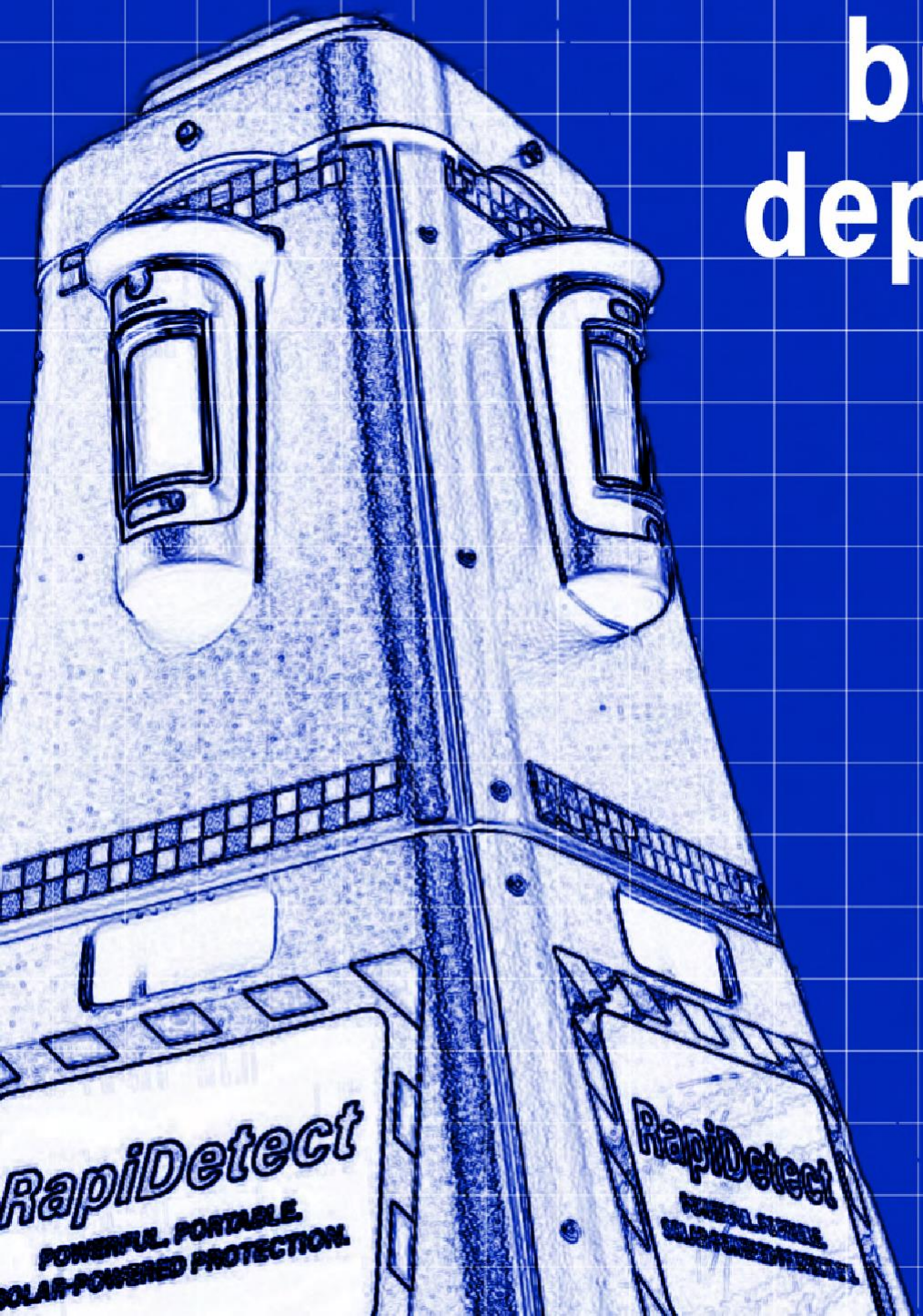
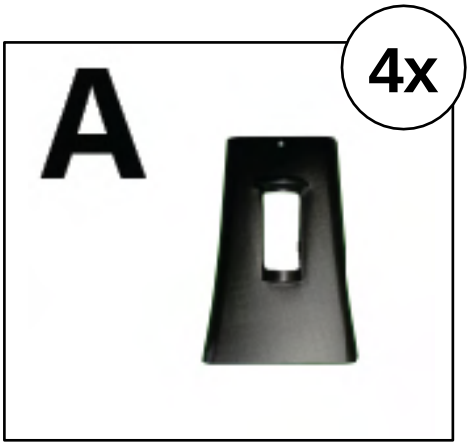
RapiDetect

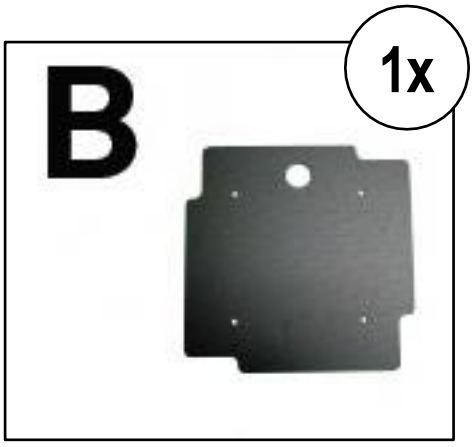
How to build your deployment tower

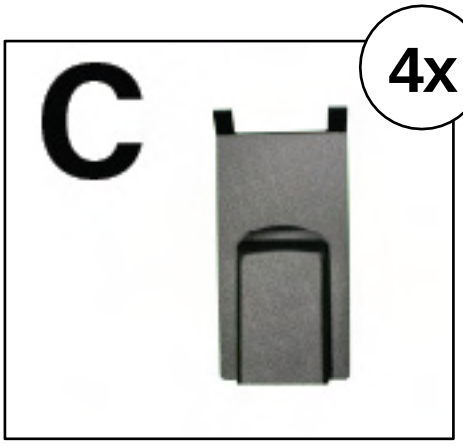


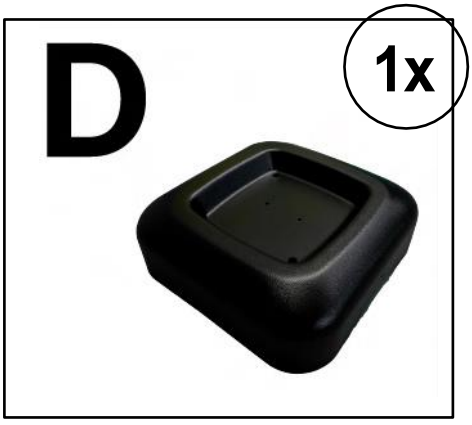
Parts

Part	Description	Quantity	✓
A	Upper Unit Side Panel	4	
B	Upper Unit Base Plate	1	
C	Upper Unit Camera Fixing Plate	4	
D	Upper Unit Lid	1	
E	Base Unit Side Panel	3	
G	Base Unit Access Panel	1	
H	Base Unit Top Plate	1	
I	Base Unit Metal Base Plate	1	
J	Base Unit Feet	4	
K	Perspex Mount Frame Kit (incl. fixing brackets & screws)	1	
L	Quick Release Loom	1	
M	Wago Connector	2	
N	Wago Box	1	
O	Battery Loom (1x Red, 1x Black)	2	
P	Hub to Solar Controller Loom	1	









H

1x

I

1x

J

4x

K

1x

L

1x

M

2x

N

1x

O

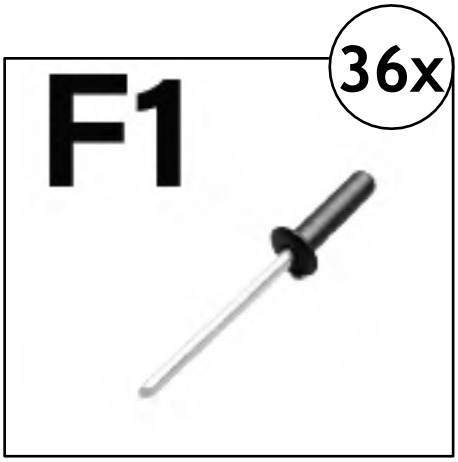
2x

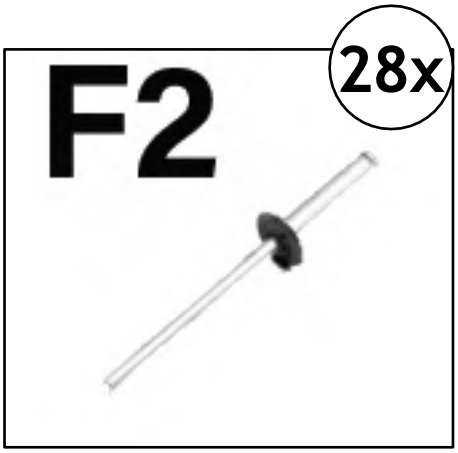
P

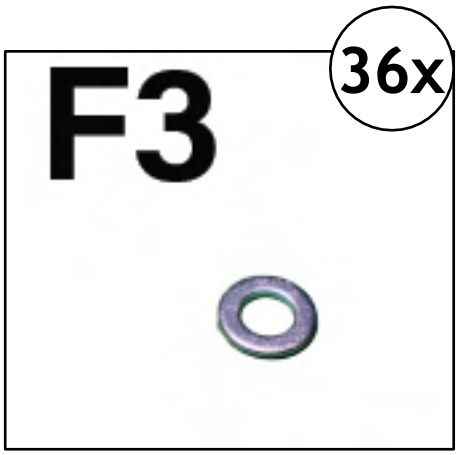
1x

Fixings

Part	Description	Quantity	✓
F1	Black Rivet	36	
F2	Silver Rivet	28	
F3	Silver Washer	36	
F4	Glue	1	
F5	Upper Unit Lid - Fixing screw	2	
F6	Upper Unit Lid - Fixing cap	2	
F7	Upper Unit Siren Base M4 Nut	2	
F8	Screw 4mm - Hub	4	
F9	Screw 8mm - Solar Controller + Siren	6	
F10	Perspex Mount Frame - Fixing Wing Nut	4	
F11	Solar Panel Self Tapping Screw Fixings	24	
F12	Solar Panel Bottom Fixing Bolts	2	
F13	Battery Terminal Cover	2	
F14	Cable Tidy	1	
F15	Foam Sealing Tape - 25cm	1	
F16	Foam Sealing Tape - 40m	1	
F17	Foam Sealing Tape - 70cm	1	







F7 2x

F8 4x

F9 6x

F10 4x

F11 24x

F12 2x

F13 2x

F14 1x

F15 1x

25cm

F16 1x

40cm

F17 1x

70cm

Components

Part	Description	Quantity	✓
Y1	Solar Controller	1	
Y2	Ajax MotionCam /PHOD's	4	
Y3	Ajax StreetSiren DoubleDeck	1	
Y4	Ajax Hub 2	1	
Y5	Solar Panels	4	
Y6	Battery	1	
Y7	Siren Brand Plate	1	

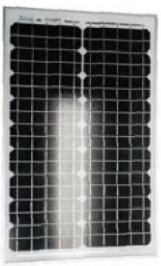
Y1

Y2

Y3

Y4

Y5



Y6

Y7

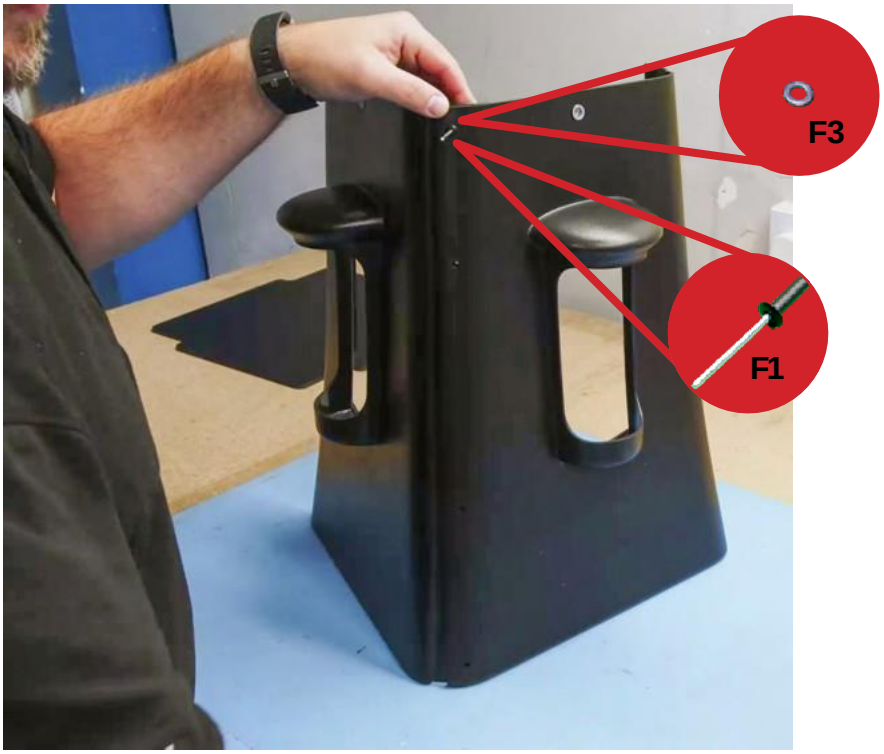
Tools Needed

Rivet Gun (Recommended 18v Battery)	
Battery Powered Drill	
Flat head Screwdrivers - Various Sizes	
Phillips Screwdriver - Various Sizes	
Drill Screwdriver bit - Various Sizes (PH & H Heads)	
HSS Drill Bits 5mm (Base Unit Alignment & Base Plate Holes)	
Wire Strippers	
Emery/Sandpaper - Medium Grit	

1 Upper Unit Assembly

Place 2 x Upper Unit Side Panels (A) with holes aligned.

2



Place 4 x Black Rivets (F1) in each aligned hole, place a Washer (F3) on the back of each Black Rivet holding in position. Use the rivet gun to secure, following the sequence 1 to 4.

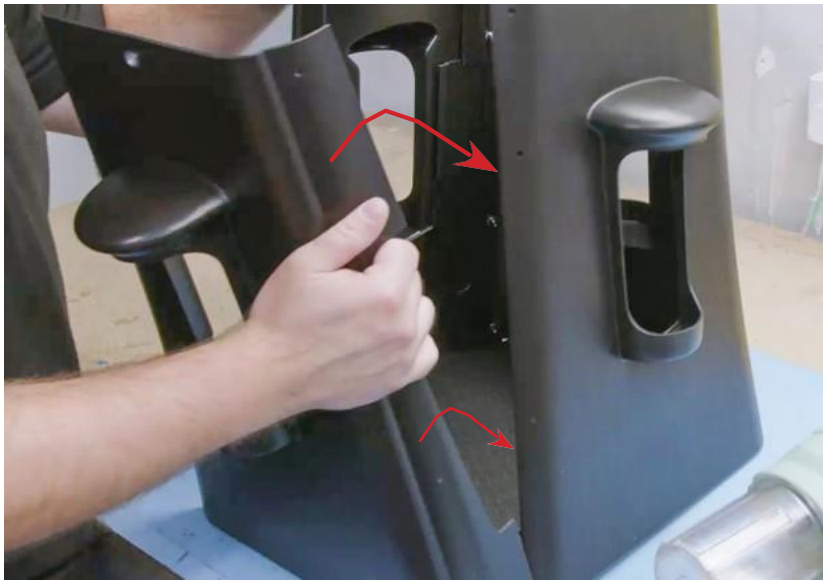
3

Repeat previous step and add the 3rd side.

4

Place the Upper Unit Base Plate (B) inside (textured side facing up).

5

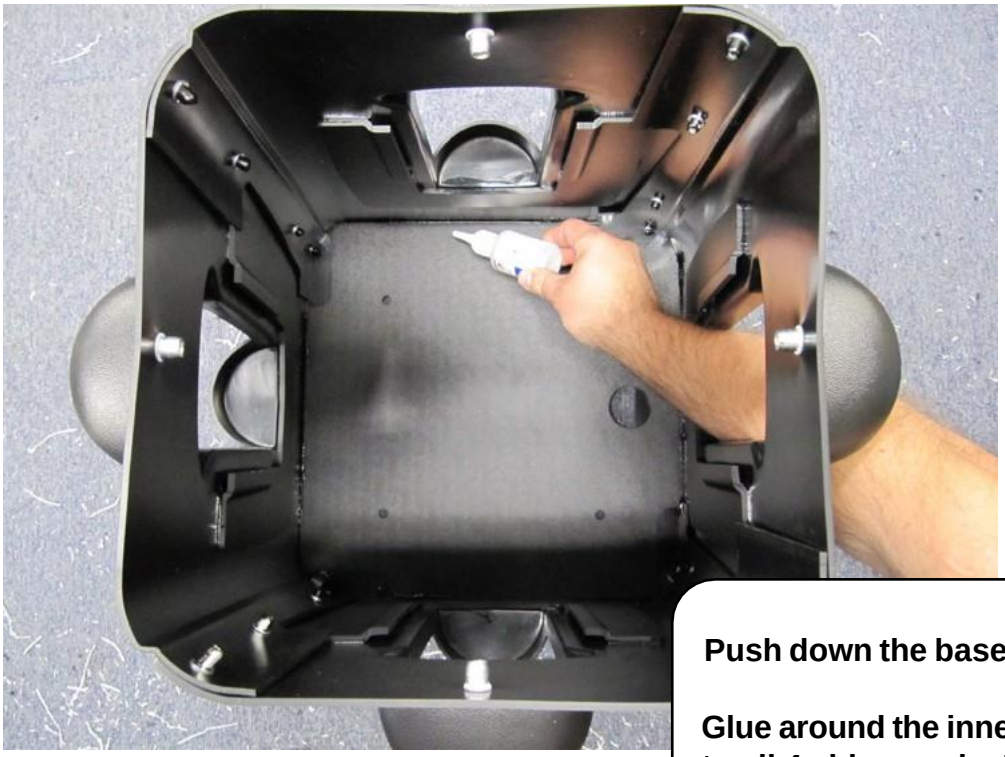


When installing last panel ensure that the inner edge sits behind the other panel as indicated

Align the last Side Panel (A) using the Black rivets (F1) and Washers (F3). Secure with the Rivet gun.

- READ INSTRUCTIONS ON GLUE BOTTLE BEFORE USE
- TAKE CARE WHEN GLUING TO ENSURE NO GLUE CONTACTS YOUR HANDS!
- BEFORE GLUING ENSURE PLENTLY OF VENTALIATION
- DO NOT USE EXCESSIVE GLUE

6



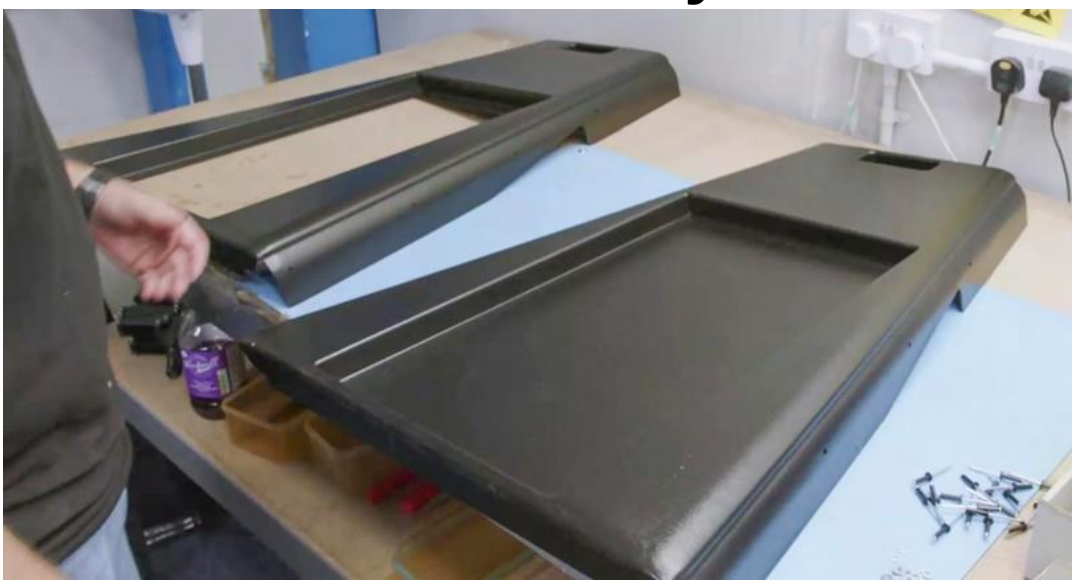
Push down the base plate (B) to seat firmly.

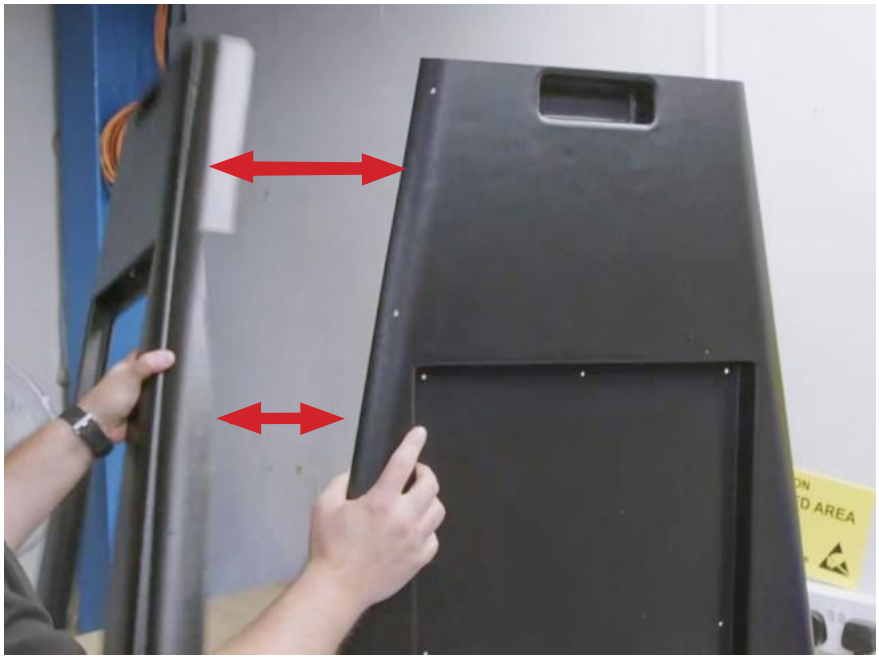
Glue around the inner edges of (B), affixing it to all 4 side panels. Leave to dry for 5 mins.

7

After allowing the glue to dry, place Upper Unit on its side, lift each flap and insert glue between (A) and (B). Press firmly until glue sets. Once completed, stand unit back up.

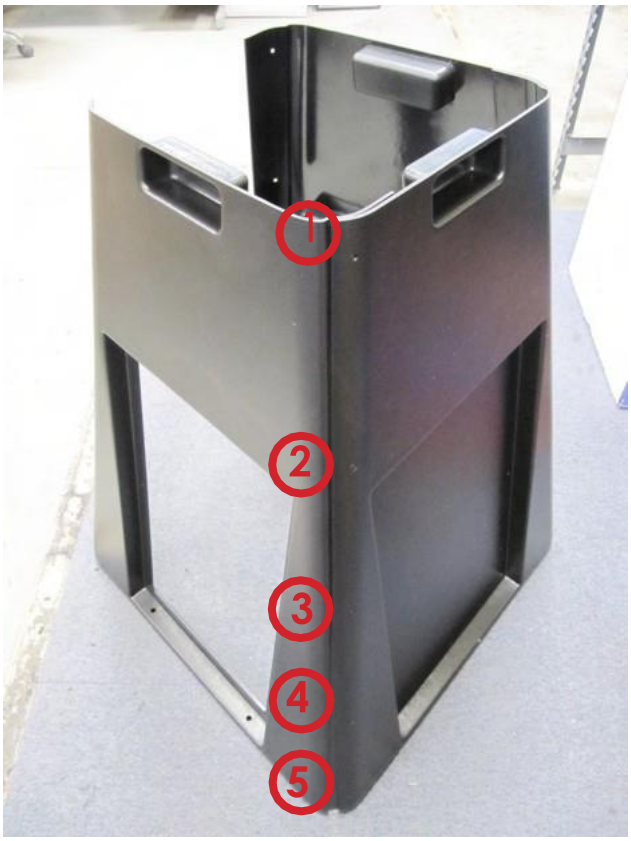
8 Base Unit Assembly

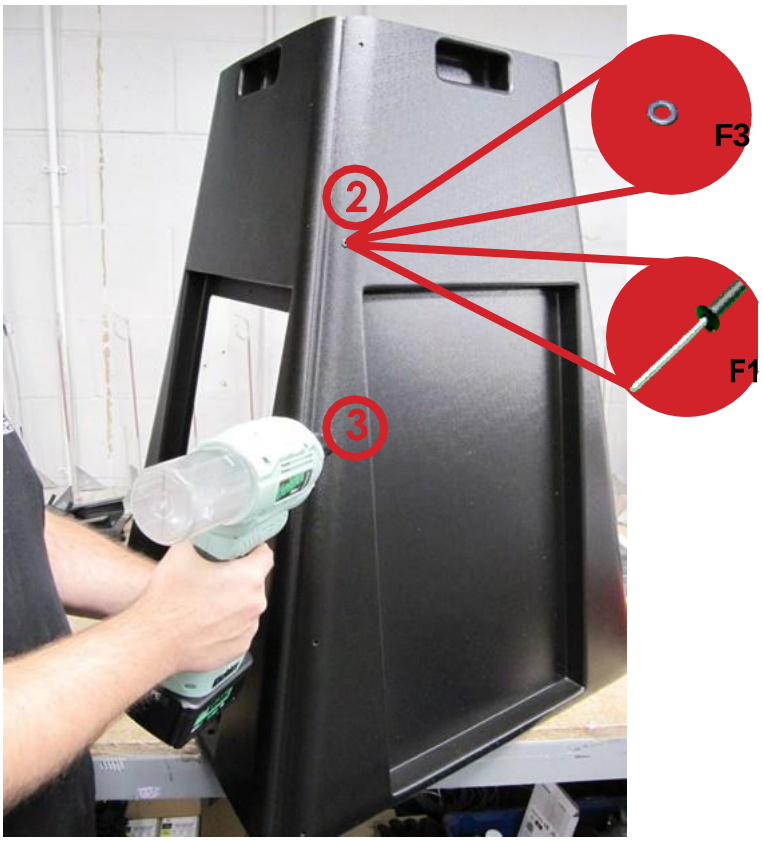




Place 1 x Side Panel (E) and 1 x Access Panel (G) together with holes aligned.

9

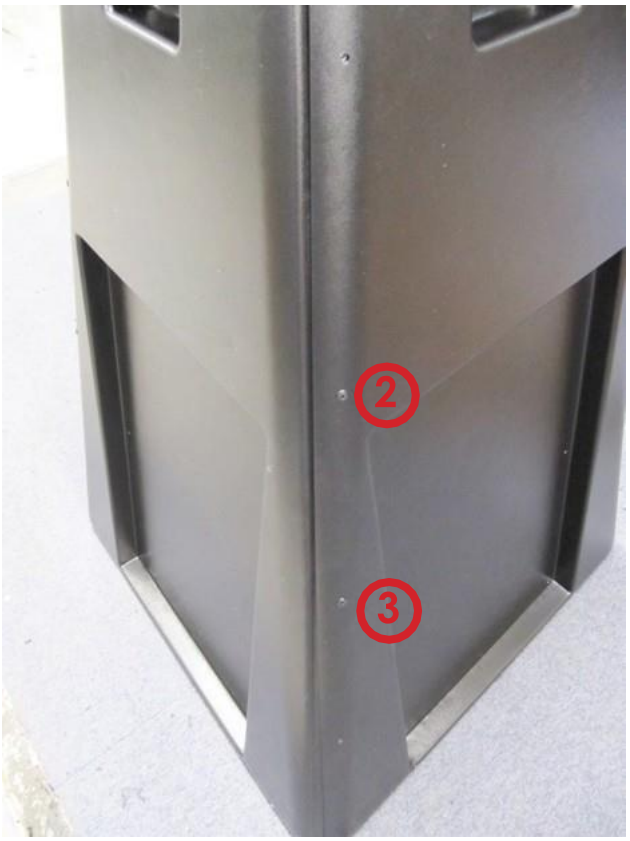




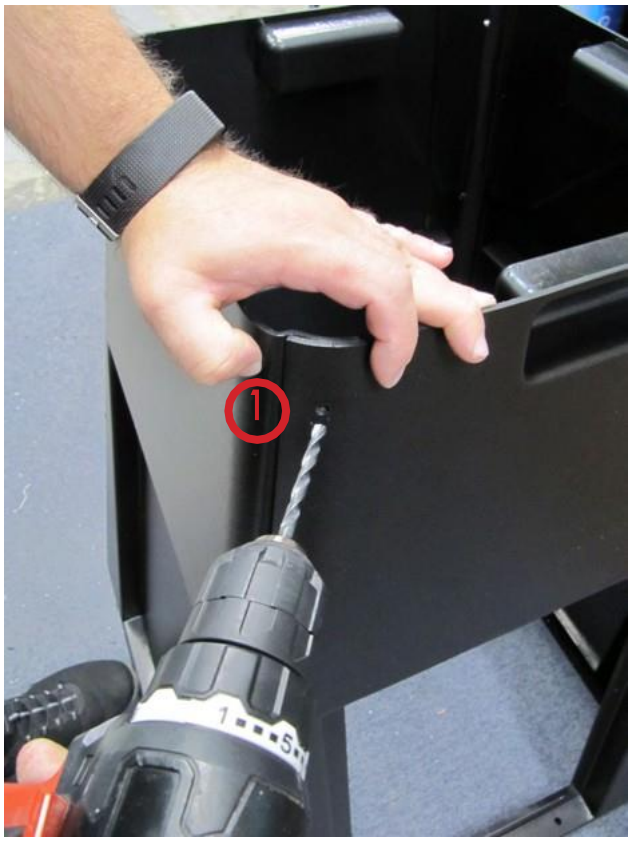
Place Black Rivet (F1) in holes 2 & 3 only, place Washer (F3) on rear of Rivet. Secure with Rivet Gun

10

Repeat previous step for holes 2 & 3 only, adding the other 2 x Side Panels (E) to form the Assembly Shell



11



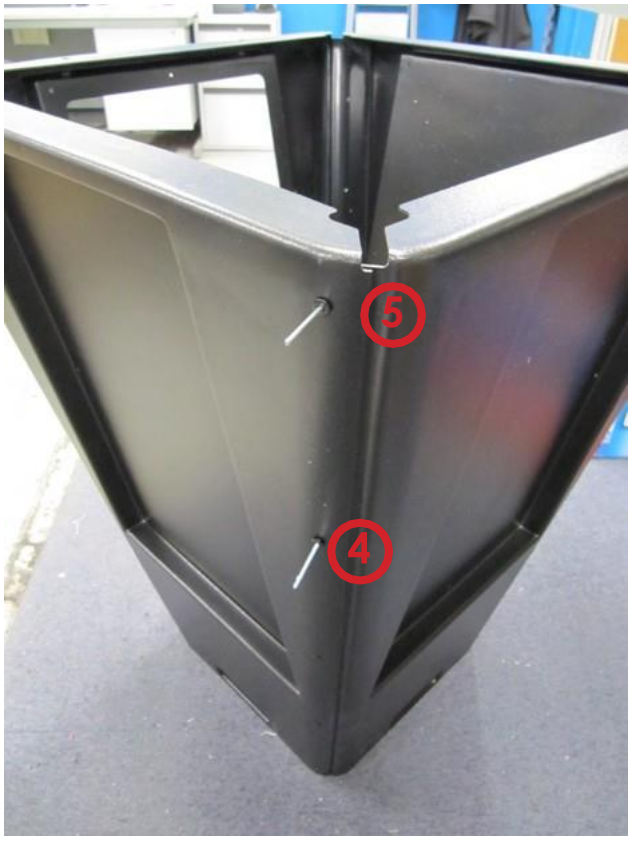
Align Top section. Drill top hole out using 5mm drill bit to ensure rivet sits square (not at any angle)

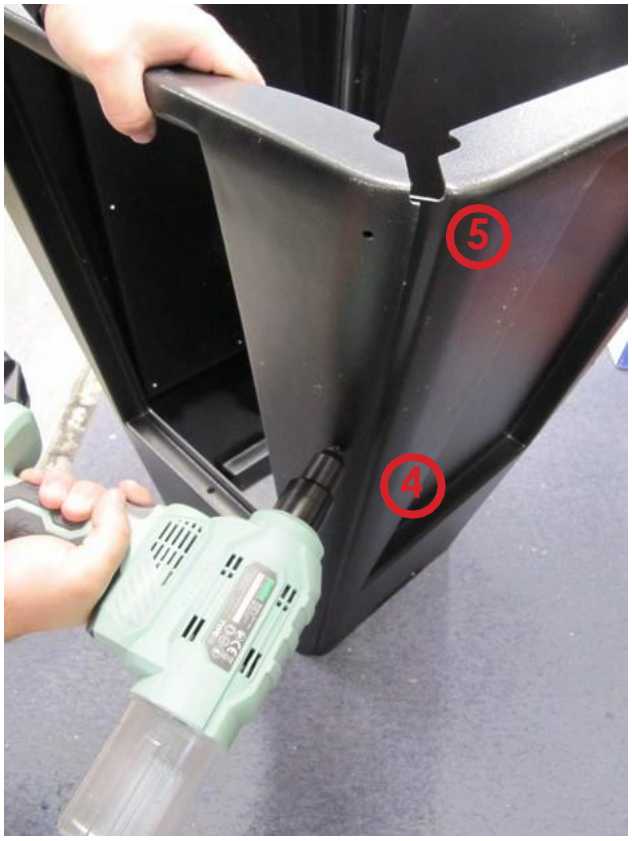
12

Ensure Top section edges align then rivet. Repeat for other 3 x corners

13

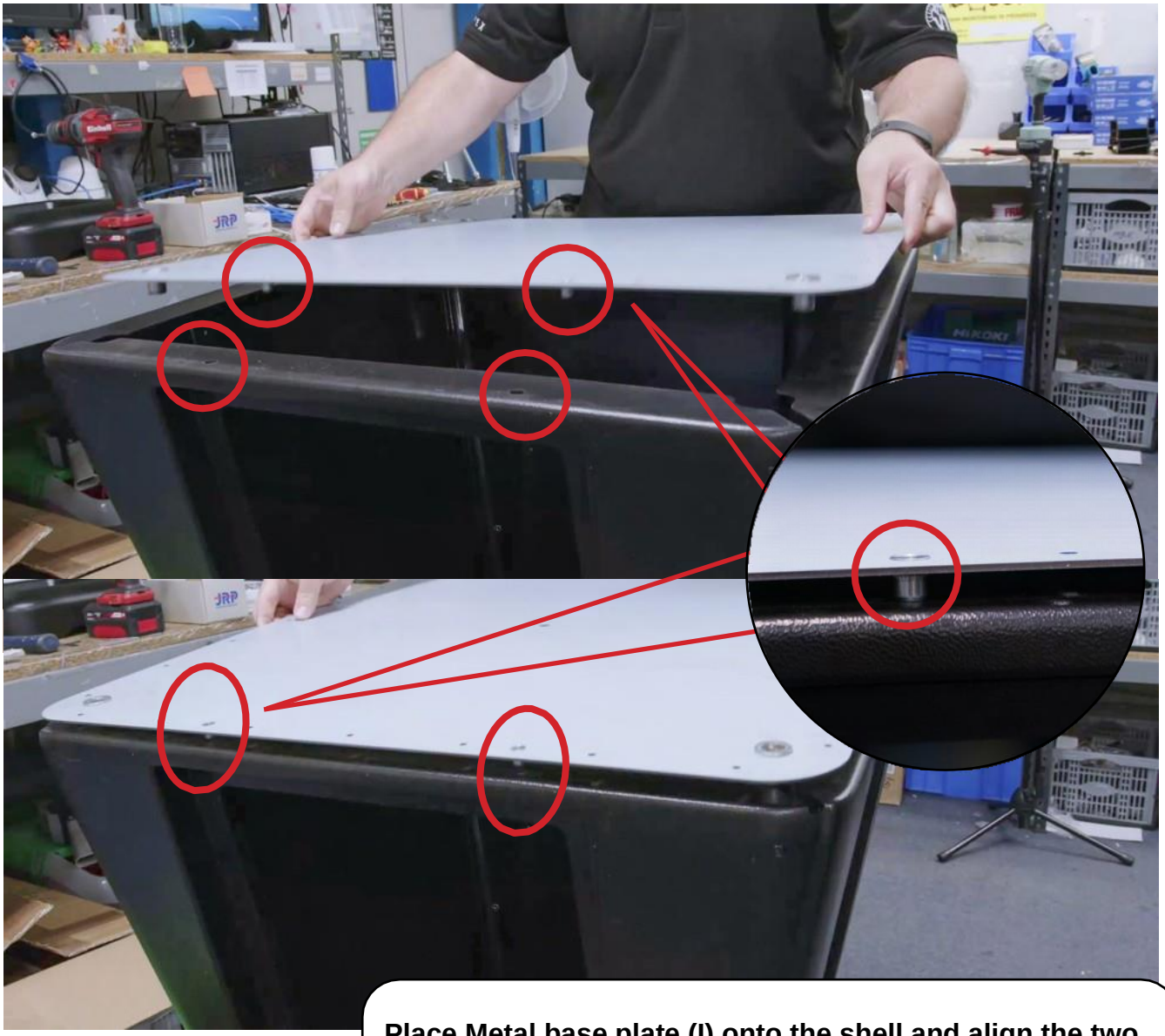
Turn the Shell upside down and rivet the two remaining holes 4 & 5.
Repeat on all 4 sides





14

With the unit upside down, on a clean even surface.



Place Metal base plate (I) onto the shell and align the two M6 thread inserts into the drilled holes on the shell base flap. Ensure the base plate is square.

- **DO NOT ALLOW DRILL BIT TO PENETRATE MORE THAN A DEPTH OF 5MM**

15

Using a 5mm drill bit, start drilling 1 x hole in the center of each edge and rivet each to hold Base Plate secure using Silver Rivets (F2). Then drill all (24x) remaining holes.
After drilling all guide holes, rivet Metal Base Plate to the shell using rivets (F2).

16

Screw the 4 Base Unit feet (J) into the base by hand. Screw all the way down.
When complete, turn the Base Unit back over to stand upright.

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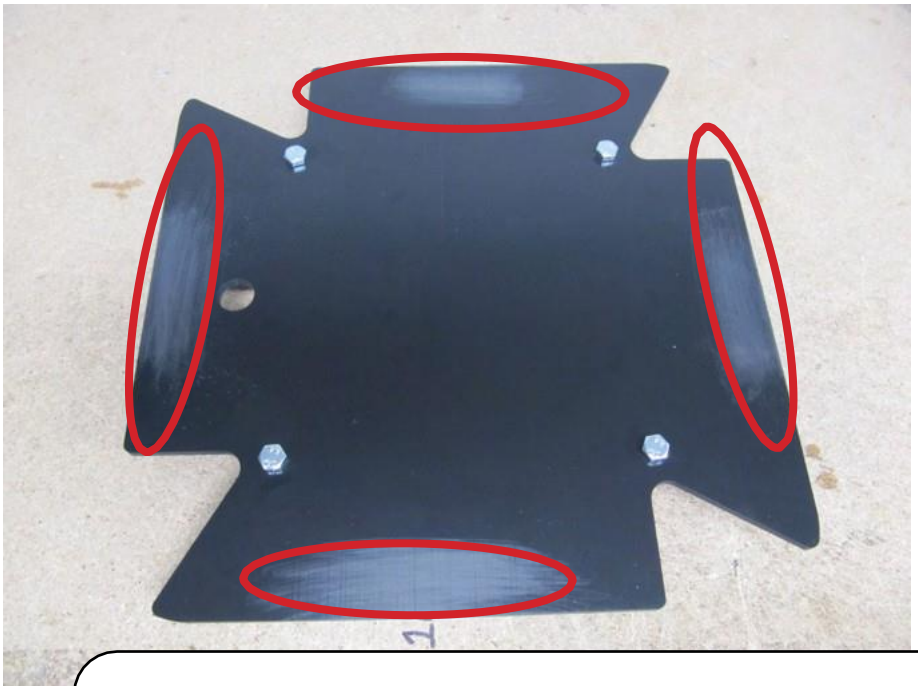
- TAKE CARE WHEN GLUING TO ENSURE NO GLUE CONTACTS YOUR HANDS!
- BEFORE GLUING ENSURE PLENTLY OF VENTALIATION
- DO NOT USE EXCESSIVE GLUE

17

Take the Base Unit Top Plate (H), unscrew the 4 x bolts just enough to allow glue nozzle behind and apply a small drop of glue onto one of exposed bolt threads.

Immediatley screw the bolt back tightly to the plastic. Repeat for the 3x remaining bolts.

18



Using Emery/Sandpaper - Medium grit, roughen the highlighted areas.

- READ INSTRUCTIONS ON GLUE BOTTLE BEFORE USE
- TAKE CARE WHEN GLUING TO ENSURE NO GLUE CONTACTS YOUR HANDS!
- BEFORE GLUING ENSURE PLENTLY OF VENTALIATION
- DO NOT USE EXCESSIVE GLUE

19

Roughen the highlighted areas on the Base Unit with Emery/Sandpaper. Apply an even layer of glue.

20

Place Base Unit Top Plate (H) on top of the glued areas (bolt threads facing up) and apply pressure to join the pieces together. Avoid using excess glue to avoid leakage, wipe off any excess immediately.
Allow glue to dry.

21

Place the upper unit on the lower unit, align the 4 x bolt holes and also ensure the cable holes on both panels are aligned.

22

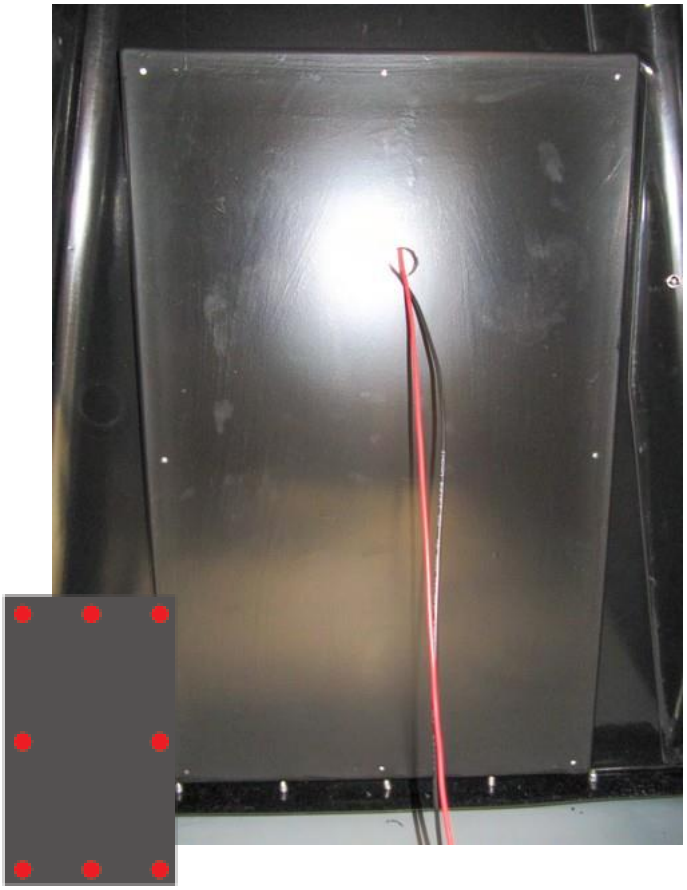
Place Lid (D) on to the upper unit.

23 Installing Solar Panels

Place a Solar Panel (Y5) with the electrical connector at the top, next to the recess in the Base Unit.

Thread the 2 x wires through the hole as shown Repeat with 3 x Solar Panels (Y5) into 3 x Lower Body Panels (E)

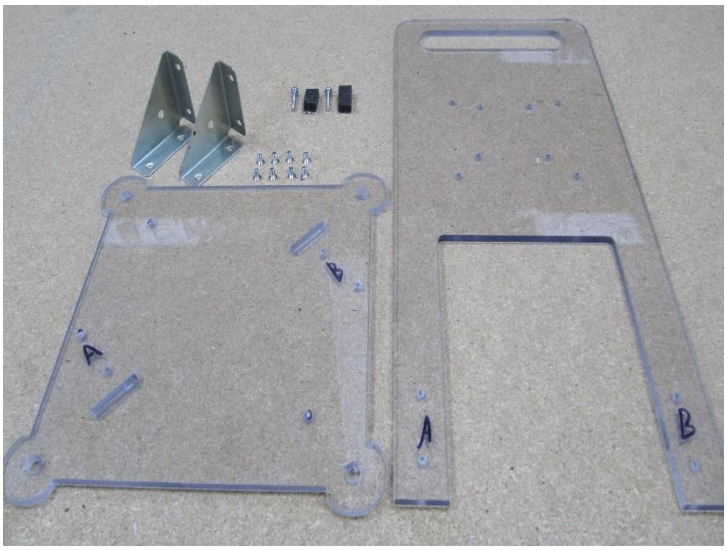
24



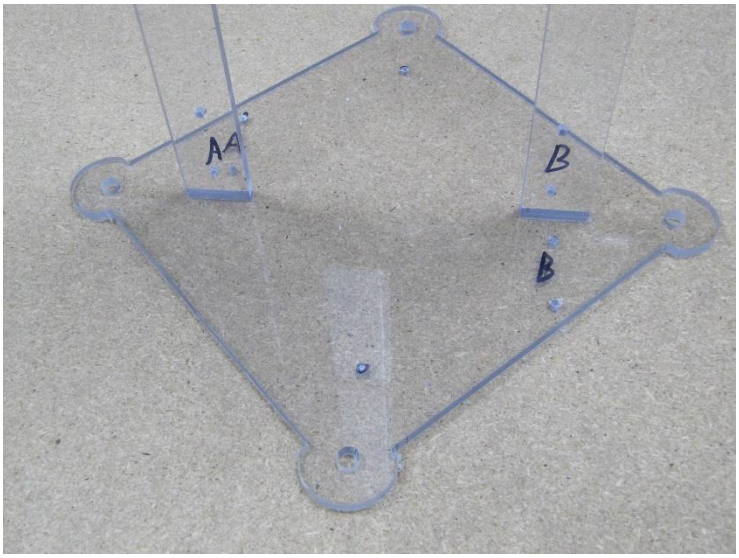
Place a hand on the solar panel to keep it in place, using 8 x (F11), affix the panel to the unit, from inside as per the image on the left

Repeat affixing 2 x more wired solar panels (Y5) to the base unit. Leave wires in the base unit for now.

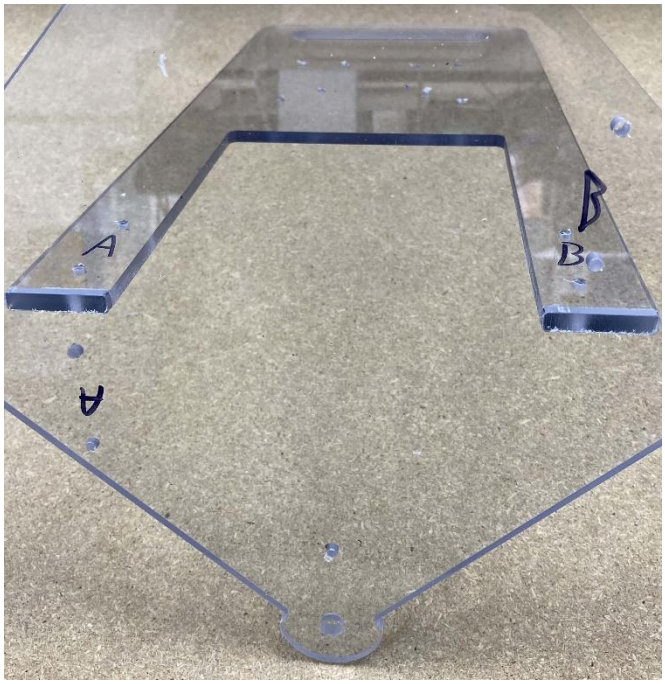
25 Battery Assembly Installation



Take the Perspex Mount Frame and supplied fittings as shown.

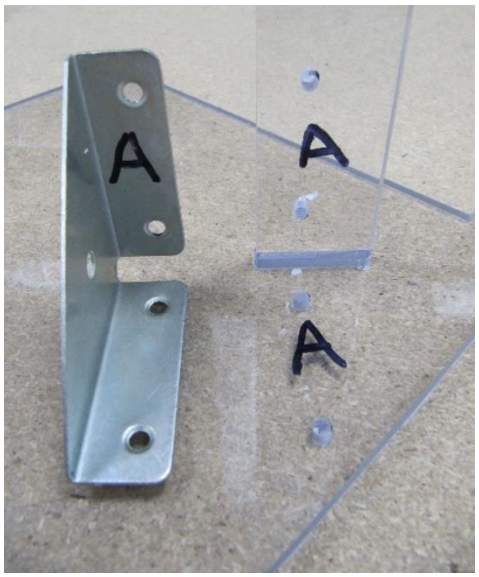


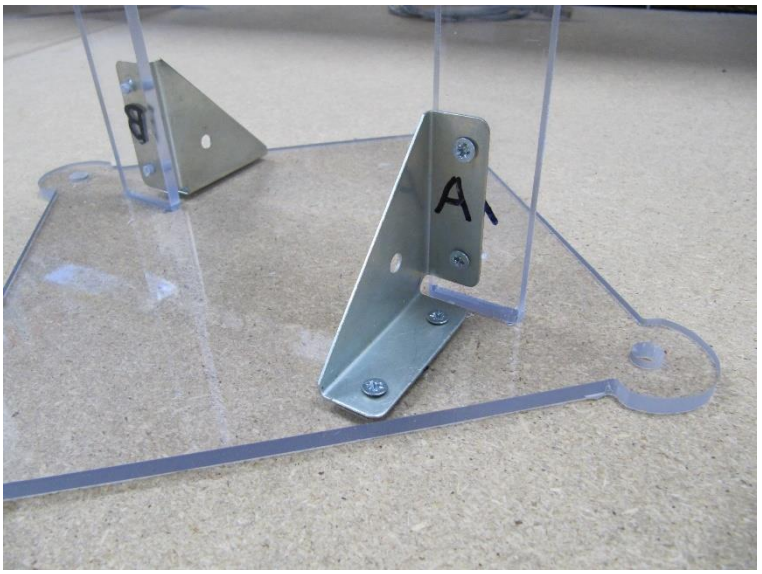
Align and insert the upright Perspex panel aligning A to A and B to B.



Push firmly until the base edges of the upright are flush with the Perspex base plate bottom face as in the diagram.

Align the Perspex panel support brackets as shown in the diagram below.
Loosely screw in all 4 x screws per bracket allowing proper alignment, when all screws are in place, tighten accordingly.



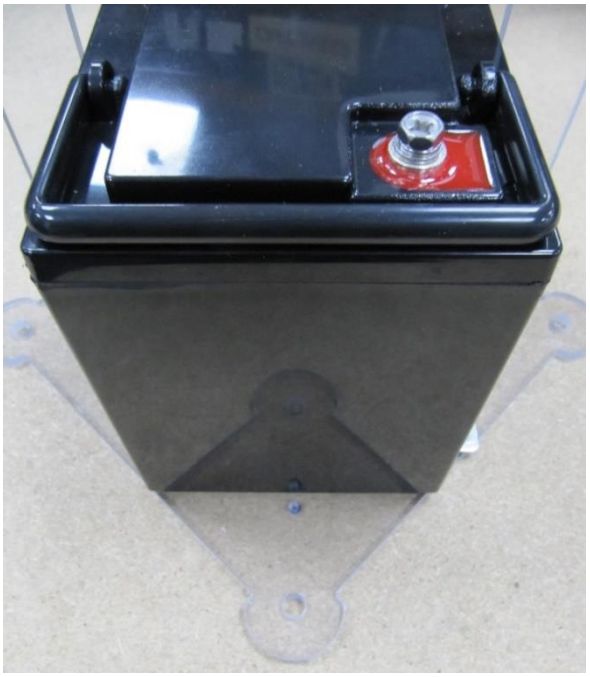


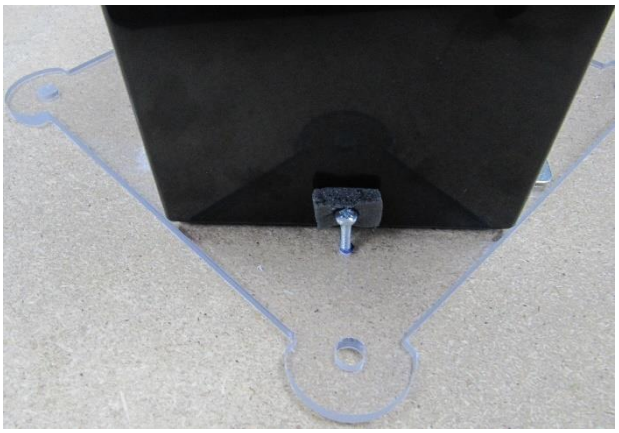
Run a small amount of glue around the base of the Perspex uprights where they join the Perspex base to provide additional stability to the frame.
Allow the glue to dry for a few minutes before installing the battery.

Take the Perspex Mount Frame (K) and Battery (Y6).

Remove Battery terminal screws and washers (retain for future use) to allow battery positioning on Perspex Mount Frame.

Position Battery on Perspex Mount Frame as show.





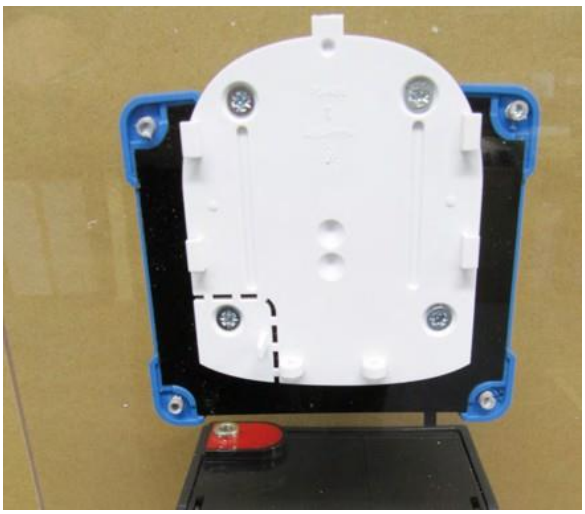
Secure Battery on Perspex Mount Frame as show above at both ends of the battery using the 2 x screws found in the Perspex Mount Frame kit with a small piece of foam tape on each.

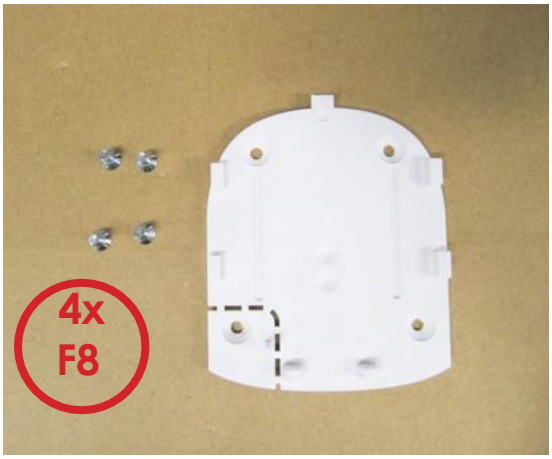
26

Attach the Solar Controller (Y1) to the Perspex Mount Frame (K) with 4 x (F9) using the 4 x outer holes.

27

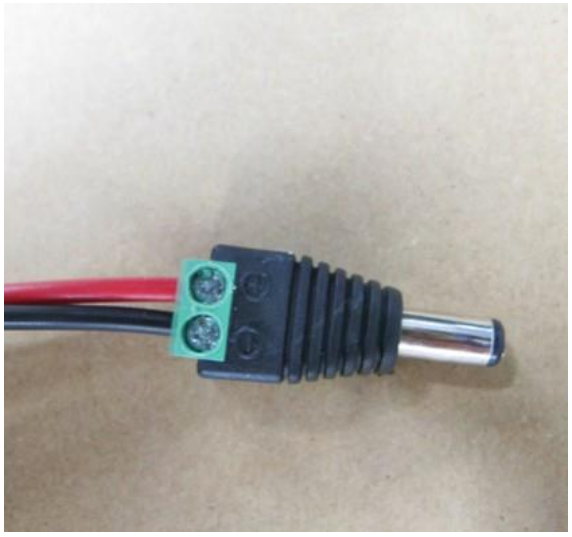
Take the Ajax Hub, remove the mounting plate from the Hub (Y4), and attach it to the reverse of the Perspex Mount Frame (K) so it's back to back with the Solar Controller.

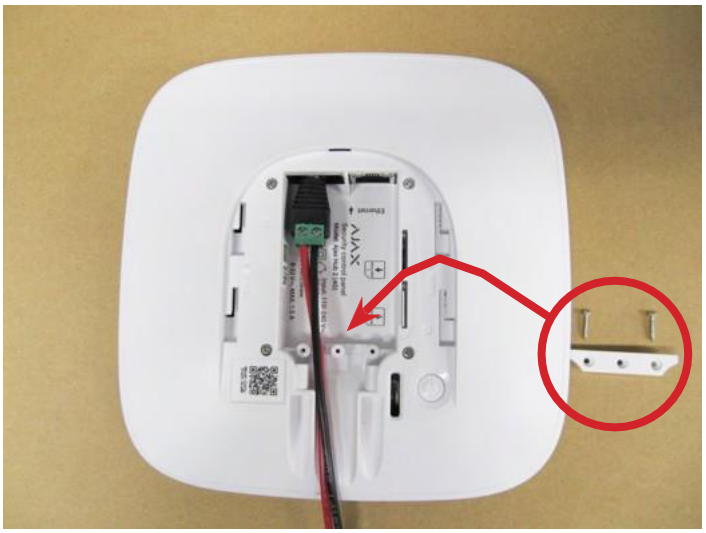




28

Attach the Hub to Solar Controller Loom (P). Secure the cables with cable clamp as shown.





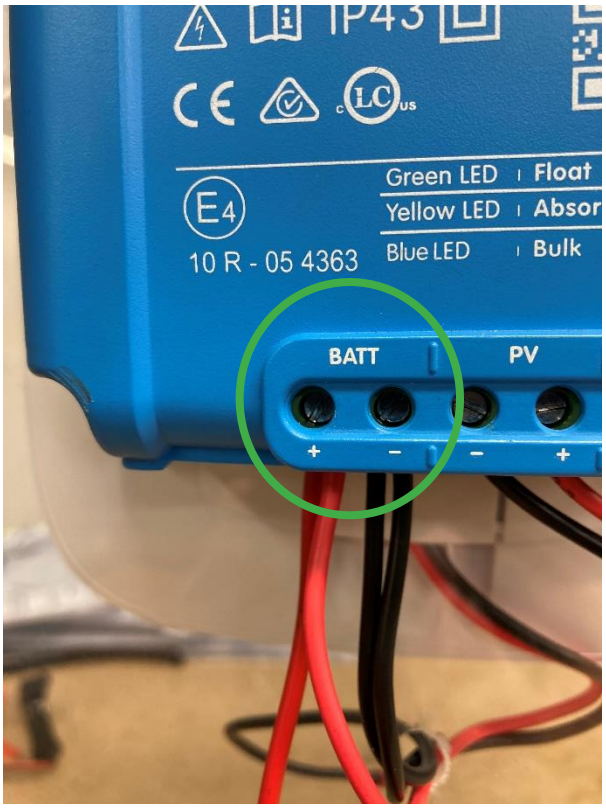
29

Pop the SIM out of the card. Insert the SIM card into the slot highlighted.

30

Slide the Hub onto the Mounting Plate by sliding in the direction shown.

31



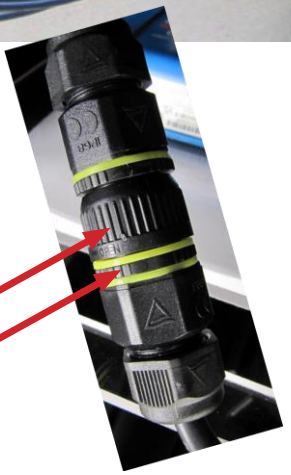
Connect Hub to Solar Controller

Red Wire (with In-line fuse) to BATT +

Black wire to BATT -

32 Connecting Quick Release Loom to Solar Controller

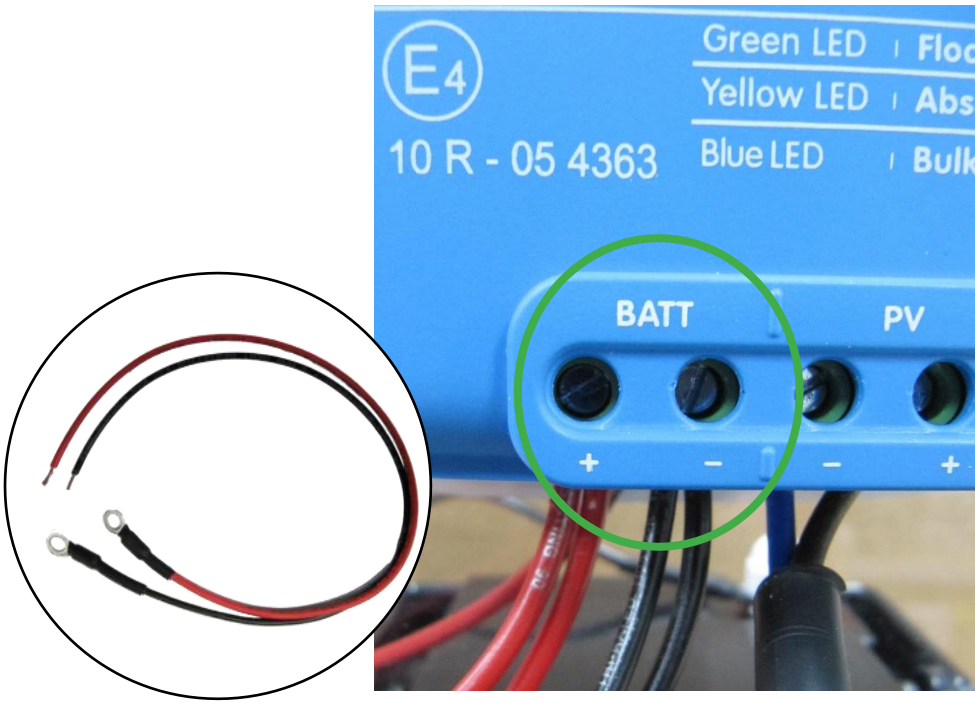
Take Quick Release Loom (L). Using shorter cable, connect Brown wire to PV + on the Solar Controller and Blue wire to PV -
Disconnect Quick Release Connector and place Loom to the side for now.



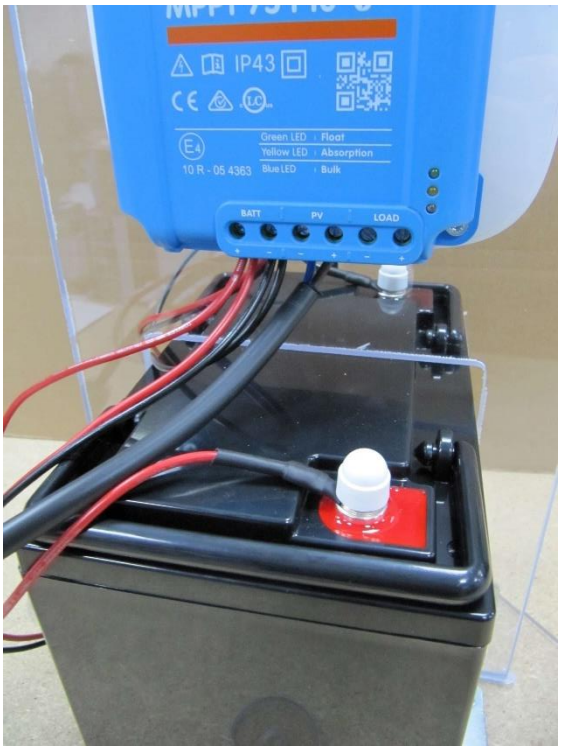
Disconnect by holding the two ribbed sections as shown.

33 Connecting Battery to Solar Controller

Connect the 2 x Battery looms (O) to Solar controller:
Red wire to BATT + and Black wire to BATT -



34



Connect Battery Looms (O) to the Battery as shown: Red ring crimp to Batt + terminal, Black ring crimp to Batt - terminal.
Place White Caps (F13) over the terminals.

35

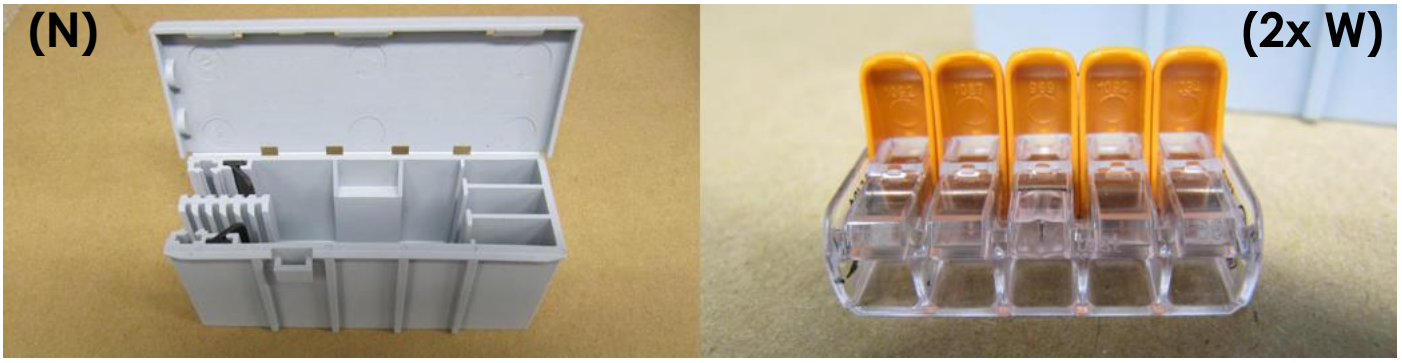
Battery Assembly Complete: Place to one side.

36 Wiring Base Unit

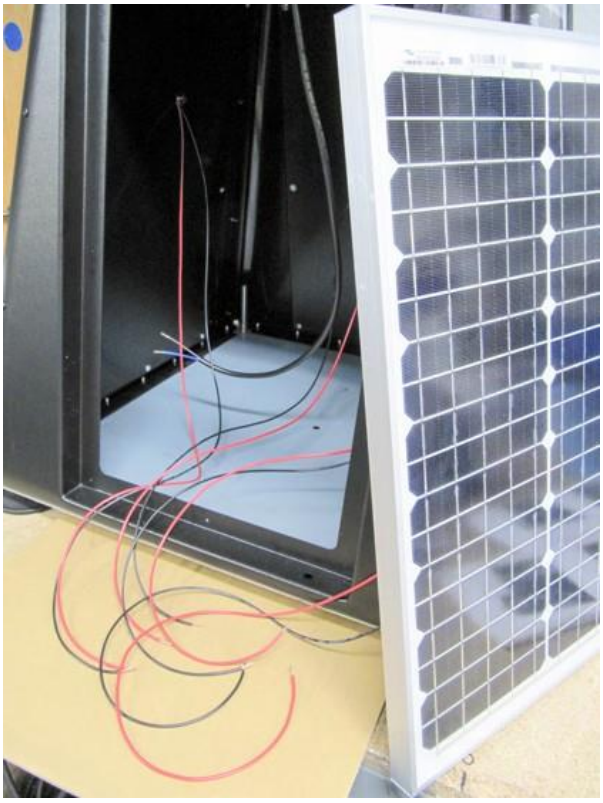
Insert the Quick Release Loom - Long length through the hole on the base unit.

37

Components required

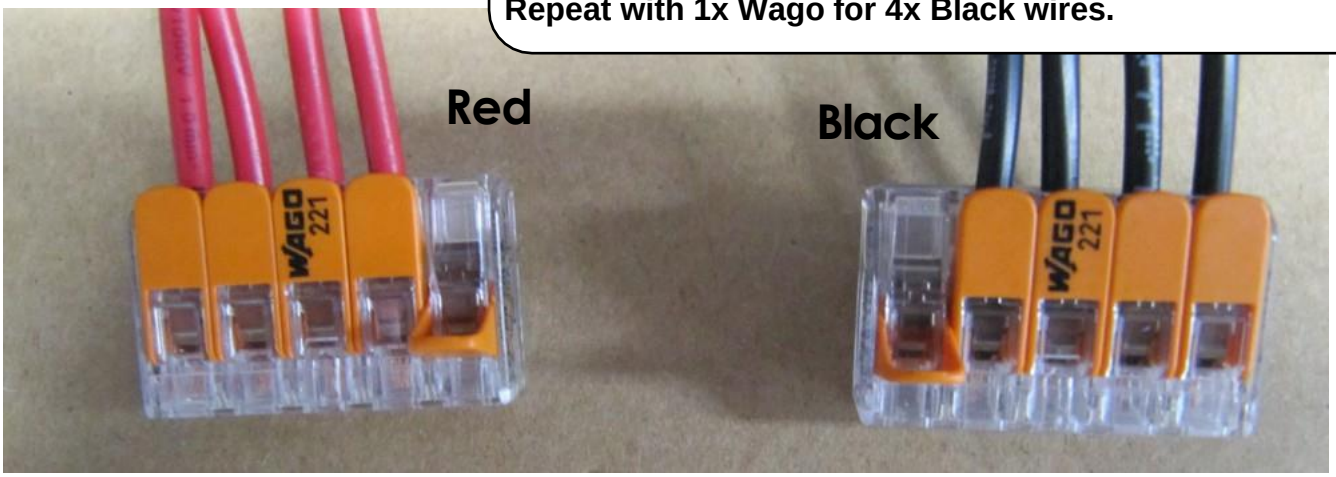


Position the 4th Solar Panel as per image, gather the wires from the 4 x Solar Panels.
Ensure the non-fitted Solar Panel (Access Panel) is positioned with the bolt as shown.

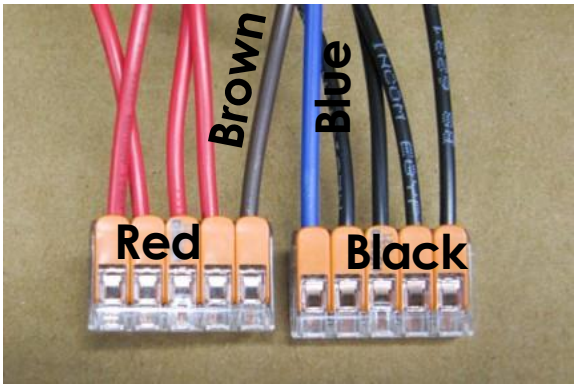


38

Using 1x Wago Connector, connect 4x Red wires as shown.
Repeat with 1x Wago for 4x Black wires.

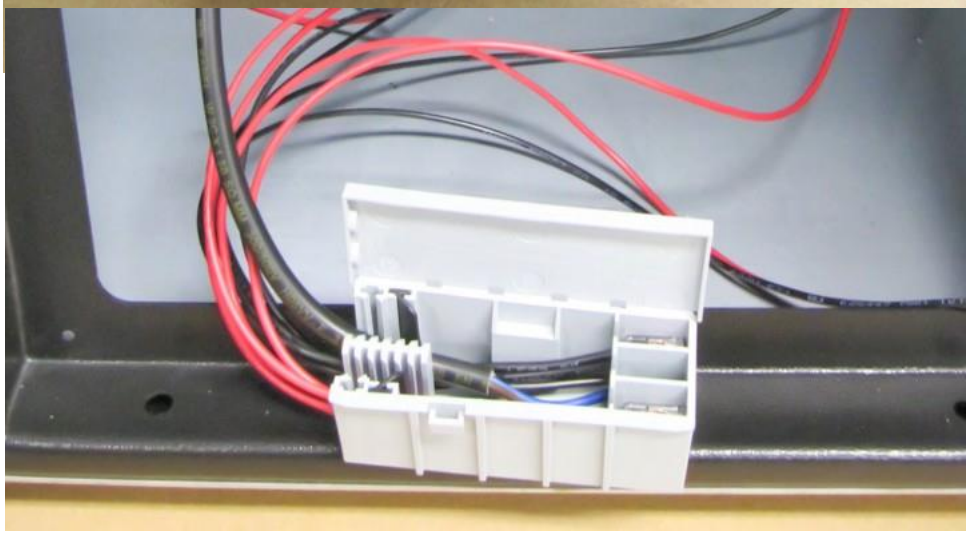


39



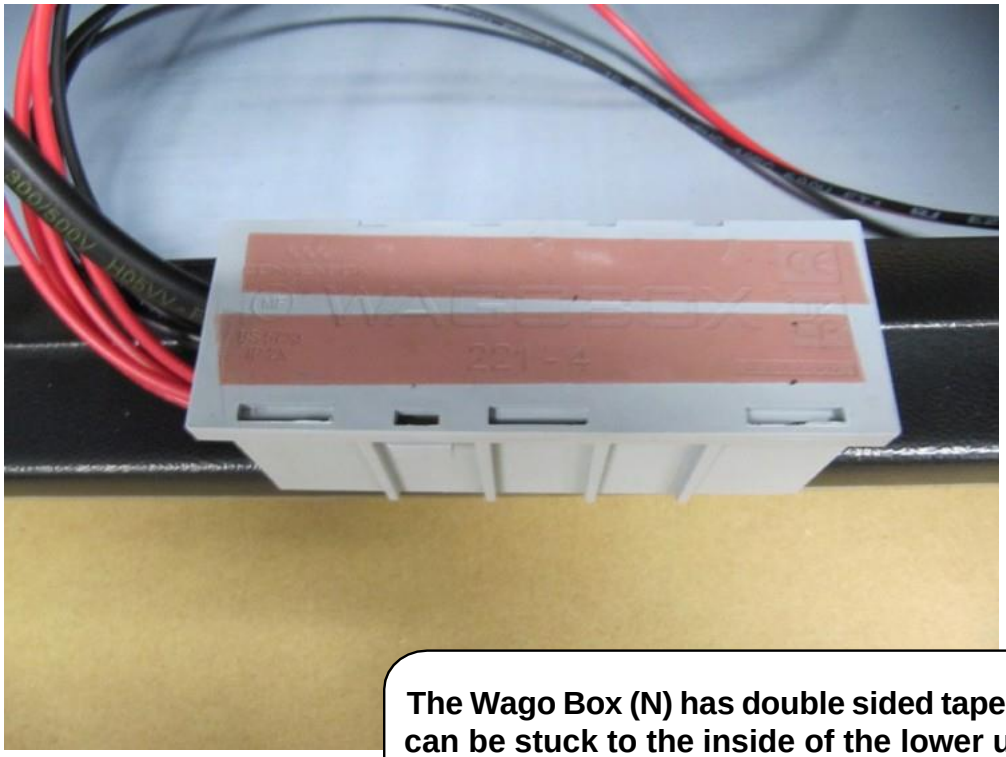
Connect the Quick Release Loom to Wago Connectors as shown.

40



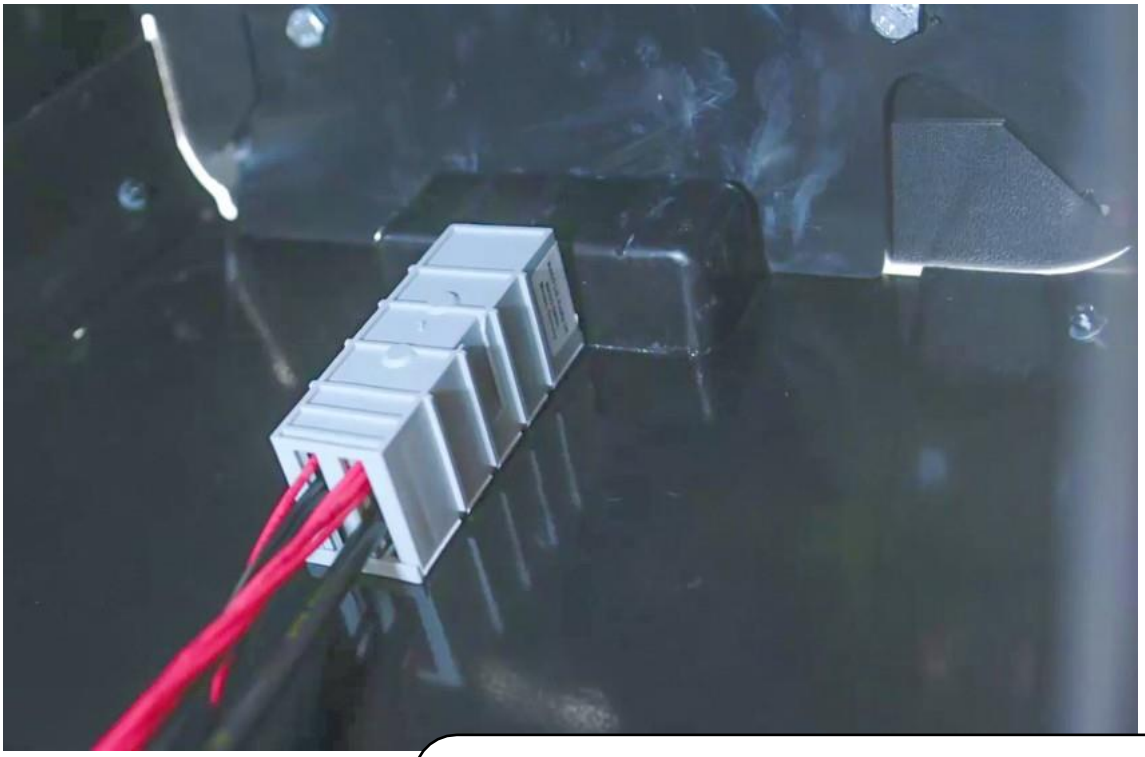
Place both Wago connectors (M) into the Wago box (N) as per the image and clip the box closed.

41



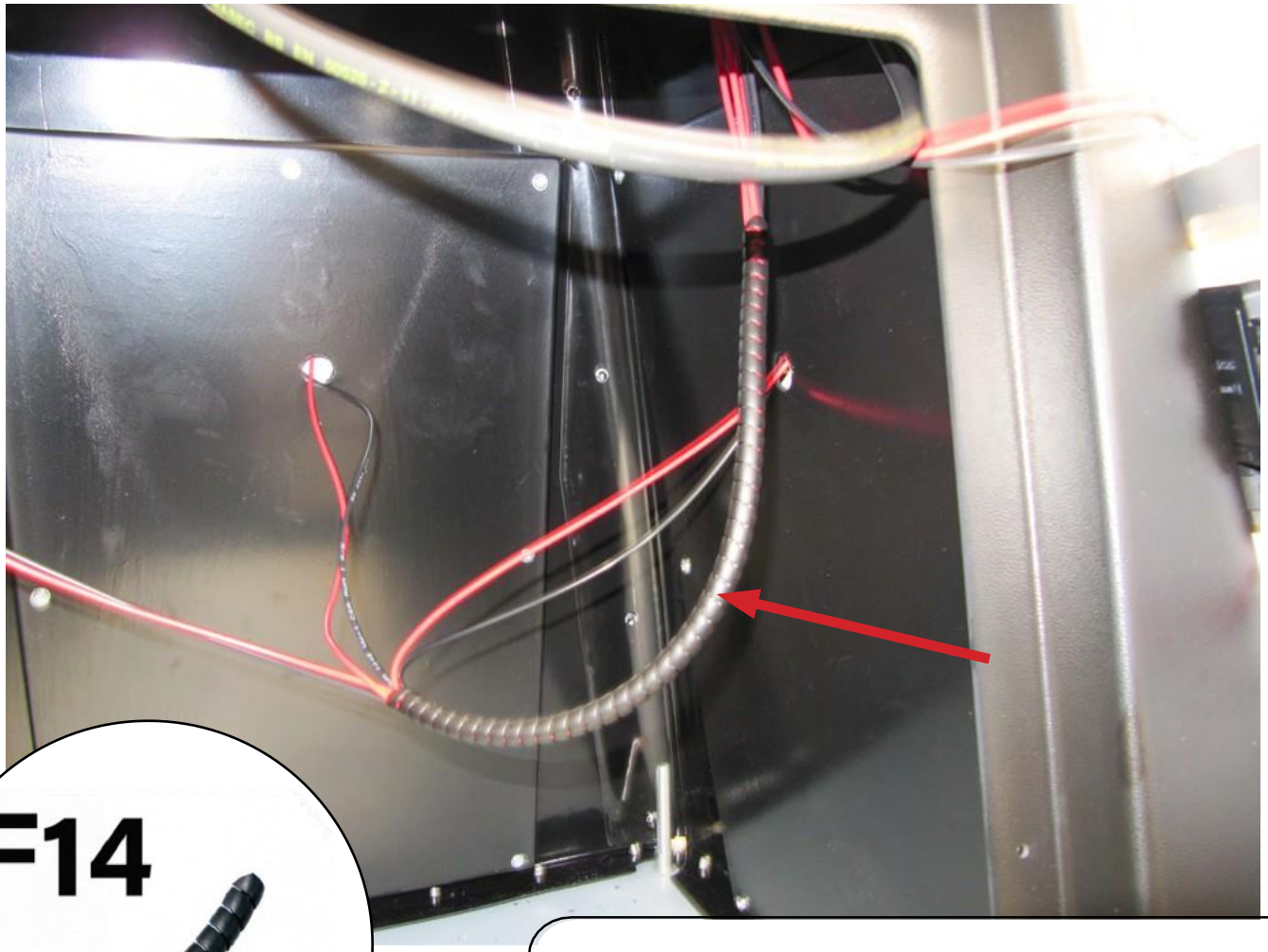
The Wago Box (N) has double sided tape applied so it can be stuck to the inside of the lower unit.
Peel both pieces of the tape to expose the sticky side.

42



Place the Wago box (P) inside as high as you can (Below the inner recess handle) with the wires hanging from the bottom of the box.

43



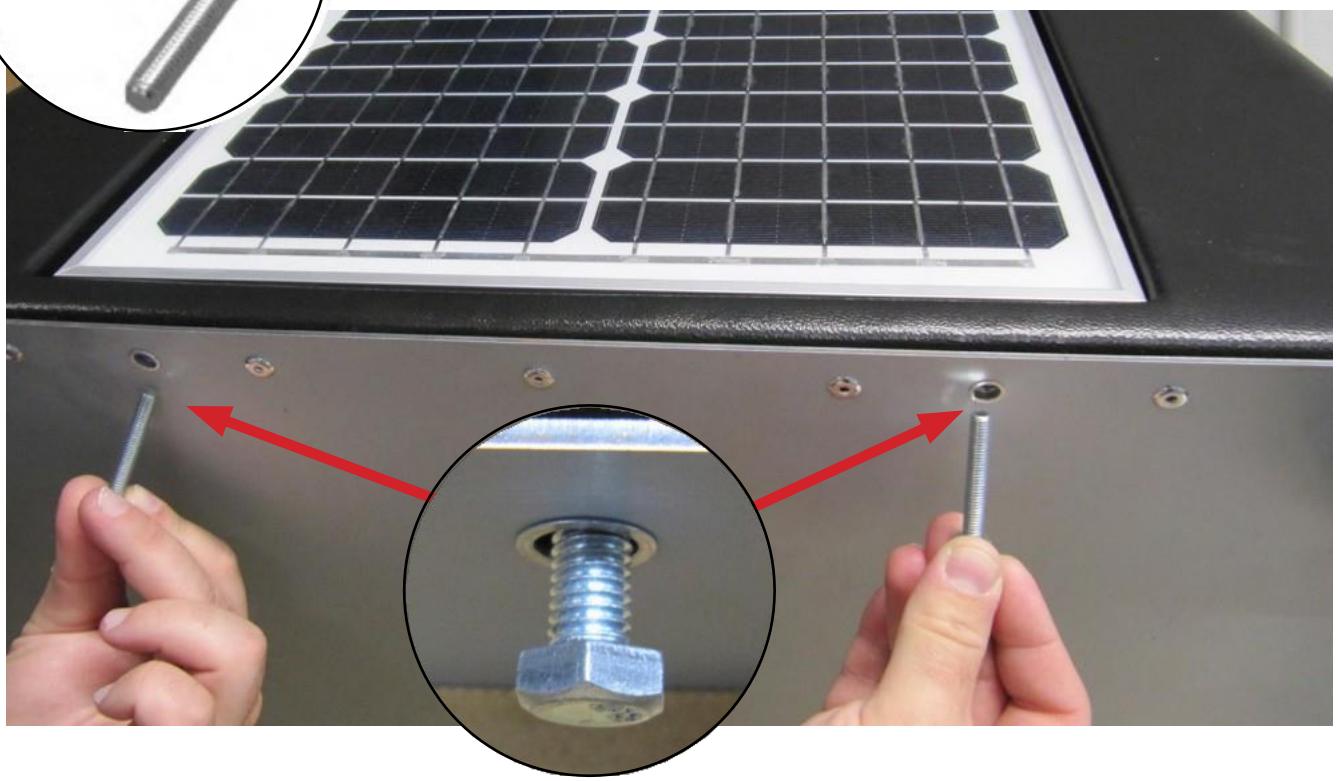
Wrap the Cable Tidy (F14) around the 6x wires for the fixed Solar Panels only (not the Solar Access panel or the Quick Release loom) to keep them secure.

44

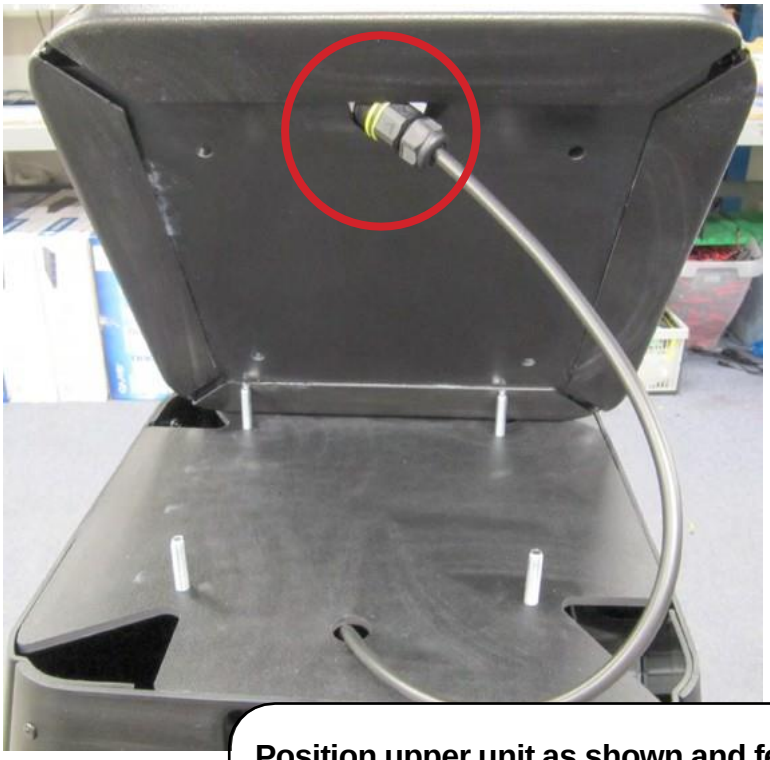
Fit the last Solar panel, tilt the top inward, slide the panel up so the Solar Panel Top Bolt slots into the pre-drilled hole in the recess.

45

Raise/tilt the Base Unit under the Access Solar Panel. Insert the 2 x Solar Panel Bottom Fixing bolts (F12) into the panel through the bottom of the lower unit to affix the panel securely. Tighten both Bolts fully.



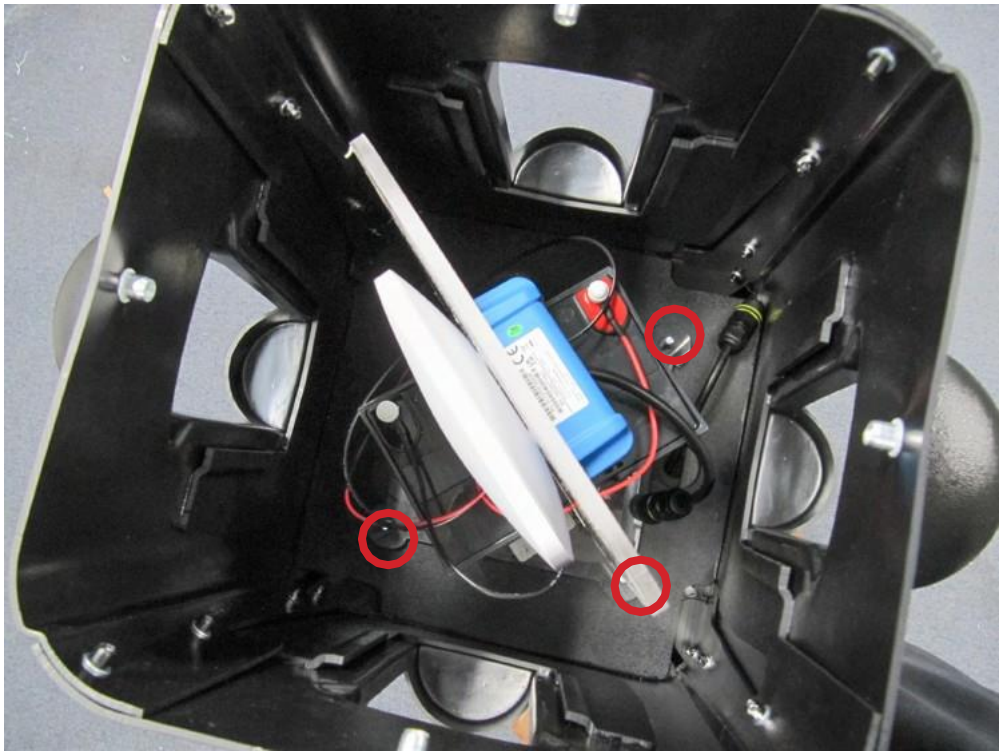
46

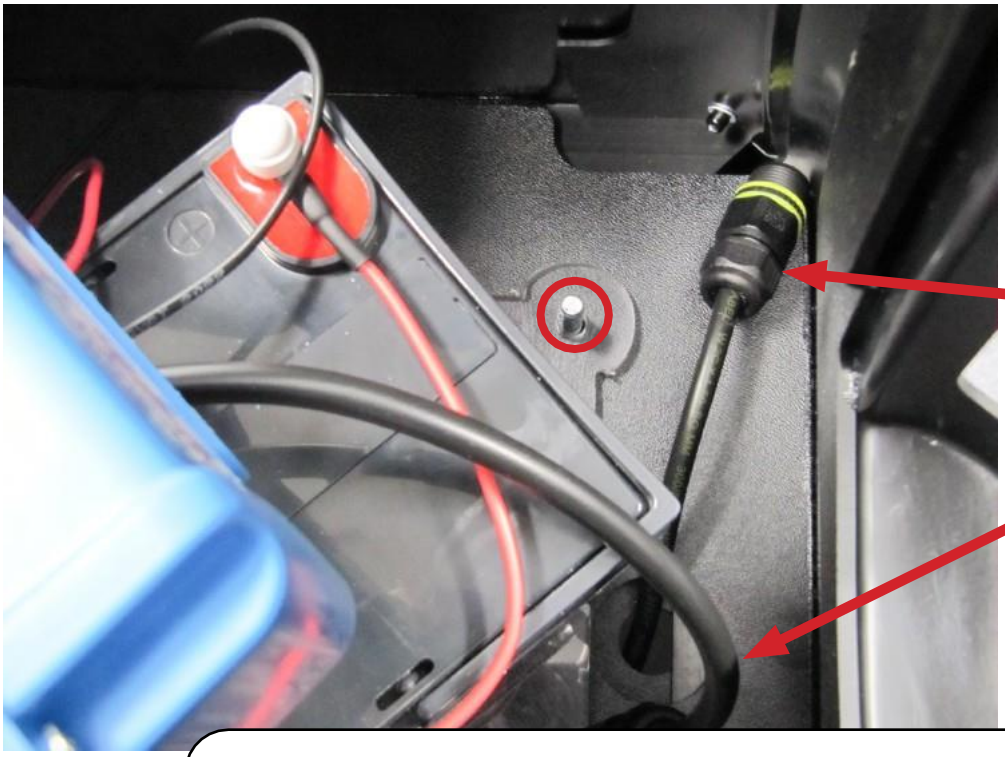


Position upper unit as shown and feed Quick Release Loom through cut out.

Align upper unit and place onto the 4x mounting bolts.

47 Installing Battery Assembly



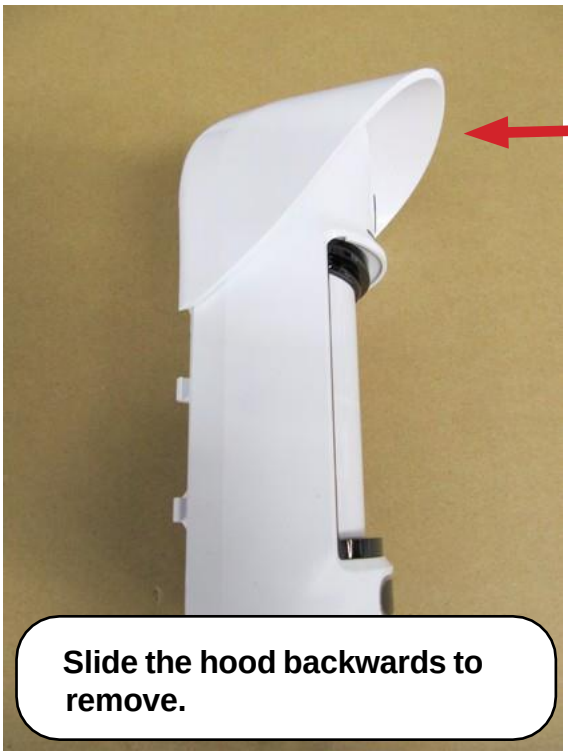


Lower the Battery Assembly into the upper unit, aligning the screw holes to the 4x bolts with the Quick Release Loom connectors aligned. Secure assembly hand tight with 4x Wing nuts (F10).

Re-connect the Quick Release connector and then place back into the upper unit.

48 Installation Motion Cams/PHOD's

Take each Motion Cam and slide the back down from the body and remove.



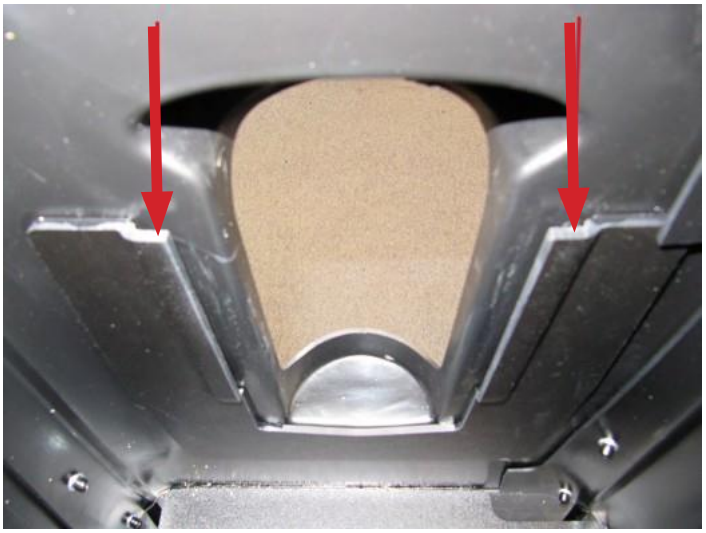
Slide the hood backwards to remove.

NOTE: If configuring the system refer to RapiDetect Full Set Up Guide (link on page 47)

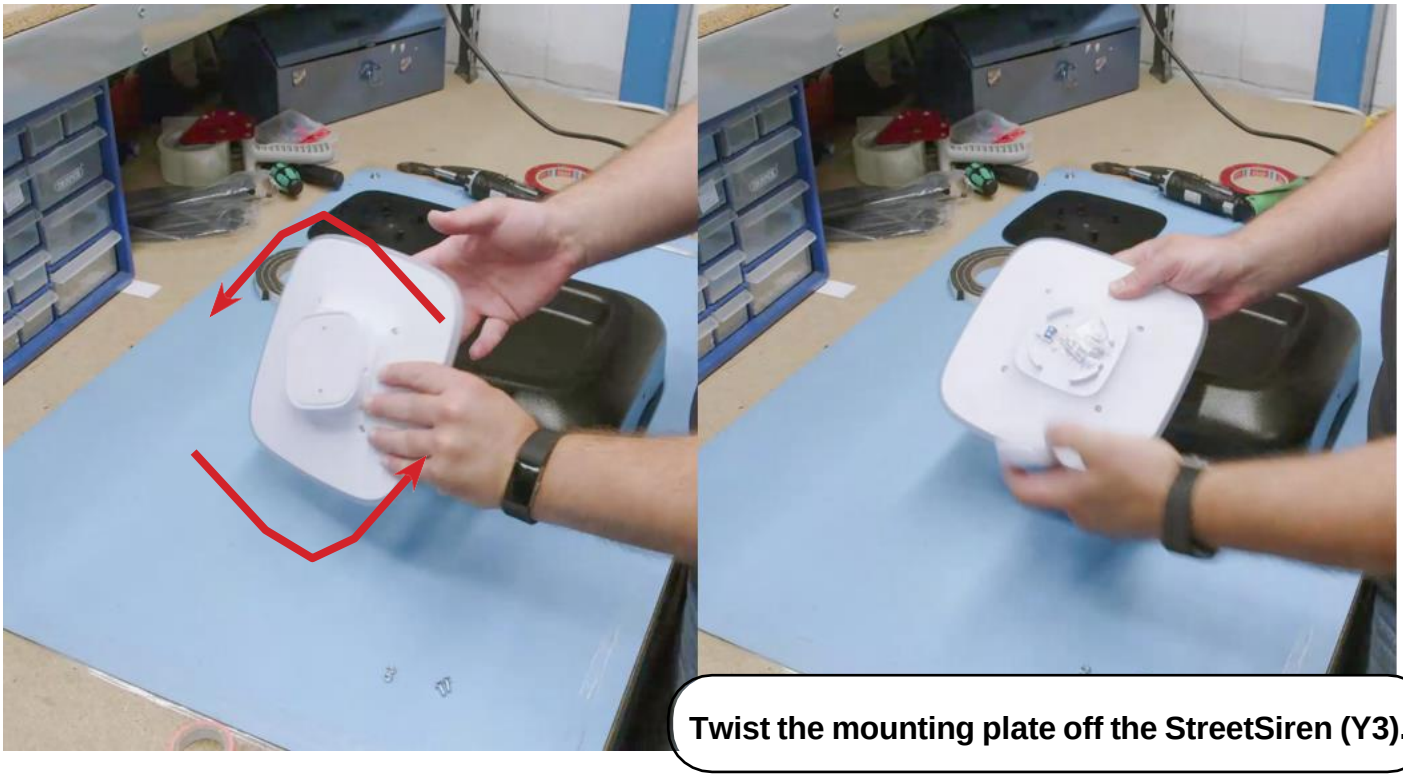
Re-attach back cover and secure with screw.

49

Place each MotionCam/PHOD (one at a time) into the camera housing, secure in place with Camera Fixing Plate (C).



50 Installing the Street Siren



Twist the mounting plate off the StreetSiren (Y3).

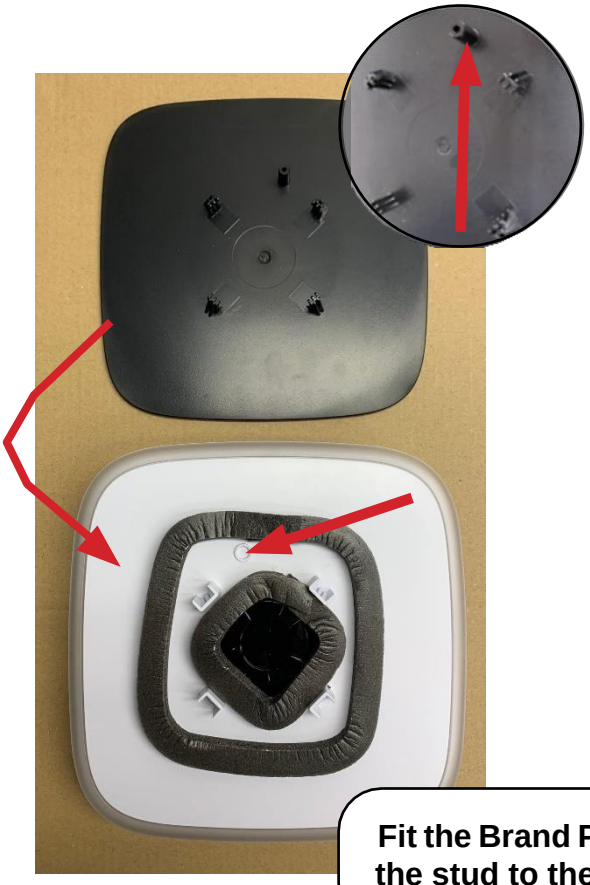
51

Place the mounting plate in the centre of the Upper Unit lid (D) and fix with two screws (F9) through the of the lid, tightening the two nuts (F7) from the underside.

52

On the underside of the StreetSiren, use the Foam Tape (F15) to create a squared seal around the center siren. Use Foam Tape (F16) to create the outer squared seal.
Overlap the ends as shown and press down firmly to ensure a good seal.

53



Fit the Brand Plate (Y7) onto the StreetSiren (Y3), aligning the stud to the marker on the Siren base.

54

On the underside of the StreetSiren (Y3), fix Foam Tape (F17) around the edge to create a seal.
Ensure ends join tightly together.

55

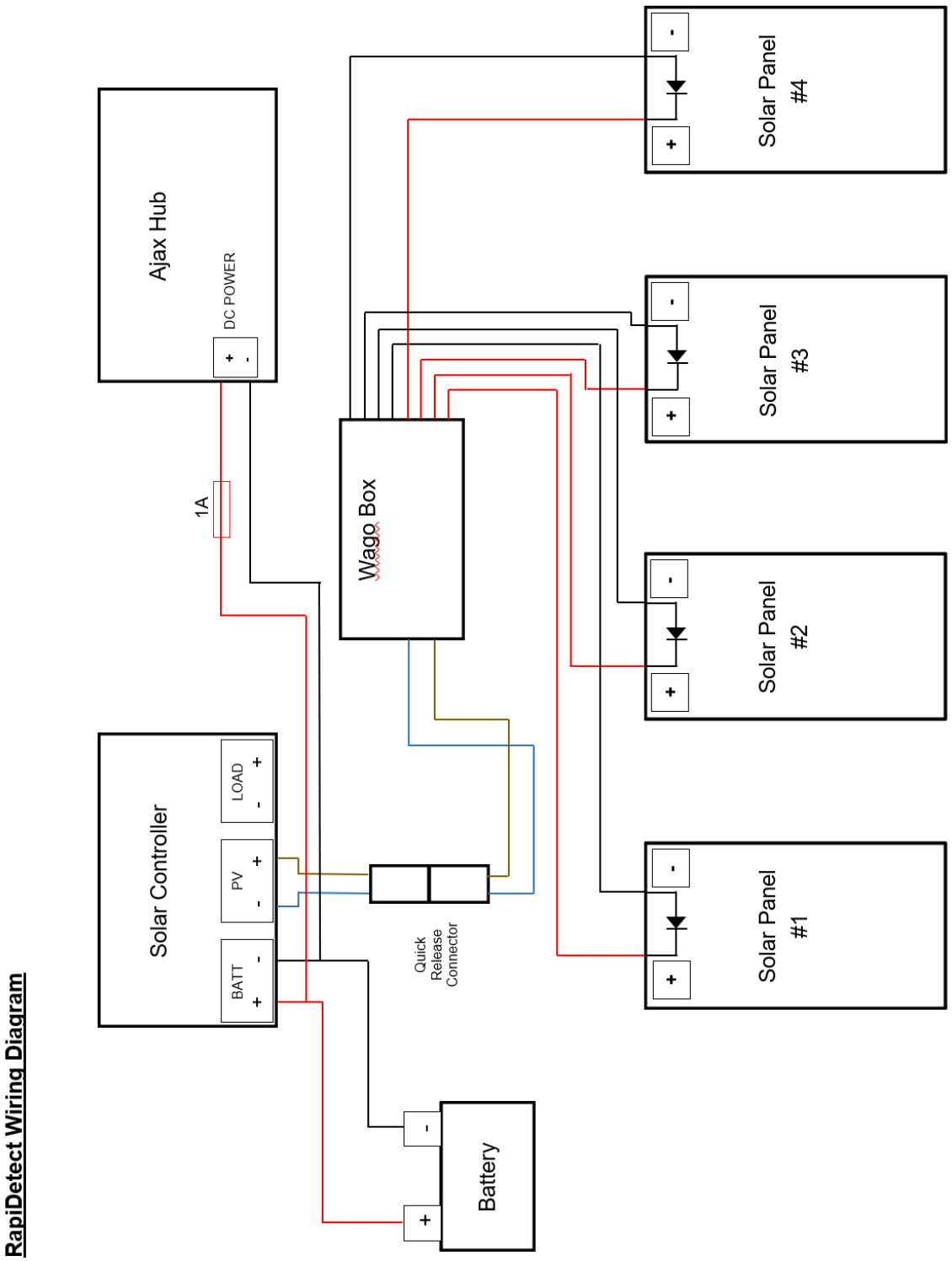
Position the StreetSiren above the Upper Unit lid (D) as per the first image (about 45 degrees), turn the StreetSiren 45 degrees clockwise until it clicks into position as per the second image.

56

Secure the Upper Unit lid (D) to the Upper Unit using the Lid Security Screw (F5) and Lid Security screw cap (F6) repeat on opposite side of the lid.

Top Tip: Position the Ajax logo facing the same direction as the removable Solar panel (which is marked with a black dot on the top left hand side) so it is easier to access the inside of the lower unit in the future.

Wiring Diagram



RapiDetect Full Set Up Guide

Please scan the below QR code to access the

RapiDetect
Full Set Up Guide

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