

3.3.3 Transducer Checks

This section provides instructions to confirm the operational and functional performance of the transducers.

3.3.3.1 Ultrasound Transducer Checks

NOTE: Always use GE-approved transducers only.

1. Visually inspect the transducer case, the cable, the strain relief, and the connector pins for any signs of damage. Replace the transducer if damage is evident.
2. Turn the monitor on and connect the ultrasound transducer to either US or US2 input connector of the monitor unit and confirm that:
 - a. The FHR1 value shows three steady dashes “- - -.”
 - b. The FHR1 mode shows *US*.
 - c. The recorder prints *US* on the center margin of the strip chart paper after approximately 20 seconds.
3. Hold the ultrasound transducer in your hand with the transducer front facing the palm of your hand and use your other hand to gently press and depress the back of the transducer rhythmically while maintaining a steady rate. Confirm the following:
 - a. The FHR1 value on the monitor follows the input rate.
 - b. The recorder follows the input rate.
 - c. The FHR1 heartbeat indicator (♥) flashes for each input.
 - d. Ultrasound audio is generated from the speaker on the rear side of the monitor.

3.3.3.2 TOCO Transducer Checks

NOTE: Always use GE-approved transducers only.

1. Visually inspect the transducer case (especially on the diaphragm located on the bottom of the transducer), the cable, the strain relief, and the connector pins for any signs of damage. Replace the transducer if damage is evident.
2. Turn the monitor on and connect the TOCO transducer to UA input connector of the monitor.
3. Use the Trim Knob Control of the monitor to access the *Install Options Screen 2* and note the Default TOCO Reference setting. Exit the service mode by selecting *Restart* at the bottom of the screen.

4. Momentarily depress the UA Reference Button of the monitor and confirm that:
 - a. The UA value shows the default setting.
 - b. The UA mode shows *TOCO*.
 - c. The recorder prints *TOCO* on the strip chart paper.
5. Apply gentle pressure to the TOCO transducer diaphragm and confirm that the UA value responds to the pressure input. Increasing force should produce an increasing value and vice versa.

3.3.4 Functional Checks

This section provides instructions to confirm the operational and functional performance of the monitor unit.

NOTE: Always use GE-approved transducers only.

3.3.4.1 System Checks

1. Make sure that all transducers are disconnected from the front panel of the unit and the strip chart is loaded into the recorder.
2. Turn the unit power on. Confirm that the unit generates two tones from the rear panel speaker and the Power Indicator (green light) illuminates.
3. Confirm that the monitor display is on and it is showing the *General* screen.
4. Use the Trim Knob Control to access the *General Setup* screen and confirm the paper speed is set in accordance with hospital or local requirements. If paper speed setting is wrong, access the *Install Options Screen 1* screen again to change the paper speed.



WARNING:

Incorrect paper speed setting results in inaccurate waveform prints on the strip chart paper.

5. Depress the Test Button and confirm the following:
 - a. Display Test: All display pixels extinguish for one second and then illuminate for one second. A green horizontal line moves down on a red background followed by a blue vertical line moving from left to right.
 - b. Lamp Test: The yellow Record Indicator illuminates.
 - c. Recorder Test: The recorder prints the message *TEST: ARE ALL DOTS PRINTED?* followed by two vertical lines and four horizontal lines. The two vertical lines should appear continuous and indicate a fully functional print head. The four horizontal lines align with the heart rate and uterine activity scales, i.e., 30 and 240 BPM or 50 and 210 BPM, and 0 and 100 mmHg (0.0 and 13.3 kPa).