TELEX

AIRMAN 8+

AIRMAN8P-0210 DOUBLE SIDE ANR HEADSET 2PJ,600 OHM | AIRMAN8P-0211 DOUBLE SIDE ANR HEADSET XLR5, 600 OHM | AIRMAN8P-0212 DOUBLE SIDE ANR HEADSET P5P, XLR5,600 OHM | AIRMAN8P-0214 DOUBLE SIDE ANR HEADSET-XLR5, 600 OHM

en Customer Maintenance Manual

Table of contents

1 Record of revisions

Revision No.	Revision Date	Change Description
01	07/2020	Created
02	12/2020	Added Item 31, 32, 33 to the parts list. Minor typo fixes
03	01/2021	Added Headband Pad and Holder for Airman 8+ to the exploded view and parts table
04	04/2022	Updated to include P5P to the AIRMAN8P-0212 information
05	08/2023	Added Revision 04 to Record of revisions table
06	10/2024	Updated to include AIRMAN8P-0214
07	11/2024	Updated graphics to include model -0214, updated instructions for consistency throughout the manual.

2 Purpose of manual

This manual contains information for overhaul and servicing of the Airman 8+ headsets.

2.1 Technical support

A liaison between the customer and factory is provided by the Bosch Product Support Department. Consultation and assistance on technical problems, part information, and availability of local and factory repair facilities is available.
When writing, include all information concerning problems and mail to:
To find the proper address and phone number for your region, please reference https://telex.com/aviation-solutions/contact-telex-aviation/.

2.2 Parts ordering

Replacement parts may be ordered from our parts department. When ordering, please include the following information:

- Model Number
- Part Description
- Part Number
- Quantity

To find the proper address and phone number for your region, please reference https://telex.com/aviation-solutions/contact-telex-aviation/.

2.3 Repairs

In order to maintain the FAA certification, all repairs to the headset must be made only by persons authorized under Part 43 of the Federal Aviation Agency regulations. Bosch offers full support, repair, and recertifcation.

2.4 Safety precautions

Caution!
This information is for use by qualified personnel only. Have all service work and repairs performed by a trained technician.

- Unauthorized changes, modifications, or alterations to the product is prohibited.

Caution!
An ESD protection method should be applied before proceeding with any Mechanical/ Electrical instructions.

Caution!
Use of any replacement part, which does not have the same specifications, may cause malfunction in the device and could make the product not air-worthy.

Notice!
Any material to be disposed of should be done according to local environmental laws.

3 Introduction

General Description

The Telex Airman 8+ is a lightweight noise-reducing headset designed specifically for optimizing pilot communications in commercial and business turbine aircraft. Building on the tradition of the Airman 850 and the Airman 8, Airman 8+ has improved durability, intelligibility, and comfort. The Airman 8+ is among the lightest Active Noise Reduction (ANR) headsets on the market and one of only three FAA TSO C139a approved ANR headsets to utilize Telex's proprietary battery-free system. Soft pliable ear cushions and headband pads combine with dual direction ear cup pivots to provide long flight wearing comfort.

Models Covered

Model Number	Description
AIRMAN8P-0210	DOUBLE SIDE ANR HEADSET 2PJ 600 OHM
AIRMAN8P-0211	DOUBLE SIDE ANR HEADSET XLR5 600 OHM
AIRMAN8P-0212	DOUBLE SIDE ANR HEADSET P5P, XLR5, 600 OHM
AIRMAN8P-0214	DOUBLE SIDE ANR HEADSET-XLR5, 600 OHM

Table 3.1: AIRMAN 8+ Models and Connector/Wiring

Reference View

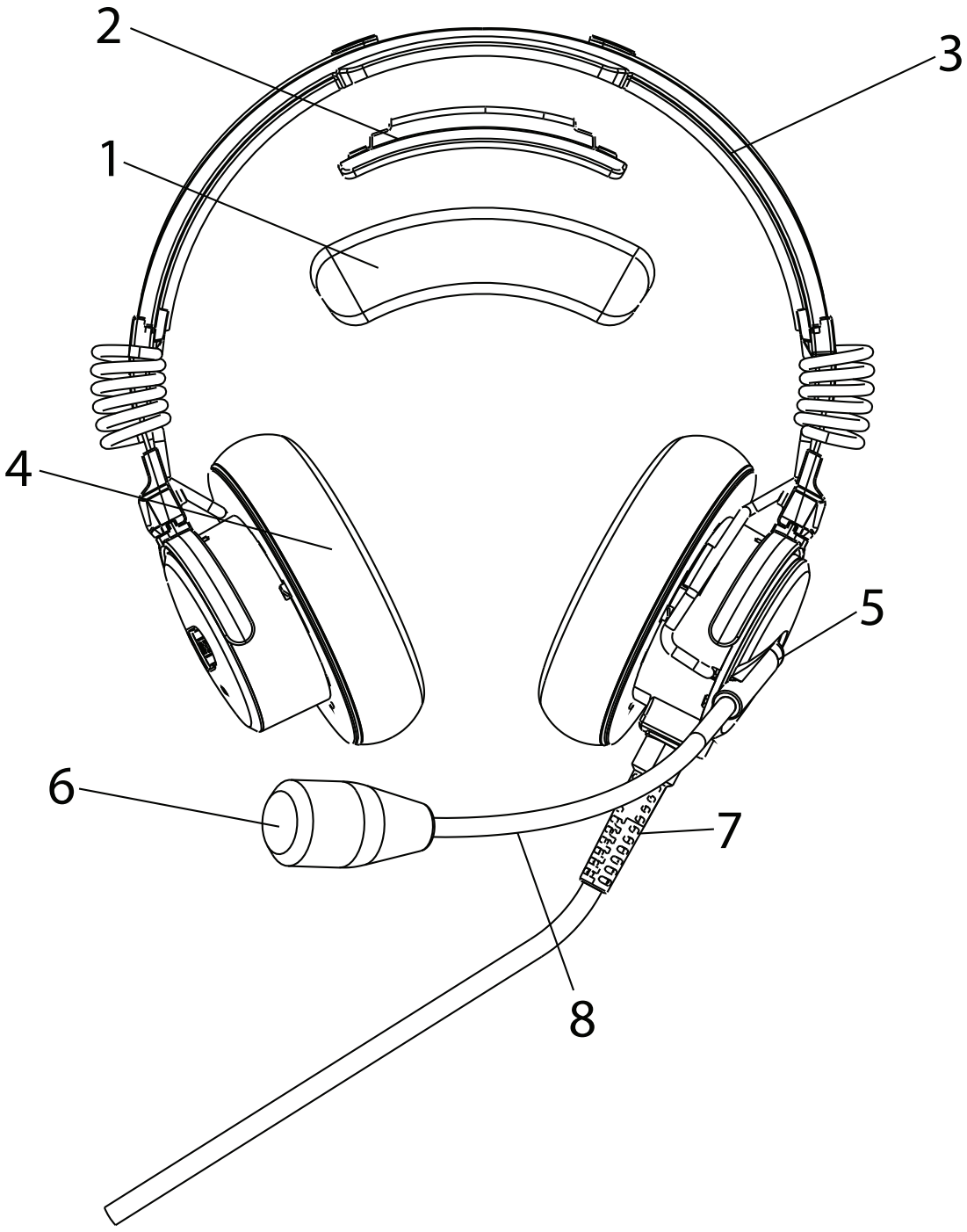


Figure 3.1: Main Component Identification

1. Headband Pad
2. Headband Pad Holder
3. Headset Gliders
4. Ear Cushions
5. Boom Rotator
6. Windscreen / Microphone
7. Cord with Strain Relief
8. Boom

3.1 FAA

The Telex Airman 8+ Headset is approved for aircraft use under FAA TSO-C139A.
The conditions and tests required for the TSO approval of this article are minimum performance standards. It is the responsibility of those installing this article, either on or within a specific type or class of aircraft, to determine that the aircraft installation conditions are within the TSO standards. TSO articles may have separate approval for installation on aircraft. The article may be installed only if performed under 14 CFR part 43 or the applicable airworthiness requirements.

4 Parts list and exploded view

4.1 Exploded view

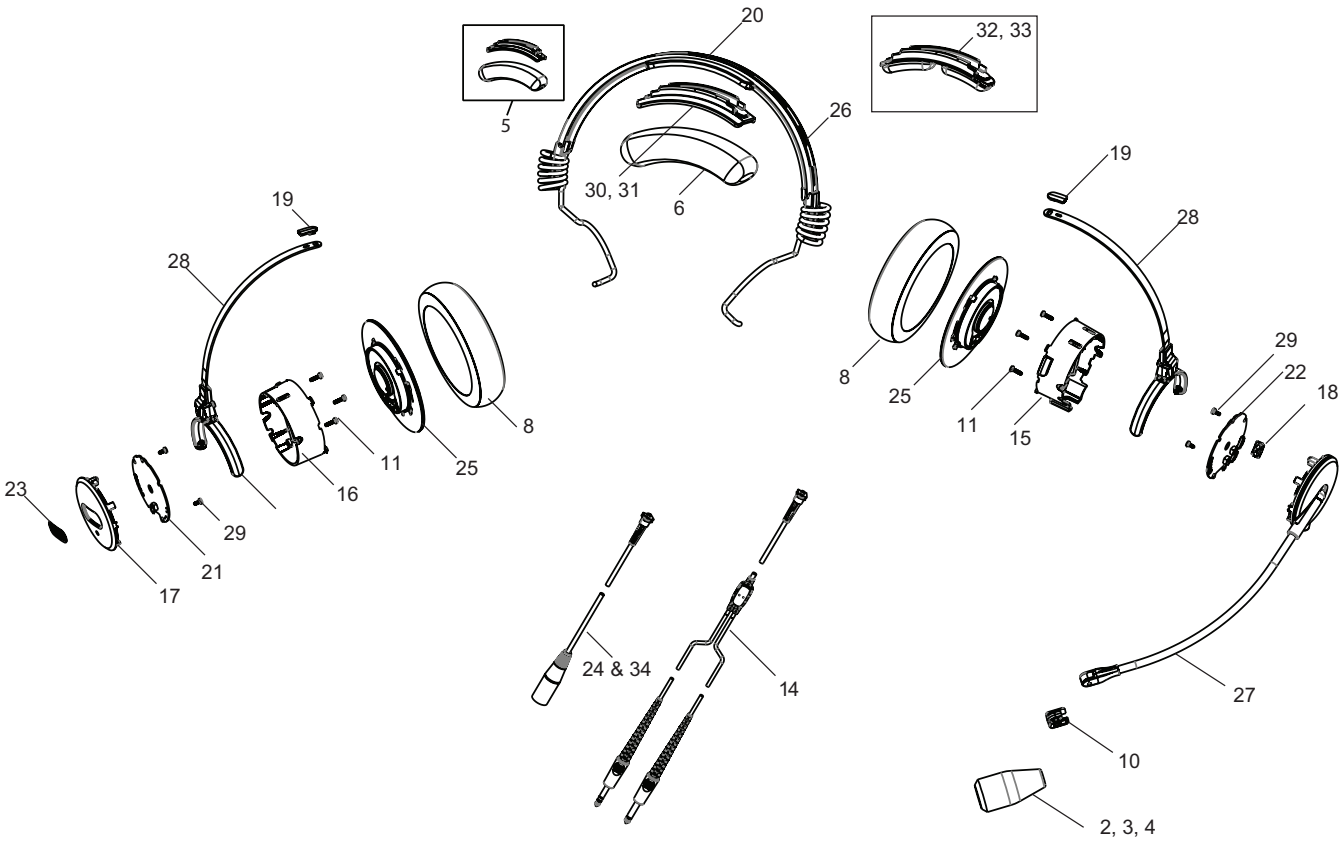


Figure 4.1: Exploded View

4.2 Parts list

Item	CTN	SPR ACC	Part No.	Description	Model			
					-0210	-0211	-0212	-0214
1 [a]	AIRMAN8P-0909	ACC	F01U382338	CARRYING CASE	1	1	1	1
2 [b]	AIRMAN7-0900	ACC	F01U313415	WINDSCREEN (2PCS)	1	1	1	1
	S-F01U327249	SPR	F01U327249	WINDSCREEN (SINGLE)				
3	AIRMAN7-9050	ACC	F01U393945	Windscreens Bulk 50pc Airman 850 / 7 / 8 / 8+	-	-	-	-

Item	CTN	SPR ACC	Part No.	Description	Model			
					-0210	-0211	-0212	-0214
4	AIRMAN7-9100	ACC	F01U393946	Windscreens Bulk 100pc Airman 850 / 7 / 8 / 8+	-	-	-	-
5	AIRMAN8P-0911	ACC	F01U395085	Headband pad and holder for Airman 8+	-	-	-	-
6 [b]	AIRMAN8P-0908	ACC	F01U382336	HEAD PAD	1	1	1	1
	ESP-F01U360393	SPR	F01U383827					
7 [a,b]	AIRMAN8P-0910	ACC	F01U382339	SANITARY COVER, AIRMAN 8+ (10PCS)	1	1	1	1
	ESP-F01U379003	SPR	F01U383830	SPP SANITARY COVER, AIRMAN 8+ (2PCS)				
8 [b]	AIRMAN8P-0903	ACC	F01U382337	EAR CUSHION, AIRMAN 8+ (2PCS)	1	1	1	1
	ESP-F01U347235	SPR	F01U383825	SPP Ear cushion Airman 8+ (2pcs)				
9 [a,b]	AIRMAN7-0904	ACC	F01U313419	CLOTHING CLIP	1	1	1	1
	S-F01U342113	SPR	F01U342113					
10 [b,c]	AIRMAN7.0908	ACC	F01U344857	MIC PREFILTER	1	1	1	1
	S-F01U346184	SPR	F01U346184					
11	590404360	SPR	F01U109816	SCREW, PT, PAN HEAD, K15 X 6MM, BLK ZINC	6	6	6	6
12 [a]	54857101	SPR	F01U150106	WIRE 28 AWG 212 WHITE	2	2	2	2
13 [a]	54857103	SPR	F01U150110	WIRE 28 AWG RED	2	2	2	2
14	S-F01U342083	SPR	F01U342083	CORD UNIT, PJ Y-BLOCK	1	0	0	0

Item	CTN	SPR ACC	Part No.	Description	Model			
					-0210	-0211	-0212	-0214
15	S- F01U342084	SPR	F01U342084	EAR SHELL, BOOM SIDE, AIRMAN 8	1	1	1	1
16	S-F01U342085	SPR	F01U342085	EAR SHELL, NON BOOM SIDE, AIRMAN 8	1	1	1	1
17	S-F01U342086	SPR	F01U342086	COVER, NON BOOM SIDE, AIRMAN 8	1	1	1	1
18	S-F01U342087	SPR	F01U342087	SWITCH ACTUATOR, AIRMAN 8	1	1	1	1
19	S-F01U342088	SPR	F01U342088	GLIDER STOP (2PCS)	1	1	1	1
20	S-F01U342090	SPR	F01U342090	HEADBAND COVER	1	1	1	1
21	ESP-F01U380743	SPR	F01U383834	PCBA, NON BOOM SIDE, AIRMAN 8+	1	1	0	0
	ESP-F01U401632	SPR	F01U406427	PCBA, NON BOOM SIDE, AIRMAN 8+ P5P	0	0	1	0
	ESP-F01U414950	SPR	F01U431988	PCBA, NON BOOM SIDE, AIRMAN 8P-0214	0	0	0	1
22	ESP-F01U380742	SPR	F01U383833	PCBA, BOOM SIDE, AIRMAN 8+	1	1	0	0
	ESP-F01U401631	SPR	F01U406428	PCBA, BOOM SIDE, AIRMAN 8+ P5P	0	0	1	0
	ESP-F01U414952	SPR	F01U431987	PCBA, BOOM SIDE, AIRMAN 8P-0214	0	0	0	1
23	S-F01U342097	SPR	F01U342097	LABEL, TELEX	1	1	1	1
24	ESP-F01U384604	SPR	F01U383824	CORD UNIT, XLR, 5M	0	1	0	0

Item	CTN	SPR ACC	Part No.	Description	Model			
					-0210	-0211	-0212	-0214
	ESP-F01U402172	SPR	F01U406429	SPA CABLE ASSEMBLY, AIRMAN 8P P5P	0	0	1	1
25 [d]	ESP-F01U379469	SPR	F01U389975	SPEAKER ASSY, AIRMAN 8+ (including faceplate and seal)	2	2	2	2
26	S-F01U344918	SPR	F01U344918	OVER HEAD CABLE	1	1	1	1
27	S-F01U344922	SPR	F01U344922	BOOM MIC ASSY, AIRMAN 8	1	1	1	0
	S-F01U428726	SPR	F01U431989	BOOM MIC ASSY, AIRMAN8P-0214	0	0	0	1
28	ESP-F01U360396	SPR	F01U383835	GLIDER YOKE ASSY, AIRMAN 8+	2	2	2	2
29	S-F01U344924	SPR	F01U344924	SCREW, PT PAN HEAD K15 X 3.5MM (25PCS)	4	4	4	4
30	ESP-F01U378961	SPR	F01U389974	SPP Headpad holder Airman 8+	1	1	1	1
31	ESP-F01U359353	SPR	F01U383826	AIRMAN 8+ VELCRO HOOK, ADHESIVE BACK	1	1	1	1
32	ESP-F01U351884	SPR	F01U359827	AIRMAN REFRESH, Headband Pad Holder	1	1	1	1
33 [b]	AIRMAN7-0906	ACC	F01U313421	AIRMAN REFRESH, Headband Pad	1	1	1	1
	S-F01U342089	SPR	F01U342089	SPP Head pad, Airman				
34	35398005	SPR	F01U146873	PLUG NC-5MX-BAG	0	1	1	1

a.Not shown.

b.Either part number is acceptable.

c.Acoustic cloth is included as part of this item.

d.The speaker assembly includes the speaker and the faceplate.

5 Maintenance

The Airman 8+ headset is designed so that ANR performance and boom microphone sensitivity can be adjusted as required to meet specification requirements. These headset adjustments are made in order to alter performance. All other maintenance requires replacement of parts, fixing open wires, or removing shorted wires. See specification instructions for ANR or boom microphone adjustment.

5.1 Recommended maintenance schedule

Notice!
Ear cushions, headband pads, and microphone windscreens are wear items. For proper headset performance, they need to be inspected and replaced if necessary at regular intervals. See the maintenance schedule for more information. Failure to replace items when deterioration or damage is apparent diminishes headset performance.

Task	Per Use	Monthly	6 months
Check boom mic placement	X		
Check ear cup placement	X		
Check headband fit	X		
Clean ear cushions		X	
Clean headband pad		X	
Check connection cable		X	
Inspect and replace windscreen, if necessary			X
Inspect and replace ear cushions, if necessary			X
Inspect and replace headband pad, if necessary			X
Inspect and clean connectors, if necessary			X

Table 5.1: Maintenance Schedule

5.2 Basic inspection

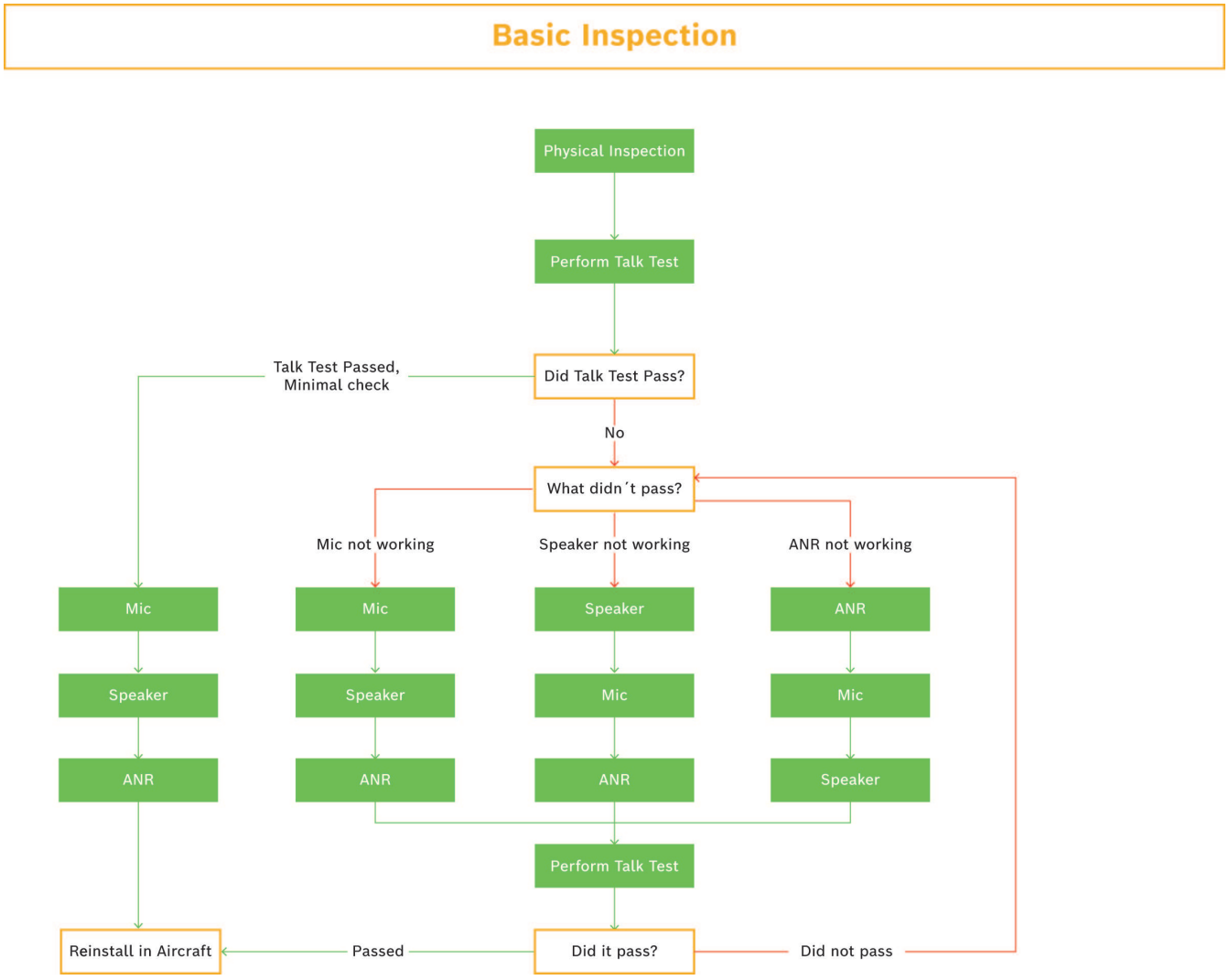


Figure 5.1: Basic Inspection

5.2.1 Physical inspection

Review all plastic parts for cracks or breaks

To review plastic parts, do the following:

– Note any parts which need to be replaced

Review all cables for obvious signs of damage to the insulating materials

To review cables, do the following:

– Look for any cables that have been pulled out of the housings.
– Look for any cables with unnatural or unusual bends or breaks.
– Note any cable assemblies that need to be replaced.

Review user replaceable items

To review user replaceable items, do the following:

– Check ear cushions.
– Check headband pads.
– Check microphone windscreen.
– Check clothing clips.
– Note any replaceable items that need to be replaced.

5.2.2 Talk test

When performing a talk test, things to be aware of:

- Note any unusual or unexpected noises, static, and oscillations.
- Note any distorted audio.
- Turn ANR on and note noise reduction of fans, ambient noise etc.
- Turn ANR off and note noise levels return to normal.
- Verify sound is heard in both ears.

5.3 Microphone troubleshooting

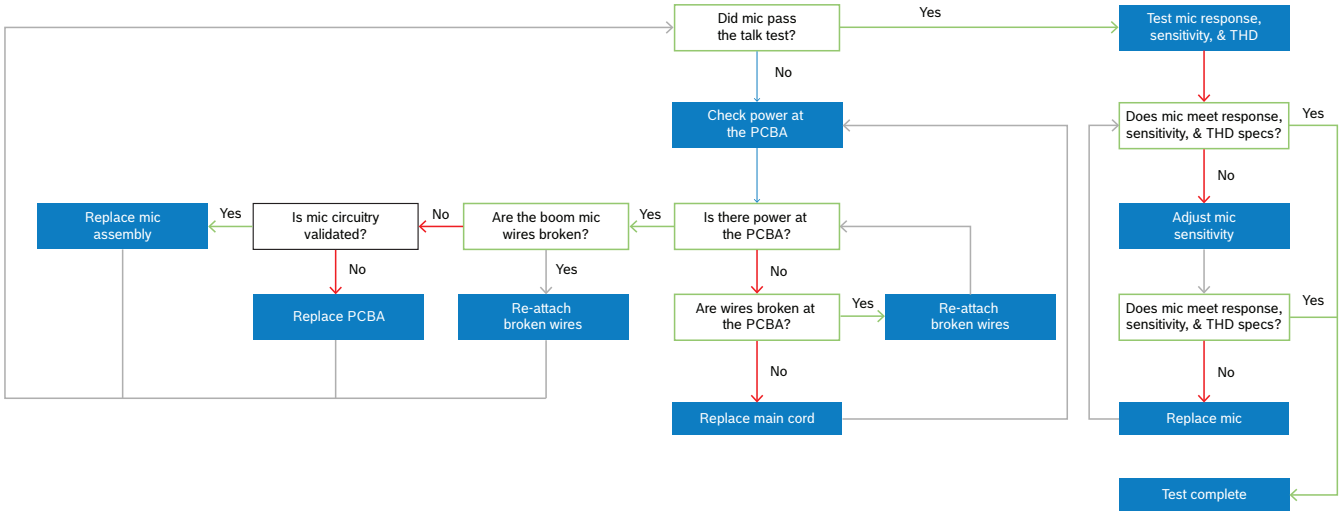


Figure 5.2: Microphone Troubleshooting

5.3.1 Validate continuity from plug to Boom side PCBA

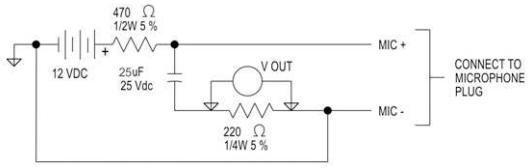
To **validate continuity from the plug to the boom-side PCBA**, do the following:

1. Using an Ohmmeter, place one **probe** on the ring terminal of the PJ-068 plug or pin 3 of the XLR connector.
2. Place the **other probe** at J1 on the PCBA.
3. Record the **measurement**.
4. Using an Ohmmeter, place **one probe** on the sleeve terminal of the PJ-068 plug or pin 4 of the XLR connector.
5. Place the **other probe** at J2 on the PCBA.
6. Record the **measurement**.
   If the reading is approximately zero, continuity is good.
   If any other reading is seen, the continuity is bad. Replace the cable.

5.3.2 Validate mic circuitry

To **validate the mic PCBA**, do the following:

1. Construct a **test circuit**.



2. Connect the **test circuit to the microphone plug** of the headset.
   For more information, see Connectors.
3. Apply an **audio signal/excitation to the microphone**.
   If audio signal is detected, the board is valid.
   If audio signal is not detected, the board should be replaced.

5.3.3 Microphone/amplifier sensitivity test

Notice!
This headset was designed, tested, and approved to FAA TSO C139a. The TSO requires the headset meet the minimum performance specifications as defined in RTCA DO-214A. This document and specifications listed here reference the test procedures, product settings, and equipment used as defined in these standards. Refer to the standard for details on how to perform individual tests.

To **test sensitivity of the microphone**, do the following:

1. Calibrate an **artificial mouth** to generate 94dBSPL for 1kHz tone at 6mm from the center of its opening.
2. Using the test circuit from the mic validation and TSO procedures, measure the **output** of the headset microphone with a true RMS AC voltmeter.

Notice!
Microphone output should be -28±3dBV. If not, make adjustment following section 5.3.4.

5.3.4 Microphone sensitivity adjustment

The microphone gain has been factory-adjusted to the nominal level required for normal radio operation. Microphone sensitivity adjusts by turning the gain adjustment control.
To **adjust the microphone**, do the following:

1. Rotate the **boom mic** clockwise until the microphone gain adjustment access hole is aligned and open.
2. Insert a **2mm x 0.5mm flat-bladed screwdriver** into the gain adjustment access hole.

Notice!
If the gain adjustment access hole is properly aligned, the screwdriver can be inserted approximately ½-inch into the hole. If not properly aligned, the screwdriver only inserts approximately 1/8-inch into the hole.

3. Turn the gain adjustment potentiometer **clockwise** to increase the gain.
   OR
   Turn the gain adjustment potentiometer **counterclockwise** to decrease the gain.

5.3.5 Microphone total harmonic distortion (THD) test

1. Calibrate the sound pressure to be 114 dB SPL at 6 mm from an artificial mouth.
2. Measure the THD of the microphone placed at that location using the same test circuit. It meets the TSO spec when THD is less than 5% from 350 Hz to 6000 Hz.

5.4 Speaker troubleshooting

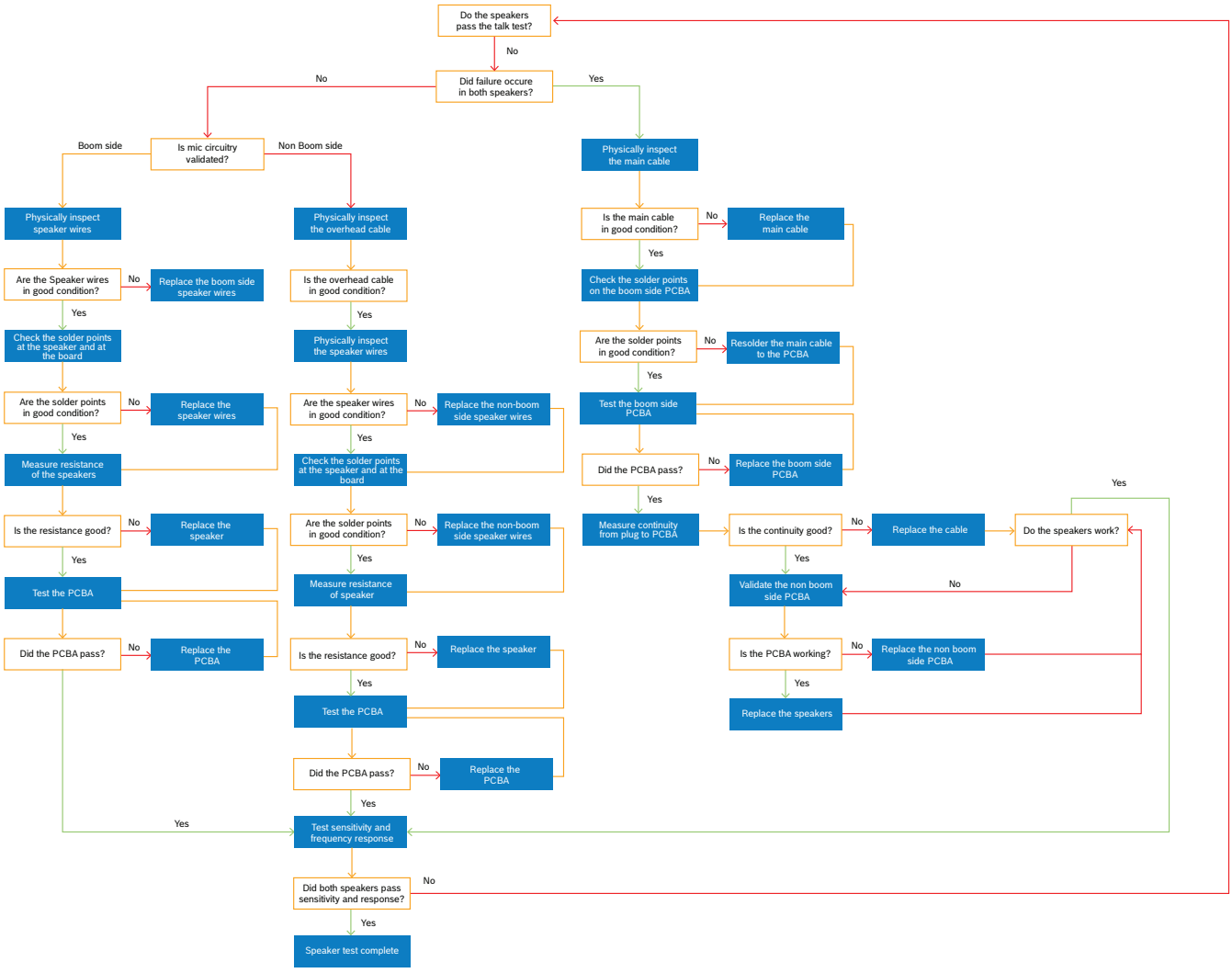


Figure 5.3: Speaker Troubleshooting

5.4.1 Speaker sensitivity and frequency response verification

Notice!
This headset was designed, tested, and approved to FAA TSO C139a. The TSO requires the headset meet the minimum performance specifications as defined in RTCA DO-214A. This document and specifications listed here reference the test procedures, product settings, and equipment used as defined in these standards. Refer to the standard for details on how to perform individual tests.

All models tested, unless noted otherwise.

Transducer Type:	Dynamic
Impedance (at the earphone plug):	600 Ω ±20% @ 1kHz
Sensitivity:	92 dB ±5 dB SPL (normal) 98 dB ±5 dB SPL (high)
Frequency Response:	< 15 dB max. to min. over the range 315 to 3150 Hz
Volume Adjustment Setting	Normal

Table 5.2: Speaker sensitivity and frequency response

5.4.2 Validate continuity from plug to boom-side PCBA

To **validate continuity from the plug to the boom-side PCBA**, do the following:

1. Using an Ohmmeter, place one probe on the **tip terminal of the PJ-055** plug or **pin 1** of the XLR plug.
2. Place the other probe at **J5** on the PCBA.
3. Record the **measurement**.
4. Using an Ohmmeter, place one probe on the **sleeve terminal of the PJ-055** or **pin 2** of the XLR plug.
5. Place the other probe at **J2** on the PCBA for models -0210 and -0211 or on **J6** on the PCBA for models -0212 and -0214.
6. Record the measurement.
   - If the reading is approximately zero, continuity is good.
   - If any other reading is seen, the continuity is bad. Replace the cable.

5.4.3 Validate the PCBA

To **validate the PCBA**, do the following:

1. On the boom side PCBA, supply a 1 kHz sine wave, 1Vrms signal between **J5** and **J2** for -0210 and -0211, **J5** and **J6** for -0212 and -0214.
2. Verify the ANR switch is in the **off position**.
   - If a signal is heard from both speakers, the boards, speakers and wiring are good. If no sound is heard from one or both speakers, a speaker or the wiring is bad. Determine if a speaker needs to be replaced or the wires need re-soldering.
   - If no sound is heard from one or both speakers after the above step, one or both boards are not good and should be replaced.

5.5 ANR troubleshooting

Notice!
The ANR circuits must be powered to perform testing. For the Airman8P-0210, -211, and 0214, connect the headset to the microphone test circuit shown in section 5.3.2. The ANR circuitry for the Airman8P-0212 requires power to be applied to XLR pin #5 for the ANR to function. For this test, apply 12 to 28 VDC to pin #5. Connect ground to pin #2.

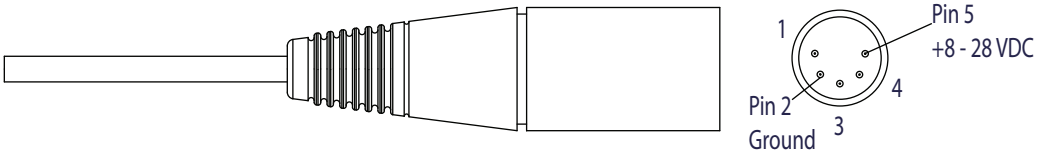


Figure 5.4: Airman8P-0214 ANR Wiring Note

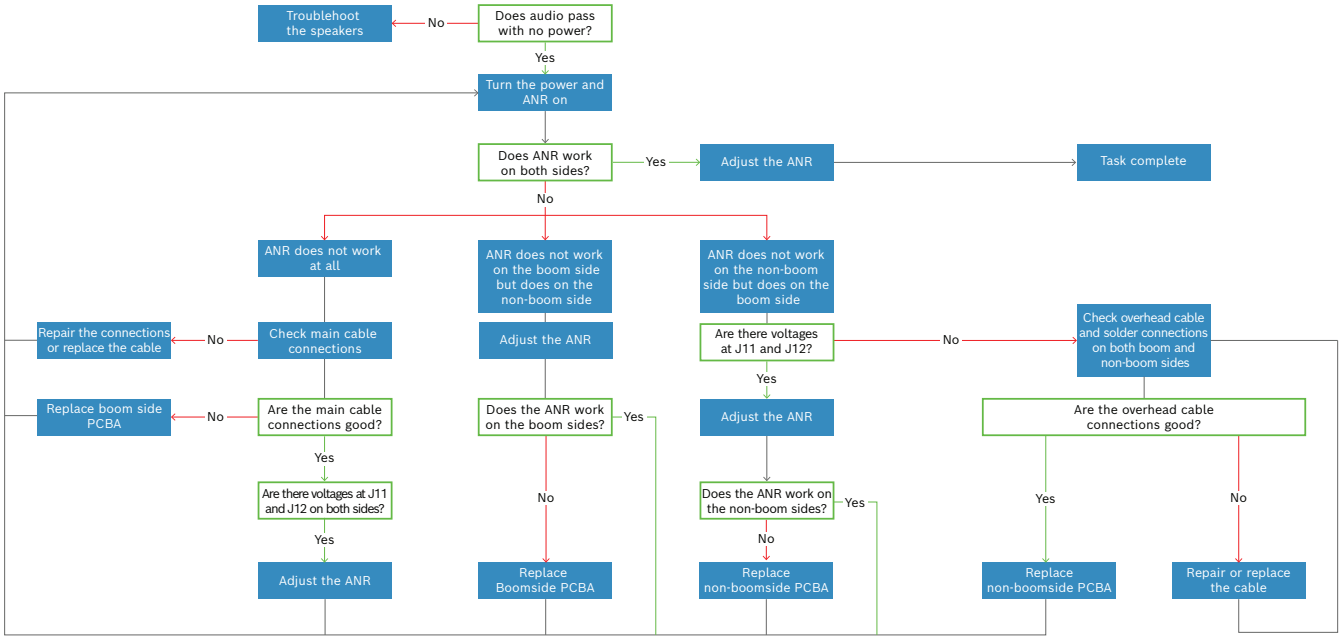


Figure 5.5: ANR Troubleshooting

5.5.1 Measuring ANR circuit voltages and switch function

Notice!
This headset was designed, tested, and approved to FAA TSO C139a. The TSO requires the headset meet the minimum performance specifications as defined in RTCA DO-214A. This document and specifications listed here reference the test procedures, product settings, and equipment used as defined in these standards. Refer to the standard for details on how to perform individual tests.

Notice!
Minimum attenuation requirements are not requirements of FAA TSO. To achieve the maximum attenuation, Bosch approved test system is required.

To **measure voltage and switch function on the boom side**, do the following:

1. Connect the **main cable plugs to a test circuit or power as follows**.
   - Refer to *ANR troubleshooting, page 21* and *Wiring Diagrams and Connectors, page 42* for wiring details.
   - Airman8P-0210 - Connect mic+ of circuit 5.3.2 to the PJ-068 connector ring; connect mic- of the circuit 5.3.2 to the PJ-068 connector sleeve.
   - Airman8P-0211 - Connect mic+ of circuit 5.3.2 to pin 3 of the XLR connector; connect mic- of the circuit 5.3.2 to pin 4 of the XLR connector.
   - Airman8P-0212 - Connect 12-28 Vdc positive to pin 5, negative to pin 2 of the XLR connector.
   - Airman8P-0214 - Connect 12-28 Vdc positive to pin 5, negative to pin 2 of the XLR connector.
2. Using a voltage meter, place the **ground probe at J10**.
3. Place the **positive probe on TP14**.
   If the measurement is 3.3Vdc, the power regulator is good. If the measurement is anything other than 3.3Vdc ±10%, the power regulator is bad. Replace the board.

To **measure the switch functionality on the boom side**, do the following:

1. If the regulator is good, verify the **ANR switch is in the off position**.
2. Place the **positive probe at J11**.
   If the measurement is near zero, the switch is open.
3. Move the **ANR switch to the on position**.
   If the measurement is at 3.3Vdc ±10%, the switch is good. If the measurement is anything else, the switch is bad. Replace the board.

To **measure the fail-safe control logic for ANR**, do the following:

1. Verify the **ANR switch is in the on position**.
2. Place the **voltage meter probe at J12** on the boom-side.
   If the measurement is -6Vdc or more negative, the fail-safe logic is working properly. If the measurement is anything more positive -6Vdc, the fail-safe logic is not working. Replace the board.

To **measure voltage and switch function on the non-boom side**, do the following:

1. If the boom side is good, place the **positive probe at J11 on the non-boom side**.
   If the measurement is near 0, the switch is open
2. Move the **ANR switch to the on position**.
   If the measurement is at 3.3Vdc ±10%, the switch is good. If the measurement is anything else, the switch is bad. Replace the board.

To **measure the fail-safe control logic for ANR**, do the following:

1. Verify the **ANR switch is in the on position**.
2. Place the **voltage meter probe at J12 on the non-boom-side**.
   If the measurement is -6Vdc or more negative, the fail-safe logic is working properly. If the measurement is more positive than -6Vdc, the fail-safe logic is not working. Replace the board.

Notice!
For board replacement, contact Bosch ASA or a Bosch certified facility for replacement and adjustment.

5.6 Cleaning the headset and connectors

Caution!
Do not allow alcohol or any liquid to touch the speaker or microphone element directly.

To **clean the headset**, do the following:

- Using a mild detergent with water and a soft towel, or isopropyl alcohol wipes, clean the plastic and metal headset parts.

Caution!
Do not soak or allow liquid to puddle on the unit.

5.7 Cleaning the ear cushions and headband pads

Caution!
Do not soak the cushions or pads.

To **clean the ear cushions and headband pad**, do the following:

- Using a soft towel dampened with water or isopropyl alcohol (not wet) or isopropyl alcohol wipe, gently wipe the **ear cushions and headband pad** thoroughly.

5.8 Replacing ear cushions and headband pads

To ensure optimal product performance, it is recommended you replace ear cushions and headband pads periodically (every six months, or sooner if needed). See *Recommended maintenance schedule, page 15*.
For detailed instructions on replacing the ear cushions, refer to *Ear cushion replacement, page 25*.
For detailed instructions on replacing the headband pads, refer to *Headband pad and headband pad replacement, page 26*.

5.9 Installing and replacing the hygenic covers

Notice!
Two hygienic covers are included with the headset. However, extra hygienic covers can be purchased separately.

To **replace the hygienic covers**, do the following:

1. Grasp the **edge of the hygienic cover** where it folds into the slot on the ear cup.
2. Gently pull the **hygienic cover** up and away from the ear cup.
3. Starting at the top of the ear cup, carefully work the **cover** around the ear cup until it is in place.

5.10 Replacing the windscreen

The foam windscreen, once removed from the microphone, can be cleaned using low pressure air to blow contaminates off from the exterior. If low-pressure air does not provide effective results, the windscreen should be replaced.

Notice!
Do not use any liquid on the foam windscreen.

To **remove the windscreen**, do the following:

1. Take care to **pull the sides of the windscreen away** from the mic pre-filter wings before removing the windscreen to avoid damaging the windscreen or microphone.

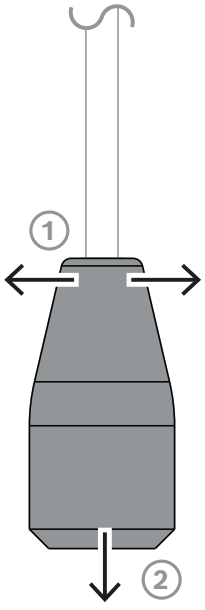


Figure 5.6: Mic Windscreen Removal and Replacement

2. Grasp the **microphone windscreen** and gently pull away from the microphone.

To **replace the windscreen**, do the following:

- Slide the **new windscreen** over the microphone.

5.11 Headset storage

To **store the headset**, do the following:

1. Move the **boom mic above the headband**.
2. Coil the **cord** into a loop.
3. Place the **coiled cord and headset** in the carrying case.

6 Disassembly

The following procedure describes the complete disassembly of the Airman 8+ headset.

Notice!
The removal process requires the following steps to be followed in the order described. Assembly is the reversal of the disassembly procedure. Please take care when disassembling to note details that may be required in the reassembly process, such as the locations of disconnected wires.

When soldering, be careful not to touch the plastic housing of the headset/headphone with the soldering iron.

Notice!
Only disassemble parts that are necessary for the repair.

6.1 Ear cushion replacement

To ensure optimal product performance, replace cushions and pads periodically.
For the recommended maintenance schedule, please refer to *Recommended maintenance schedule, page 15*.

To **remove the ear cushions**, do the following:

1. Grasp the **edge of the ear cushion** where it folds into the slot on the ear cup.
2. Gently pull the **ear cushion up and away** from the ear cup.

To **replace the ear cushions**, do the following:

1. Starting at the **top of the ear cup** (1), carefully work the **cushion around the cup** (2) until it is **in place** (3).

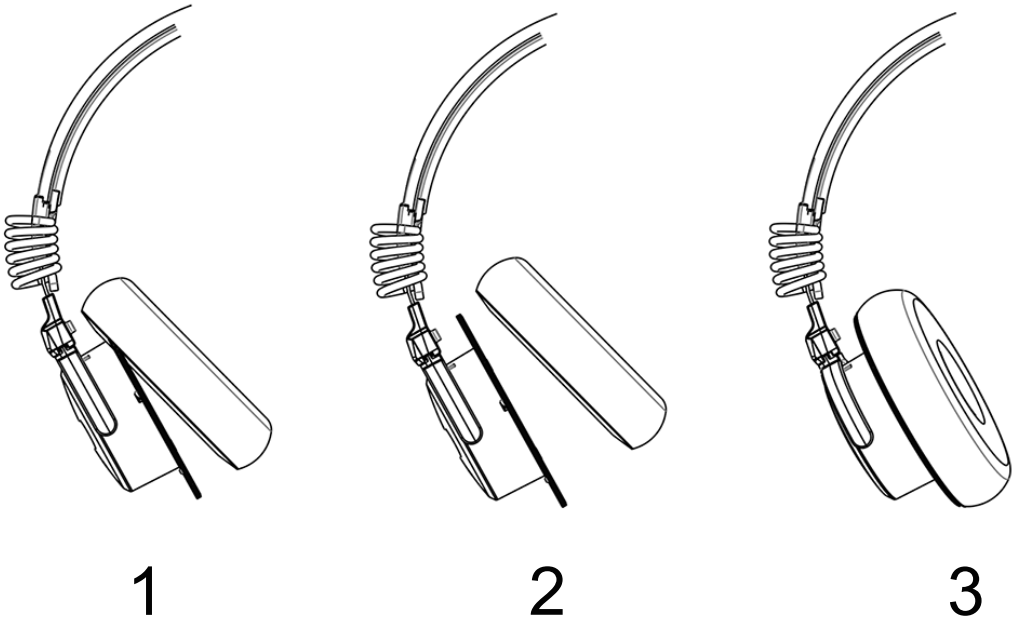


Figure 6.1: Ear Cushion Removal and Replacement

2. Verify the **replacement** is acceptable by visually inspecting around the cushion before use.

6.2 Headband pad and headband pad replacement

The Airman headsets come with two styles of headpads, a low profile headpad as well as a thick, more cushioned headpad. The thick headpad comes installed on the headset.
To **change to a different style headpad**, do the following:

1. At one end of the headband pad holder, carefully slide the **holder** from the headband cover.

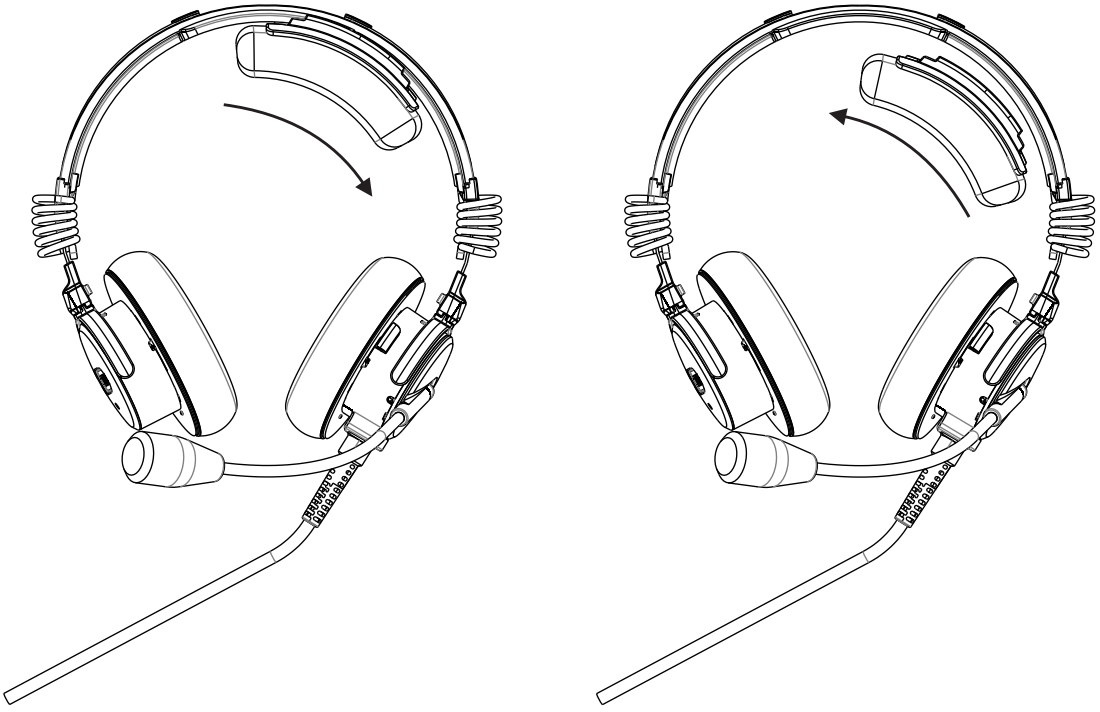


Figure 6.2: Headband pad and Headband Pad Replacement

2. With the new headband pad holder, slide the **headband pad holder** over the headband cover.

The thicker headpad is attached to its holder with Velcro
To **replace the headband pad**, do the following:

1. Grasp the **edge** of the headband pad.

Figure 6.3: Removal of Thick Headpad from Holder

2. Gently pull the **headband pad** away from the headpad holder.
3. Align the **new headband pad** with the Velcro on headpad holder.

NOTE: The low profile headpad is not removable from its holder.

Figure 6.4: Installing New Headband Pad

1. Firmly press **the new headband pad** into place.

6.3 Remove the mic prefilter

To **remove the prefilter**, do the following:

- Carefully pry the **prefilter** from the mic.

6.4 Remove the yoke assembly from the headband assembly

To **remove the yoke assembly from the headband assembly**, do the following:

1. Use a fingernail to lift the **bottom edge of the black plastic spacer**.
2. Swivel the **black plastic spacer** to the side and remove it from the assembly.

3. Slide the **yoke assembly** off of the headband.

6.5 Boom side disassembly

To **remove the speaker assembly and sleeve**, do the following:

1. At the same time, push the **two retaining cams** located in the speaker assembly out of the way.
2. Rotate the **speaker faceplate** approximately 15° clockwise.

3. Using a T-5 screwdriver, remove **three screws** (as shown).

4. Remove the **housing and the yoke/glider assembly**.

5. Using a T-5 screwdriver, remove **two screws** (as shown).

6. Remove the **PCBA**.
7. Using a soldering iron, carefully **disconnect the wires** from the speaker, overhead cord, boom mic assembly, and ANR mic solder terminals, as needed.

Notice!
Take care to avoid touching the plastic housing with the soldering iron.

6.6 Non-boom side disassembly

To **remove the speaker assembly and sleeve**, do the following:

1. Pushing the two retaining cams simultaneously on the speaker assembly, rotate the **speaker faceplate approximately 15° clockwise**.

Notice!
To avoid pulling the wires from the board, do not pull the speaker assembly more than 12mm from the ear shell.

2. Using a T-5 screwdriver, remove **three screws** (as shown).

3. Remove the **housing and the yoke/glider assembly**.

4. Using a T-5 screwdriver, remove **two screws** (as shown).
5. Remove the **PCBA**.
6. Using a soldering iron, carefully disconnect the **wires from the speaker and overhead cord**, and boom mic solder terminals, as needed.

7 Assembly

7.1 Boom side assembly

To **assemble the boom side assembly**, do the following:

1. Solder the **overhead cord** to the PCBA.

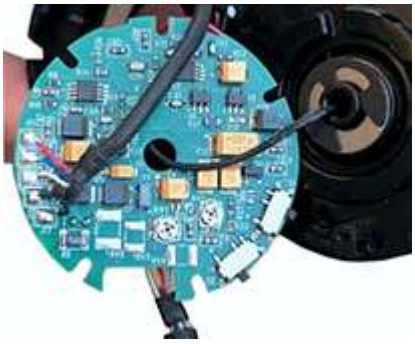
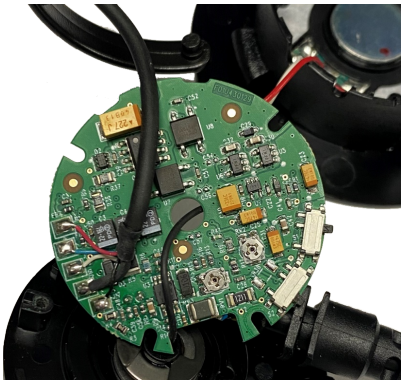
		Models -0210, -0211, -0212	Model -0214
J11	Red		
J12	Blue		
J9	White		
J10	Shield		
J17	Black		

Table 7.1: Boom Side Overhead Cable Wiring

2. Solder the **cable assembly** to the PCBA.
3. Thread the **boom mic wires** through the center hole.
4. Using the two shorter screws, attach the **PCBA** to the boom mic assembly.
5. Solder the **boom mic wires to the PCBA**.

Notice!
Use shield as an anchor point so there is slack on smaller wires.

		Models -0210, -0211, -0212	Model -0214
J7	Red		
J8	Green		
J18	Shield		

Table 7.2: Boom Mic Wiring, -210, -211, -212

6. Solder the main cord to the PCBA

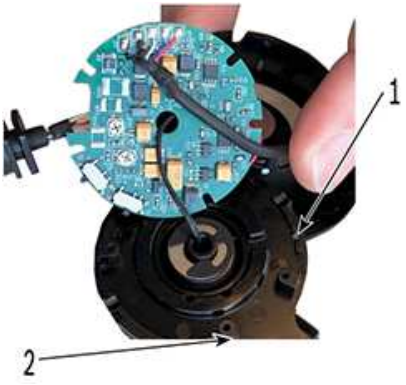
	Airman8P-0210	Airman8P-0211	Airman8P-0212	Airman8P-0214
J5	Yellow			
J6	No connection		Black	
J2	Shield or Drain + Blue			
J1	White			
J15	No Conn.	Red		

Table 7.3: Main Cord Wiring

7. Route the **speaker wires** through the housing and solder to the PCBA.

J13	Red
J14	White

8. Route the **overhead cord** and the **headset cord** through the corresponding grooves provided on the boom.

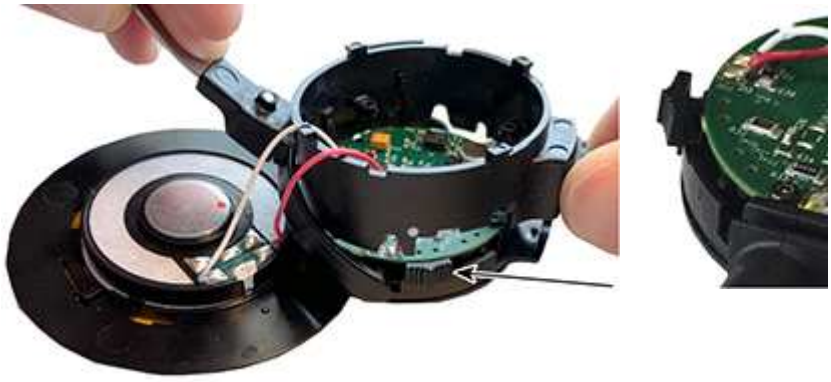
Models -0210, -0211, -0212	Model -0214	
		1 Path for overhead cable 2. Alignment post for PCBA screw

9. Place **yoke** on the housing.

Notice!
Take care to verify the orientation of the yoke, because it does not rotate 360°.

10. Place the **switch cover** on the ANR switch.

Models -0210, -0211, 0212



Model -0214

Notice!
The side with the deep grooves goes toward the speaker.

11. Place the **housing** on the boom mic assembly.
12. Make sure the overhead cord is in the correct slot and the jacket is fully inside the housing. Also, make sure the headset cord is properly located in the housing.

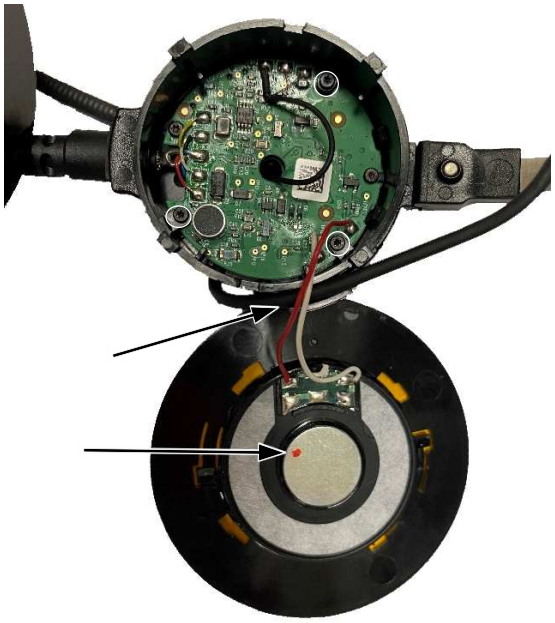
Models -0210, -0211, -0212

Model -0214

13. Using a T-5 screwdriver, replace the **three screws** (as shown) to attach the yoke and housing to the PCBA.

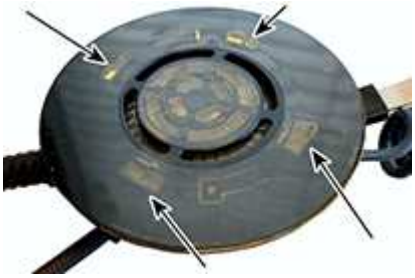
Models -0210, -0211, -0212

Model -0214



1. Position the **overhead cord** in the guide, and then align the knob of the faceplate toward the bottom.
2. Align the **four tabs** on the faceplate, and then rotate counterclockwise to lock.

Notice!
Verify all four tabs engage and retaining tabs are in the groove.



3. Carefully wind the **overhead cord** around the glider.

7.2 Non-boom side assembly

To **assemble the non-boom side assembly**, do the following:

1. Solder the **overhead cord** to the PCBA.

		Models -0210, -0211, -0212	Model -0214
J11	Red		
J12	Blue		
J9	White		
J10	Shield		
J17	Black		

Table 7.4: Non-boom Side Overhead Cable Wiring

2. Using the two shorter screws, attach the **PCBA** to the cover.

Models -0210, -0211, -0212	
	
Model -0214	
	

1	Alignment posts for PCBA screw
2	Path for overhead cord

3. Solder the **wires** to the speaker.

Notice!
Align the red wire with the polarity dot on the speaker (as shown)

		Models -0210, -0211, -0212	Model -0214
J13	Red		
J14	White		

Table 7.5: Non-boom Side Speaker Wiring

4. Route the **speaker wires** through the housing and solder to the PCBA.
5. Place **yoke** on the housing.

Notice!
Take care to verify the orientation of the yoke, because it does not rotate 360°.

6. Place the **cover** on the housing.

1. Using a T-5 screwdriver, replace the **three screws** (as shown) to attach the yoke and housing to the PCBA.

Models -0210, -0211, -0212

Model -0214

2. Position the **overhead cord** in the retaining clip and align the **knob** of the faceplate toward the bottom.
3. Align the **four tabs** on the faceplate, and then rotate counterclockwise to lock.

Notice!
Verify all four tabs engage and retaining tabs are in the groove.

4. Carefully wind the **overhead cord** around the glider.

7.3 Attach the prefilter

To **attach the prefilter**, do the following

- Carefully clip the **prefilter** to the mic.

7.4 Replace the yoke assembly on the headband assembly

To **replace the yoke assembly on the headband assembly**, do the following:

1. Slide the **yoke assembly** onto the headband.

2. Place the **glider stop** in the appropriate hole on the glider.
3. Swivel the **spacer** in line with the glider.

4. Click the **bottom edge of the black plastic spacer** into the retaining hole.

7.5 Reinstall the headband cover

To **reinstall the headband cover**, do the following:

1. Take care to verify the **overhead cord** lays between the guides.
2. Ensure the **cover** fully encloses around the headband at both sides.

8 Wiring Diagrams and Connectors

Airman 8+ Series headsets are available with multiple connector styles depending on the application of use. All models utilize custom cables developed specifically for cockpit use. All connection points implement strain and bend relief features to provide long-term durability. Shielded wire throughout the headset protects against **RFI** (Radio Frequency Interference) and **EMI** (Electromagnetic Interference).

PJ-068 / PJ-055 Connector Diagram for Airman8P-0210

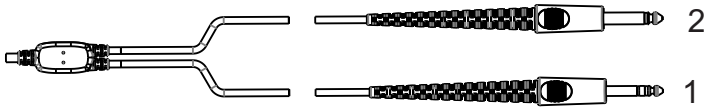


Figure 8.1: PJ Connector

1	PJ-068 or equivalent	Description
	Tip	Not Used
	Ring	Mic Signal (ANR Power +)
	Sleeve	Mic GND (ANR Power -)

Table 8.1: PJ-055, Mic Plug Connections

2	PJ-055 or equivalent	Description
	Tip	Headphone Signal
	Sleeve	Headphone GND

Table 8.2: PJ-055, Headphone Plug Connections

5-Pin XLR Aircraft Cable

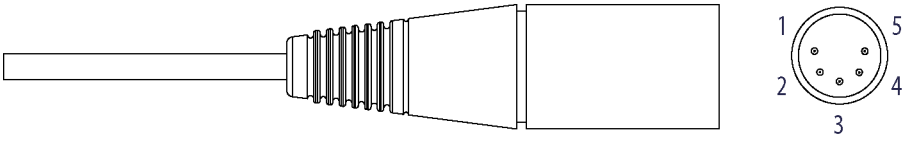


Figure 8.2: 5-pin XLR Connector

Pin	Description	Color
1	Headphone Signal	Yellow
2	Headphone GND	Shield or Drain + Black
3	Mic Power and Signal (ANR Power +)	White
4	Mic Power and Signal (ANR Power -)	Shield or Drain + Blue
5	ANR Power	Red

Table 8.3: 5-pin XLR Wiring Airman8P-0211

Pin	Description	Color
1	Headphone Signal	Yellow
2	Headphone GND (-0214 ANR Power-, see note)	Black
3	Mic Power and Signal (-0214 ANR Power+, see note)	White
4	Mic Power and Signal (-0214 ANR Power-, see note)	Shield or Drain + Blue
5	ANR Power+	Red

Table 8.4: 5-pin XLR Wiring Airman8P-0212, -0214

Notice!
For -0214, if pin 5 power is not available, ANR will be powered by mic power and the GND pins (2 and 4) are tied together.

Notice!
The Airman 8+ automatically uses power from pin 5, if it is provided by the aircraft.
The Airman8P-0212 MUST have power on pin 5 for ANR to function. If pin 5 power is not available, use the AIRMAN8P-0211 or AIRMAN8P-0214 version for ANR functionality.

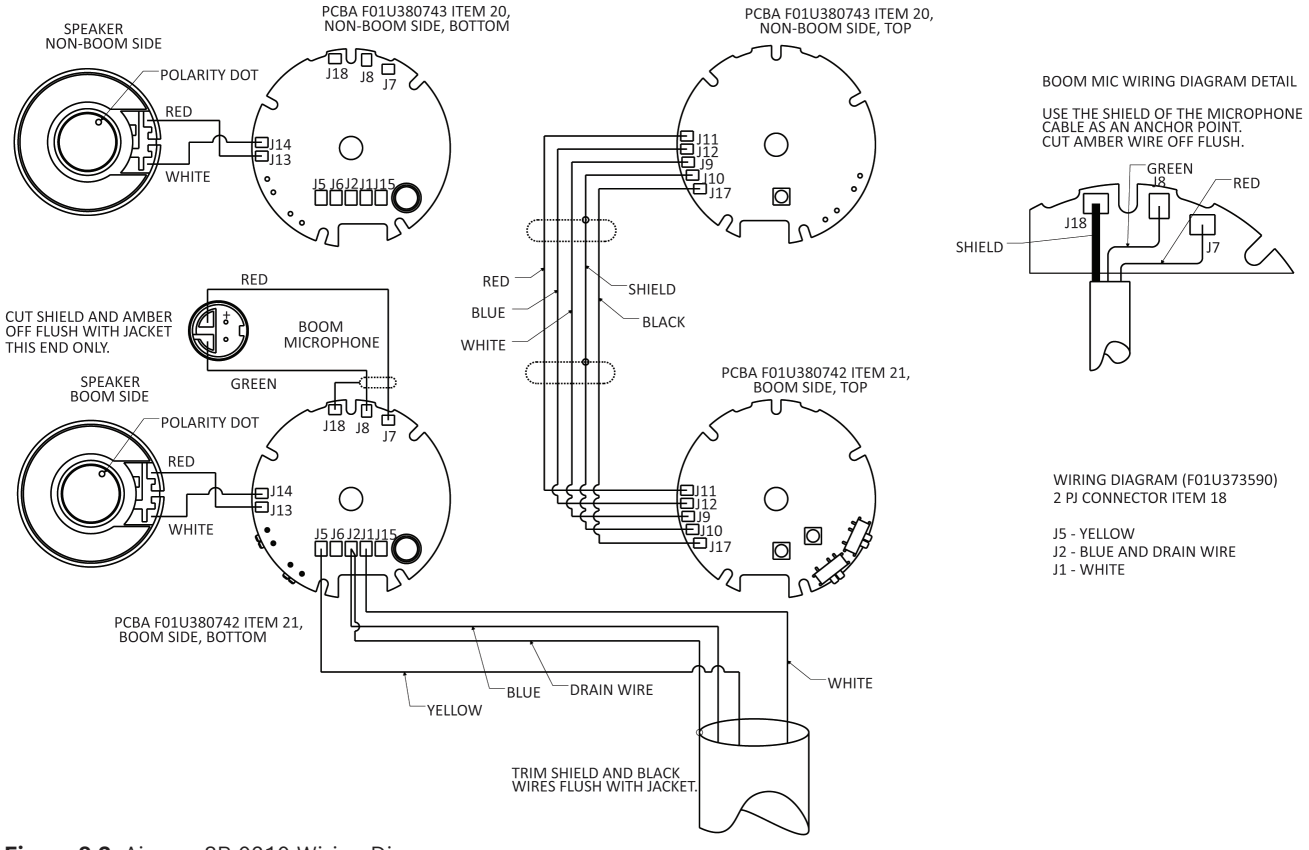


Figure 8.3: Airman 8P-0210 Wiring Diagram

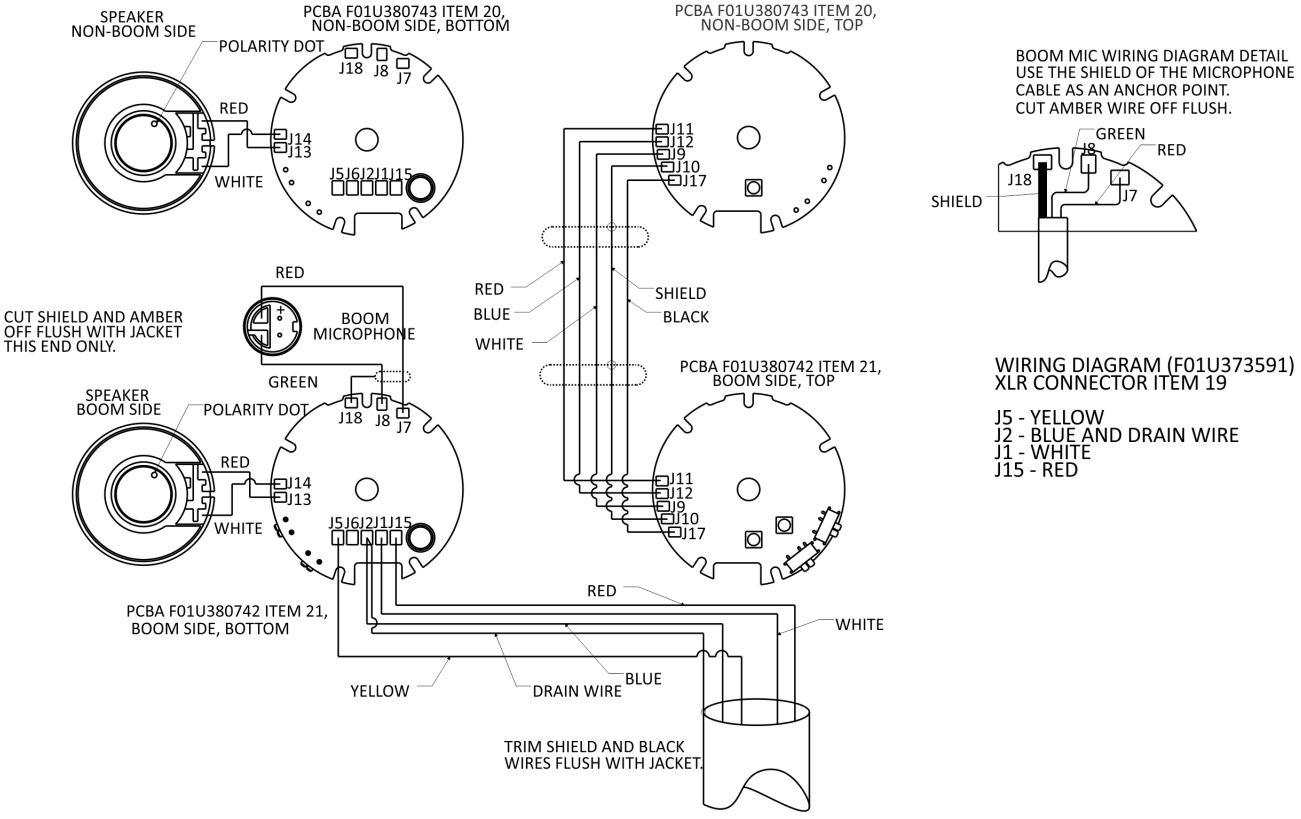


Figure 8.4: Airman 8P-0211 Wiring Diagram

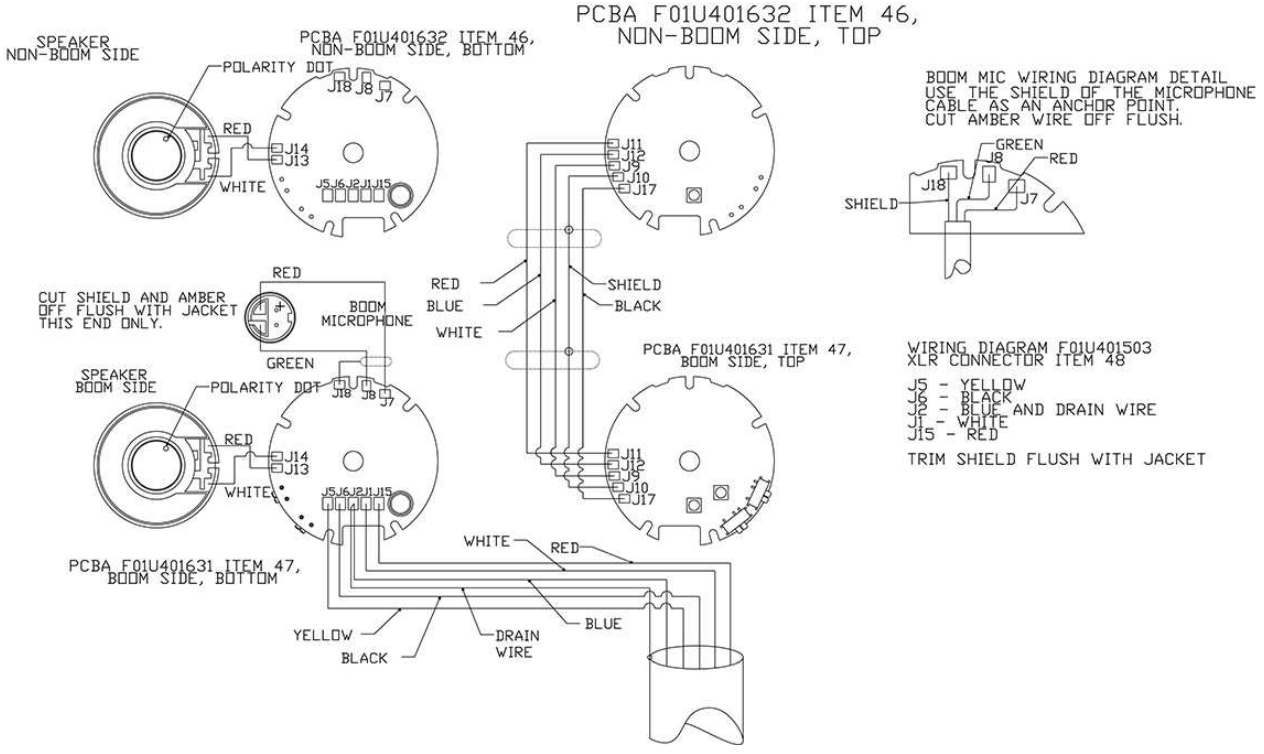


Figure 8.5: Airman8P-0212 Wiring Diagram

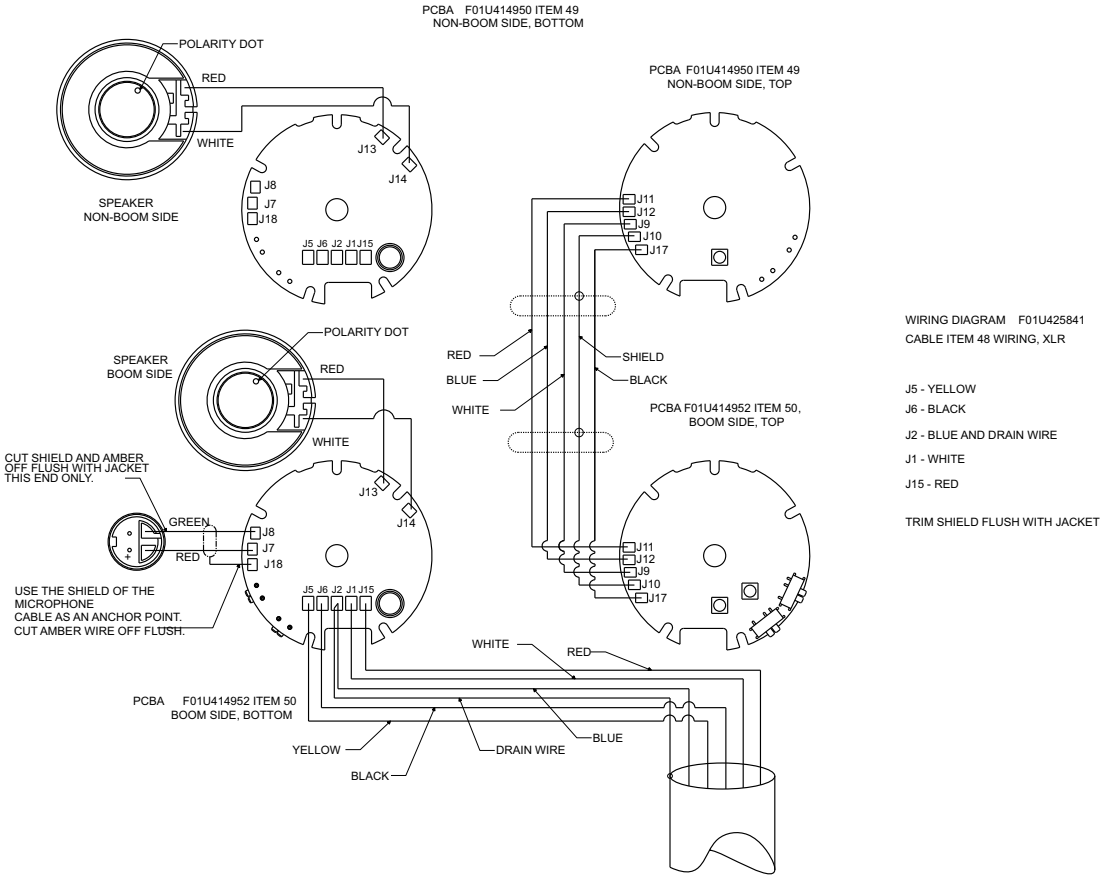


Figure 8.6: Airman8P-0214 Wiring Diagram

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