990-03958-00 **Headset Test Procedure**

For GPN: 710-03085-02 ASSY, ELEC-MECH, M20 HEADSET, BUTTER STICK, AMBER

Google

Doc #: 990-03958-00
Revision: 01

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Document History

Rev	History/Change Description	Originator(s)	Date
--	Initial Draft	Zoey Zweber	
--	Updated for new test fixture	Zoey Zweber	2019/11/06
01	Updated process	Gabriella Levine	2019/12/16

Scope

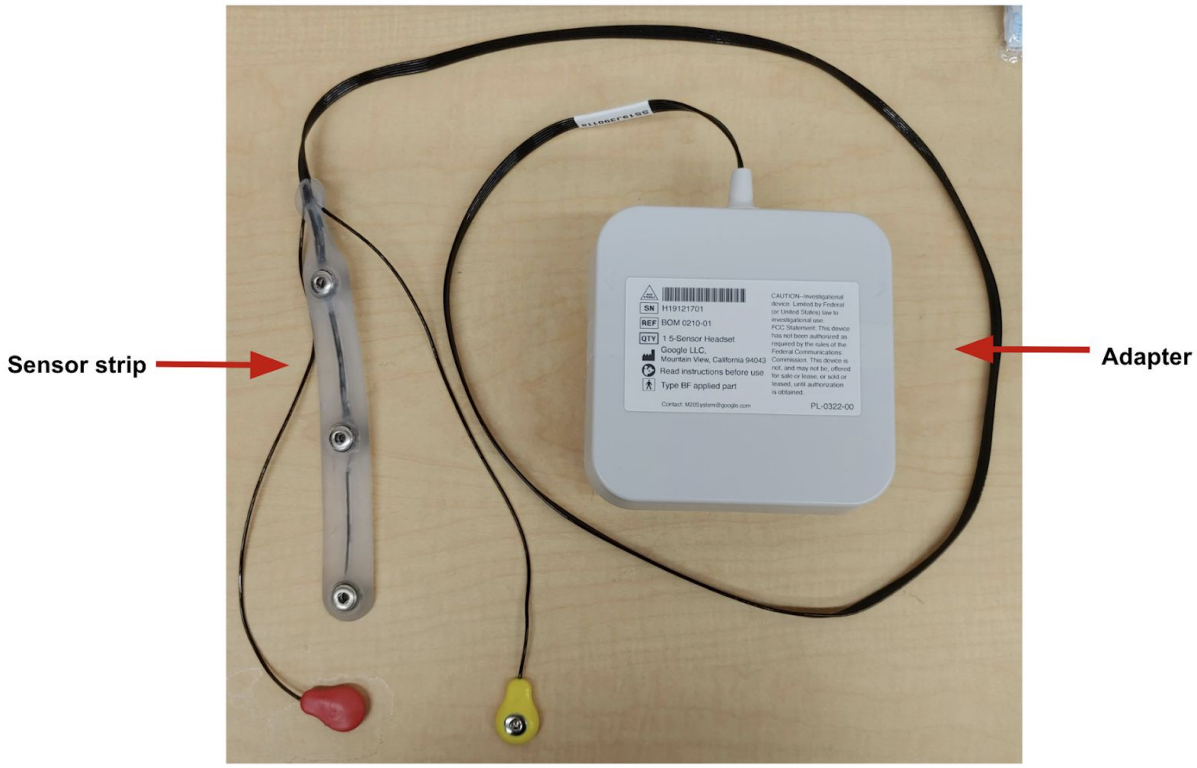
This test demonstrates the adapter assembly is receiving signal through each sensor and that each sensor is associated with the correct channel on the amplifier input, and assembled in its correct location on the sensor strip. Signals are generated from the test fixture at a known frequency and amplitude. These signals are received through the sensor strip and the output is analyzed to ensure that the amplitude and frequency of the detected output fall within the tolerance of the expected values (as defined in product PRD and IEC 60601-2-26 standard). The test will identify if any of the sensors are not functional or accurate. Each test is performed with a “golden” bioamp to separate performance issues between the bioamp and adapter assemblies.

Safety Controls & Requirements

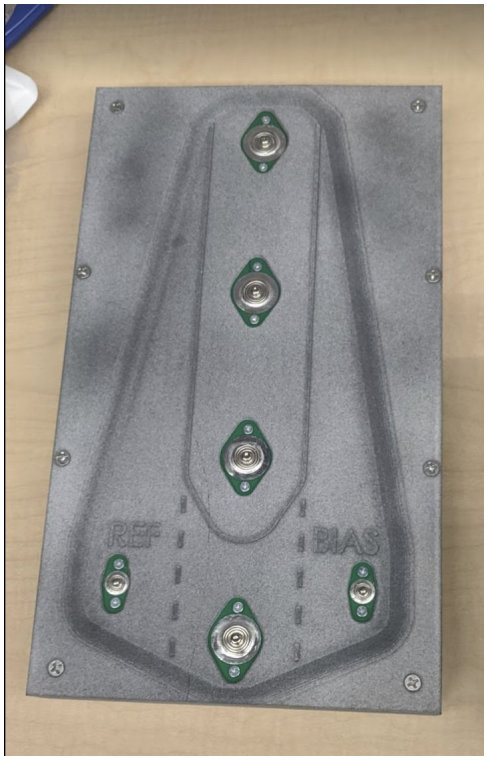
- Test must be conducted in a clean and dry environment.

1.0 Functional Test

1.1 Test Equipment

1	Device Under Test (DUT) - Headset assembly
	
2	Golden Bioamp

3	Headset test fixture



4	Additional test equipment

Philo provided laptop containing : 1x USB A interface; io-test script installed, Logs

folder mapped

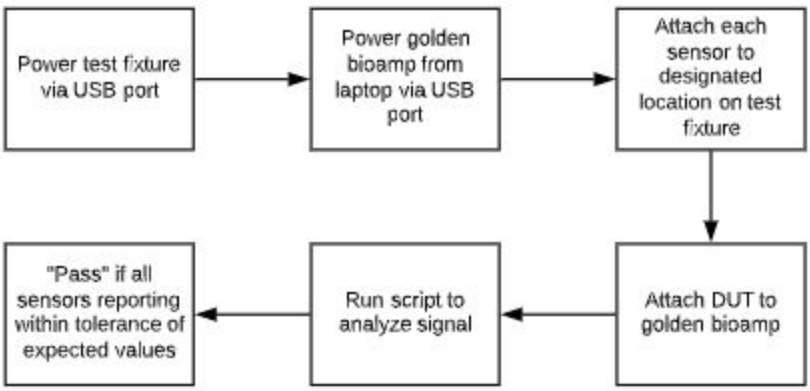
2x USB A/B cables

1x Barcode Scanner

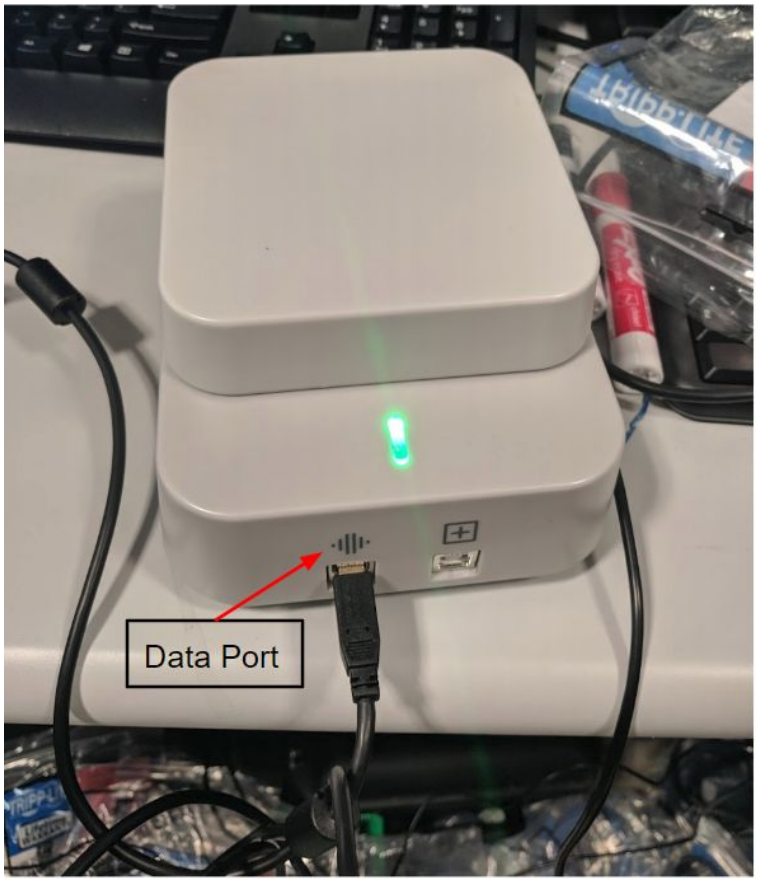
1x USB powerport

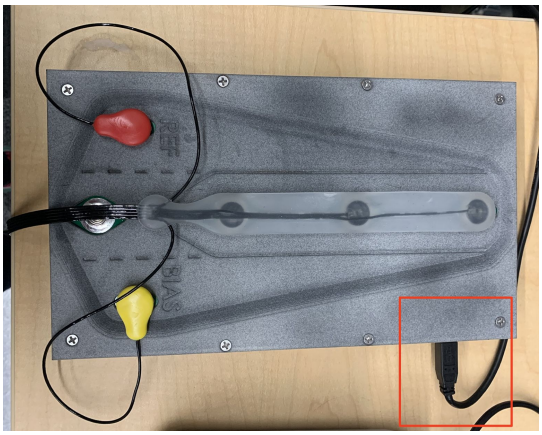
1.2 Overview

Test	Description
Sensor Test	Measures the output signal accuracy of each sensor per given input from test fixture

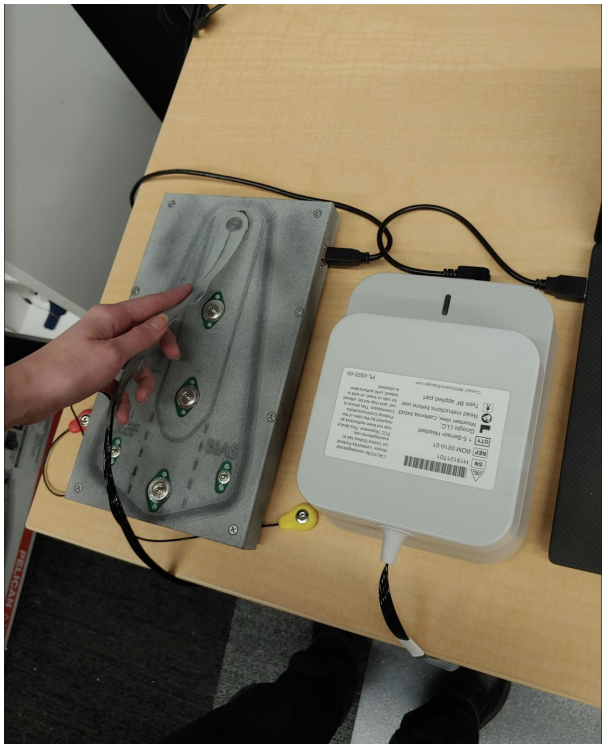
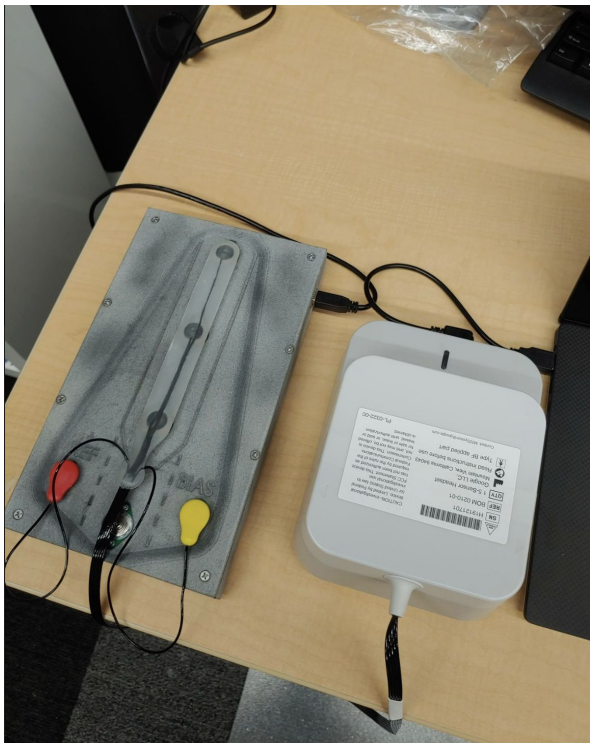


1.3 Test Setup & Procedure

Step	Action
1	Connect and power Bioamp to Laptop - Connect USB cable (B side) to Data port on Bioamp and USB (A side) to computer. This will power up the PCB (green LED illuminated) **Note**- only plug in one device (golden bioamp + DUT) at a time to the computer
	
2	Connect and power test fixture to the powerport via USB cable (B side) and the USB cable (A side) to the powerport. Plug the powerport into the wall. **Note**: There is no visual indication or LED showing that the test fixture is powered on. The sensor strip should not be plugged in yet, although it is plugged in in this photo.

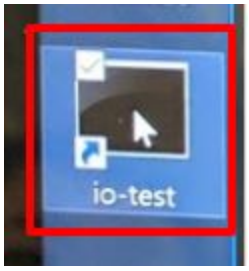



3	Attach sensor strip to test fixture by securely snapping 3 sensors onto test fixture, starting with the top snap and moving downward, then connect bias and ground. 3 sensor strip → bottom snap will be unpopulated

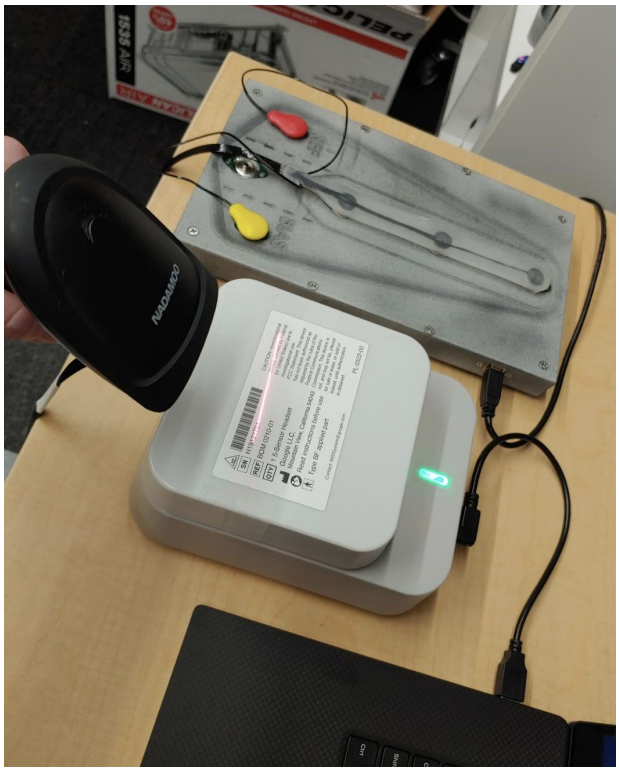



4	Attach adapter assembly (DUT) to golden bioamp. Press down firmly to ensure it is fully seated on bioamp. **Note**- adapter will have different labeling than unit pictured

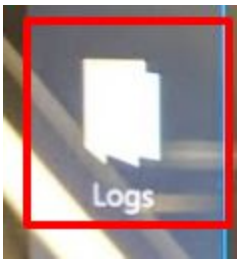
5	Double click “io-test” icon from desktop to open test script



6	Enter operator name or ID as prompted
7	Scan barcode as prompted on screen Note: barcode for production units will be on the top surface of the adapter



8	**WAIT 10 seconds before proceeding…** Hit “Enter” to initiate test. **Note**- Do not disturb unit while test is running
9	Test results will populate as pass or fail for each of the sensors. Test logs are also copied to “Logs” folder located on desktop If the results indicate “fail”, unplug and replug the amp. Close out of the test terminal window and relaunch the “io test”, run the test again, up to a total of 3 times per DUT.

	
10	Remove headset snaps from fixture, and adapter from golden bioamp.
11	Press ‘n’ to promt the test for the next headset. (Note - if you need to unplug the bioamp and replug it in for any reason, press ‘e’ to close and reopen the serial port, or close the terminal window and re-click on the icon to re-begin the test).

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1.4 Preventative Maintenance

Type	Action
Daily	
Before Batch Testing	
Bi-Monthly	

1.5 Troubleshooting

#	Symptom	Likely Cause
1	“Access denied” error shows when opening io-test script	Script cannot be run while Visualizer is open. Close visualizer and attempt to open test script again.
2	Test script crashes before it finishes running	Known software bug, unplug and replug the DUT and then rerun test

3	Very few channels show results and all fail	Adapter is likely not completely seated on the bioamp
4	Test does not display results for all channels	Issue with USB connection. Recommend unplug and replug in

Questions/Comments

Provide contact info for any questions pertaining to this document.