

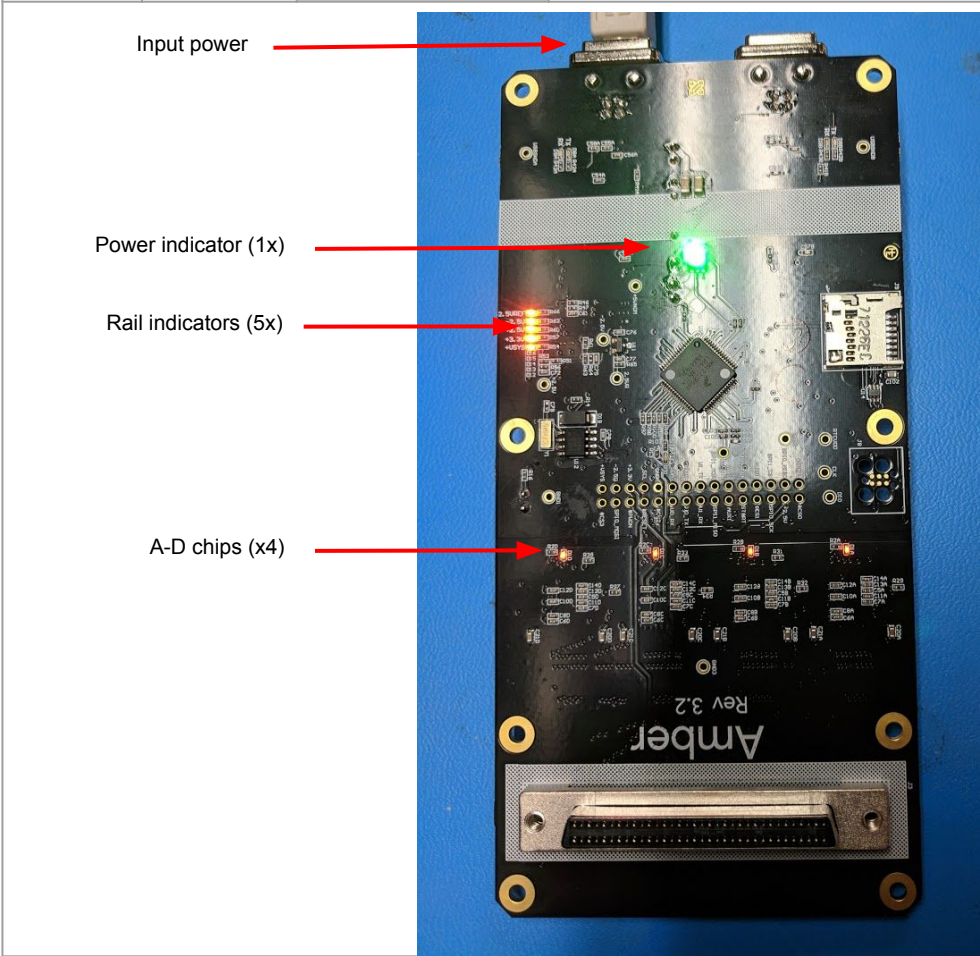


Title	M20 Bioamp (Butter Dish) Assembly Instructions	
P/N		
Scope	Assembly instructions for Flex	
Revision		
Date		
Author		
Approver(s):		
Revision History		
01	Initial Release	
02		
03		
04		

Tool / Consumable List	
Description	
Consumables	Tools
	T8 torque driver
	T15 torque driver
	USB A/B Cable
	Laptop (power source)
	Connector Alignment Fixture
	Sticker Placement Jig
	DYMO Printer



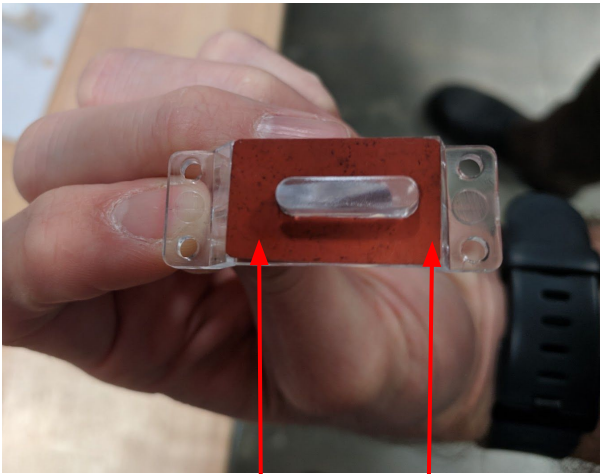
Seq #	Cycle Time	Operation Description
01		<div>Power board via USB connection to laptop, check all LEDs are illuminated (10 in total)</div> <ul style="list-style-type: none"><li>1 green power indicator lit</li><li>5 rail indicators lit</li><li>4 chips are lit</li></ul>



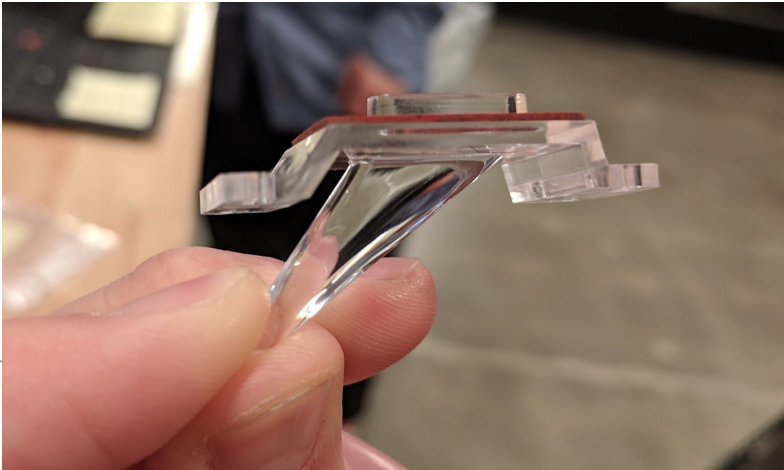
Part Desc:	Part#
Amber Board	BOM-0098-00
Tools/Equipment:	Part#
USB A/B with power source	
Critical Process Parameters	
Critical Quality Attributes	
All LED lights specified should be illuminated	
Key Points	
Should any LEDs fail to illuminate, note which component and place board in MRB	



Seq #	Cycle Time	Operation Description	Place lightpipe gasket on lightpipe  Note: Gasket is not symmetric and only fits in one orientation
02			



Non-symmetric gasket



Part Desc:	Part#
Lightpipe Lightpipe Gasket	PN-0169-00 PN-0170-00
Tools/Equipment:	Part#
Critical Process Parameters	
Critical Quality Attributes	
Key Points	
Gasket spacing is not symmetric, ensure it is placed in the correct orientation	



Seq #	Cycle Time	Operation Description	Place lightpipe with gasket on top housing, secure using qty 4 M2.63x6mm screws, tighten to 35 in-oz Note: actual gasket will likely be red color instead of gray as shown
03			



Tall end of horn points inward



Part Desc:	Part#
Lightpipe Lightpipe Gasket Bioamp Top Housing Torx M2.63x6 (x4)	PN-0169-00 PN-0170-00 PN-0166-00 PN-0104-00
Tools/Equipment:	Part#
T8 torque driver	
Critical Process Parameters	
35 in-oz tightening torque	
Critical Quality Attributes	
Ensure screw head is seated and flush with lightpipe surface	
Key Points	
Tall end of lightpipe faces inward (only fits in one orientation) Fasten in star pattern	



Seq #	Cycle Time	Operation Description	Place qty 2 USB gaskets around USB connectors on main board
04			

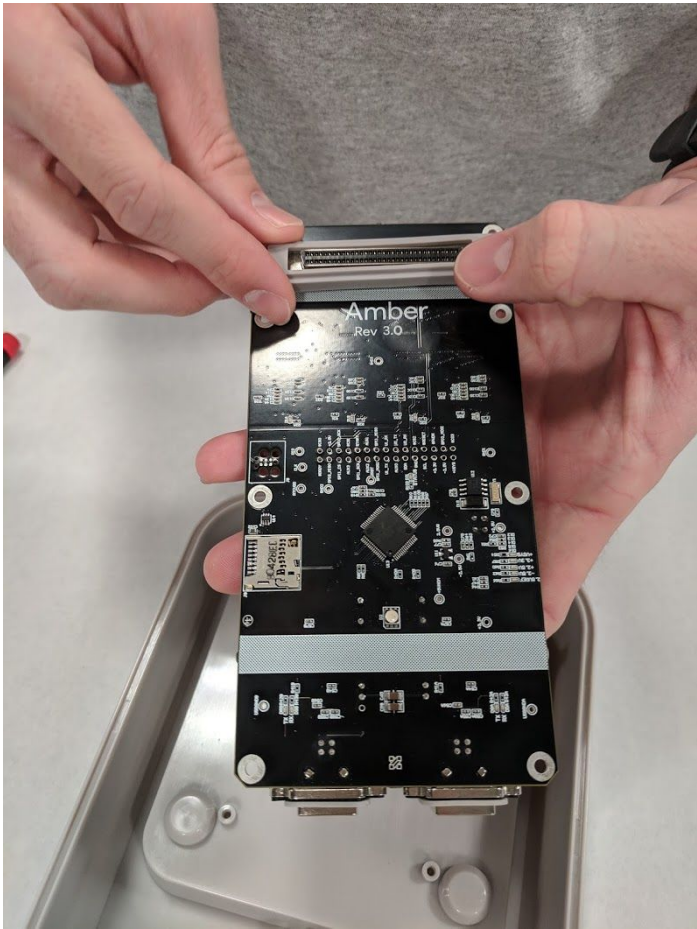


Part Desc:	Part#
USB Gasket (x2) Amber Board	PN-0213-00 BOM-0098-00
Tools/Equipment:	Part#
Critical Process Parameters	
Critical Quality Attributes	
Key Points	





Seq #	Cycle Time	Operation Description	Place connector boot on large connector
05			



Part Desc:	Part#
Connector Boot Amber Board	PN-0171-00 BOM-0098-00
Tools/Equipment:	Part#
Critical Process Parameters	
Critical Quality Attributes	
Key Points	



Seq #	Cycle Time	Operation Description	Place top housing on connector alignment fixture
06			

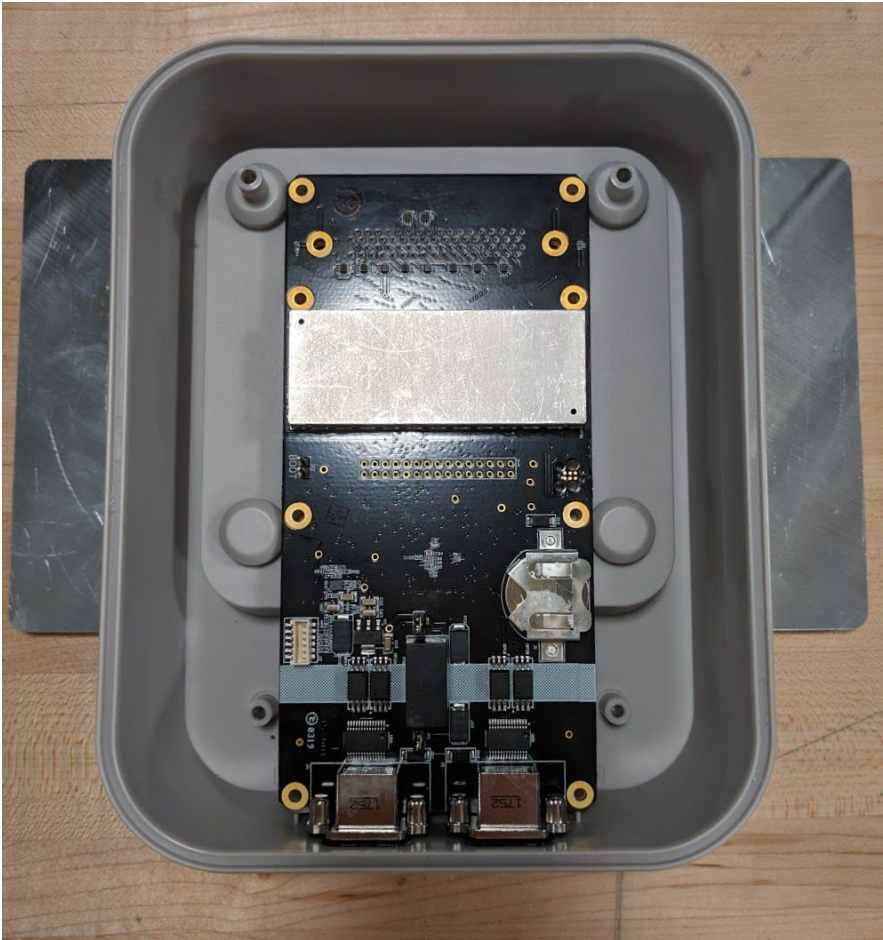


Part Desc:	Part#
Bioamp Top Housing	PN-0166-00
Tools/Equipment:	Part#
Alignment Fixture	N/A
Critical Process Parameters	
Critical Quality Attributes	
Key Points	





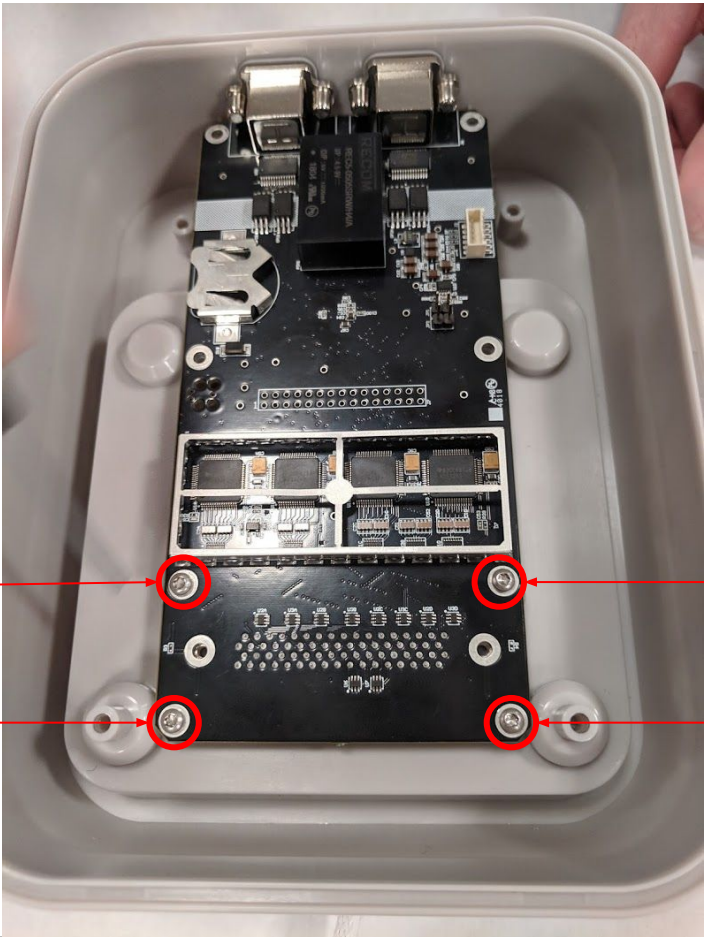
Seq #	Cycle Time	Operation Description	Line up USB connectors with cutouts in top housing, push board forward <b>then</b> down to secure in place. Board should make full contact with connector from alignment fixture.
07			



Part Desc:	Part#
Amber Board Top Housing	BOM-0098-00 PN-0166-00
Tools/Equipment:	Part#
Connector Alignment Fixture	TBD
Critical Process Parameters	
Critical Quality Attributes	
Key Points	



Seq #	Cycle Time	Operation Description	Fasten qty 4 M2.63x6 screws in connector region to 35 in-oz. Tighten in star pattern in the order shown below. Remove assembly from alignment fixture.
08			



Part Desc:	Part#
Amber Board Top Housing Torx M2.63x6 (x4)	BOM-0098-00 PN-0166-00 PN-0104-00
Tools/Equipment:	Part#
T8 torque driver	

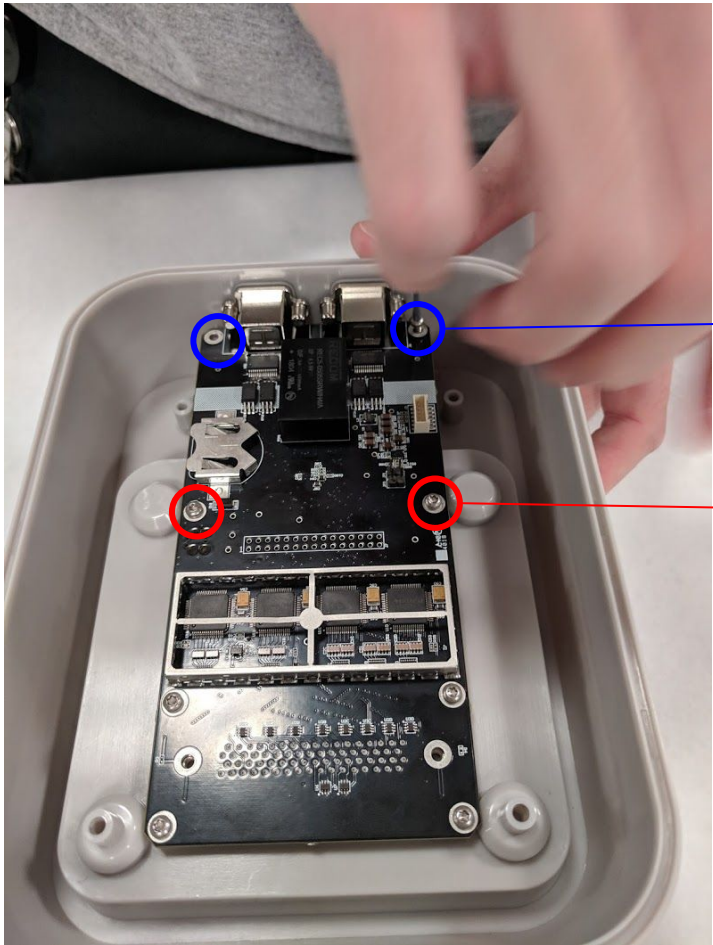
Critical Process Parameters
35 in-oz tightening torque

Critical Quality Attributes
Ensure screw head is seated and flush with board surface

Key Points
Torque in star pattern



Seq #	Cycle Time	Operation Description	Working your way towards USB connectors, fasten two middle screws then two USB-side screws with qty 4 M2.63x6 screws to 35 in-oz
09			



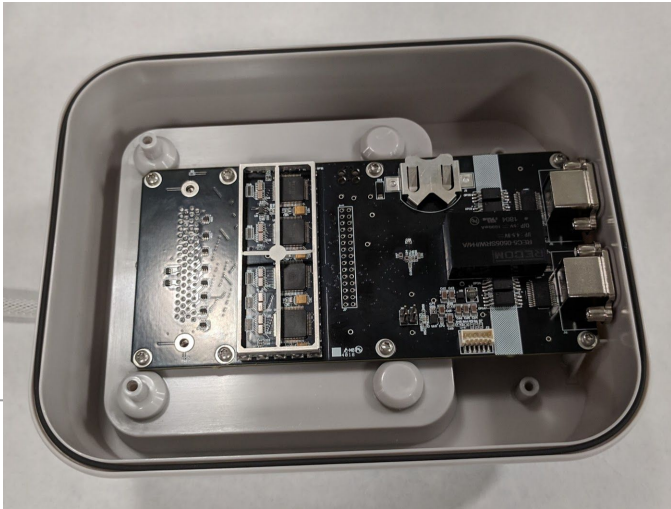
Fasten last

Fasten first

Part Desc:	Part#
Amber Board Top Housing Torx M2.63x6 (x4)	BOM-0098-00 PN-0166-00 PN-0104-00
Tools/Equipment:	Part#
T8 torque driver	
Critical Process Parameters	
35 in-oz tightening torque	
Critical Quality Attributes	
Ensure screw head is seated and flush with board surface	
Key Points	
Fasten screws near USBs last to ensure board does not buckle Ensure all 4 screws are tightened <b>after</b> assembly is removed from alignment fixture	



Seq #	Cycle Time	Operation Description	Insert the o-ring along the groove at the edge of the top housing
10			



Part Desc:	Part#
Top Housing O-ring	PN-0166-00 PN-0293-01
Tools/Equipment:	Part#
Critical Process Parameters	
Critical Quality Attributes	
Ensure o-ring is securely within groove	
Key Points	

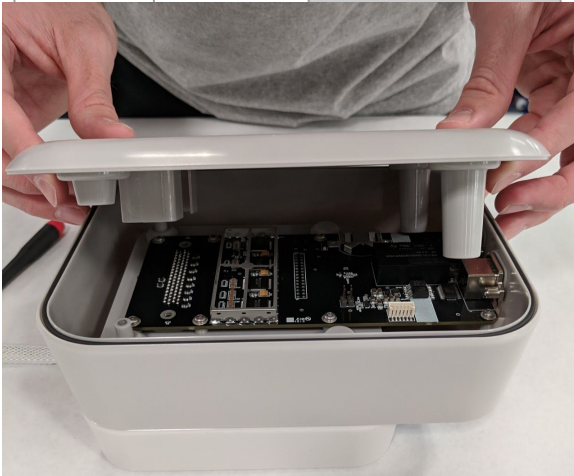




Seq #	Cycle Time	Operation Description
11		

Place bottom housing, tightly squeeze top and bottom together and secure using qty 4 M3.36x10 screws to 8.5 in-lbs. Tighten in a star pattern. Ensure the enclosure is fully secured by squeezing together, no movement should be felt.

**Note:** Bottom housing will only fit in one orientation

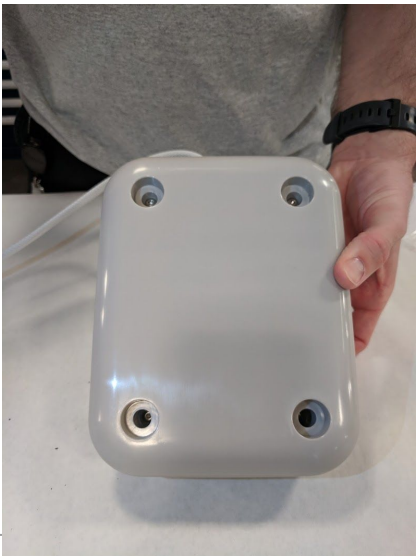


Part Desc:	Part#
Top Housing Bottom Housing Torx M3.36x10 (x4)	PN-0166-00 PN-0165-00 PN-0216-00
Tools/Equipment:	Part#
T15	

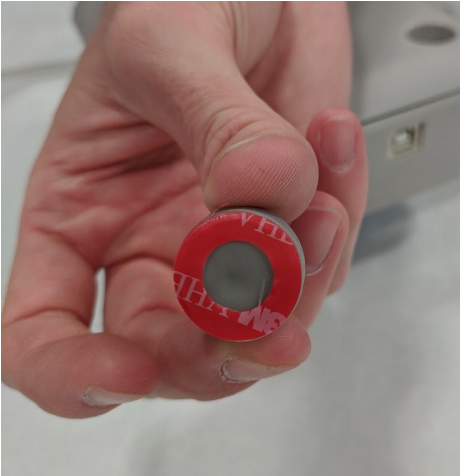
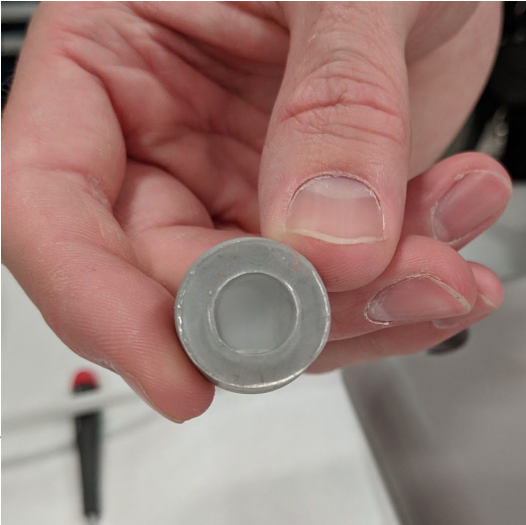
Critical Process Parameters
Enough pressure needs to be applied between top and bottom housings to compress o-ring and create seal

Critical Quality Attributes
Ensure screws are fully seated 8.5 in-lbs tightening torque

Key Points
After tightening, you should not feel any movement when squeezing top and bottom enclosures together





Seq #	Cycle Time	Operation Description	Attach pre-cut VHB disc to bottom surface of each rubber foot (qty 4), remove backing	
12				
<div></div> <div></div>			Part Desc:	Part#
			Rubber Foot (x4) VHB Pre-cut disc	PN-0172-00 PN-0299-00
			Tools/Equipment:	Part#
			Critical Process Parameters	
			Critical Quality Attributes	
			Key Points	





Seq #	Cycle Time	Operation Description	Confirm that 4 screws are fully seated and there is no excess gap between housings. Then, firmly press each rubber foot until it is seated in bottom housing
13			



Part Desc:	Part#
Rubber Foot (x4) Bottom Housing	PN-0172-00 PN-0165-00
Tools/Equipment:	Part#
Critical Process Parameters	
Critical Quality Attributes	
Key Points	
Little rubber feet must sit completely in bore with outer circumference not protruding above housing surface	



Seq #	Cycle Time	Operation Description
14		<p>Create a label sticker using the DYMO program following the model below.</p> <p>The serial number of the amp should be BYYYMMDD##, where YY are the last two digits of the current year, MM are the current month, DD are the current day, and ## are the number in sequence of amps you have made this day (starting with 01).</p> <p>After printing, affix sticker to underside of amp. Use the jig to place the sticker. The top of the sticker should be towards the connector end of the device</p>

B19012303  
Manufactured for Google LLC,  
Mountain View, California 94043



Contents: 1 Bioamplifier  
CAUTION--Investigational  
device. Limited by Federal  
(or United States) law  
to investigational use.  
FCC Statement: This device  
has not been authorized  
as required by the rules  
of the Federal Communications  
Commission. This device  
is not, and may not be, offered  
for sale or lease, or sold  
or leased, until  
authorization is obtained.



Part Desc:	Part#
Tools/Equipment:	Part#
DYMO printer Sticker Placement Jig	
Critical Process Parameters	
Critical Quality Attributes	
Key Points	