

|   |  |                     |  |           |  |                                    |  |  |  |                                   |  |               |  |
|---|--|---------------------|--|-----------|--|------------------------------------|--|--|--|-----------------------------------|--|---------------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |                     |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION                          |  |               |  |
|   |  |                     |  |           |  |                                    |  |  |  |                                   |  |               |  |
| DRAWN   |  | NAME<br>Joe O'Brien |  | SIGNATURE |  | DATE                               |  | TITLE:<br><br>NN22 Control Unit Enclosure<br>Assembly Instructions |  | DWG NO.<br><br>WOJ-CUENC-AI-RevAB |  | A4            |  |
| CHK'D   |  |                     |  |           |  |                                    |  |  |  |                                   |  |               |  |
| APPV'D  |  |                     |  |           |  |                                    |  |  |  |                                   |  |               |  |
| MFG   |  |                     |  |           |  |                                    |  |  |  |                                   |  |               |  |
| Q.A   |  |                     |  |           |  |                                    |  |  |  |                                   |  |               |  |
|   |  |                     |  |           |  |                                    |  | MATERIAL:  |  | SCALE:1:5                         |  | SHEET 1 OF 10 |  |
|   |  |                     |  |           |  |                                    |  |  |  |                                   |  |               |  |
|   |  |                     |  |           |  |                                    |  | WEIGHT:  |  |                                   |  |               |  |

Press fit the four magnets into the 3D printed part as shown  
Fit should be tight enough that no epoxy is needed but can be used if printed part is loose as printed.

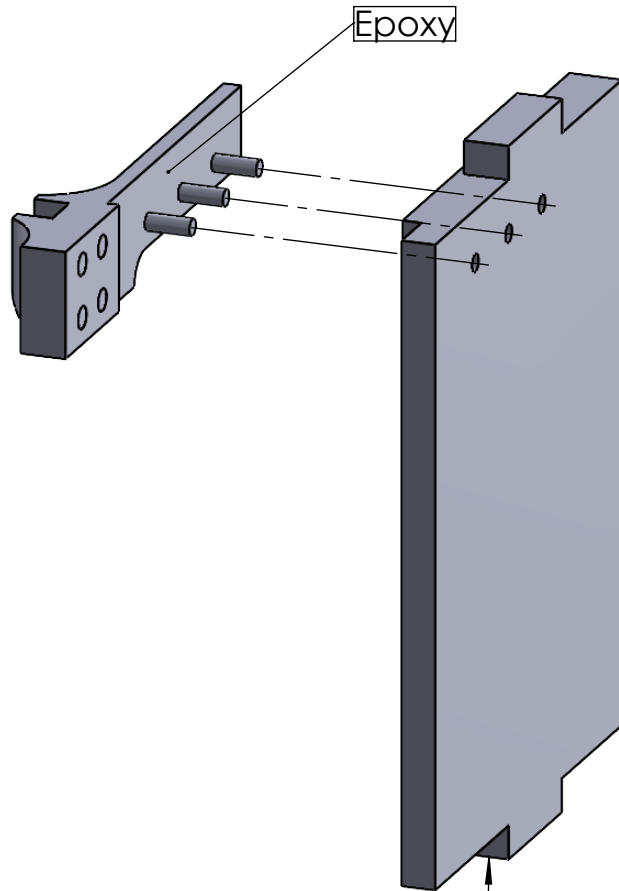
Epoxy

5862K166 4X

[WOJ-CUENC-012-RevAB] 3D Printed Side Bracket

|   |  |                     |  |           |  |                                    |  |  |  |          |  |
|---|--|---------------------|--|-----------|--|------------------------------------|--|--|--|----------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |                     |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION |  |
|   |  |                     |  |           |  |                                    |  | TITLE:<br><b>NN22 Control Unit Enclosure<br/>Assembly Instructions</b> |  |          |  |
| DRAWN   |  | NAME<br>Joe O'Brien |  | SIGNATURE |  | DATE                               |  |  |  |          |  |
| CHK'D   |  |                     |  |           |  |                                    |  |  |  |          |  |
| APPV'D  |  |                     |  |           |  |                                    |  |  |  |          |  |
| MFG   |  |                     |  |           |  |                                    |  |  |  |          |  |
| Q.A   |  |                     |  |           |  | MATERIAL:                          |  | DWG NO.<br><b>WOJ-CUENC-AI-RevAB</b>                                   |  |          |  |
|   |  |                     |  |           |  |                                    |  | A4   |  |          |  |
|   |  |                     |  |           |  |                                    |  | SCALE:1:5  |  |          |  |
|   |  |                     |  |           |  | WEIGHT:                            |  | SHEET 2 OF 10  |  |          |  |

2



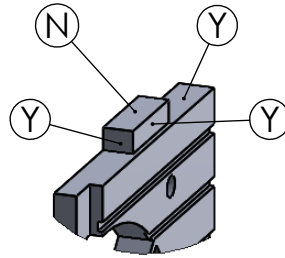
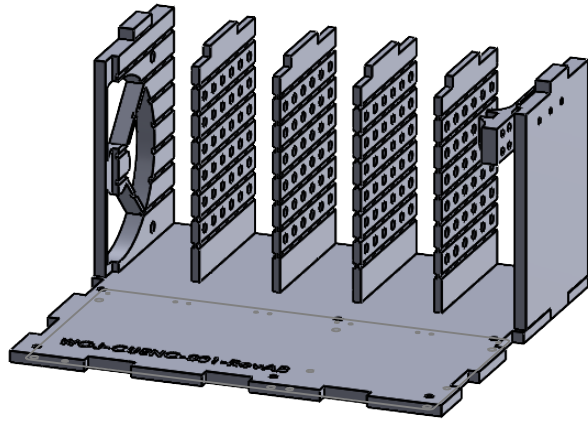
Epoxy

Epoxy 3D printed magnet holder prepared in previous step to enclosure side panel with matching holes as shown. Allow epoxy to partially cure for a few minutes before putting any pressure on the joined parts.

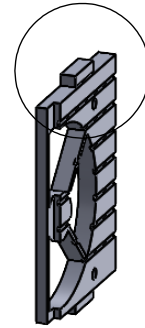
[WOJ-CUENC-005-RevAB] Control Unit Enclosure Interface Card End Right 3D Print

|   |  |                     |  |           |  |                                    |  |  |  |                                      |  |               |  |
|---|--|---------------------|--|-----------|--|------------------------------------|--|--|--|--------------------------------------|--|---------------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |                     |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION                             |  |               |  |
|   |  |                     |  |           |  |                                    |  |  |  |                                      |  |               |  |
| DRAWN   |  | NAME<br>Joe O'Brien |  | SIGNATURE |  | DATE                               |  | TITLE:<br><b>NN22 Control Unit Enclosure<br/>Assembly Instructions</b> |  | DWG NO.<br><b>WOJ-CUENC-AI-RevAB</b> |  | A4            |  |
| CHK'D   |  |                     |  |           |  |                                    |  |  |  |                                      |  |               |  |
| APPV'D  |  |                     |  |           |  |                                    |  |  |  |                                      |  |               |  |
| MFG   |  |                     |  |           |  |                                    |  |  |  |                                      |  |               |  |
| Q.A   |  |                     |  |           |  |                                    |  |  |  |                                      |  |               |  |
|   |  |                     |  |           |  |                                    |  | MATERIAL:  |  | SCALE:1:5                            |  | SHEET 3 OF 10 |  |
|   |  |                     |  |           |  |                                    |  |  |  |                                      |  |               |  |
|   |  |                     |  |           |  |                                    |  | WEIGHT:  |  |                                      |  |               |  |

3

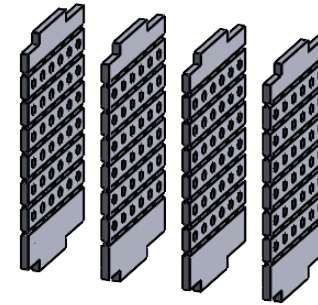


DETAIL A  
SCALE 2 : 3

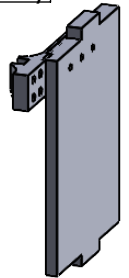


A

Epoxy



Epoxy



Prepare the two side panels with a thin layer of epoxy on the top and bottom edges indicated in the expanded view.  
Place the two side panels and four middle panels into the corresponding square holes in the base.  
Epoxy is not needed for the middle panels.

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| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |  |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION |  |
| DRAWN: Joe O'Brien  |  |  |  | SIGNATURE |  | DATE                               |  | TITLE:<br><b>NN22 Control Unit Enclosure<br/>Assembly Instructions</b> |  |          |  |
| CHK'D   |  |  |  |           |  |                                    |  |  |  |          |  |
| APPV'D  |  |  |  |           |  |                                    |  |  |  |          |  |
| MFG   |  |  |  |           |  |                                    |  |  |  |          |  |
| Q.A   |  |  |  |           |  |                                    |  |  |  |          |  |
|   |  |  |  |           |  | MATERIAL:                          |  | DWG NO.<br><b>WOJ-CUENC-AI-RevAB</b>                                   |  |          |  |
|   |  |  |  |           |  |                                    |  | SCALE:1:5  |  |          |  |
|   |  |  |  |           |  | WEIGHT:                            |  | SHEET 4 OF 10  |  |          |  |

D

C

B

A

6

5

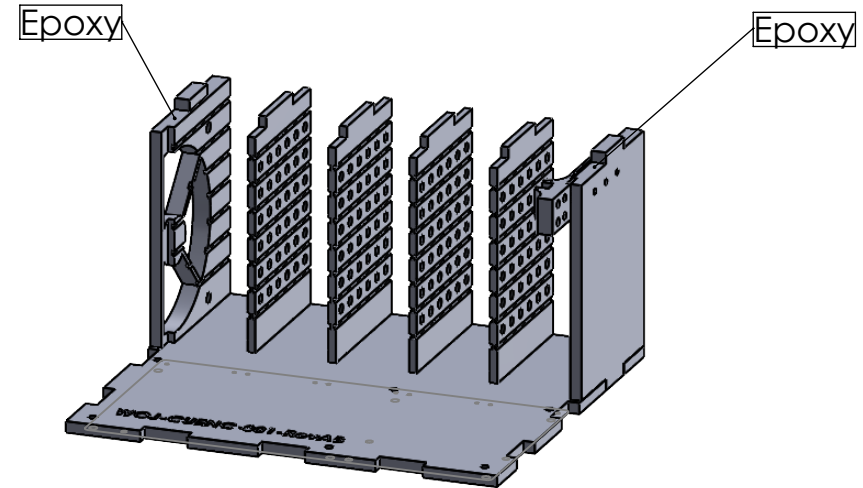
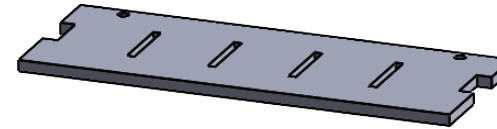
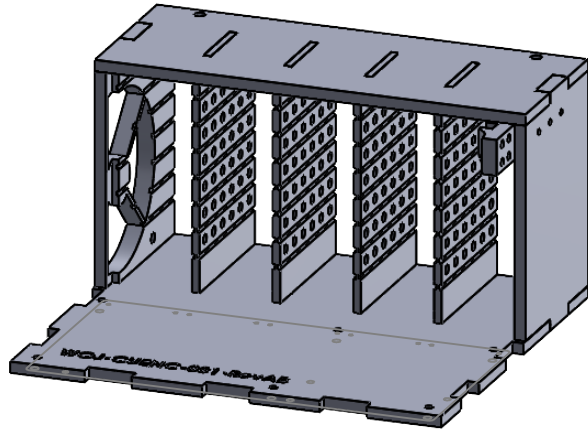
4

3

2

1

4



Place the top panel on the enclosure making sure to align the middle panel tabs with the corresponding holes and placing the acrylic top with the holes at the edge of the enclosure. After placing the top panel on, use something providing a right angle to bookend the enclosure as the epoxy cures. It is also advised to place something on top to add weight ensuring a good bond is made with the enclosure lid.

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| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |      |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION                             |  |
| DRAWN   |  | NAME |  | SIGNATURE |  | DATE                               |  | TITLE:<br><b>NN22 Control Unit Enclosure<br/>Assembly Instructions</b> |  | DWG NO.<br><b>WOJ-CUENC-AI-RevAB</b> |  |
| CHK'D   |  |      |  |           |  |                                    |  |  |  |                                      |  |
| APPV'D  |  |      |  |           |  |                                    |  |  |  |                                      |  |
| MFG   |  |      |  |           |  |                                    |  |  |  |                                      |  |
| Q.A   |  |      |  |           |  |                                    |  |  |  |                                      |  |
|   |  |      |  |           |  | MATERIAL:                          |  |  |  |                                      |  |
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|   |  |      |  |           |  | WEIGHT:                            |  |  |  | SCALE:1:5                            |  |
|   |  |      |  |           |  |                                    |  |  |  | SHEET 5 OF 10                        |  |

D

C

B

A

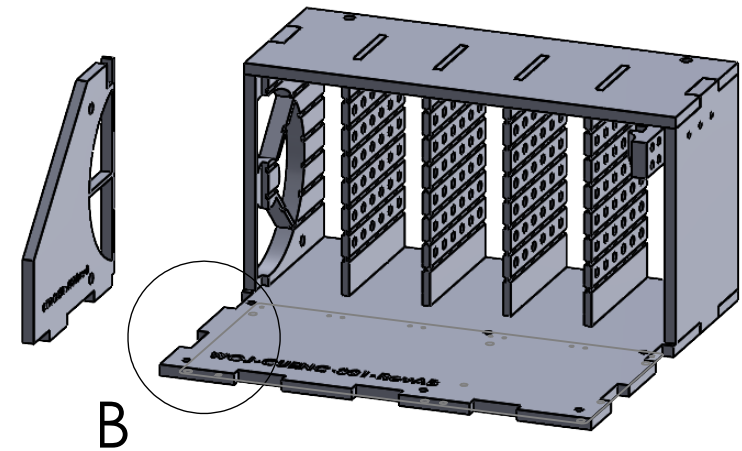
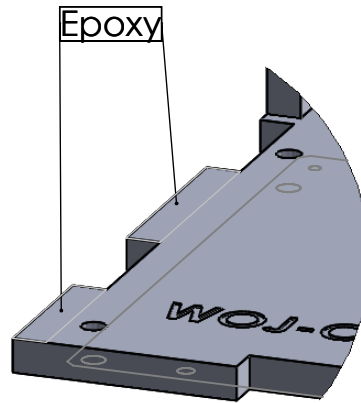
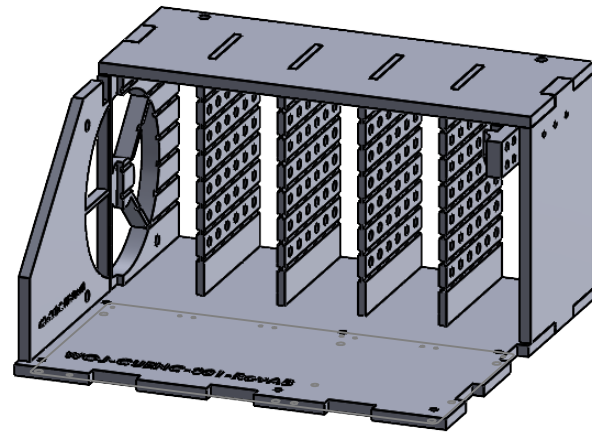
D

C

B

A

5



## DETAIL B

SCALE 1 : 1

Apply epoxy to surface of bottom panel and then attach the front side panel.  
After placing side panel use a C-Clamp to align acrylic panel to the already attached side panel.

|   |  |  |  |         |  |                                    |  |  |  |                    |  |      |  |
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| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |  |  | FINISH: |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION           |  |      |  |
|   |  |  |  |         |  |                                    |  | TITLE:<br><h1>NN22 Control Unit Enclosure<br/>Assembly Instructions</h1> |  |                    |  |      |  |
| DRAWN   |  |  |  | NAME    |  | SIGNATURE                          |  |  |  |                    |  | DATE |  |
| CHK'D   |  |  |  |         |  |                                    |  |  |  |                    |  |      |  |
| APPV'D  |  |  |  |         |  |                                    |  |  |  |                    |  |      |  |
| MFG   |  |  |  |         |  |                                    |  |  |  |                    |  |      |  |
| Q.A   |  |  |  |         |  |                                    |  | MATERIAL:  |  | DWG NO.            |  |      |  |
|   |  |  |  |         |  |                                    |  |  |  | WOJ-CUENC-AI-RevAB |  |      |  |
|   |  |  |  |         |  |                                    |  |  |  | A4                 |  |      |  |
|   |  |  |  |         |  |                                    |  | WEIGHT:  |  | SCALE:1:5          |  |      |  |
|   |  |  |  |         |  |                                    |  |  |  | SHEET 6 OF 10      |  |      |  |

A

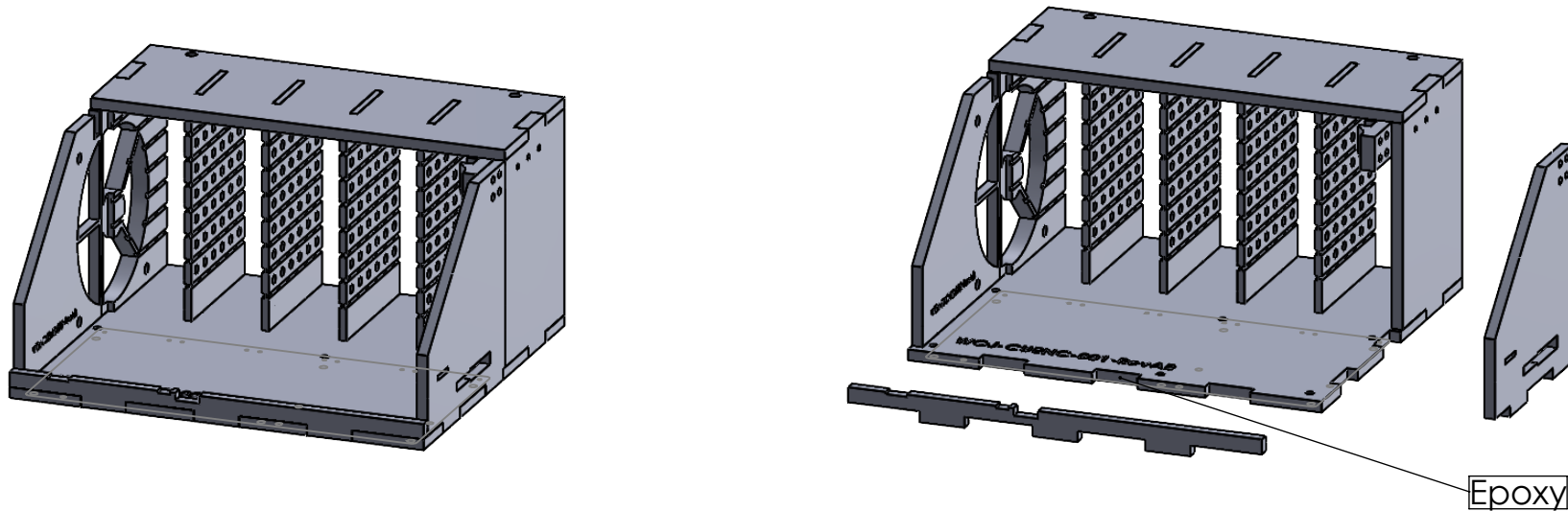


A

SCALE 1 : 1

|   |             |           |      |           |  |   |  |                      |  |               |  |
|---|-------------|-----------|------|-----------|--|---|--|----------------------|--|---------------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |             |           |      | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES  |  | DO NOT SCALE DRAWING |  | REVISION      |  |
|   |             |           |      |           |  |   |  |                      |  |               |  |
|   | NAME        | SIGNATURE | DATE |           |  | TITLE:<br><h1 style="margin: 0;">NN22 Control Unit Enclosure<br/>Assembly Instructions</h1> |  |                      |  |               |  |
| DRAWN   | Joe O'Brien |           |      |           |  |   |  |                      |  |               |  |
| CHK'D   |             |           |      |           |  |   |  |                      |  |               |  |
| APPV'D  |             |           |      |           |  |   |  |                      |  |               |  |
| MFG   |             |           |      |           |  |   |  |                      |  |               |  |
| Q.A   |             |           |      | MATERIAL: |  | DWG NO.   |  |                      |  | A4            |  |
|   |             |           |      |           |  | WOJ-CUENC-AI-RevAB  |  |                      |  |               |  |
|   |             |           |      |           |  |   |  |                      |  |               |  |
|   |             |           |      | WEIGHT:   |  | SCALE:1:2   |  |                      |  | SHEET 7 OF 10 |  |

7



Apply a thin layer of epoxy to the tabs on the front edge of the enclosure bottom piece as was done for the side panel.  
With the removable side panel installed, place the front piece in position with something clamping it down to ensure the epoxy adheres well. Allow to cure for 30 minutes.

|   |  |      |  |           |  |                                    |  |  |  |                                      |  |
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| DRAWN   |  | NAME |  | SIGNATURE |  | DATE                               |  | TITLE:<br><b>NN22 Control Unit Enclosure<br/>Assembly Instructions</b> |  | DWG NO.<br><b>WOJ-CUENC-AI-RevAB</b> |  |
| CHK'D   |  |      |  |           |  |                                    |  |  |  |                                      |  |
| APPVD   |  |      |  |           |  |                                    |  |  |  |                                      |  |
| MFG   |  |      |  |           |  |                                    |  |  |  |                                      |  |
| Q.A   |  |      |  |           |  |                                    |  |  |  |                                      |  |
|   |  |      |  |           |  | MATERIAL:                          |  |  |  |                                      |  |
|   |  |      |  |           |  |                                    |  |  |  |                                      |  |
|   |  |      |  |           |  |                                    |  | WEIGHT:  |  |                                      |  |
|   |  |      |  |           |  |                                    |  |  |  | SCALE:1:5                            |  |
|   |  |      |  |           |  |                                    |  |  |  | SHEET 8 OF 10                        |  |

Epoxy

TITLE:  
**NN22 Control Unit Enclosure  
Assembly Instructions**

DWG NO.  
**WOJ-CUENC-AI-RevAB**

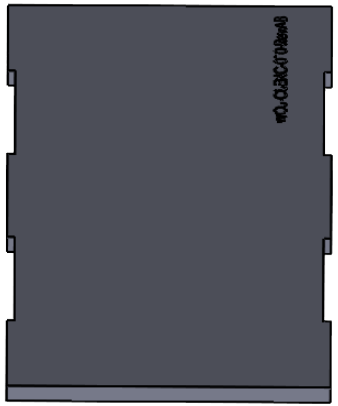
A4

SCALE:1:5

SHEET 8 OF 10



8



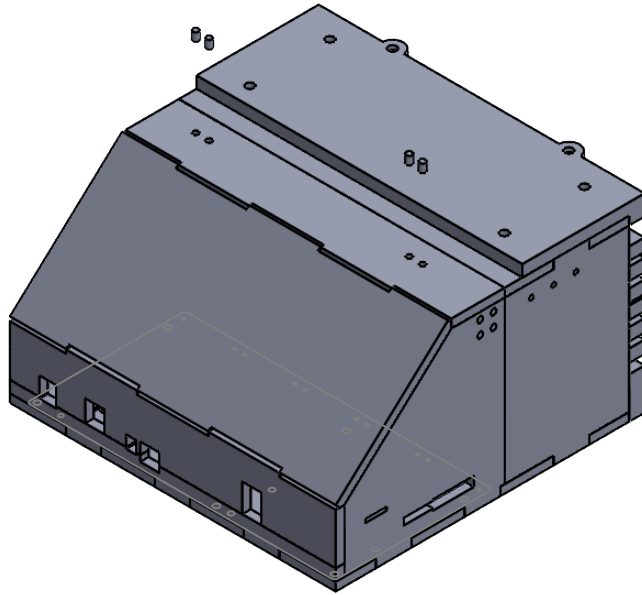
Sand down the tabs on each of the acrylic parts at an angle so the parts can sit flush in the angle jig.

Multiple of these angle guides can be used to ensure the angle is maintained across the whole width. In this jig each of the pieces should have the tabs sanded enough so that a straight line is formed at the border between each panel.

Using a generous amount of epoxy, join the three acrylic parts together, forming a fillet of epoxy. Using more epoxy, join the support rib to the inside of the lid covering the O on the front panel with the rib. Allow to cure for at least 1 hour.

|   |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
|---|--|------|--|-----------|--|------------------------------------|--|--|--|-----------------------------------|--|---------------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |      |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION                          |  |               |  |
|   |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
| DRAWN   |  | NAME |  | SIGNATURE |  | DATE                               |  | TITLE:<br><br>NN22 Control Unit Enclosure<br>Assembly Instructions |  | DWG NO.<br><br>WOJ-CUENC-AI-RevAB |  | A4            |  |
| CHK'D   |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
| APPV'D  |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
| MFG   |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
| Q.A   |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
|   |  |      |  |           |  |                                    |  | MATERIAL:  |  | SCALE:1:5                         |  | SHEET 9 OF 10 |  |
|   |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
|   |  |      |  |           |  |                                    |  |  |  |                                   |  |               |  |
|   |  |      |  |           |  |                                    |  | WEIGHT:  |  |                                   |  |               |  |

9



Secure magnets into lid acrylic using a piece of tape covering the inside and a small amount of epoxy as was done previously. Allow epoxy to cure for at least 30 minutes before moving.

Once all acrylic parts have been secured with epoxy, assembly of the unit with electronics and final placement of ribbon cable clamps can be attached as shown in image to the left.

|   |  |                     |  |           |  |                                    |  |  |  |          |  |
|---|--|---------------------|--|-----------|--|------------------------------------|--|--|--|----------|--|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS<br>SURFACE FINISH:<br>TOLERANCES:<br>LINEAR:<br>ANGULAR: |  |                     |  | FINISH:   |  | DEBURR AND<br>BREAK SHARP<br>EDGES |  | DO NOT SCALE DRAWING   |  | REVISION |  |
|   |  |                     |  |           |  |                                    |  | TITLE:<br><b>NN22 Control Unit Enclosure<br/>Assembly Instructions</b> |  |          |  |
| DRAWN   |  | NAME<br>Joe O'Brien |  | SIGNATURE |  | DATE                               |  |  |  |          |  |
| CHK'D   |  |                     |  |           |  |                                    |  |  |  |          |  |
| APPV'D  |  |                     |  |           |  |                                    |  |  |  |          |  |
| MFG   |  |                     |  |           |  |                                    |  |  |  |          |  |
| Q.A   |  |                     |  |           |  | MATERIAL:                          |  | DWG NO.<br><b>WOJ-CUENC-AI-RevAB</b>                                   |  |          |  |
|   |  |                     |  |           |  |                                    |  | A4   |  |          |  |
|   |  |                     |  |           |  |                                    |  | SCALE:1:5  |  |          |  |
|   |  |                     |  |           |  | WEIGHT:                            |  | SHEET 10 OF 10   |  |          |  |