

VR102601 – Process 005  
**Revision History**

Insert Ground Plane

Date / Time	Rev	Author	Description
8/9/2017	A	JEB	Original Version

**Approvals**

Rev	Approval	Customer	Engineering	Mechanical	Software	Mfg	OPS	QA	Test	Sales	Support	Corp
A	DT											
	Initial											

**1.0 Process Description**

Description	<b>Insert Ground Plane</b>
-------------	----------------------------

VR Part Number	VR102601
Customer Part Number	355467-01
Configuration	Standard
Model	SRA-16(20x69]
Process Number	VR102601-005
Process Standard	15 Minutes



## 2. Setup






### 2.1 Technician

Tech #	Certification Required	Skill	Process	Safety
1	No	Fabricator 1	Cutting Aluminum	Requires Xacto Knife training


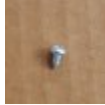
### 2.2 Tools

#### 2.2.1 Calibrated Tools

Number	Tool	Description	Rev	Specification	Calibration Requirements	Image
1	None					

Number	Tool	Type	Reference	Image
1	Xacto Knife			
2	Squeegee	Plastic		
3	Mux Hole Filler Boards			
4	Hand Philips Screw Driver			
5	Gloves			

**2.3 Materials**

#	VR Part Number	Mfg Part Number	Manuf	Description	Qty	Requires Serial #	Size	Tolerance	COC Req	Lot Req	Incoming QA Req	Image
1	VR102657		VR	36" x 10 mil Aluminum Foil with Adhesive backing cut per process 004	1	N	36" x 66"	+/- .001	n	n		
2				¼" #4 hold down screws	4	N			n	n		

**2.4 References**

Number	VR Doc Number	Description	Manuf	Description	Directory
1		ROHS Directive		ROHS Directive 2001/65/Eu	<a href="http://www.icqc.co.uk/en/rohs.php">http://www.icqc.co.uk/en/rohs.php</a>

**2.5 Safety**


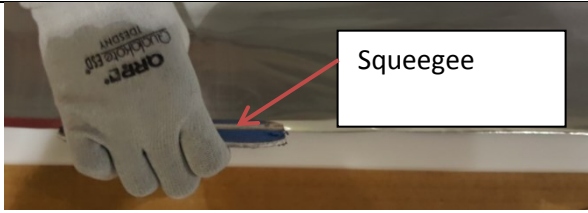


Number	Type	Description	Reference
1	Gloves	Gloves should be worn while handling material as sharp edges are created with the material is cut	OSHA
2	Xacto Knife Usage	Training is required for the usage of an Xacto Knife	VR Safety


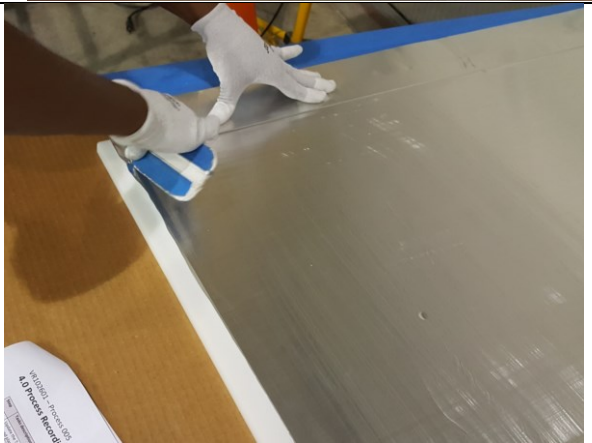
### 3.0 Tasks


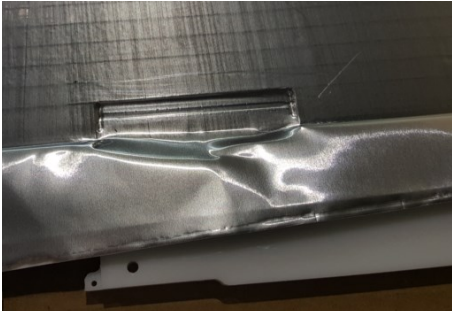

Step	Tech	Tool	Material	Tasks description	Reference Drawing	Image
1	1	NC-3, NC-4, NC-5	2	Add the Bottom Filler MUX to the plastic material. Use 2 screws to hold each side of the mux. Make sure the cutout for the mux edge cut is facing up.		
2	1	NC-3, NC-4	2	Add the Middle Filler Mux to the plastic material in the middle Mux cutout. Use 2 screws to hold each side of the mux. Make sure the cutout for the mux edge cut is facing up.		
3	1	Hand	1	Begin peeling back the adhesive backing from the aluminum sheet exposing about 6" of material with the adhesive side down.		


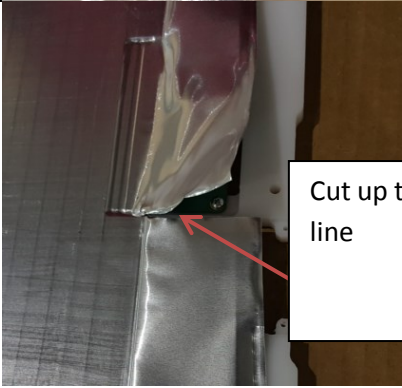
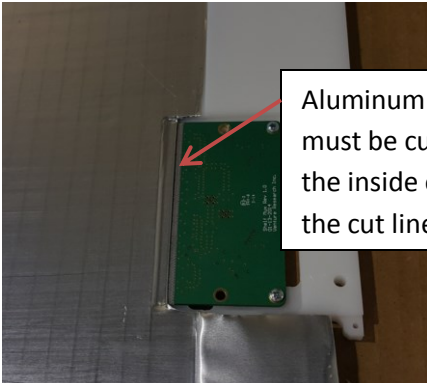
VR102601 – Process 005

Insert Ground Plane

4	1	Hand		With the material edge exposed, align it so that the cut edge will be able to put in the pocket to align with the top edge of the pocket.		
5	1	NC-2		Using the squeegee, place the aluminum material in the pocket and push the edge of the material so it is in the pocket on the edge and slightly on the wall of the pocket.		
6	1	NC-2		Complete pressing the aluminum into the edge and then fan out using the Squeegee to press the material on to the plastic backing.		
7	1	NC-2		Continue to remove the adhesive backing while simultaneously smoothing the aluminum so that it adheres to the plastic material.		

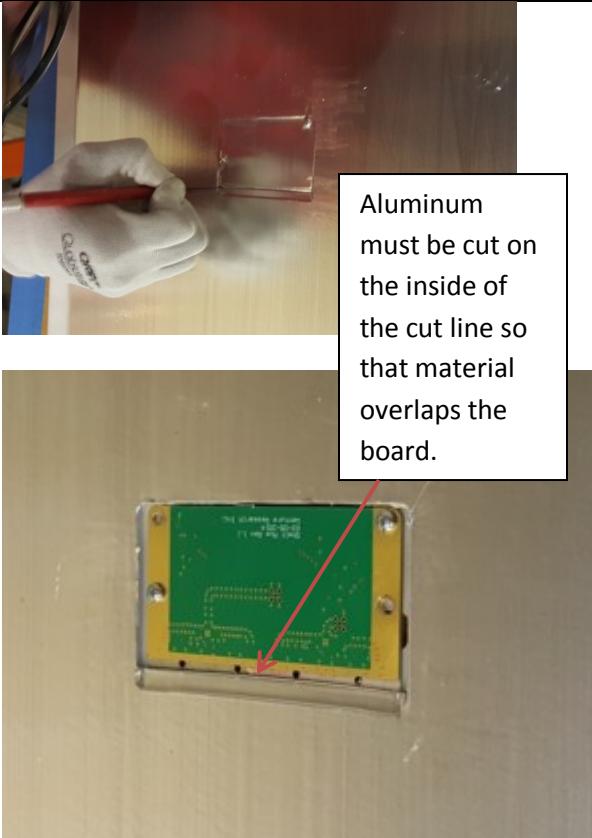
8		NC-2		When the material is over the mux, make sure that the aluminum is pressed down on all sides to clearly show where the mux edges are under the aluminum		
9	1	NC-2		When all the material is adhered to the pocket, go around the walls of the pocket and push the excess material into the corner of the pocket so that it creates a right angle at the edge		

10	1	NC-2		<p>Make one more pass over the muxes to make sure they are well defined on where their edges are especially the cut line.</p>		<p>Middle Mux</p>  <p>Bottom Mux</p> 
11	1	NC-1		<p>Using an Xacto knife, cut the aluminum at the right angle of the pocket wall and pocket</p>		

12	1	NC-1		Continue to cut the entire perimeter of the pocket.		
13	1	NC-1		When the perimeter is complete, cut out the bottom mux leaving the aluminum on the edge of the mux up to the cut line so that the edge of the aluminum overlaps the edge of the board.		 <div data-bbox="1591 678 1822 857" style="border: 1px solid black; padding: 5px;"> <p>Cut up to cut line</p> </div>  <div data-bbox="1591 1003 1814 1182" style="border: 1px solid black; padding: 5px;"> <p>Aluminum must be cut on the inside of the cut line</p> </div>

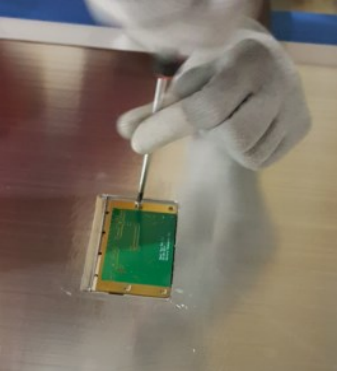

VR102601 – Process 005

Insert Ground Plane

14	1	NC-1	Cut out the middle mux aluminum again observing the cut line so that aluminum slightly overlaps the mux.		 <p>Aluminum must be cut on the inside of the cut line so that material overlaps the board.</p>
----	---	------	--	--	---

VR102601 – Process 005

Insert Ground Plane

15	1	NC-4		Remove the screws from the muxes and remove the temporary filler boards. Be careful not to tear the aluminum at the cut line boundary		
16	1	NC-2		The ground plane installation is complete, wipe down the surface and look for any bubbles and use the squeegee to remove them.		
17				Tape the QA/Traveler to the part and place on the carrier rack for the next process		

## 4.0 Process Recording

Step	Tasks description	Reference Drawing / Image
1	Update the QA/Traveler with the Date and time of completion of the part with the ground plane complete	

## 5.0 Non Compliance

#	Non Compliance	Disposition	Reference Drawing / Image
1	Material cut smaller than ground plane pocket	Mark the material with a red dot and create issue log designating the description of why the part resulted in not being cut correctly. Place the material in the non-compliance area for CNC non-compliance.	
2	Tear of material when installing	Mark the material with a red dot and create a issue log designating the description of why the part what torn. Remove the material from the plastics and place the material in the non-compliance area for CNC non-compliance.	
3	Wrinkle / Seam in ground plane	If the wrinkle is excessive, mark the material with a red dot and create an issue log designating the description of why a wrinkle in the material occurred during installation. Remove the material from the plastics and place the material in the non-compliance area for CNC non-compliance.	