



## TROUBLESHOOTING GUIDE

All hardware on the ALGO 5 Newborn Hearing Screener may be checked at one time by selecting **F5 - Equipment Check** and then selecting **Run Equipment Check**. Individual components may then be checked using **Run Artifact**, **Run Acoustic** or **Run Impedance**.

### MINIMIZE IMPEDANCE LEVELS

- Whenever impedance readings are greater than 12 kOhms or the difference between pairs is greater than 5 kOhms, the ALGO screener cannot begin or continue screening. "Check Sensor" messages will also appear to alert you of high impedance levels.

- Check connections between the tab clips and the sensors (Refer to Figure 1); align the clip so as the wire is closest to the baby's skin. Check the connection between the sensor cable (PCA 5) and the preamplifier (Refer to Figure 2).

**Correct clip attachment:**  
Clip is attached to the purple tab portion of sensor only.

**Incorrect clip attachment:** Clip touches hydrogel portion of sensor.

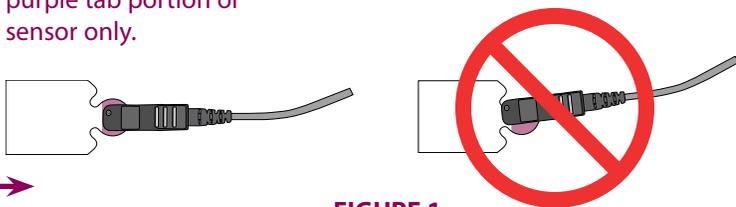


FIGURE 1

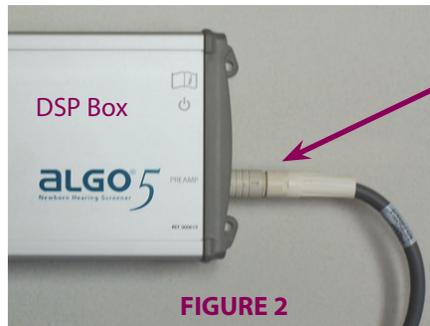


FIGURE 2

**PreAmp to DSP Connection**  
(use the alignment arrows to connect; do not force any connection)

PreAmp Cable

- Ensure that the sensors with colored cable clips are correctly placed and firmly attached to the baby's skin with the tab section of all three sensors pointed in the same direction (Refer to Figure 3).

- Black** clip to **Vertex** sensor (center forehead, as high as possible)
- White** clip to **Nape** sensor (center and back of neck)
- Green** clip to **Common** sensor (shoulder)

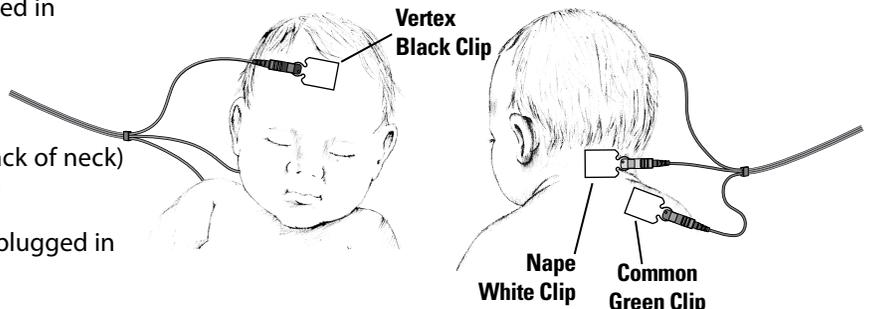


FIGURE 3

- Check that the preamplifier cable is securely plugged in (Refer to Figure 4).

- Evaluate the infant's skin type and prep or reprep as necessary:  
**Note:** If both the Nape and Vertex sensor readings are  $\geq 12$  kOhms, prep the Common site first.

- Remove the sensor.
- Wash sensor site(s) with mild soap and water.
- Replace sensor(s) and check impedance readings.
- If readings are between 12 and 20 kOhms, leave the sensor(s) on skin for 2 to 3 minutes.
- Apply saline if impedance readings are still high after 2-3 minutes.

- If impedance readings are still too high after reprepping, remove the sensor(s) and discard. Prep the site(s) again, place new sensor(s), and recheck the impedance readings.

- If an impedance reading is "> 99 kOhms" after careful prepping, select **Equipment Check (press F5 key)** from the Main Window display and perform an **Impedance Check (PCA Clip Check)**. This checks to see if your preamplifier or sensor cable is damaged.

You will need the **ALGO Check Kit** (REF 040527) to perform an Impedance Check (Refer to Figure 5).

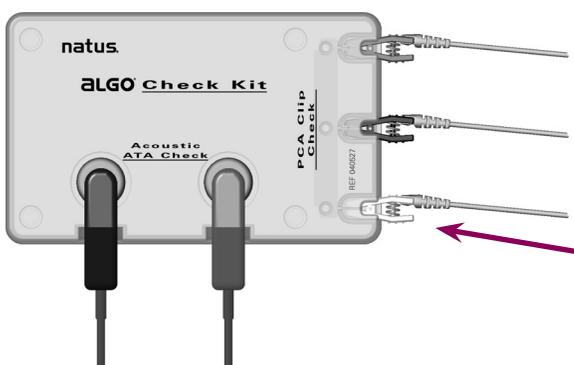


FIGURE 5

When attaching the sensor cable (PCA 5) clips to the ALGO Check Kit, make sure the clips are inserted completely into the receptacle.

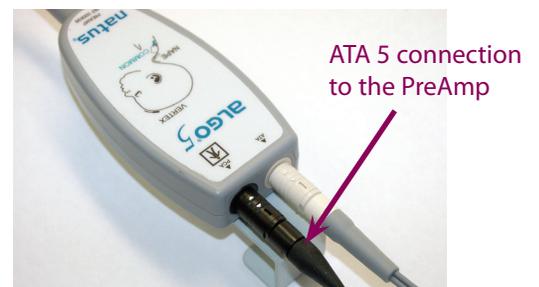


FIGURE 4

ATA 5 connection to the PreAmp

### Skin Preparation Techniques:

- Moist or oily skin:** Gently wash sensor site(s) with soap and water, or alcohol if permitted by your hospital protocol.

**Note:** Alcohol must be followed by saline, as alcohol dries the skin, inactivating the sensor adhesive.

- Dry skin:** Apply a drop of water or saline at the sensor site(s).
- Flaky skin:** Apply a drop of NuPrep<sup>®</sup> Prepping Gel on gauze sponge and gently scrub site. Remove excess gel by using a damp cloth or gauze. Pat lightly with dry gauze.

## MINIMIZE AMBIENT INTERFERENCE

- In the case of excessive ambient interference (i.e. room noise) the following events may occur:
  - The screen will slow down or may stop completely.
  - The ambient indicator bar on the Screening display will become more than 90% filled, and the “Check Ambient” message will appear.
- a. Ensure that the earphone cable (ATA 5) is properly attached to the screener (Refer to Figure 6). Also check that the earphone cable transducers are securely attached to the earphones.
- b. Check that the earphones are properly placed and form a good seal around the baby’s ears (Refer to Figure 7). Also check that the earphone cable transducers are securely attached to the earphones.



FIGURE 6

Earphone cable (ATA 5) connection to screener

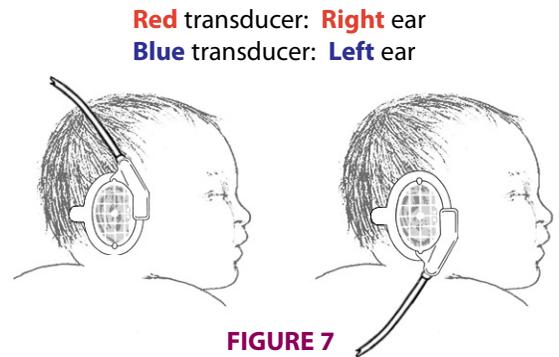


FIGURE 7

Red transducer: Right ear  
Blue transducer: Left ear

- c. Check the noise in your surroundings. Reduce excessive noise or move to another location to complete the screening.
- d. If the baby is crying, wait until he/she is quieter to proceed with the screening.
- e. If ambient noise is still excessive, select **Equipment Check (press F5 key)** from the Main Window display and perform an **Acoustic Check (ATA Check)**. You will need the **ALGO Check Kit (REF 040527)** to perform an Acoustic Check (Refer to Figure 8).

## MINIMIZE MYOGENIC INTERFERENCE

- In the case of excessive myogenic interference (i.e. muscular or electrical interference), the following events may occur:
  - The screen will slow down or may stop completely.
  - The myogenic indicator bar on the Screening display becomes more than 50% filled and turns orange.
  - A “Check Myogenic” message appears next to the myogenic indicator bar on the Screening display.
- a. Ensure correct connections between the clips and sensors (Refer to Figure 1 on reverse side).
- b. Ensure correct sensor placement (Refer to Figure 3 on reverse side).
- c. Check to see if the ALGO screener is in the vicinity of any of the following equipment:
  - Computers, VCRs or radio equipment
  - Monitors, infusion devices, pumps, phototherapy lights, or warmers
  - Large metal carts, sinks, or bank of power outlets

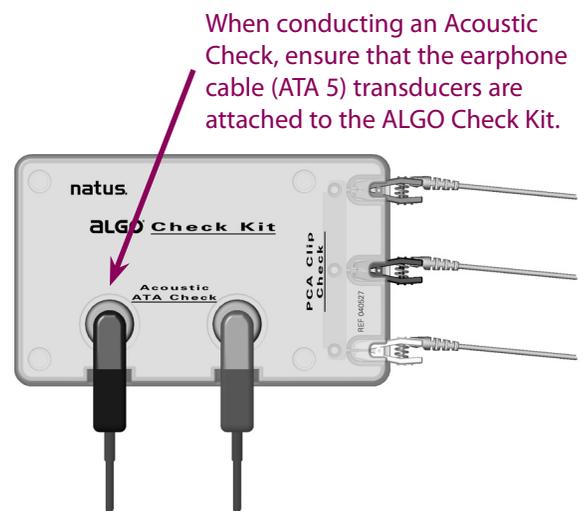


FIGURE 8

- If the screener is near any of the equipment listed above, power off the screener, and move it to another location for screening.
- d. Check the baby. Is the baby:
  - Too alert?
  - Sucking too much?
  - Clenching his/her jaw?
  - Not the appropriate age for screening?
  - Too sick or too active neurologically?
- If the answer is yes to any of these questions, help the baby settle or reschedule the screening.
- e. If the source of myogenic interference is not immediately obvious (e.g., an active baby), select **Equipment Check (press F5 key)** from the Main Window display, and perform an **Artifact Check**.  
You will need the **ALGO Check Kit (REF 040527)** to perform an Artifact Check. **When performing an Artifact Check, ensure that the sensor cable (PCA 5) clips are correctly attached to the ALGO Check Kit.**

- If the screener passes the Artifact Check, the source of the myogenic interference is the baby.
- If the screener fails the Artifact Check, the source of myogenic interference is the screener or the environment. Power off the device and move it to another location for screening.

**Note:** You may also perform an Impedance Check to verify that the sensor and preamplifier cables are working properly and are not the source of the myogenic interference.

Refer to the ALGO 5 User Manual for further information and all applicable precautionary information.

NuPrep is a trademark of D.O. Weaver & CO.

© 2020 Natus Medical Incorporated