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Diebold Telephone Audio (TA) Retrofit Manual

Diebold Audio to BavSonic Audio Upgrade

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Important Safety Instructions

1. READ THESE INSTRUCTIONS
2. KEEP THESE INSTRUCTIONS
3. HEED ALL WARNINGS
4. FOLLOW ALL INSTRUCTIONS
5. DO NOT USE THIS APPARATUS NEAR WATER
6. CLEAN ONLY WITH A DRY CLOTH
7. DO NOT BLOCK ANY VENTILATION OPENINGS. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS
8. DO NOT INSTALL NEAR ANY HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTERS, STOVES OR OTHER APPARATUS (INCLUDING AMPLIFIERS) THAT PRODUCE HEAT
9. PROTECT THE POWER CORD FROM BEING WALKED ON OR PINCHED PARTICULARLY AT PLUGS, CONVENIENCE RECEPTACLES AND THE POINT WHERE THEY EXIT THE APPARATUS
10. ONLY USE ATTACHMENTS/ ACCESSORIES SPECIFIED BY THE MANUFACTURER
11. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL. SERVICING IS REQUIRED WHEN THE APPARATUS HAS BEEN DAMAGED IN ANY WAY, SUCH AS POWER-SUPPLY CORD OR PLUG IS DAMAGED, LIQUID HAS BEEN SPILLED OR OBJECTS FALLEN INTO THE APPARATUS, THE APPARATUS HAS BEEN EXPOSED TO RAIN OR MOISTURE, DOES NOT OPERATE NORMALLY OR HAS BEEN DROPPED.

Additional Safety Instructions

WARNING – TO REDUCE THE RISK OF FIRE OR ELECTRONIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

WARNING – AN APPARATUS WITH CLASS I CONSTRUCTION SHALL BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE CONNECTION.

THE MAINS PLUG IS USED AS A DISCONNECT DEVICE AND SHALL STAY READILY OPERABLE.

APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES SHALL BE PLACED ON THE APPRATUS.

Audio Upgrade Overview

The Diebold to BavSonic Audio Upgrade Kit is designed to replace the Diebold One-on-One audio system with a Bavis BavSonic audio while maintaining the Diebold wiring harness and lighted call button.

Because this system uses the existing Diebold wiring harness and connectors, there is no wire to run or holes to cut. Installation is quick and easy!

This product sells for less than the Diebold Audio system and is available via FedEx next day if you don't have it in your inventory. So, this upgrade is available, less costly and easy to install! What more could one ask for?

If you have any questions regarding the installation of this product, please contact E. F. Bavis and Associates, Inc. at [513/677-0500](tel:5136770500) or [800/937-3322](tel:8009373322), and ask for the Audio Technical Support department.

Parts List

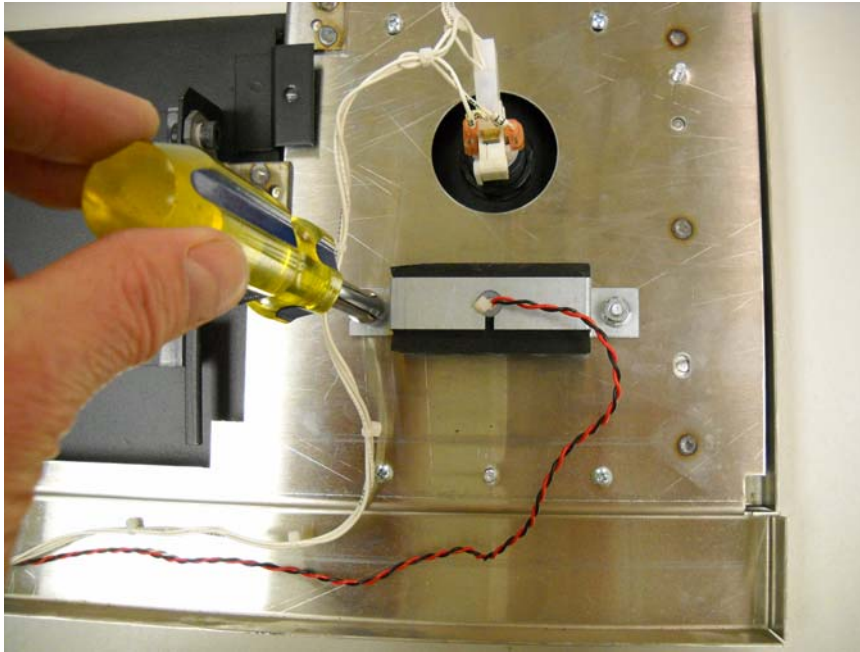
<u>PART #</u>	<u>DESCRIPTION</u>	<u>QTY</u>
22214011	Diebold Audio Adapter Board	1
22224011	Diebold BavSonic Gasket	1
00828031	Diebold Retrofit Mic Plate	1
02912994	Black Flat Faced Screw-in Microphone	1
02908213	Screw-in Mic Windscreen	1
99025001	5/8-32x1/8 Thick Panel Nut (Mic Nut)	1
01614011	74" Mic Extension Cable	1
22319992	SL Universal w/BEAM TA Interface	1
00853031	Cat5 Patch Cable Red 14 ft.	2
00853042	Gray RJ45/RJ11 Patch Cable	1
00828021	Diebold NA Retrofit Plate	1
02909991	2x3 Speaker w-5/32" Mounting Holes	1
02909051	2x3 Speaker Backbox	1
22142011	5in Speaker Harness	1
91142001	4-40x7/8 M/F Hex Standoff	1
22225011	9 Pos. Female DSub. Gender Adapter	1
22221011	Diebold Dongle	1
90005002	2-56 Nylon Locking Nut	2
90202223	2-56 x 1-1/4" Philips MS SS	2
91025001	4-40 Nylon Locking Nut	5
94005001	#10-32 Keps Nut	2
22223011	Co-bored Unthreaded Spacer	4
94183621	10-32x1-1/8 Philips Pan Head MS	4
01008001	Small Wire Tie	4
01008004	Medium Wire Tie	4
00768011	Diebold Telephone Audio Retrofit Manual	1



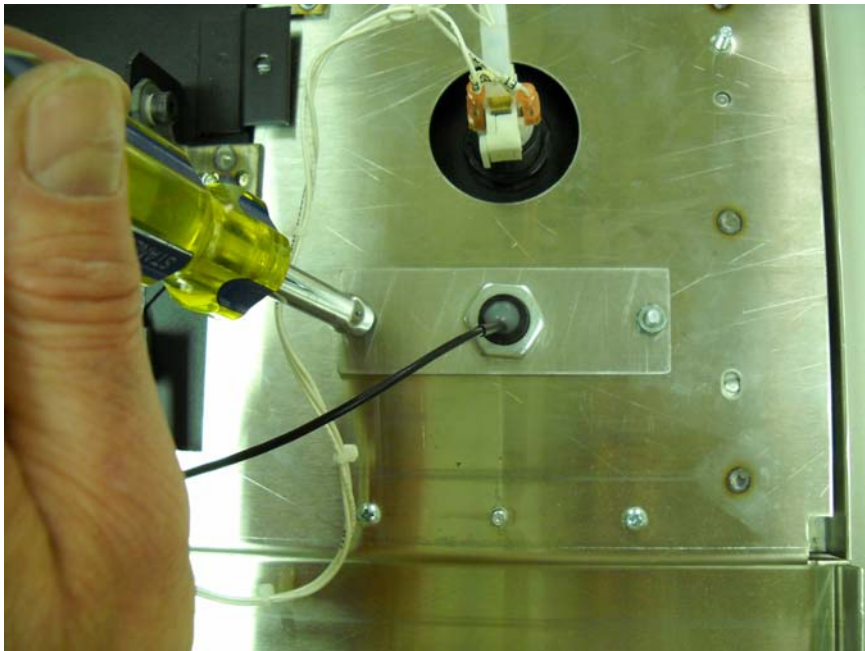
Installing the New Customer Microphone

(Note: The panel has been removed for better visibility)

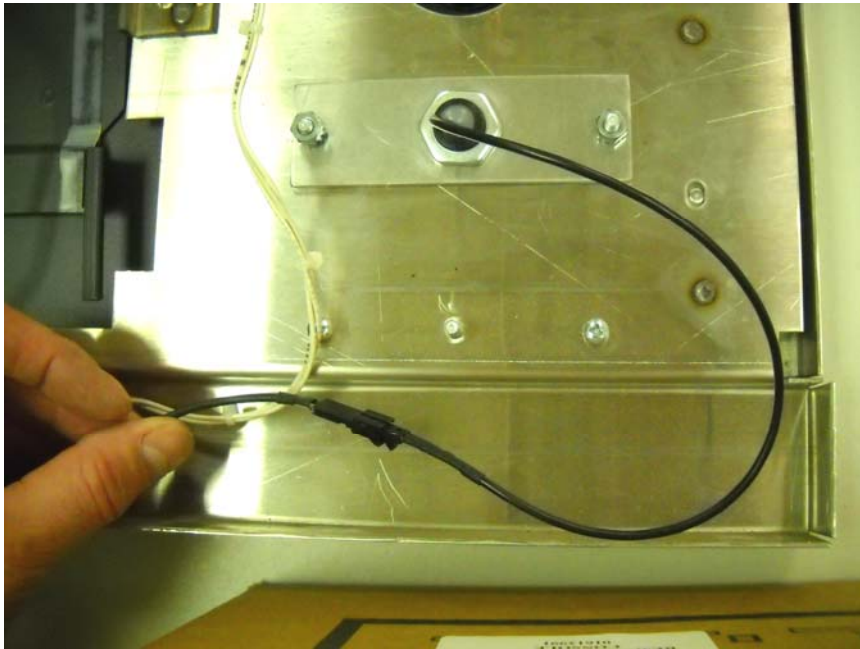
1. Access the incoming microphone. For drawers this is usually under the drawer's countertop, to the right of the drawer and mounted to the back of the customer audio panel.
2. Remove the nuts holding the Mic to the panel.



3. Place the new microphone and its mounting plate over the studs and re-install the retaining nuts.



4. Connect the Mic Extension Cable to the mic leads and route cable through the drawer over to the customer audio board/speaker housing. (It is best to follow the same path as the old microphone wiring.)



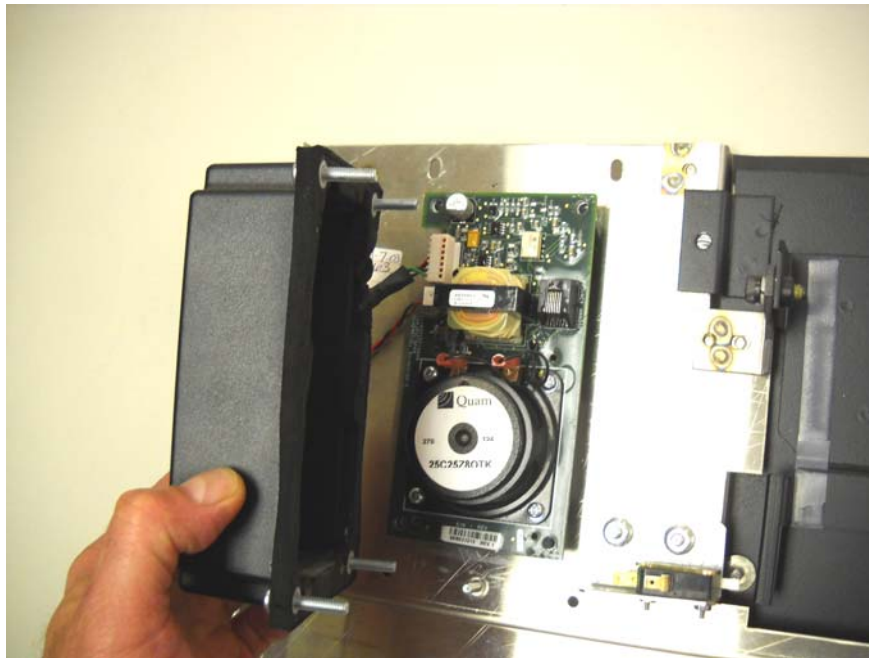
BavSonic Audio Board & Speaker Installation Instructions

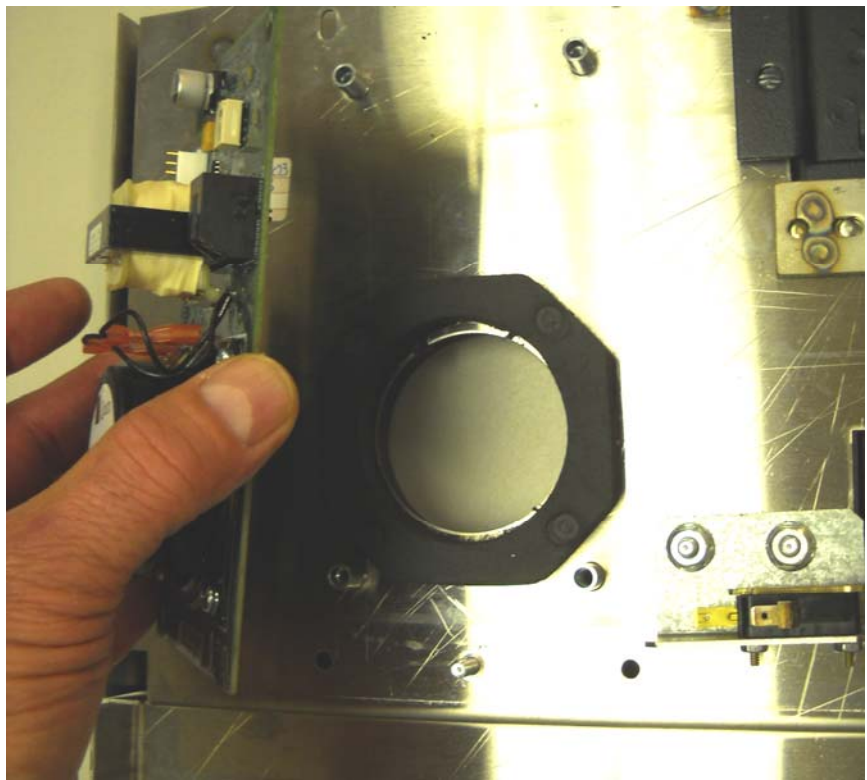
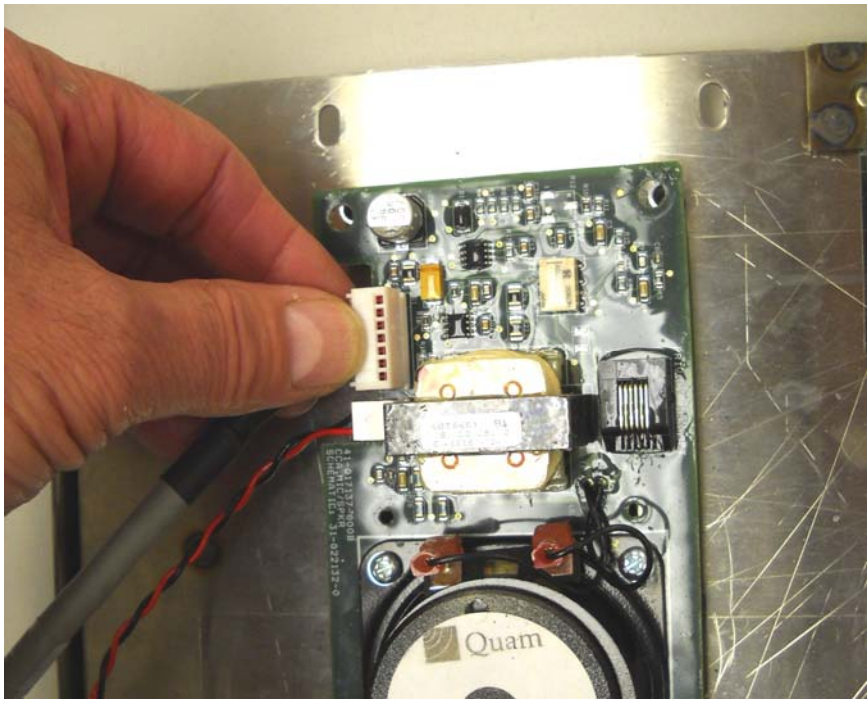
(Note: The panel has been removed for better visibility)

1. Access the outgoing audio board and speaker. This is usually under the drawer's countertop, to the left of the drawer and mounted to the back of the customer audio panel.

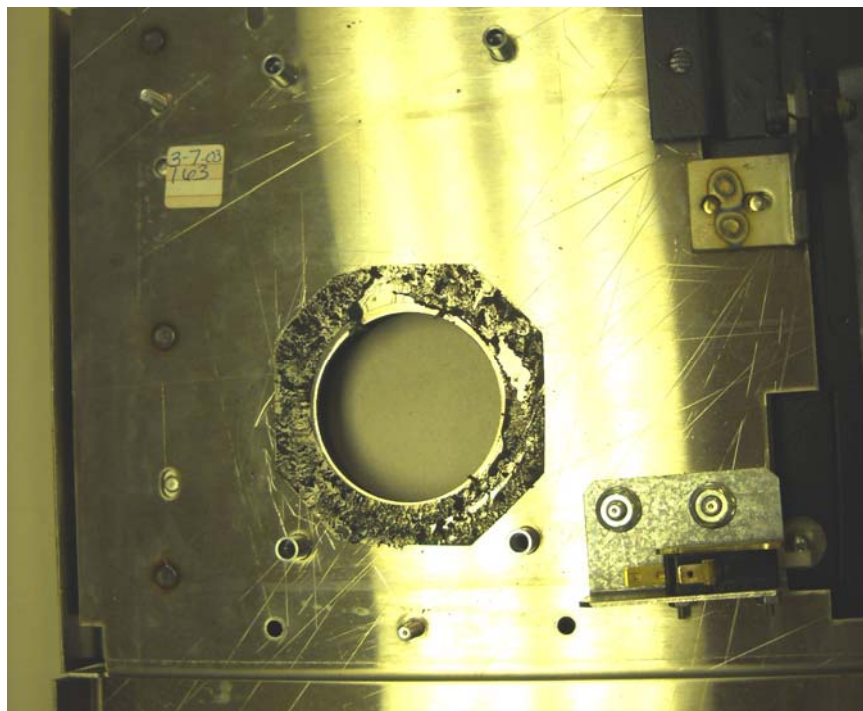
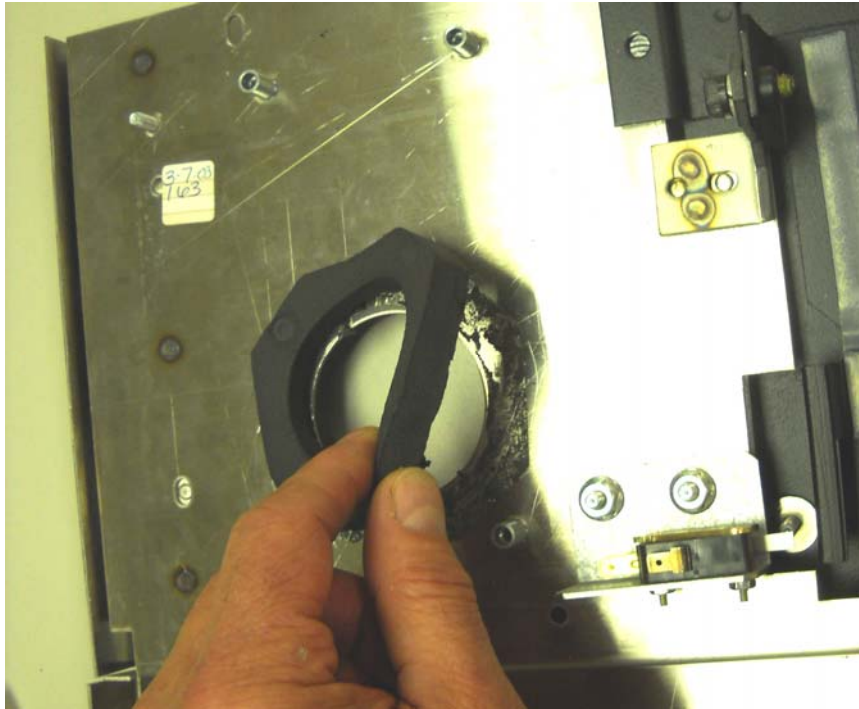


2. Remove the audio board cover, disconnect the wiring, and then remove the audio board/speaker assembly.



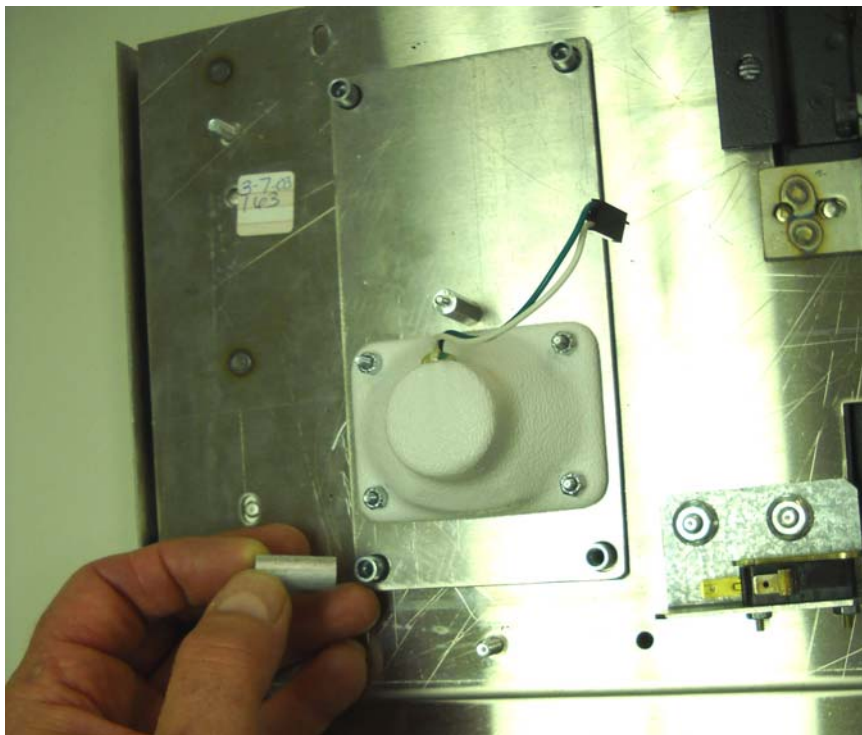
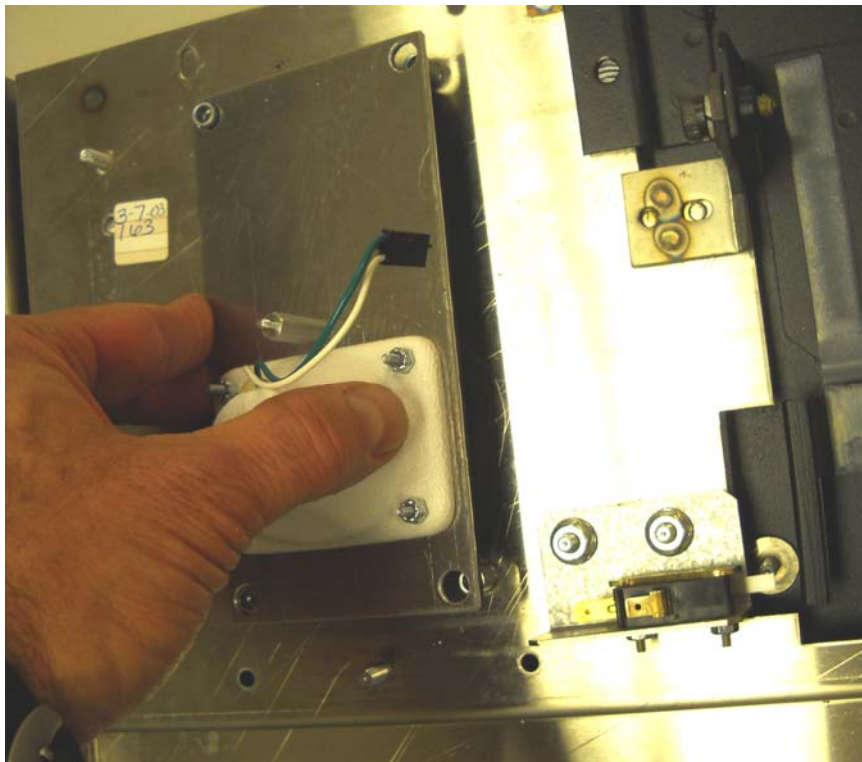


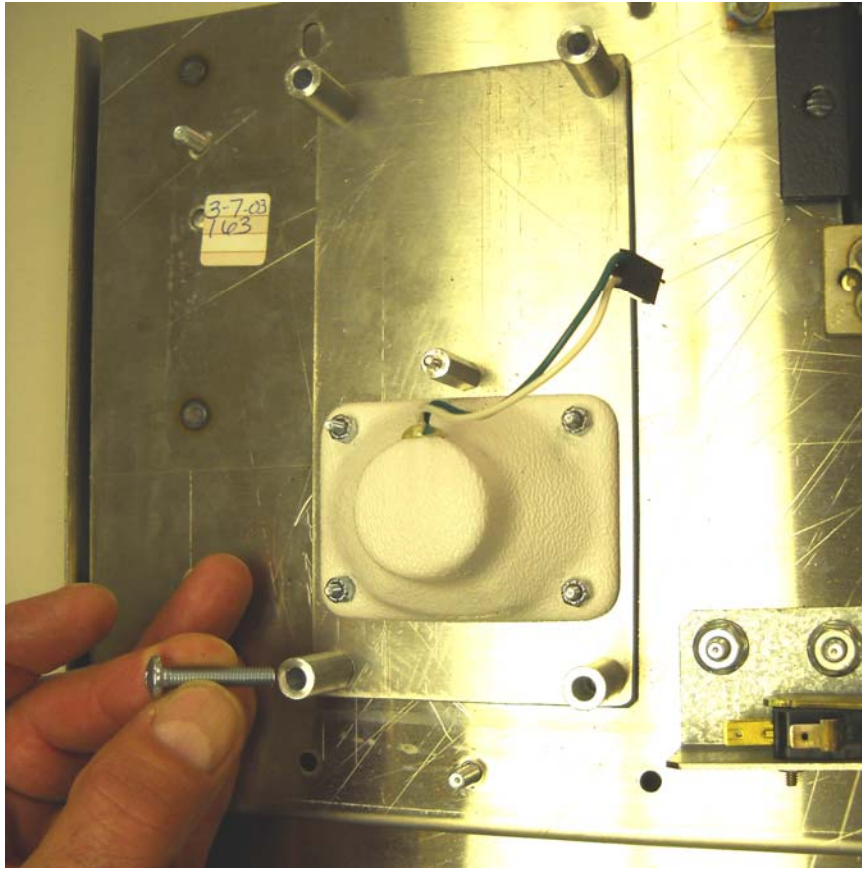
3. Remove the speaker gasket from the Diebold panel.



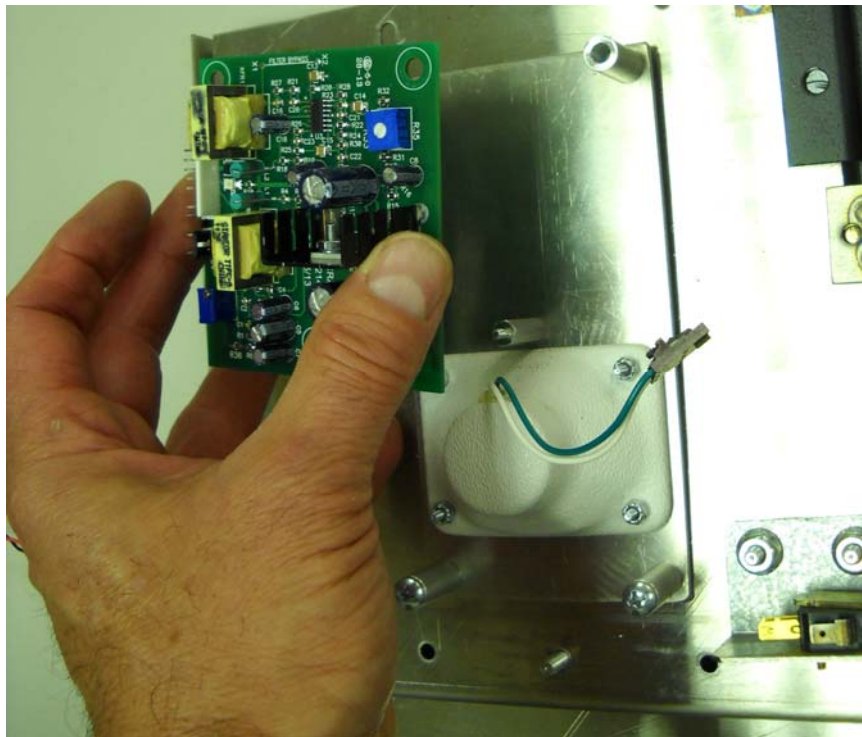
4. Apply the 3-1/8" x 6" gasket supplied, to the flat side of the BavSonic audio board/speaker mount, if it is not already installed. NOTE: Be careful that the gasket does not overlap any of the holes.

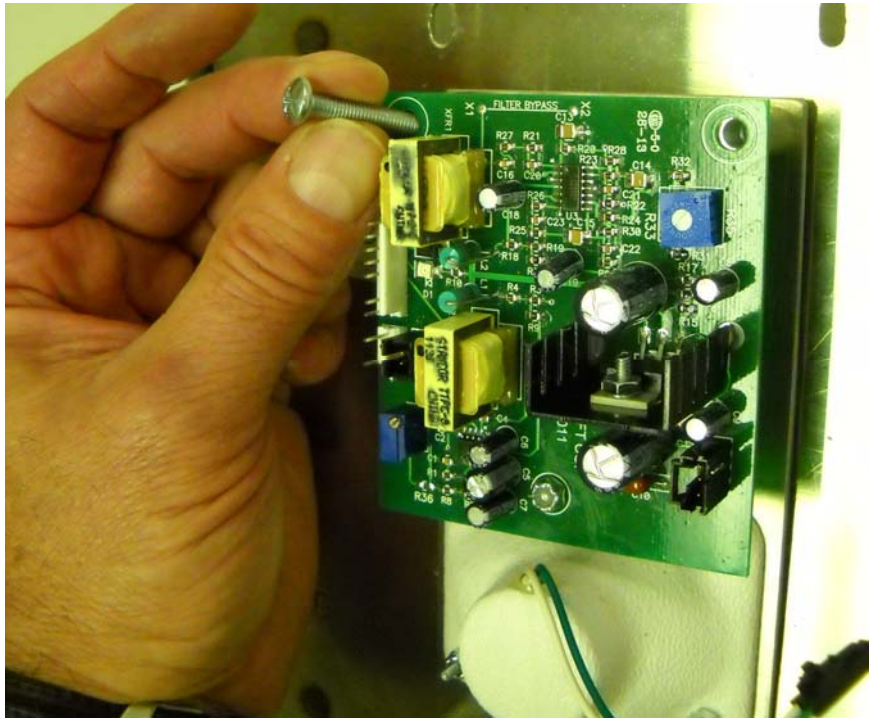
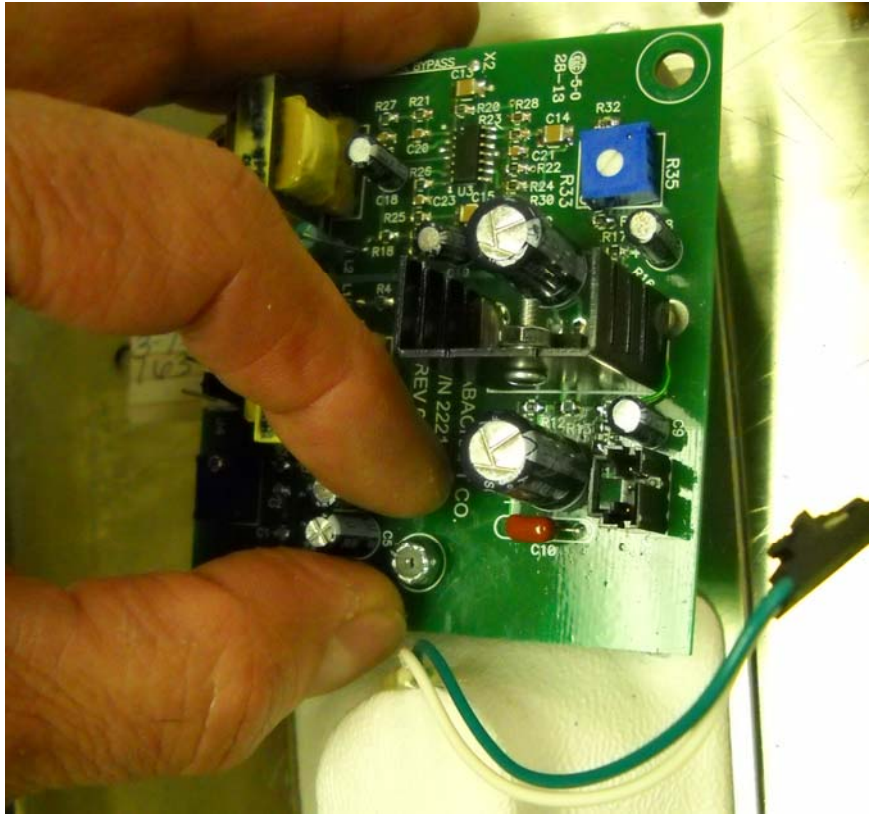
5. Install the BavSonic audio board/speaker mount over the old board's mounting spacers and then install the end with the wider hole of new spacers sent with the installation kit, over the top of the old spacers and secure the bottom of the mount with two of the 10-32x1-1/8" screws included in this kit.





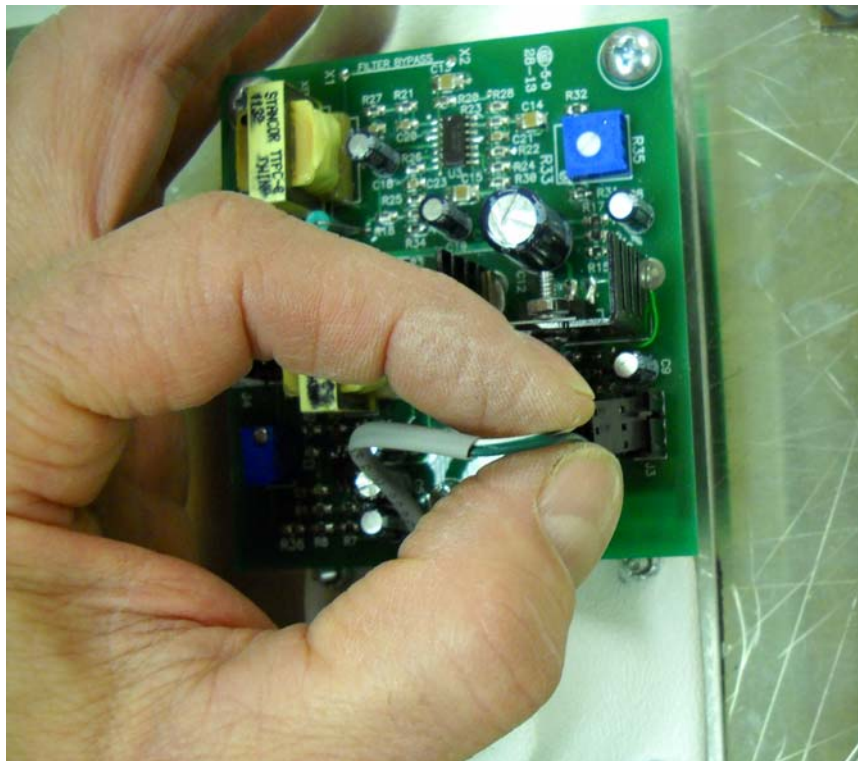
6. Place the BavSonic audio board onto the hex spacer on the new board mount and secure with a 4-40 nylon locking nut and the remaining two 10-32x1" screws.

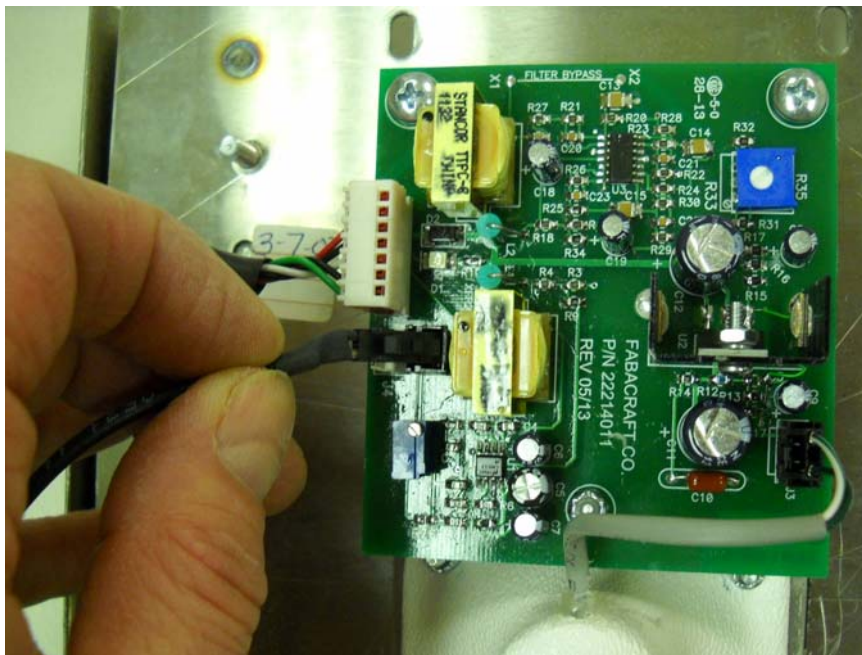
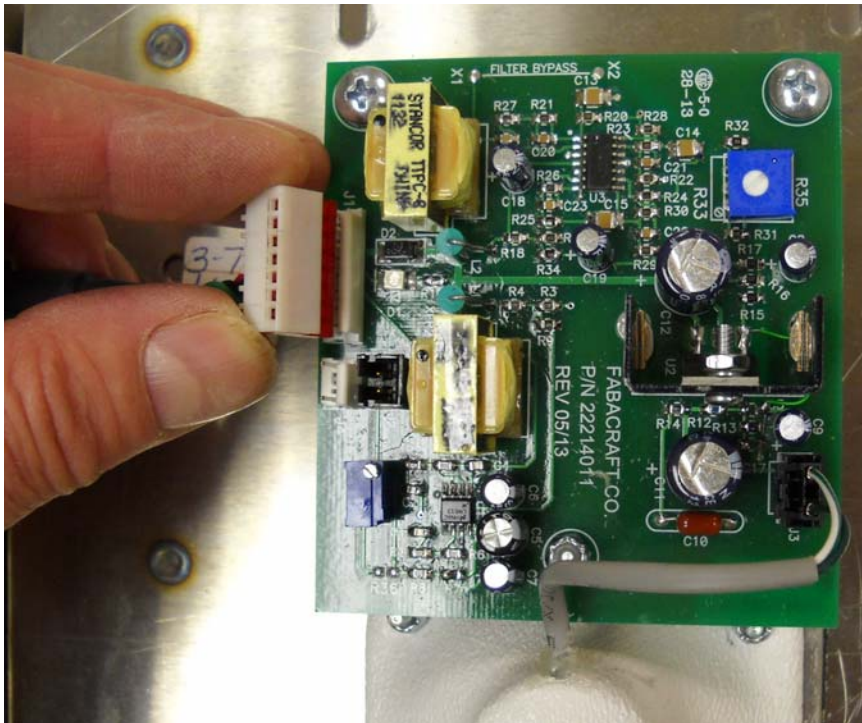






7. Attach the speaker, console harness and microphone to the BavSonic audio board.
(**Note:** If a Diebold to BavSonic Handset Upgrade is being installed, connect the mic and speaker cables from the hook switch to the board and speaker.)





Connecting to the BavSonic Telephone Audio Interface

1. Connect the heat-shrink covered Dongle to the console end of the audio harness and secure with the nuts and screws provided. (It may be necessary to use the D-Sub Gender Adapter supplied in this kit.)



2. Connect the Cat5 cable from the Dongle to the TA Interface's Intercom Connection port.
3. Connect the RJ45 end of the Grey flat cable to the Phone System Connection port.
4. Attach the power cord for the interface to a 110 Vac outlet. (The "Power On" LEDs on the Dongle and the BavSonic Interface should be on when the power pack is connected to 110 Vac.)

Adjusting the Audio Levels

This interface has an integral BEAM (Bavis Enhanced Audio Module) module which is very powerful voice processing system. This system has both echo cancellation and background noise suppression.

There are adjustments for both incoming and outgoing audio levels inside the interface. A small screwdriver is required to make this adjustment. The adjusters are $\frac{3}{4}$ turn.

The adjustment procedure is to have someone in a running vehicle in the drive-thru talking to the technician on the telephone. With the outgoing audio adjusted down. In small increments turn the incoming audio level down. Normally there will not be any appreciable reduction in the sound level at the handset coming from the drive-thru lane. The AGC (automatic gain system) of telephone system is automatically reducing the signal to an acceptable level. When the incoming sound level does decrease, increase the level slightly until the sound comes back up to the normal level. This setting will give the echo cancellation system maximum range. Then adjust the outgoing level for usable audio, not excessively loud. Excessive outgoing audio levels may cause distortion in the incoming audio.

In the early version of the Telephone Audio Interface with BEAM, there are two configurations available for the BEAM system. Configuration selection is via a pin header and jumper located near the 6 position Microfit programming connector on the BEAM board. The standard configuration (0) is selected by having the shorting jumper installed on only one pin. Please consult with the factory for optional configuration (1) which is selected by having the shorting jumper installed on both pins.

In the current version of the interface there are four (4) configurations available. Selecting the configuration is performed by moving the jumpers on the headers marked as JP1 & JP2, (See the Current BEAM Configuration Jumper illustration). To determine which configuration is currently programmed in, without opening the enclosure, watch the flashes of the LED near the Intercom Connection port.

Configuration 1: One flash then pause. Each jumper is on only one pin of the JP1 and JP2 headers.

Bypass – Only used for Factory calibration. No alteration of the audio signal.

Configuration 2: Two flashes then pause. JP1 jumper is on both pins and JP2 jumper is on only one pin.

Normal – Echo Cancellation & Noise reduction.

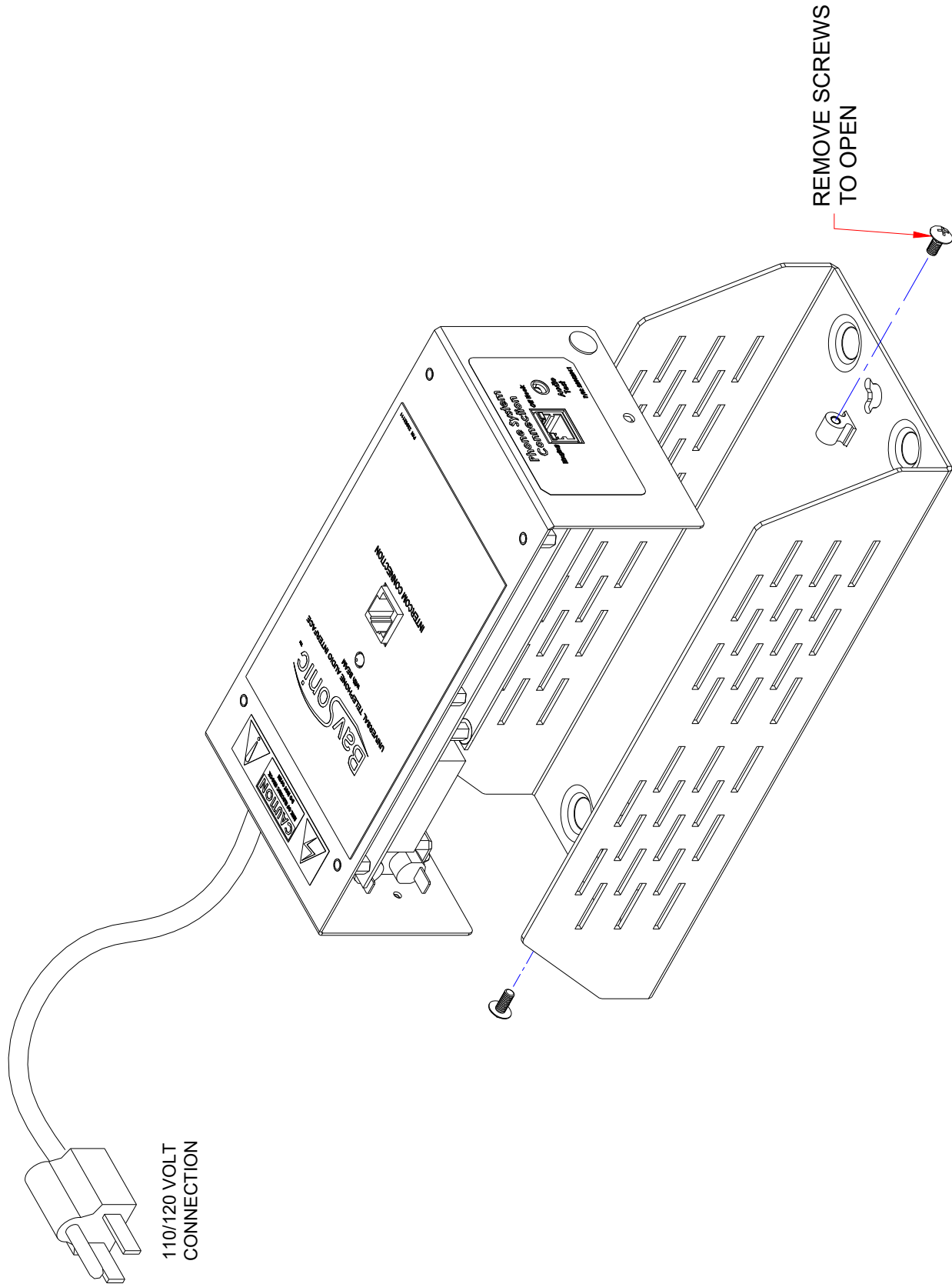
Configuration 3: Three flashes then pause. JP1 jumper is on only one pin and JP2 jumper is on both pins.

Extra Magic – Echo Cancellation, Noise reduction, & Speech boost.

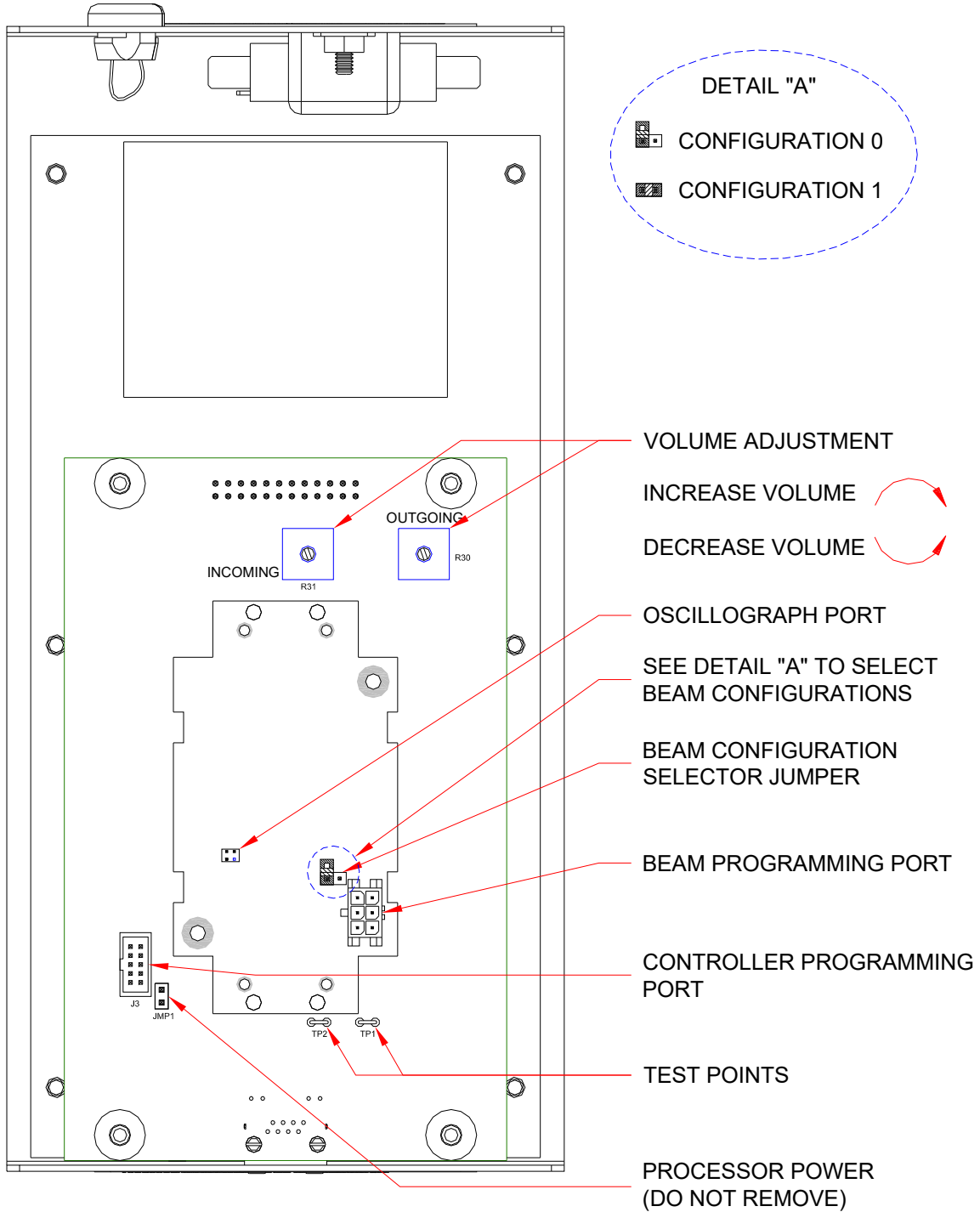
Configuration 4: Four flashes and pause. JP1 jumper is on both pins and JP2 jumper is on both pins.

Reduced Outgoing Audio – There is Echo cancellation and noise reduction with the outgoing audio volume level reduced.

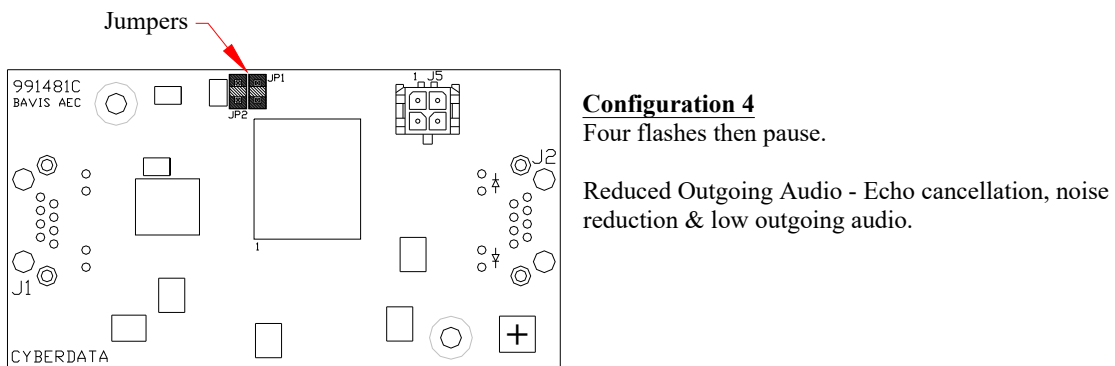
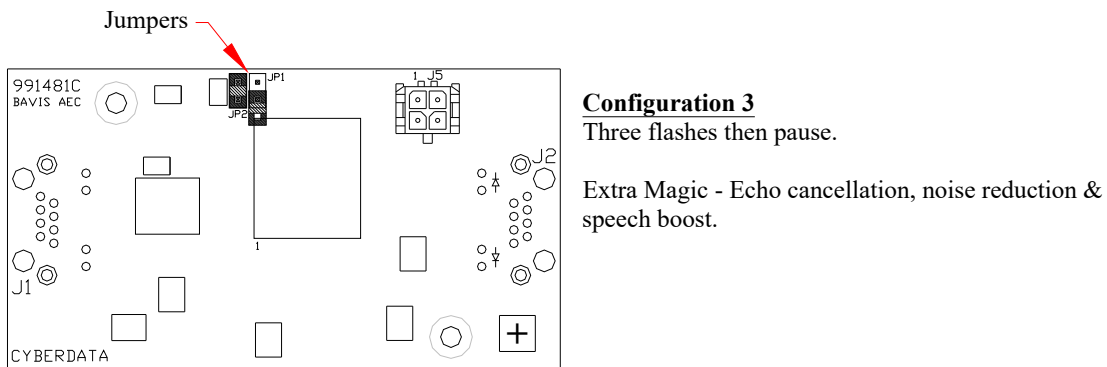
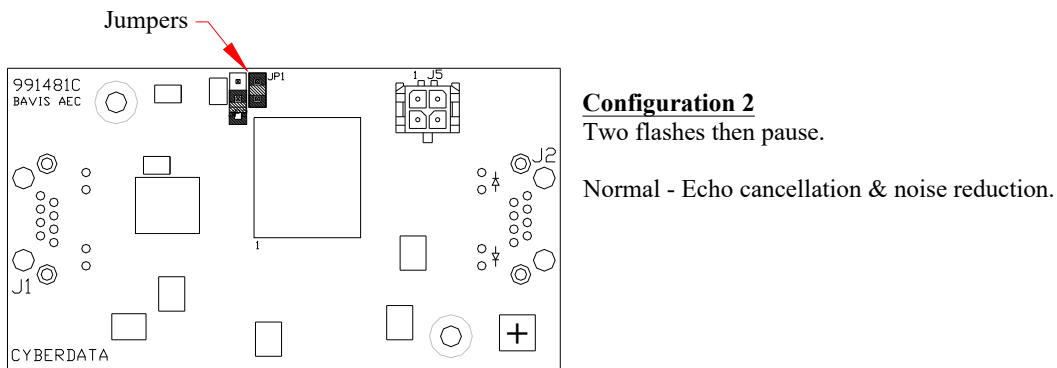
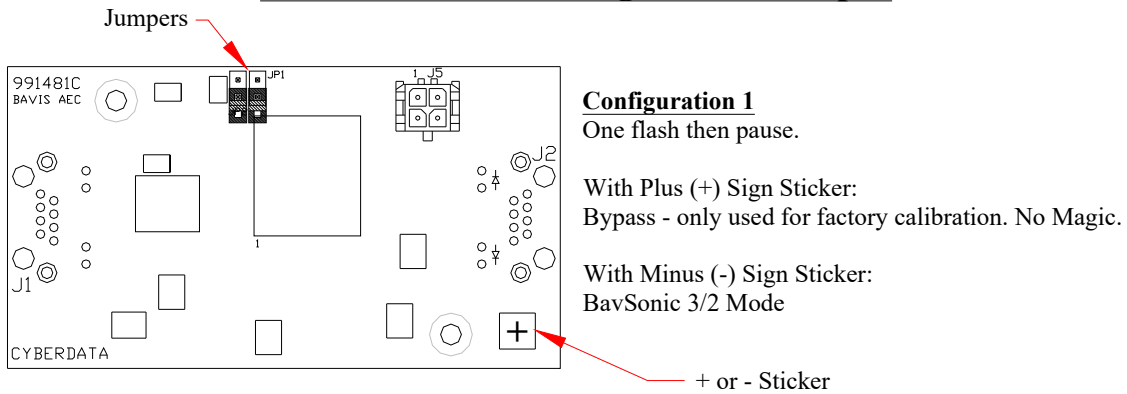
Opening the Interface Enclosure



Early Version Configuration Jumper



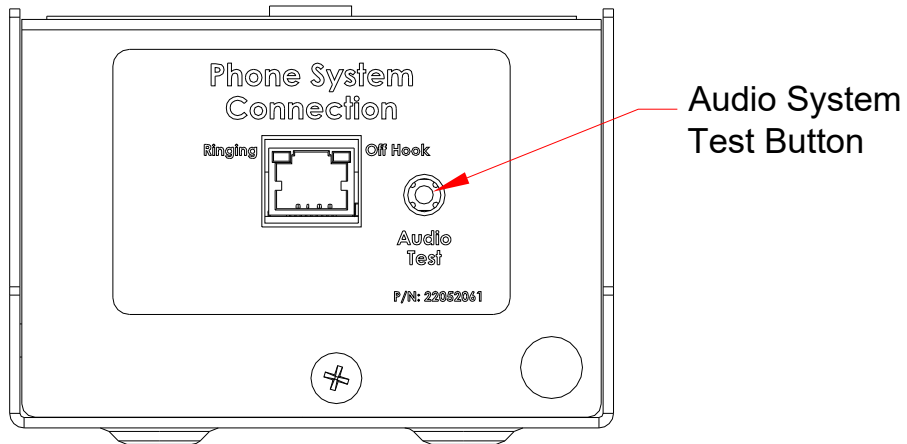
Current BEAM Configuration Jumper



If the audio cannot be adjusted satisfactorily please consult with the factory.

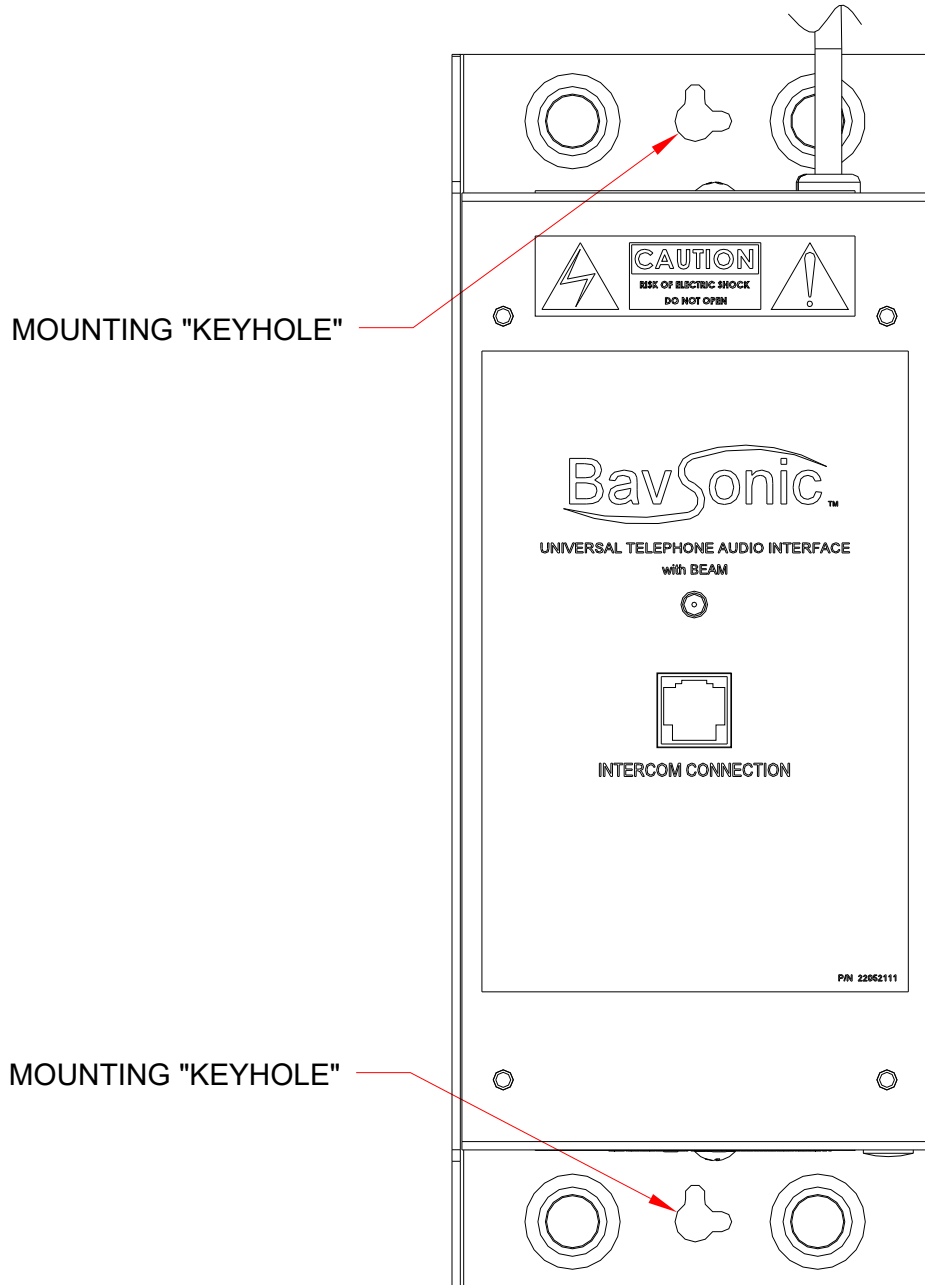
Testing

The single lane Universal Telephone Audio Interface has a built in test feature. The test feature works with the system connected to a telephone or not. Pressing the audio test activates the test mode. Pressing the call button causes the outside microphone to be connected to the outside speaker at half volume. This mode stays active for 5 minutes or until the telephone system goes off hook.



Mounting the Interface

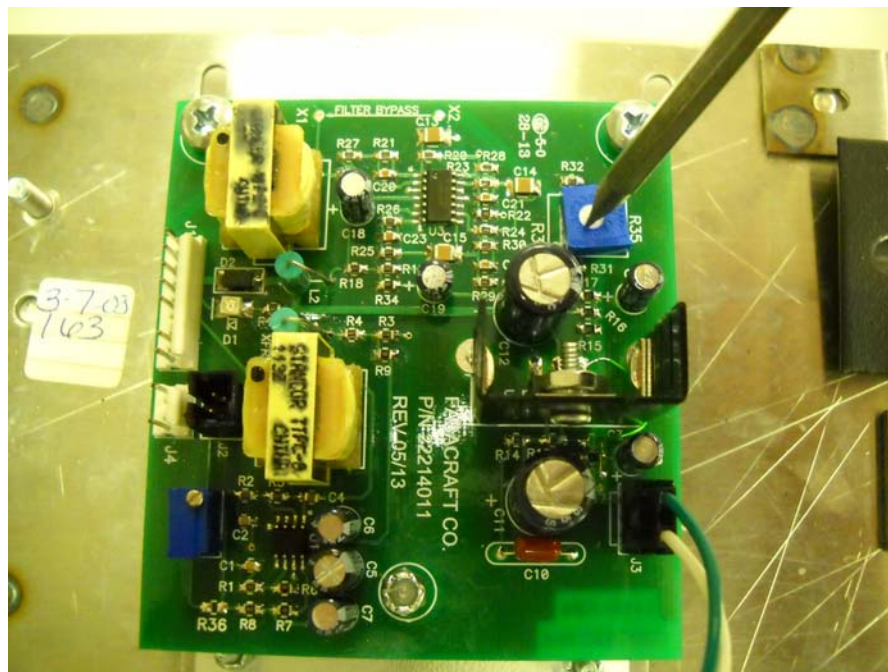
There are two “Keyhole” slots in the base of the assembly’s housing to mount the interface.



Adjusting Audio Volume Levels (for non-BEAM System)

(Note: If using a TA Interface with the BEAM System, DO NOT adjust the pots on the audio board as they have already been calibrated. Make all volume gain adjustments inside of the interface enclosure.)

1. Apply power to the TA Interface to power the system.
2. On the customer audio board you just installed, adjust the Outgoing gain pot R35, (clockwise for louder), until the outgoing volume is sufficient.
3. Close the console and place into position, and then test the audio levels, feedback and the call button tone. Repeat steps 2 and 3 as necessary.



Out-going volume adjustment

For Technical Support call E.F. Bavis at (513) 677-0500 and ask for Audio Technical Support.

