

MITSUBISHI A6M ZERO FIGHTER



Pack 12 | Build Instructions

Your 1:18 model of the Japanese Zero is reproduced in the most exquisite detail, with electronics allowing you to recreate aeronautical operations such as take-off and landing, turning, firing and night combat. Lights, machine-gun and propeller sounds bring your legendary fighter plane to life.

In your twelfth model pack, you will assemble:

**STAGE 93: ASSEMBLING THE SWITCH UNIT
AND THE DISPLAY PEDESTAL**

**STAGE 94: STAGE 94: ATTACHING FUSELAGE
PANELS, WING GUNS AND PITOT TUBES**

STAGE 95: CHARGING UNIT ASSEMBLY

**STAGE 96: INSTALLING THE INFRARED
RECEIVER AND ASSEMBLING THE DISPLAY
PANEL**

STAGE 97: CHECKING THE BATTERY

**STAGE 98: ASSEMBLING THE DISPLAY
PEDESTAL AND BATTERY CASE**

**STAGE 99: ASSEMBLING THE DISPLAY
PEDESTAL**

**STAGE 100: FINISHING THE MODEL AND THE
DISPLAY PEDESTAL**



There are excellent videos showing how to build the Zero [here](#).

Advice from the experts

Spare screws are included with each part. Occasionally, you may be instructed to keep spare or unused screws for a later stage.

Keep these spares in a safe place and label them correctly.

Please make sure you don't mix up the screws. They look quite similar, but the threads do vary slightly. Using the wrong screws may damage the parts.

When securing parts together using multiple screws, fit each screw loosely to ensure all the parts are correctly aligned before gently tightening them firmly, but not overtight, in the order in which you placed them.

The screwdriver can be magnetised by stroking it with a magnet (fridge magnet, etc.) enabling it to hold the screws and make assembly easier.

If a screw is tight going into a metal part, do not force it as you may shear the head off. Remove it and put a tiny smear of Vaseline, soap or light oil on the thread. That will lubricate it and make it easier to drive home.

During the course of this build, you will receive many pieces that you will assemble immediately – following the instructions in the corresponding stage – and other pieces that you should store safely to one side, for use in future assembly stages.

When gluing parts together, glue may be applied to either of the two parts. Some experts find it easier to apply glue to a hole rather than a pin. Choose a method that works best for you.

It's a good idea to test fit your parts so that you can check their positioning before gluing.

Not suitable for children under the age of 14. This product is not a toy and is not designed for use in play. Keep the parts out of the reach of small children. Some parts may have sharp edges. Please handle them with care.

Stage 93: Assembling the Switch Unit and the Display Pedestal

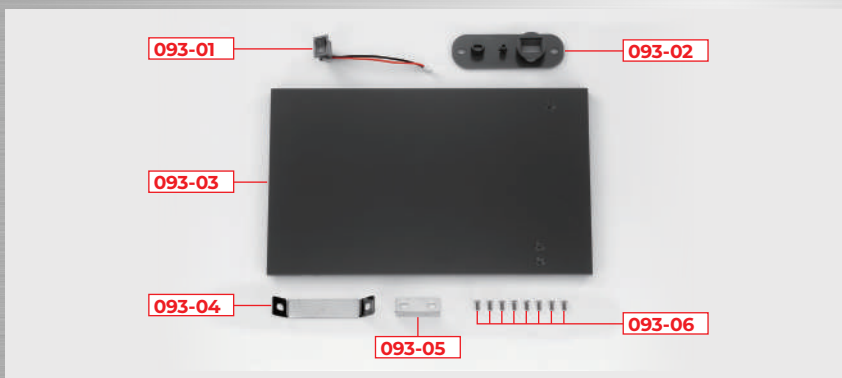


Stage 93 Assembly

Switch Unit

In this stage we'll be attaching a switch unit to the display pedestal frame. When doing so, take the opportunity to ensure all of the parts are securely fastened.

STAGE 93 PARTS



You will also need: screwdriver

* The remaining six of 093-06 will not be used in this stage. Keep them in a safe place until required in a later stage.

* Parts may differ slightly from those shown but this will not affect assembly.

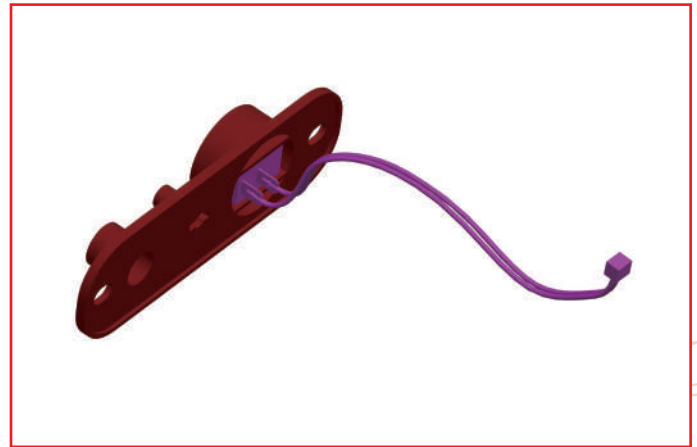
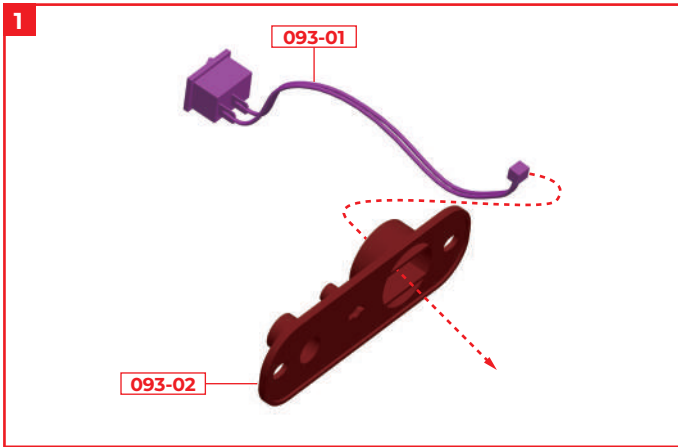
PARTS LIST

	Part	No.	Material
<input type="checkbox"/>	093-01	1	Switch unit
<input type="checkbox"/>	093-02	1	ABS resin
<input type="checkbox"/>	093-03	1	MDF
<input type="checkbox"/>	093-04	1	Steel
<input type="checkbox"/>	093-05	1	Steel
<input type="checkbox"/>	093-06	8	Steel

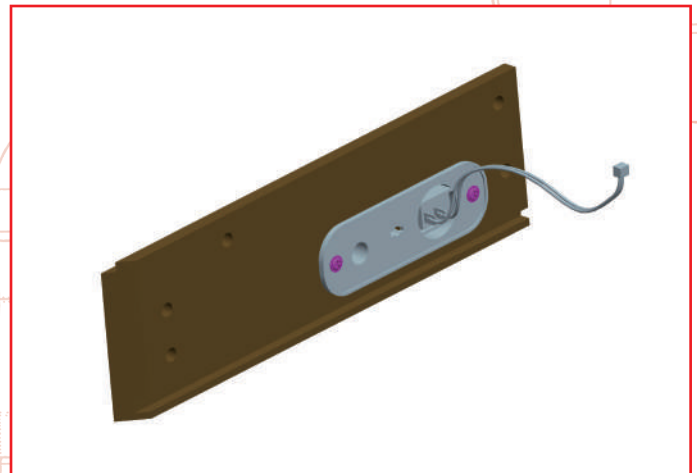
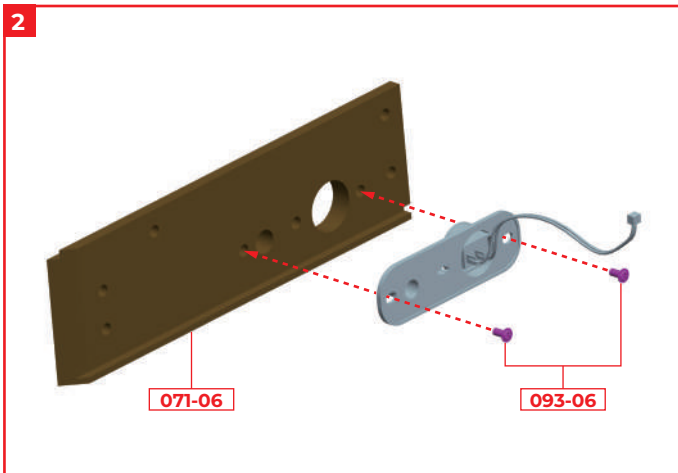
STEP 1

Assembling the switch unit

← : Glue
- - - : Don't Glue



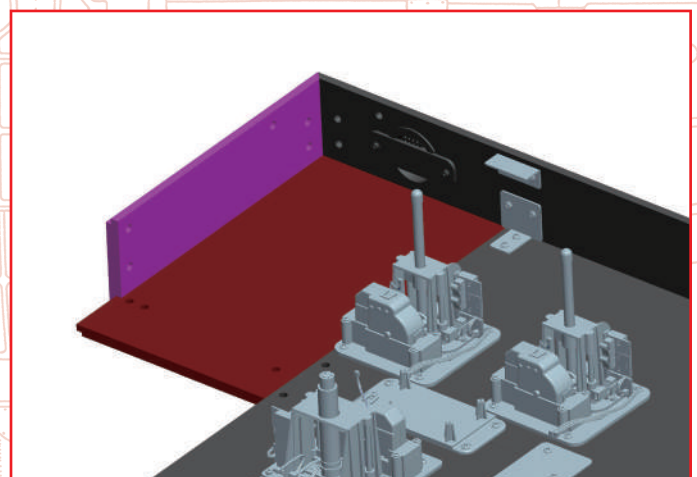
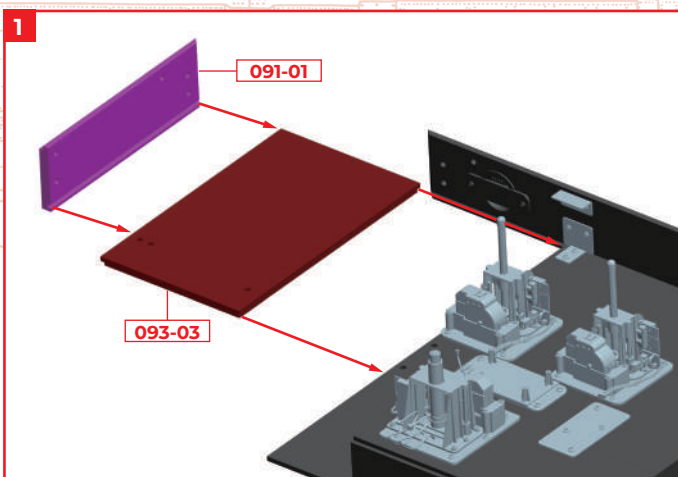
Thread the cord of switch 093-01 through the opening in the switch plate 093-02 and fit the switch. Note that the switch has a fixed left and right orientation. Make sure that the terminal on the back of the switch is to the left when viewed from the back.



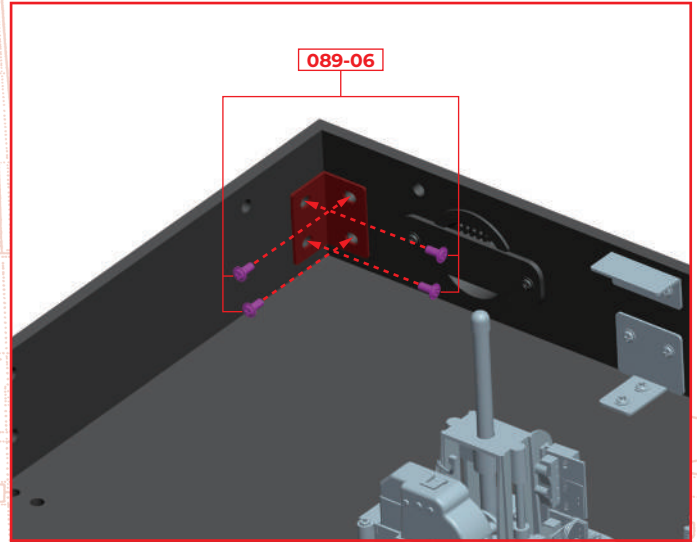
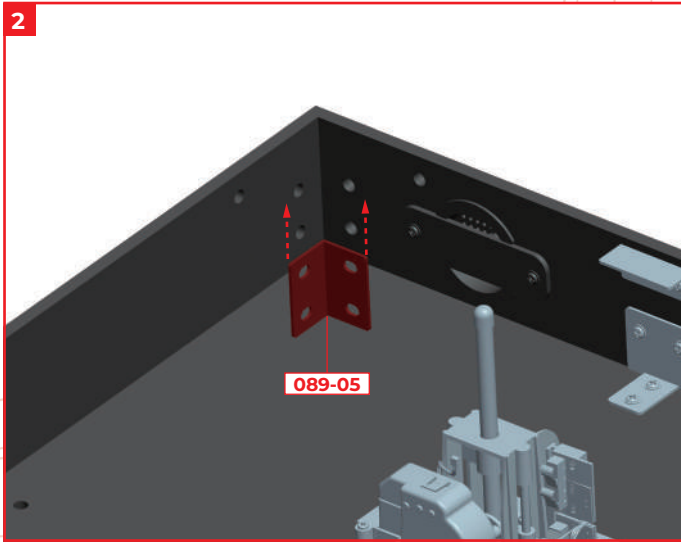
Fit the switch unit assembled in 1 into the pedestal frame 071-06 that came with Stage 71, and fix in place with 2 x 093-06 screws.

STEP 2

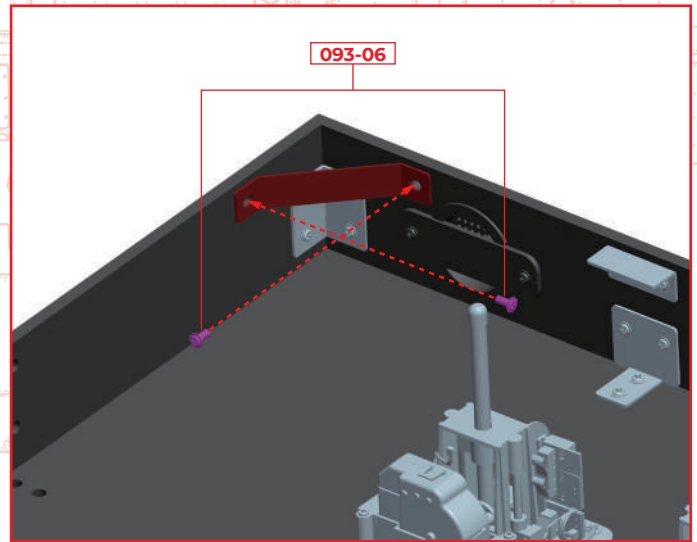
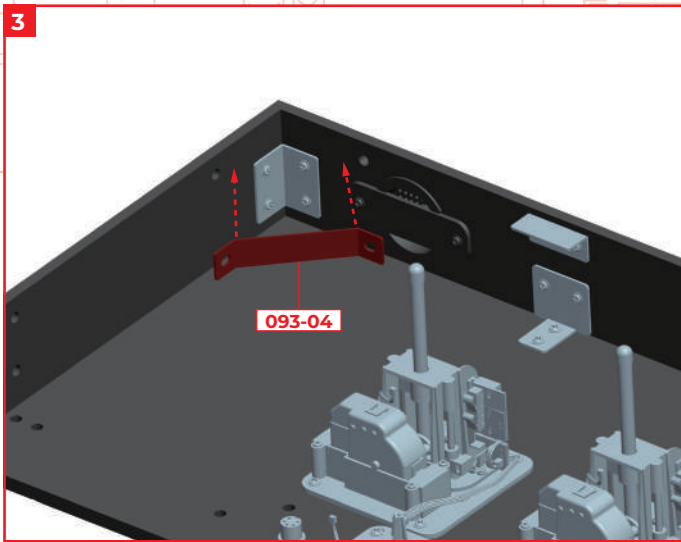
Assembling the pedestal frame



Fit the pedestal plate 093-03 and the pedestal frame 091-01 that came with Stage 91 into the pedestal.

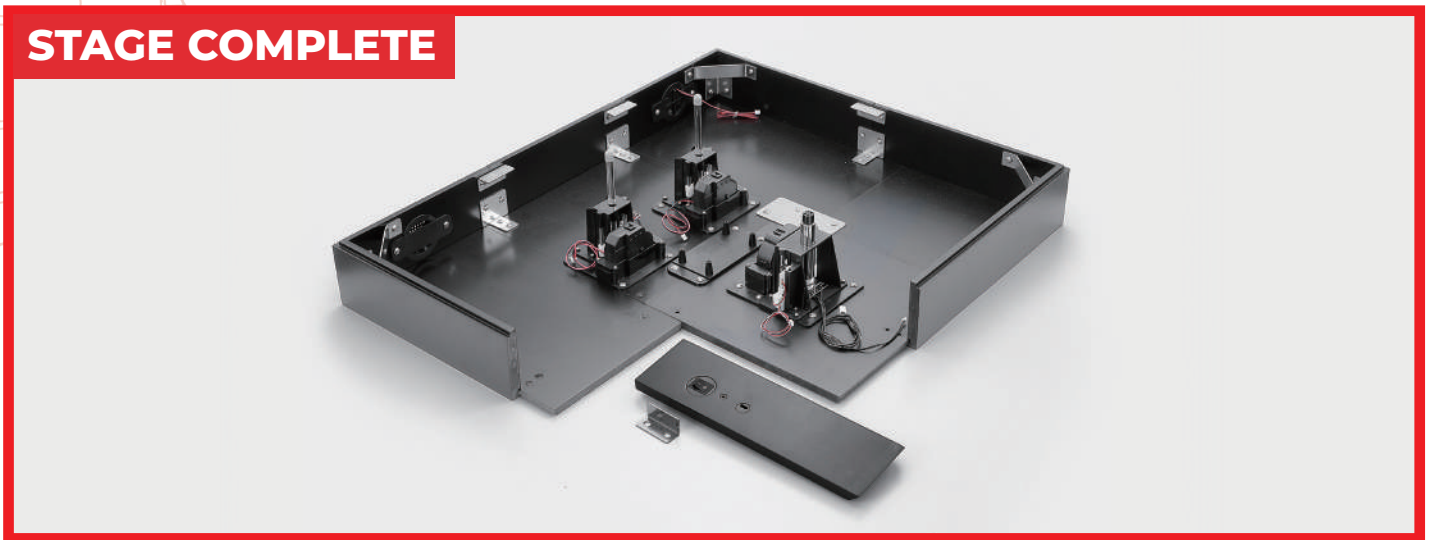


Align the metal fitting 089-05 that came with Stage 89 with the pedestal frame, and fix in place with 4 x 089-06 screws.



Align the metal fitting 093-04 with the pedestal frame, and fix in place with screws 093-06.

STAGE COMPLETE



Stage 94: Attaching Fuselage Panels, Wing Guns and Pitot Tubes

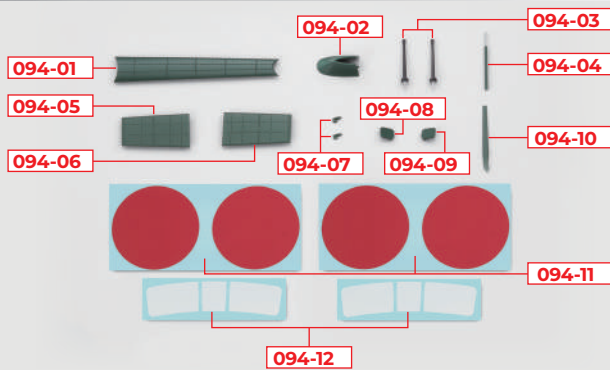


Stage 94 Assembly

Fuselage panel, wing guns, Pitot tube

In this stage we'll be attaching panels to the fuselage and 20 mm machine guns and pitot tubes to the wings. We'll also insert the top side panels to the wings, completing the aircraft. The decals will be attached later on.

STAGE 94 PARTS



You will also need: screwdriver, superglue
 * 094-11 & 094-12 will not be used in this stage. Keep them in a safe place until required.
 * Parts may differ slightly from those shown but this will not affect assembly.

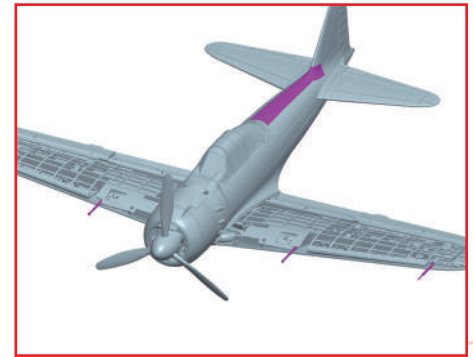
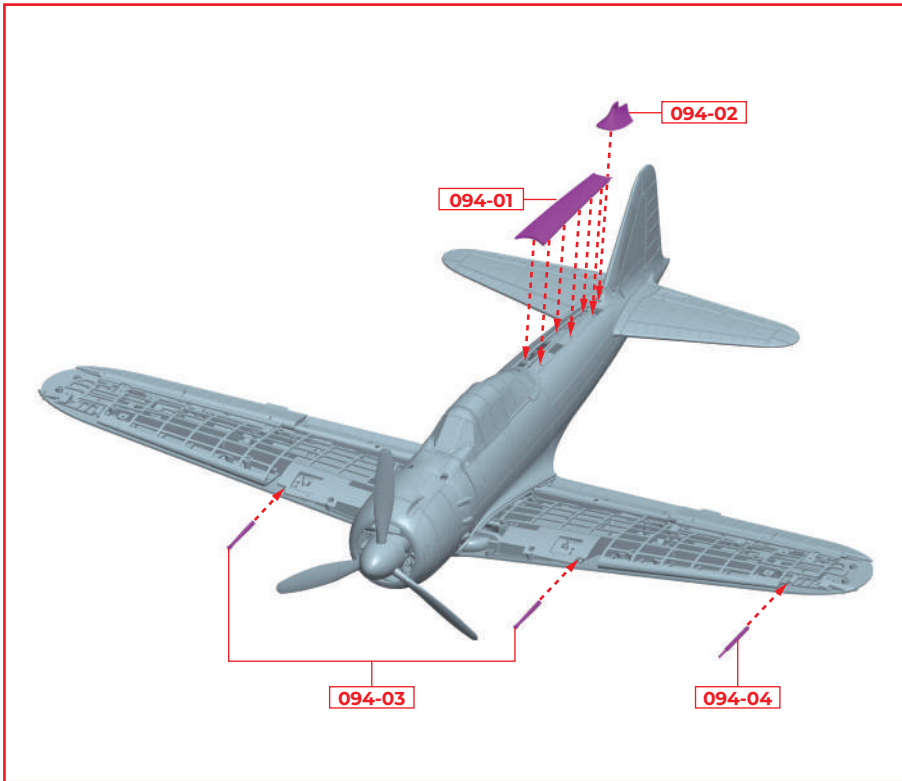
PARTS LIST

	Part	No.	Material
<input type="checkbox"/>	094-01	1	Die-cast
<input type="checkbox"/>	094-02	1	ABS resin
<input type="checkbox"/>	094-03	2	ABS resin
<input type="checkbox"/>	094-04	1	ABS resin
<input type="checkbox"/>	094-05	1	ABS resin
<input type="checkbox"/>	094-06	1	ABS resin
<input type="checkbox"/>	094-07	2	ABS resin
<input type="checkbox"/>	094-08	1	ABS resin
<input type="checkbox"/>	094-09	1	ABS resin
<input type="checkbox"/>	094-10	1	ABS resin
<input type="checkbox"/>	094-11	2 sets (1 spare)	Decal
<input type="checkbox"/>	094-12	2 sets (1 spare)	Decal

STEP 1

Attaching the fuselage panels, 20 mm machine guns and Pitot tubes

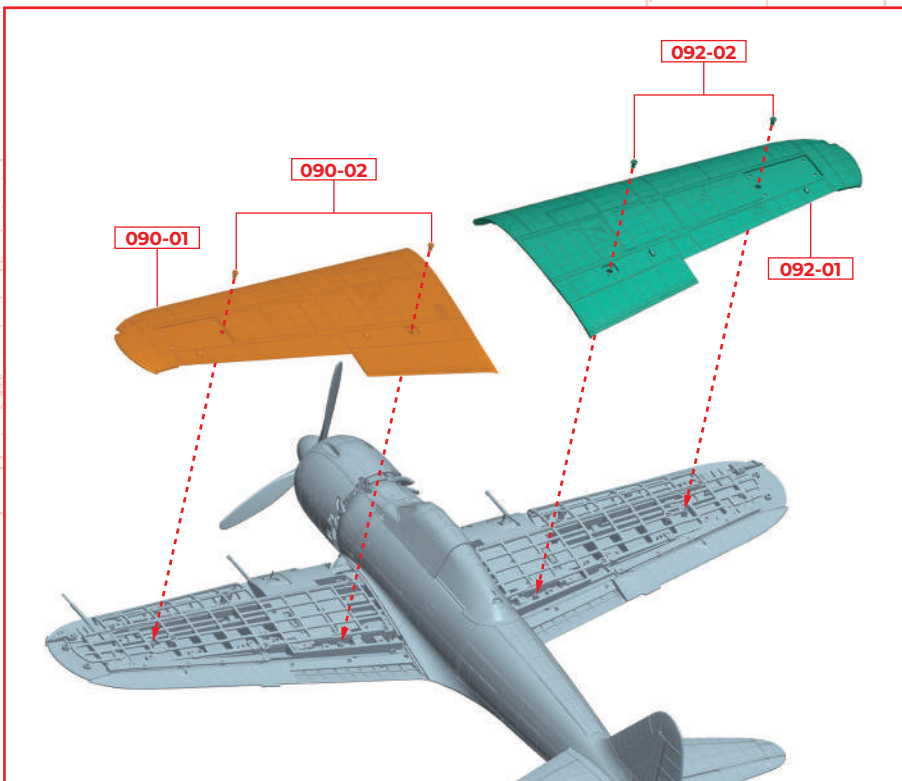
← : Glue
 - - - : Don't Glue



Fit the fuselage panels **094-01** and **094-02** on the top of the fuselage. Insert the 20mm machine gun **094-03** into the right wing. Then insert another 20mm machine gun **094-03** and the Pitot tube **094-04** into the left wing. Be careful not to break the machine guns and Pitot tube in this process.

STEP 2

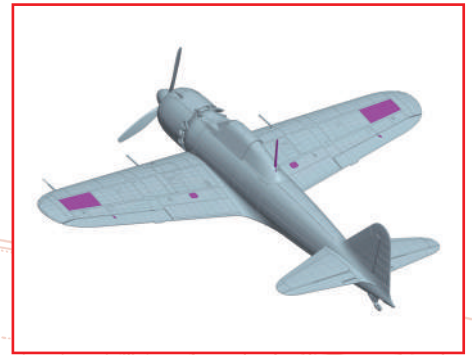
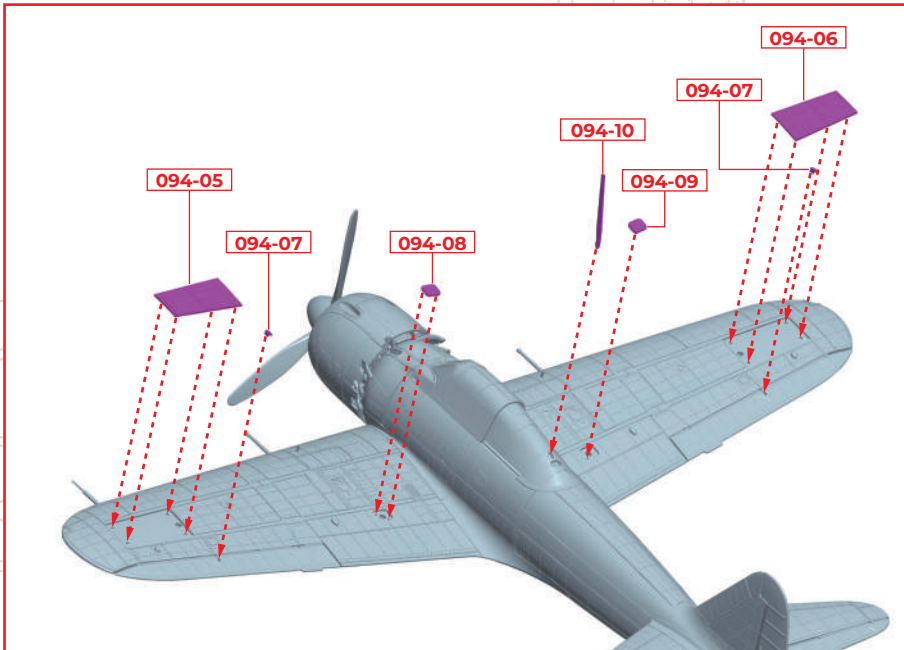
Attaching the top outer panels to the wings



Fit the left wing topside panel **090-01** that came with Stage 90 into the left wing, and fix it in two places with screws **090-02**. Fit the right wing topside panel **092-01** that came with Stage 92 into the right wing, and fix it in two places with screws **092-02**. Check that the 9 large and small protrusions on the topside panels fit into the holes of the main wing.

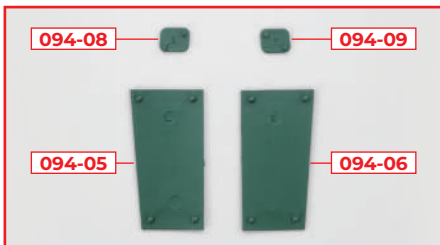
STEP 3

Attaching wing panels, cockpit antenna and aileron control rod covers

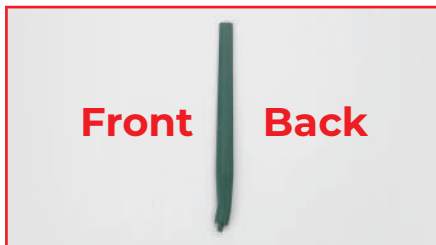


Fit the wing panels 094-05 and 094-08 on the upper surface of the left wing. Fit the wing panels 094-06 and 094-09 on the upper surface of the right wing. Insert the antenna 094-10 into the hole at the rear of the cockpit. Fit the aileron control rod covers 094-07 to the left and right ailerons.

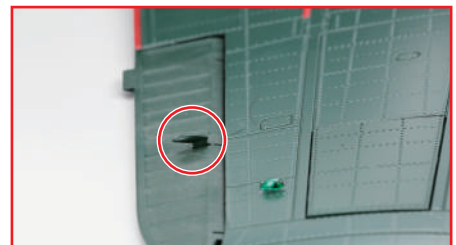
NOTE



Wing panels 094-05, 094-06, 094-08 and 094-09 are all marked with an L (left) or R (right) on their reverse sides.



Be careful with the direction the antenna is facing – when placed correctly it should lean slightly towards the canopy.



The longer part of the aileron control rod covers 094-07 should face towards the rear.

STAGE COMPLETE



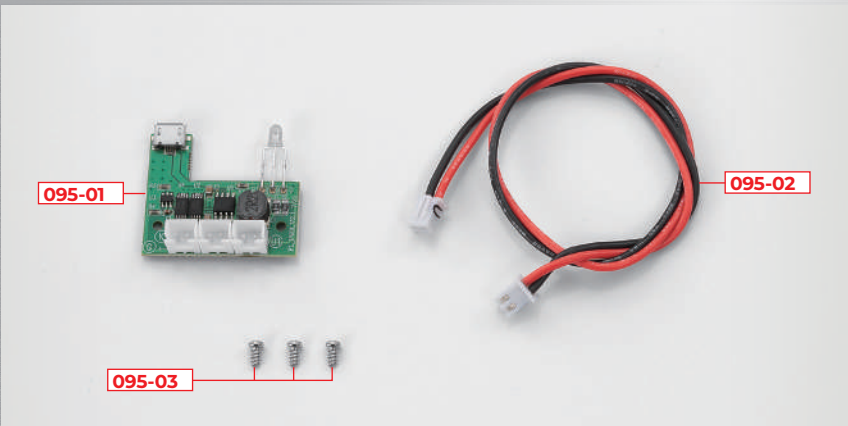
Stage 95: Charging Unit Assembly



Stage 95 Assembly
 Charging Unit

In this stage we'll assemble the charging unit for the display pedestal. When installing the circuit board to its holder make sure the circuit board is facing the right direction.

STAGE 95 PARTS



PARTS LIST

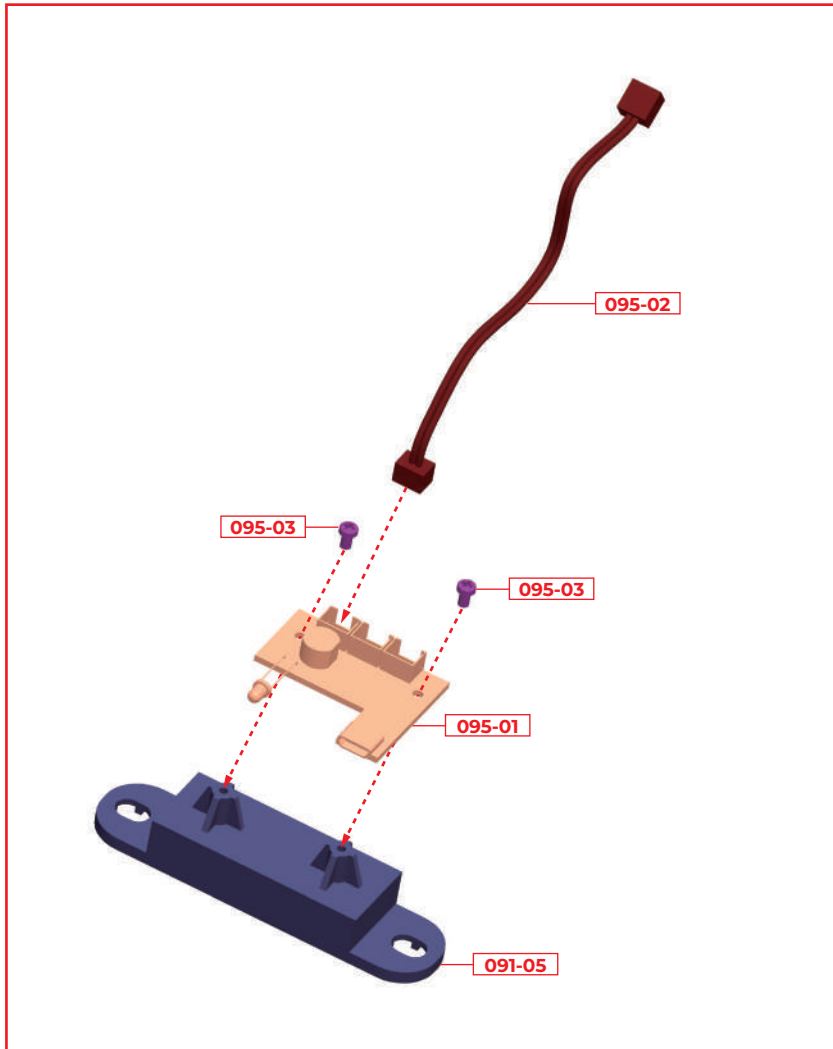
	Part	No.	Material
<input type="checkbox"/>	095-01	1	Circuit board
<input type="checkbox"/>	095-02	1	Cable
<input type="checkbox"/>	095-03	3 (1 spare)	Steel

You will also need: screwdriver
 *Parts may differ from those shown but this will not affect assembly.

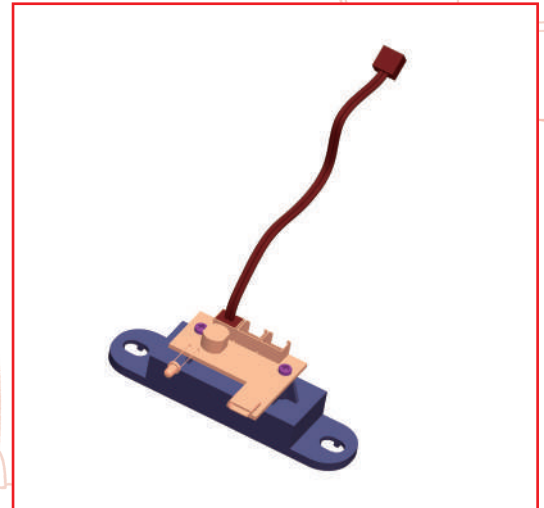
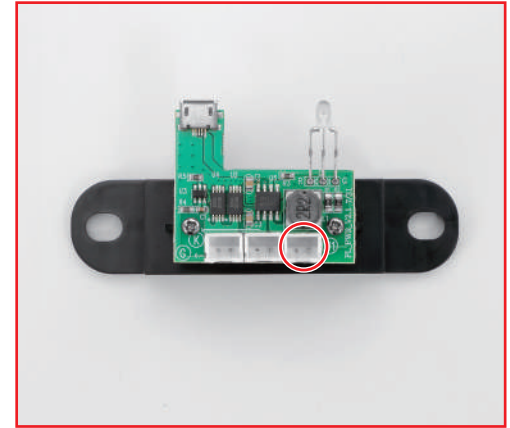
STEP 1

Installing the charging unit circuit board

← : Glue
- - - : Don't Glue

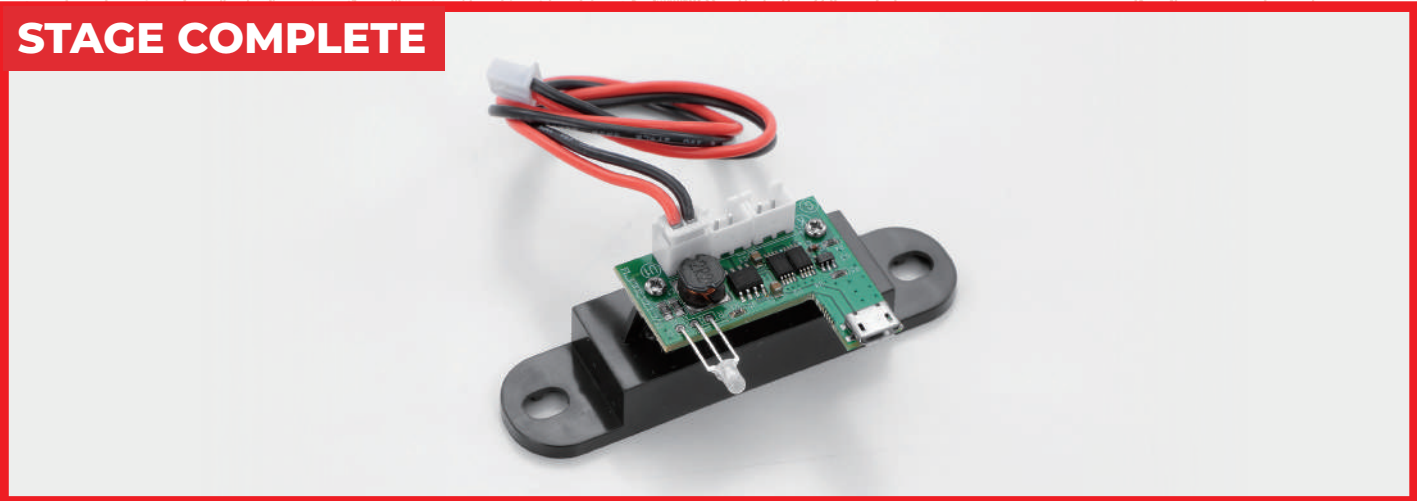


NOTE



Align the circuit board 095-01 with the circuit board holder 091-05 that came with Stage 91, and fix it place using 2 x 095-03 screws. Insert the cable 095-02 into the connector on the circuit board (circled in red in the upper right photo).

STAGE COMPLETE



Stage 96: Installing the Infrared Receiver and Assembling the Display Panel



Stage 96 Assembly

Infrared receiver/Pedestal

In this stage we'll be mounting the infrared receiver to the display panel. This device is crucial to ensuring the A6M Zero's special features function properly as it receives signals from a remote control. We'll also continue assembling the display panel.

STAGE 96 PARTS



You will also need: screwdriver
 * Parts may differ slightly from those shown but this will not affect assembly.

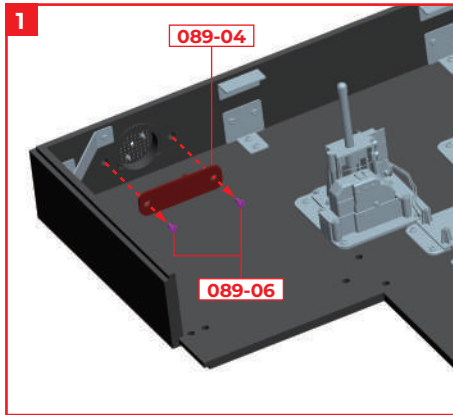
PARTS LIST

	Part	No.	Material
<input type="checkbox"/>	096-01	1	Circuit board
<input type="checkbox"/>	096-02	1	Steel
<input type="checkbox"/>	096-03	1	MDF
<input type="checkbox"/>	096-04	3 (1 spare)	Steel
<input type="checkbox"/>	096-05	4	Steel

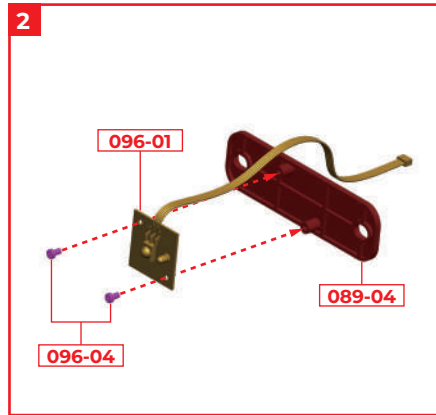
STEP 1

Installing the infrared receiver circuit board

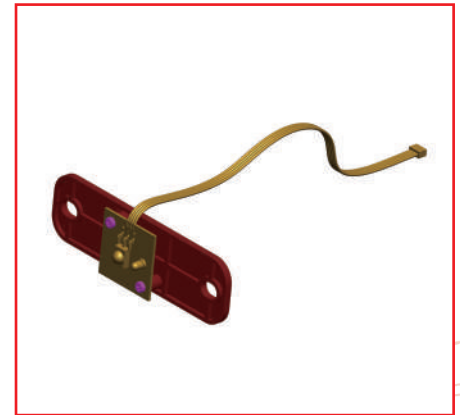
← : Glue
- - - : Don't Glue



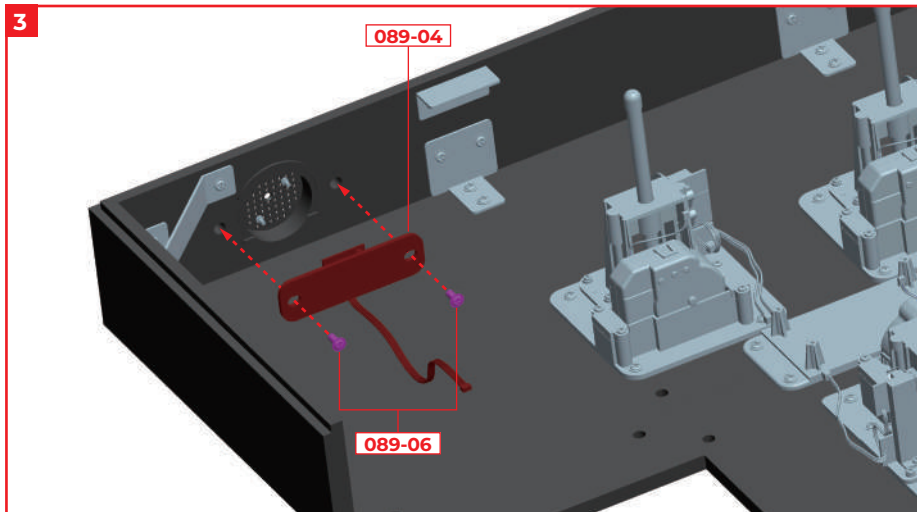
Remove the two screws 089-06 that secure the cover holder 089-04 to the pedestal and remove the cover holder.



Align the Infrared receiver circuit board 096-01 with the cover holder 089-04 removed in step 1, and fix the parts together with 2 x screws 096-04.

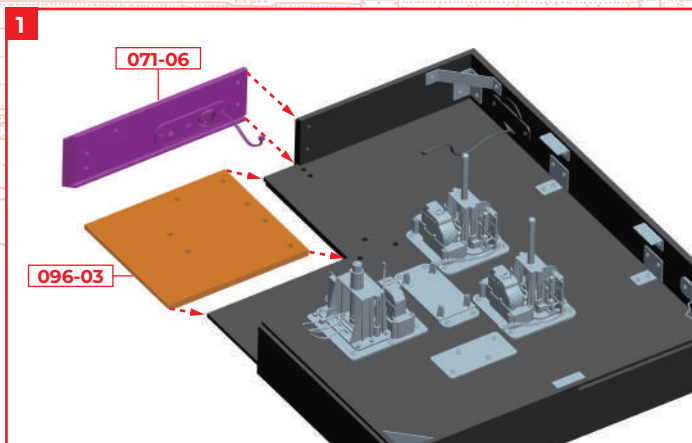


Refit the cover holder 089-04 to the pedestal, and fix it with the screws 089-06 which were removed in step 1.

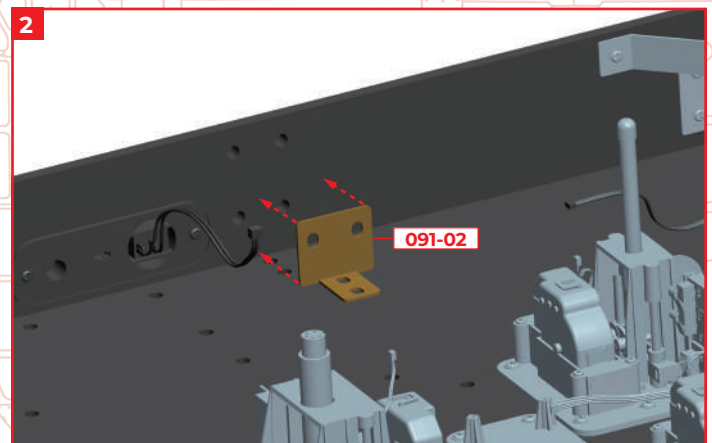


STEP 2

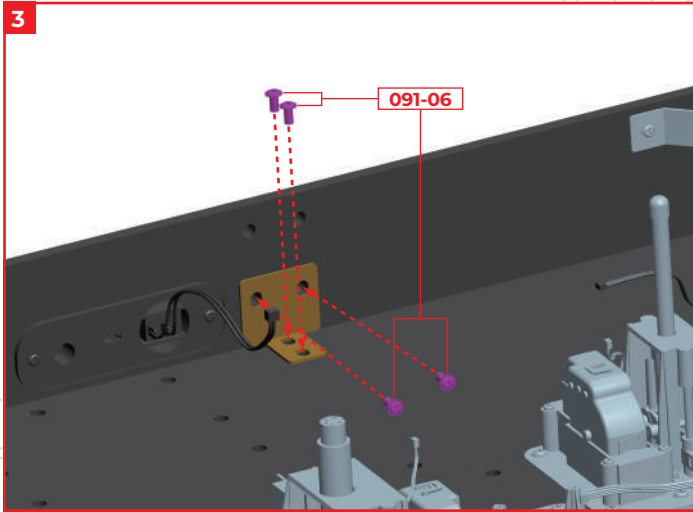
Assembling the display panel



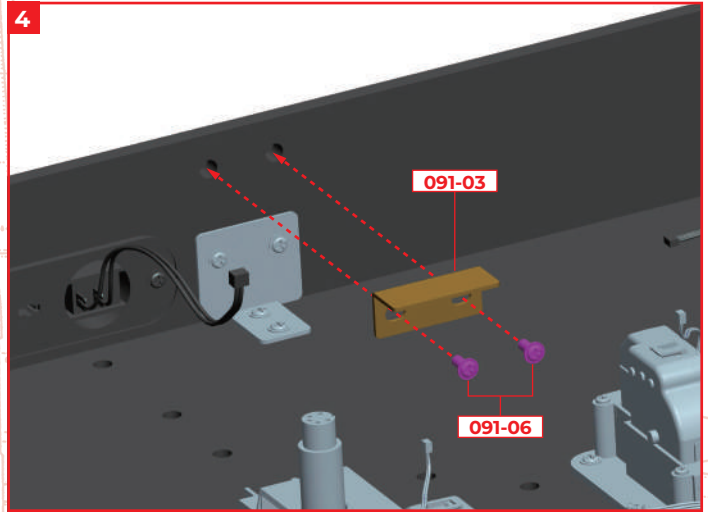
Fit the display panel base plate 096-03 and the pedestal panel frame 071-06 assembled in Stage 93 onto the pedestal.



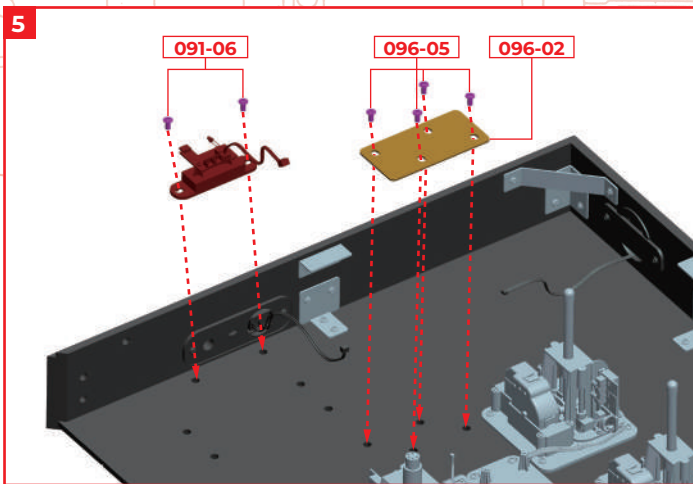
Align the metal fittings 091-02 that came with Stage 91 with the pedestal panel base plate 096-03 and the pedestal frames 091-01 and 071-06.



Fix the metal fittings 091-02 assembled in 2 with the four screws 091-06 that came with Stage. 91.



Align the metal fitting 091-03 that came with Stage 91 with the pedestal frames 091-01 and 071-06, and fix it with the two screws 091-06 that came with Stage 91.



Insert the LED and charging unit assembled in Stage 95 into the switch unit, and fix in place with 2 x screws 091-06 which came in stage 91. Align the base plate metal mount 096-05 with the pedestal plate, and fix in place with 4 x screws 096-05.

NOTE

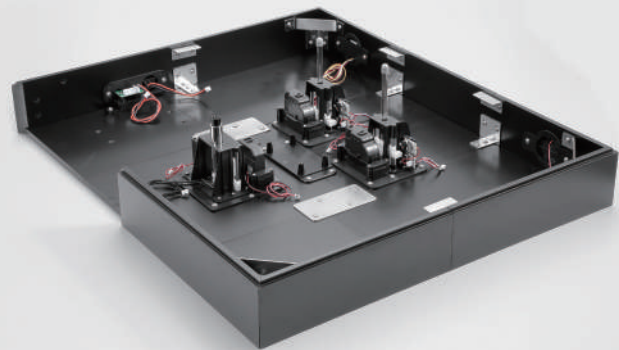


When placing the charging unit on the base plate it's easier to slide it in from the side.



Make sure you can see the LEDs and connectors from the front.

STAGE COMPLETE



Stage 97: Checking the Battery



Stage 97 Assembly

Battery

The battery used to power all of the electronics on the model has been included with this stage. Be careful when handling it as the battery is delicate - if you drop it or it receives some sort of physical shock it may not work properly.

STAGE 97 PARTS



097-01

PARTS LIST

	Part	No.	Material
<input type="checkbox"/>	097-01	1	Battery

There is no assembly in this stage. Keep the battery in a safe place until required in a later stage.

Stage 98: Assembling the Display Pedestal and Battery Case



Stage 98 Assembly
 Pedestal/Battery Case

In this stage we'll attach the final part of the display pedestal frame, insert the battery into its case and do a bit more work on the display pedestal itself.

STAGE 98 PARTS



PARTS LIST

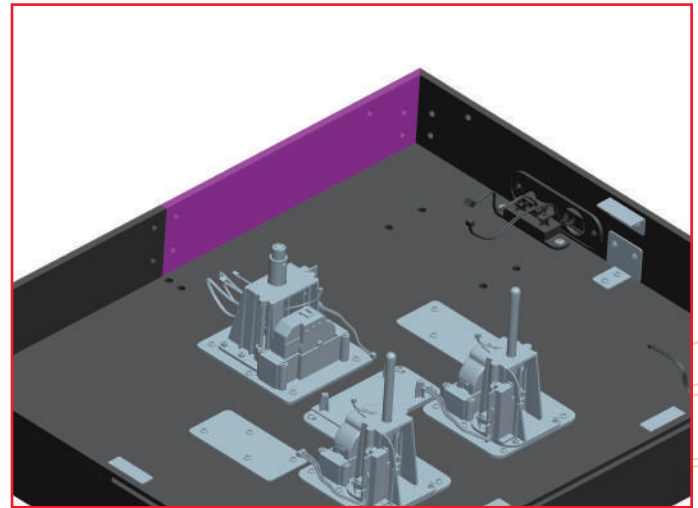
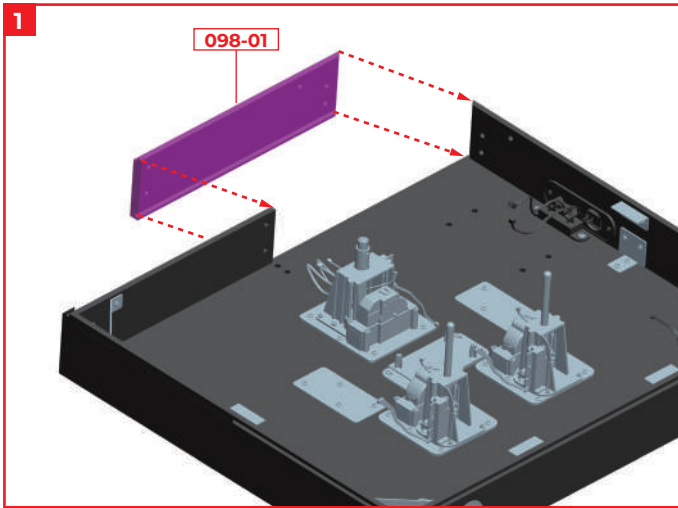
	Part	No.	Material
<input type="checkbox"/>	098-01	1	MDF
<input type="checkbox"/>	098-02	1	Steel
<input type="checkbox"/>	098-03	1	Steel
<input type="checkbox"/>	098-04	1	ABS resin
<input type="checkbox"/>	098-05	1	ABS resin
<input type="checkbox"/>	098-06	1	Figure
<input type="checkbox"/>	098-07	10	Steel
<input type="checkbox"/>	098-08	1	Steel
<input type="checkbox"/>	098-09	1	Steel

You will also need: screwdriver, superglue.
 * Place figure **098-06** in the cockpit.
 * Parts may differ slightly from those shown but this will not affect assembly.

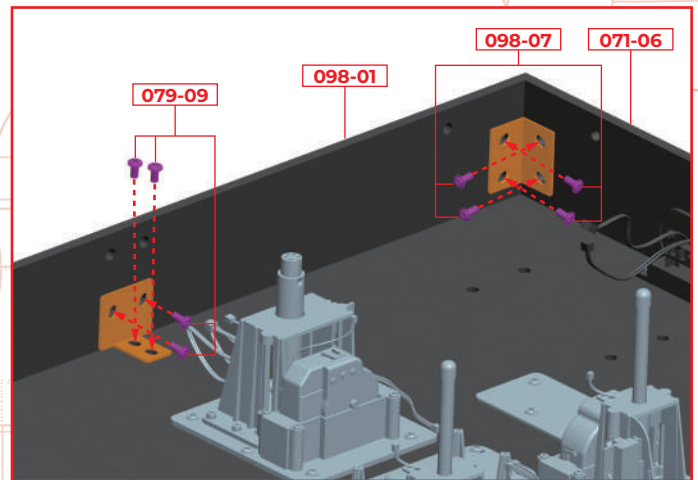
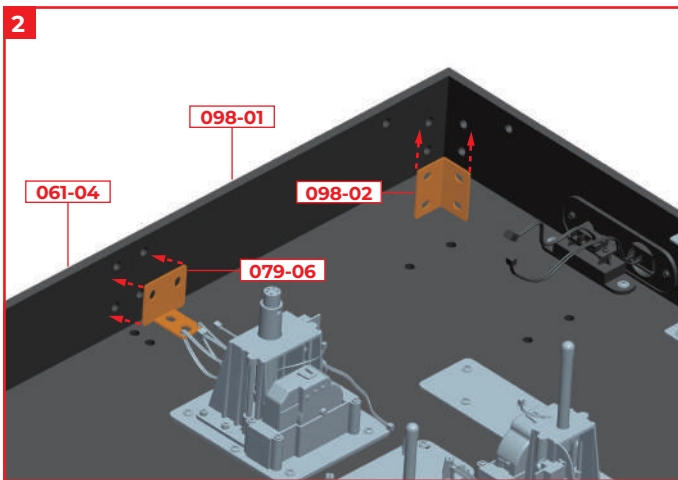
STEP 1

Assembling the display pedestal

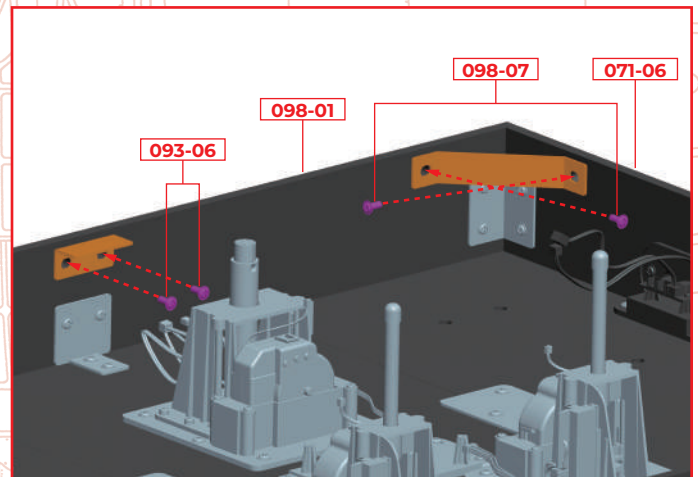
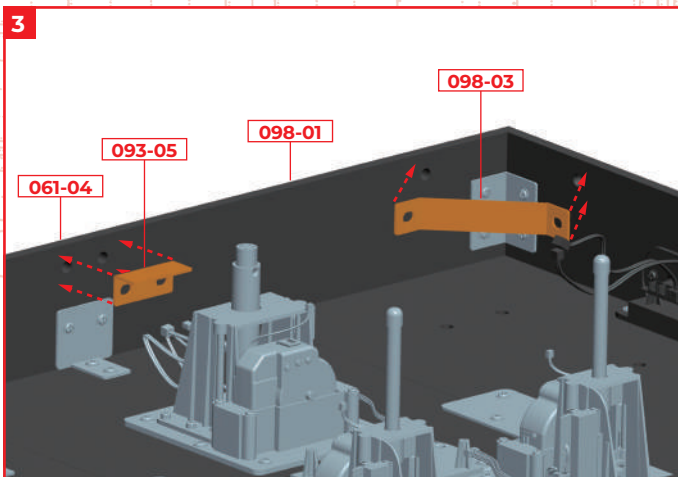
← : Glue
 - - - : Don't Glue



Fit the pedestal frame 098-01 into the pedestal assembled in Stage 96.



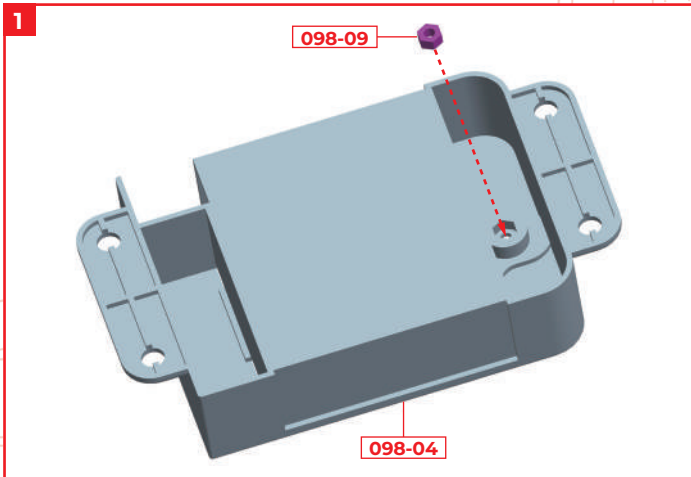
Align the metal fitting 079-06 from Stage 79 with the pedestal frames 098-01 and 061-04, and fix in place with 4 x screws 079-09. Align the metal fitting 098-02 with the pedestal frames 098-01 and 071-06, and fix in place with 4 x screws 098-07.



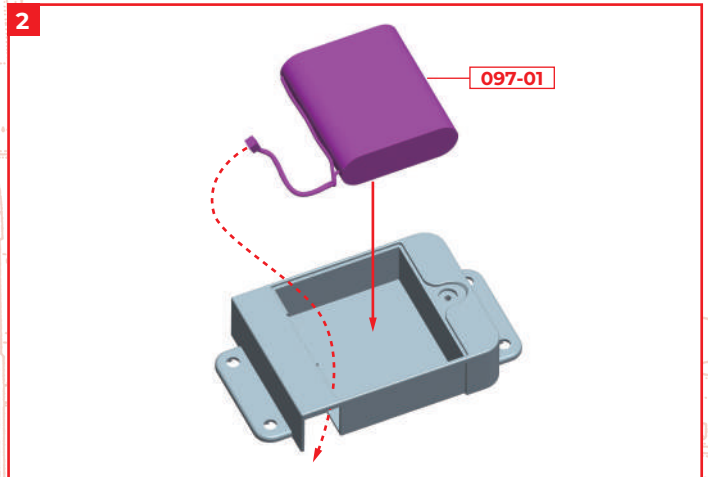
Align the metal fitting 093-05 from Stage 93 with the pedestal frames 098-01 and 061-04, and fix them in place with 2 x screws 093-06. Align the metal fitting 098-03 with the pedestal frames 098-01 and 071-06, and fix them in place with 2 x screws 098-07.

STEP 2

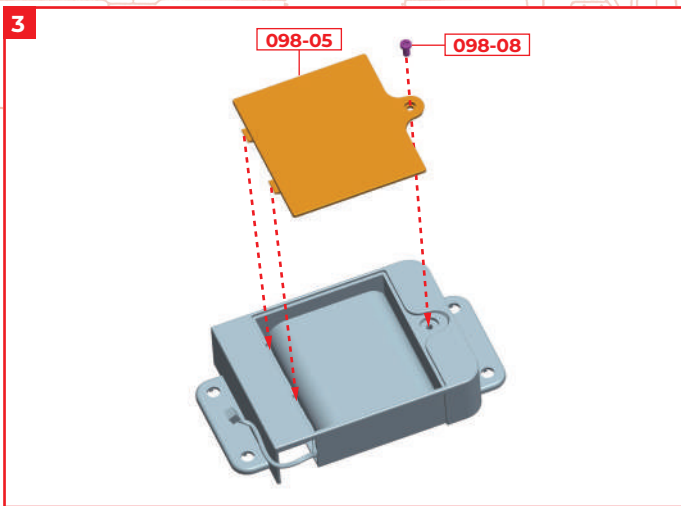
Installing the battery case



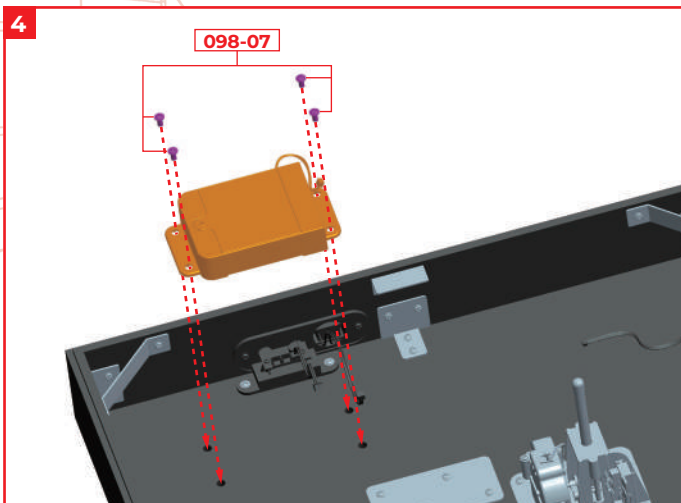
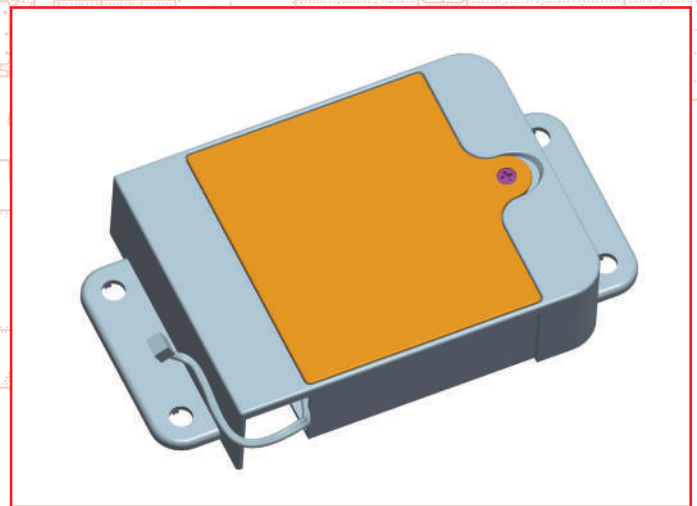
Fit nut 098-09 into battery case 098-04.



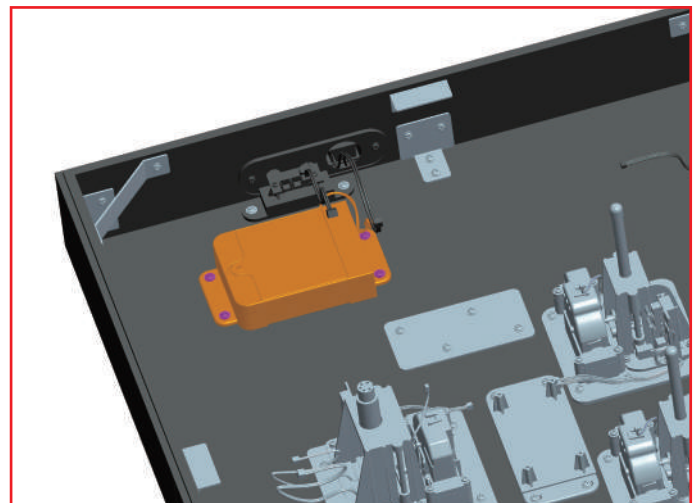
Insert the battery 097-01 from Stage 97 into the battery case 098-04. The battery cable should be pulled out through the hole in the case.



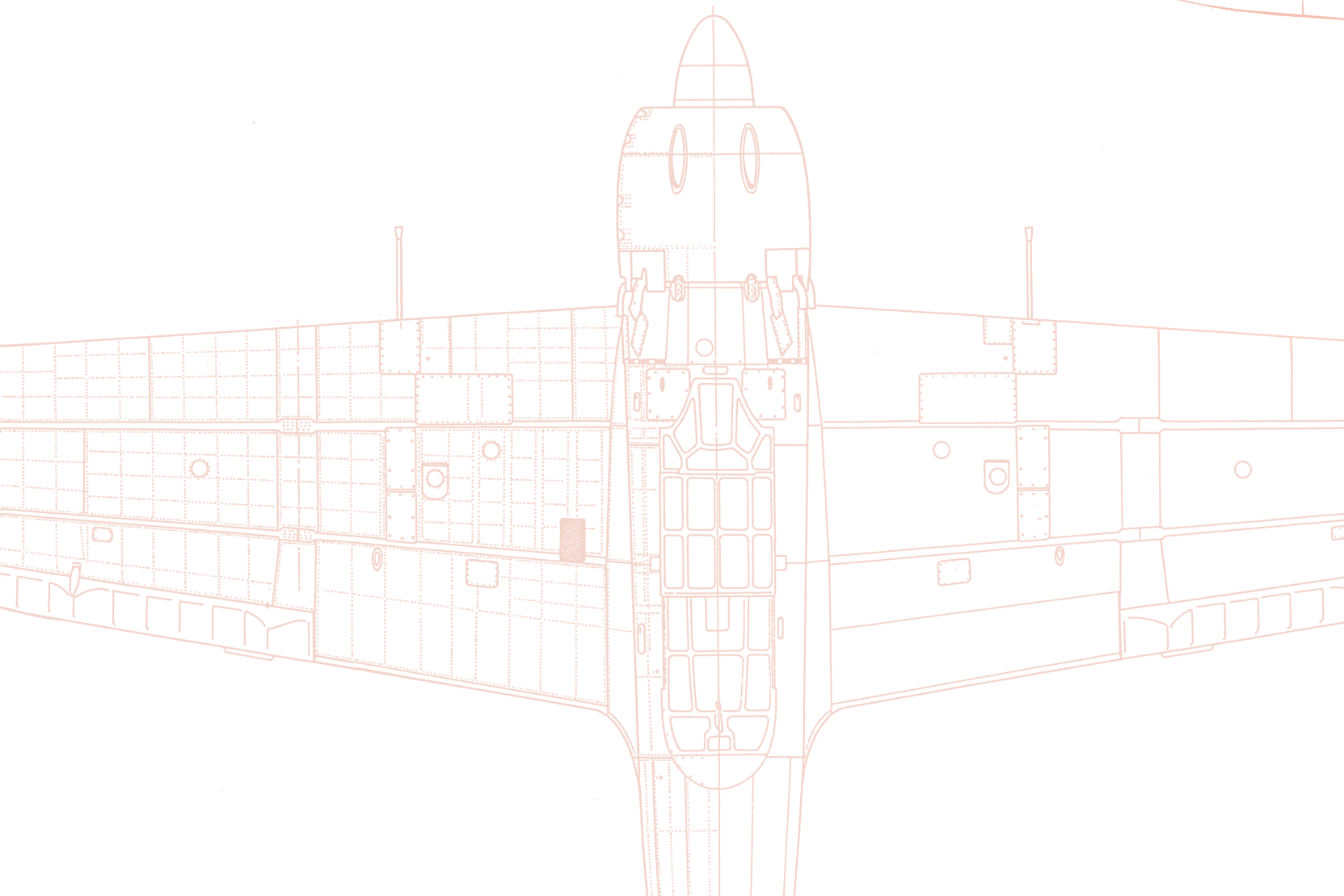
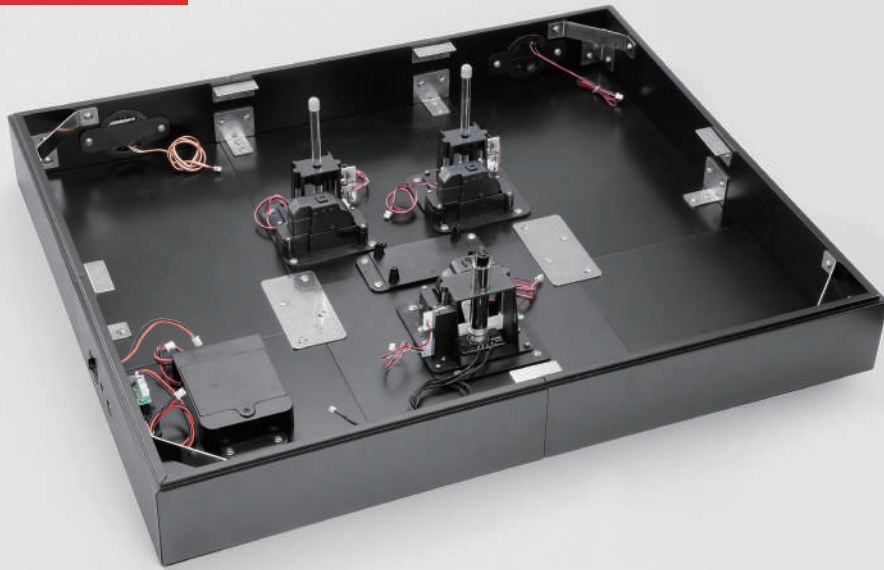
Place the cover 098-05 on the battery case 098-04 and secure it with screw 098-08.



Place the battery case 098-04 on the pedestal assembled in STEP 1, and fix in place with 4 x screws 098-07.



STAGE COMPLETE



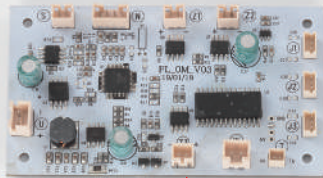
Stage 99: Assembling the Display Pedestal

Stage 99 Assembly

Pedestal

In this stage we'll be installing the circuit board used to control all of the A6M Zero's electronics in the display pedestal and then connecting everything up.

STAGE 99 PARTS



PARTS LIST

	Part	No.	Material
<input type="checkbox"/>	099-01	1	Circuit board
<input type="checkbox"/>	099-02	5 (1 spare)	Steel

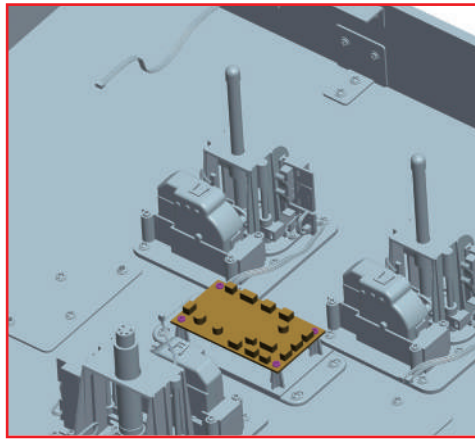
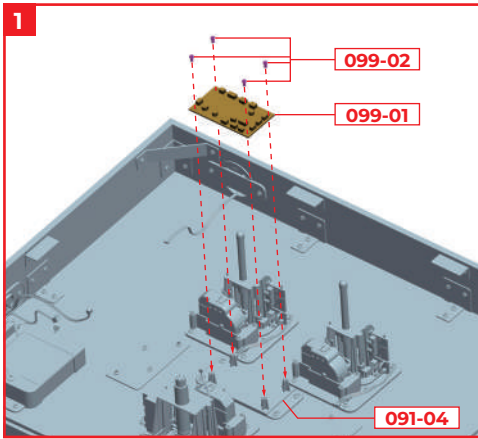
You will also need: screwdriver

* Parts may differ from those shown but this will not affect assembly.

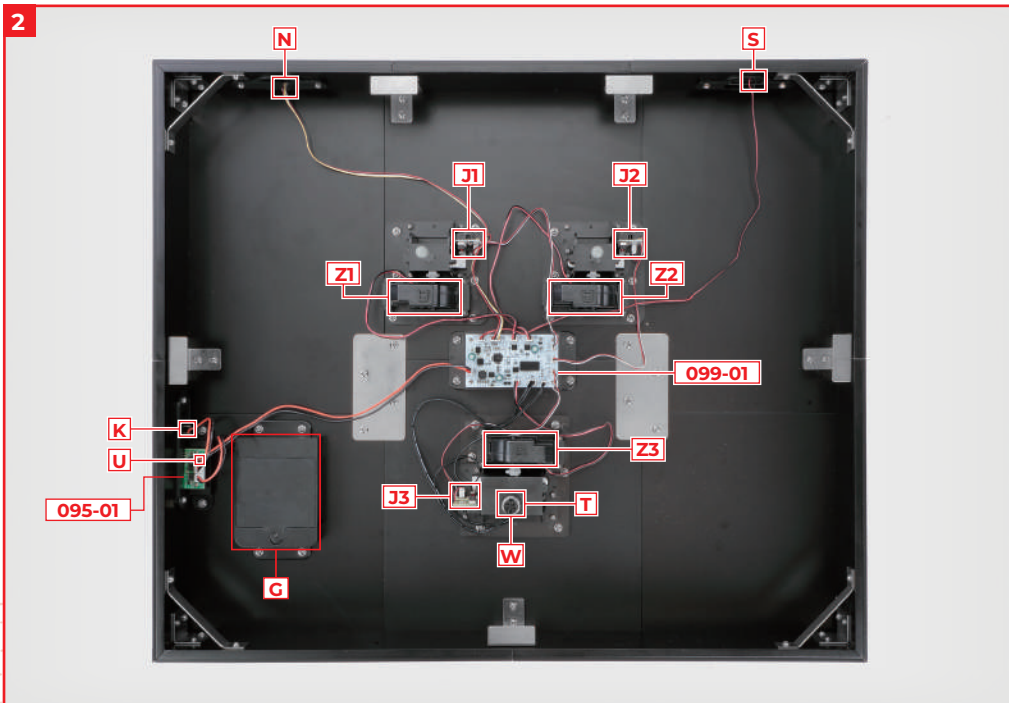
STEP 1

Installing the circuit board

← : Glue
- - - : Don't Glue

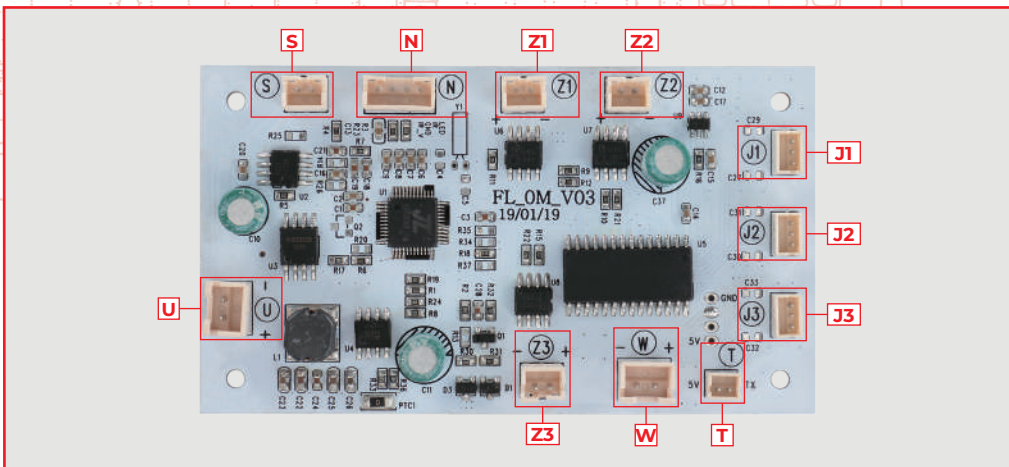


Place the circuit board **099-01** on the mount **091-04** in the pedestal assembled in Stage 98, and fix in place with 4 x **099-02** screws. Pay close attention to the orientation of the board.



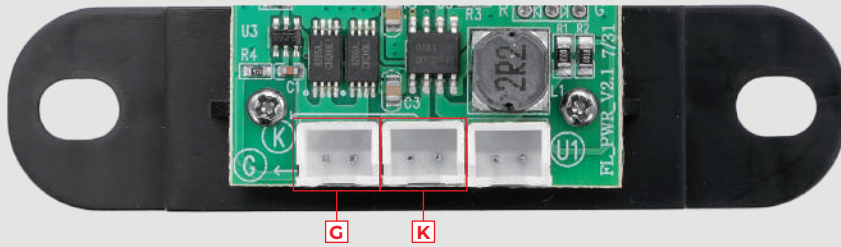
NOTE

Make sure the switch is in the off position before connecting everything up.



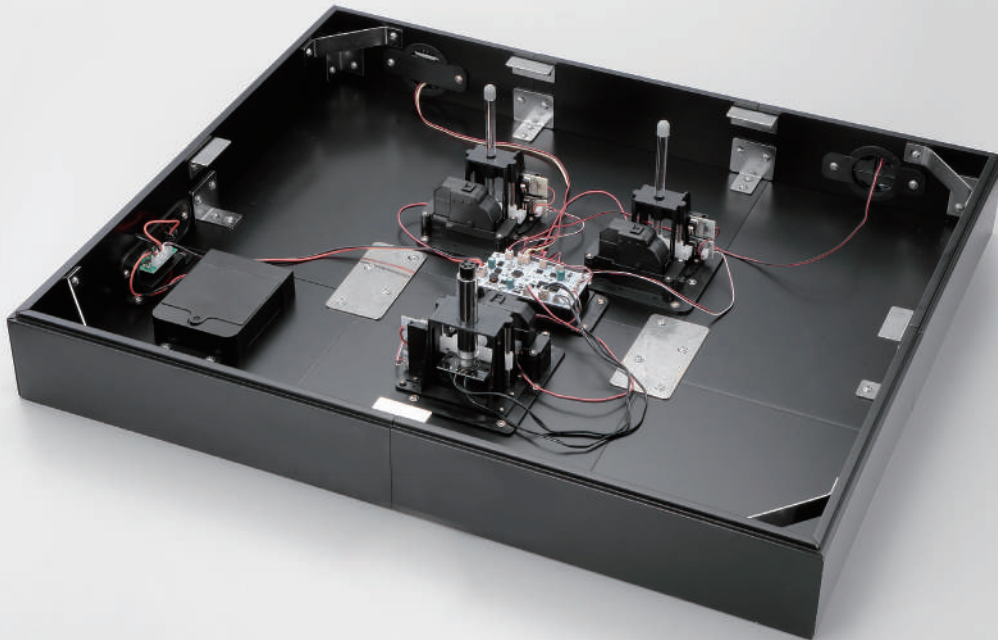
Plug the connectors into the circuit board, match the alphanumeric labels on the connectors with the corresponding labels on the circuit board: motor (Z1, Z2, Z3); limit switch (J1, J2, J3); speaker (S), Infrared indicator (N); Power connector (T, W); power supply (U).

3

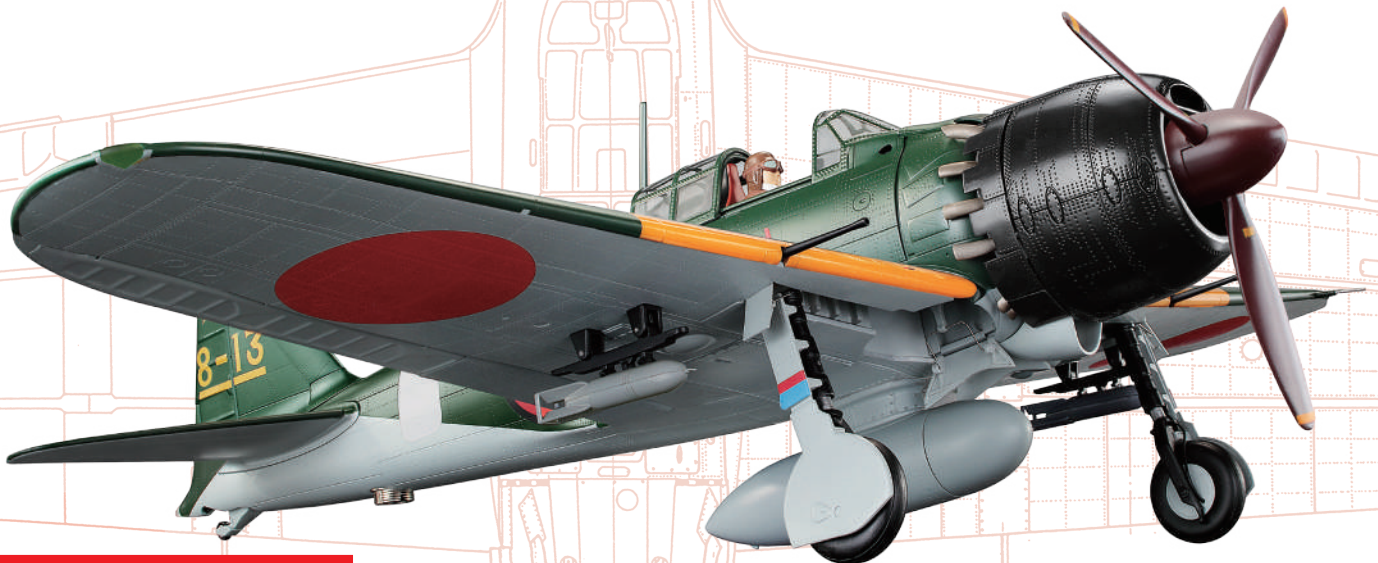


Insert the switch (K) and battery (G) connectors into the circuit board 095-01, matching the alphanumeric labels.

STAGE COMPLETE



Stage 100: Finishing the Model and the Display Pedestal



Stage 100 Assembly
Fuselage/Pedestal

In this stage we'll attach the decals to the fuselage and wings, place the top board on the display pedestal and then... that's it, the A6M Zero is done! Test the controls and make sure everything's working properly then have fun with all of the movement, lights and sound!

STAGE 100 PARTS

PARTS LIST

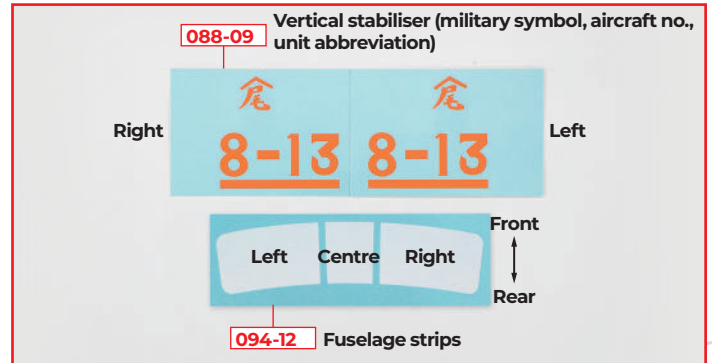
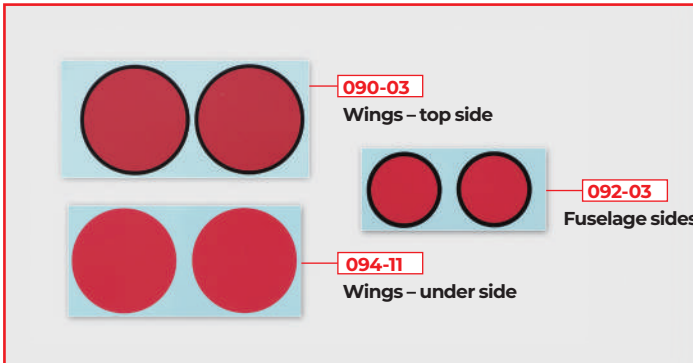
	Part	No.	Material
<input type="checkbox"/>	100-01	1	MDF
<input type="checkbox"/>	100-02	1	MDF

You will also need: small dish, water, tissue, tweezers, cotton bud, micro USB Type-B cable, CR2025 battery.

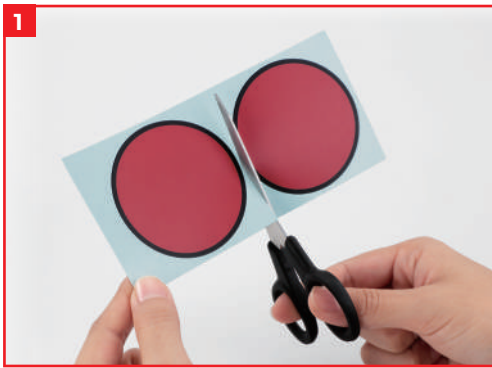
STEP 1

Attaching the decals

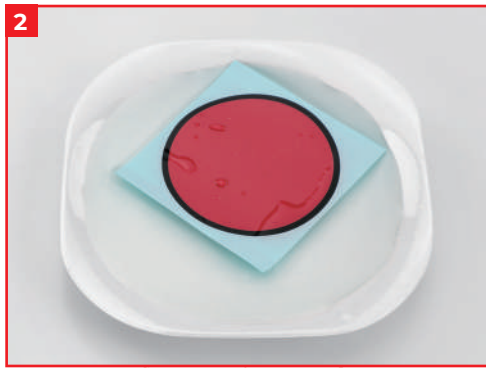
← : Glue
- - - : Don't Glue



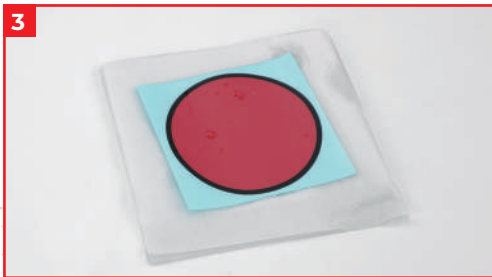
Take the decals that came in earlier stages 88, 90, 92 and 94.



1 Cut one decal from the sheet.



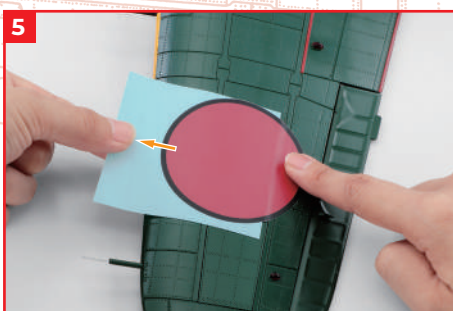
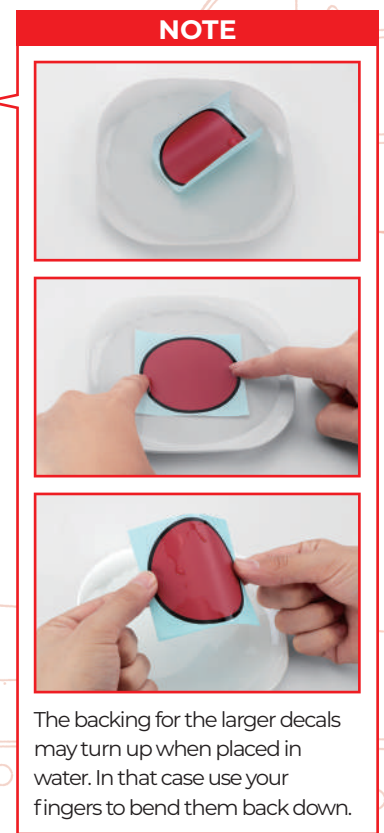
2 Soak it in water in a shallow dish for 1 to 10 seconds.



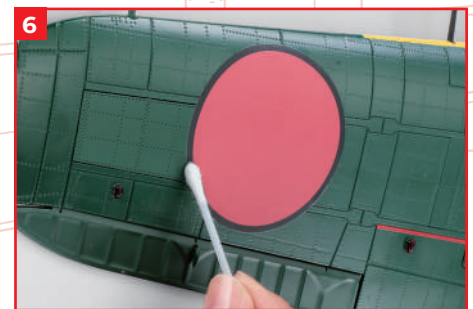
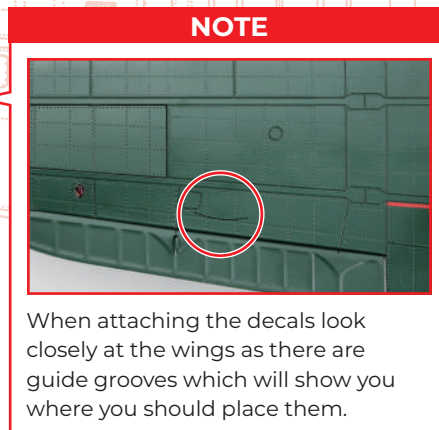
3 Place the decal on tissue and wait for about 30 seconds. Excessive water is absorbed, the glue melts and the decal peels off from the backing, then slide the decal with your fingertips or tweezers to check that it has peeled off.



4 Use your fingertips or tweezers to gently pull the decal off the backing.

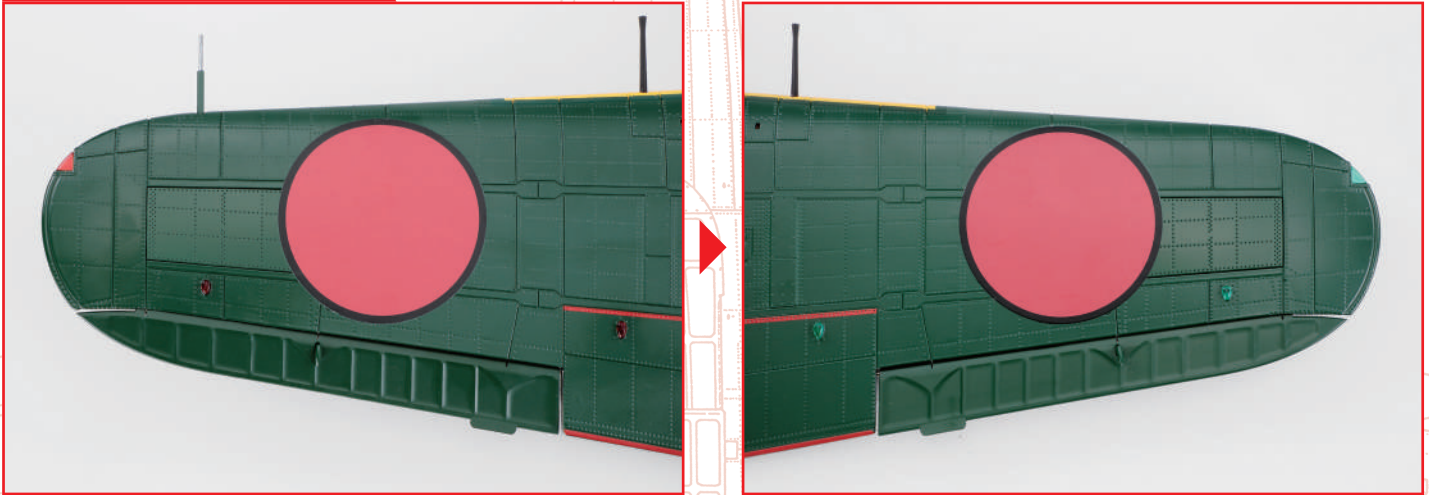


5 Bring the decal still on its backing to the position where it will be attached, hold the decal with your fingertips or a cotton swab, and slide the backing away.



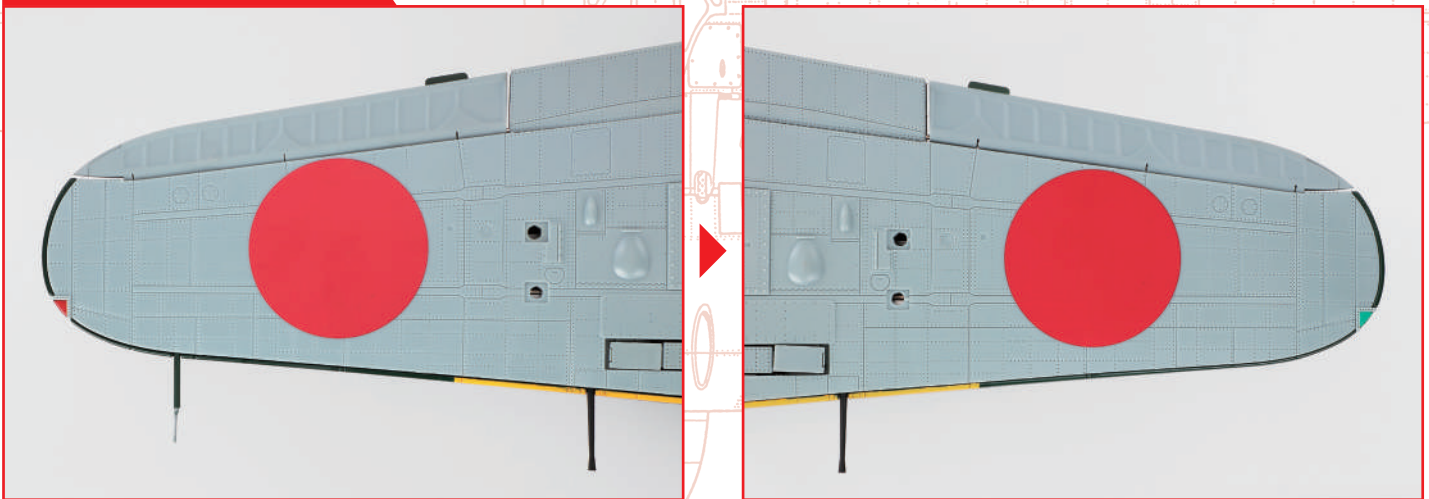
6 Lightly press with a cotton bud to attach it and absorb any excess water. Apply decals in all positions in the same way.

Wings – top side



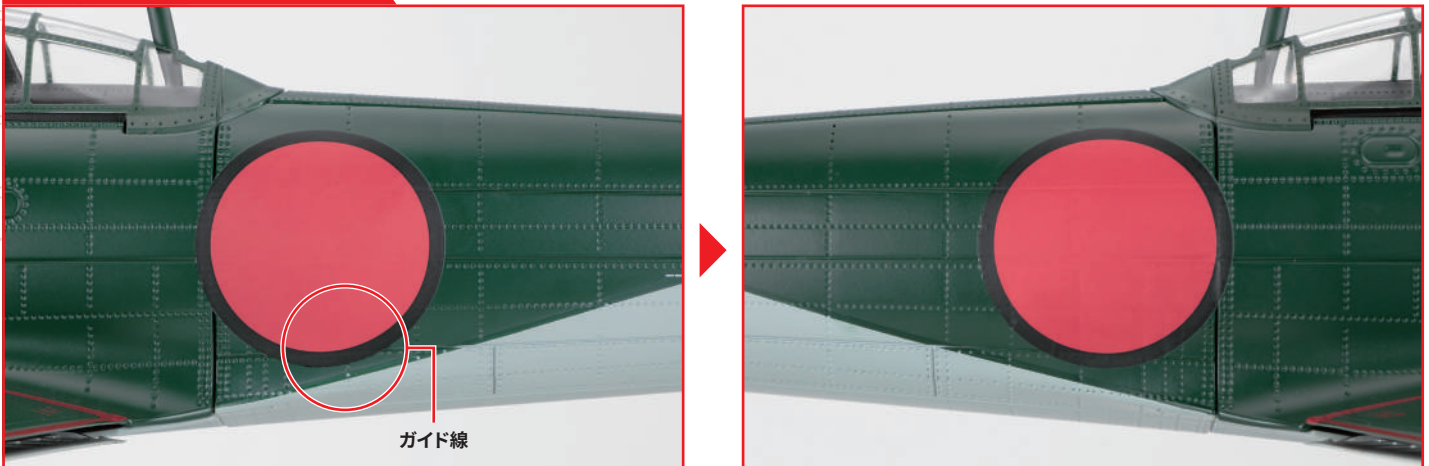
Attach decals 090-03 to the position indicated by the dotted line on the upper surface of the left and right wings.

Wings – underside



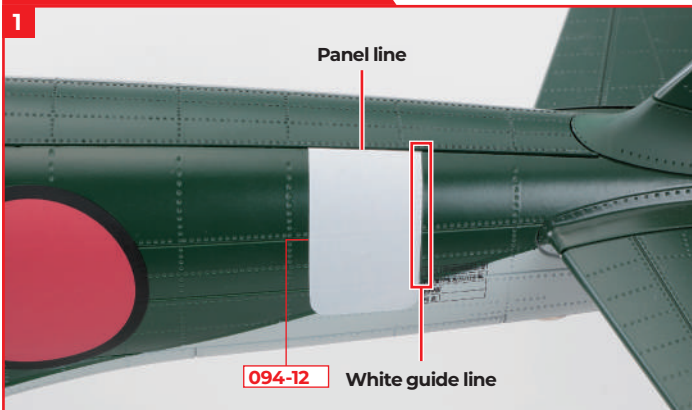
Attach decals 094-11 to the underside of the left and right wings. Please refer to the photo for the position to paste.

Fuselage sides

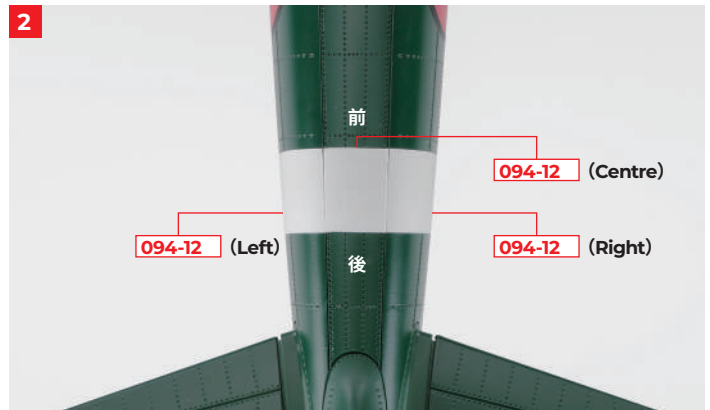


There is a guide line on the left side of the fuselage, so stick the bottom edge of the decal on the guide. For the right side of the fuselage, look at the fuselage from above, and attach the decal so that it is symmetrical with the left side, referring to the decal on the left side of the fuselage and the position in the photo.

Fuselage strips

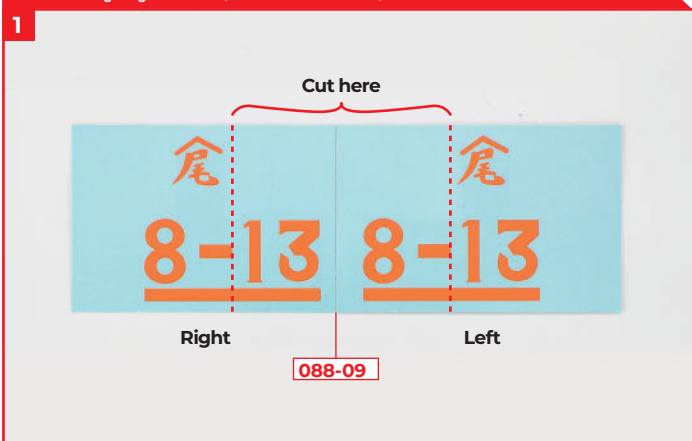


The left side of the fuselage is marked with a white guide line, so in the vertical position, the back edge of the decal 094-12 (left) should be aligned with the white line. The top of the decal should be aligned with the panel line at the top of the left side of the fuselage, and the bottom should be below the guide line.



Attach Decal 094-12 (centre) and Decal 094-12 (right) to the upper part of the fuselage according to the position of Decal 094-12 (left).

Military symbol, aircraft no., unit abbreviation



Cut the decal 088-09 (left and right) along the dotted line with a utility knife before using it.

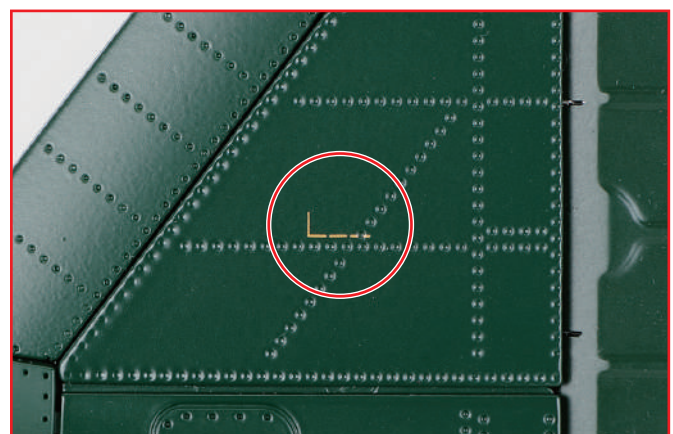


Attach the left half of Decal 088-09 (left) to the vertical stabilizer on the left side. Next, attach the right half of the decal 088-09 (left) to the rudder, being careful not to shift the top and bottom from the left half. It is easier to match the lines below.



Attach the right half of Decal 088-09 (right) to the vertical stabilizer on the right side, and attach the left half of Decal 088-09 (right) to the rudder, being careful not to shift the top and bottom from the right half. Stick it so that it is in the same position as the decal on the left side.

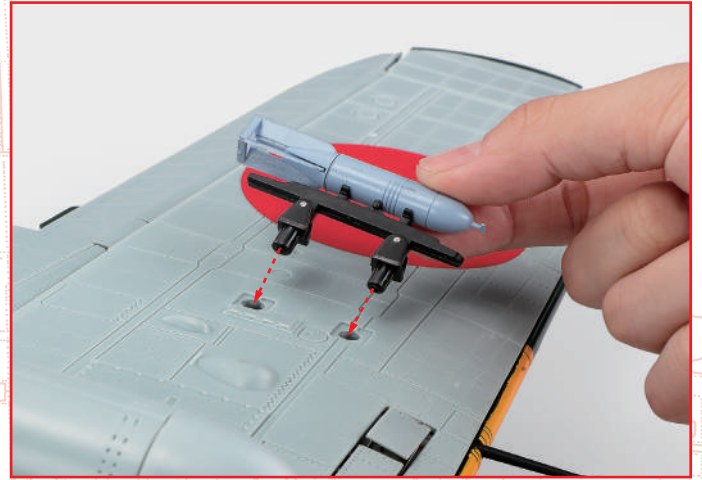
NOTE



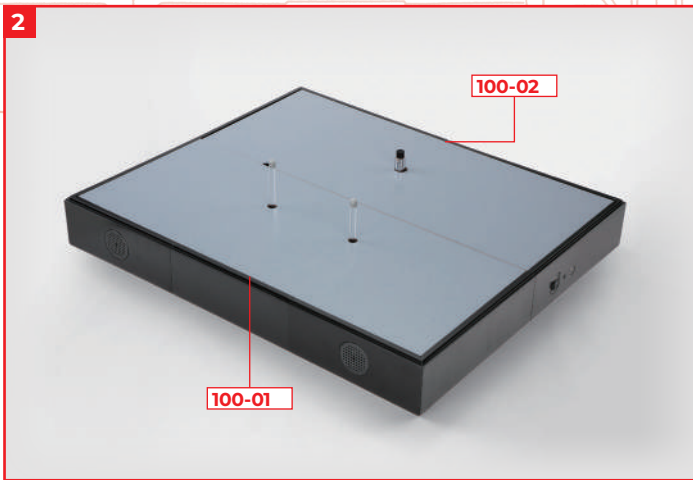
There's a yellow guide line on the vertical stabilizer which is where you should attach the left half of 088-09 (L).

STEP 2

Placing the top frame on the display pedestal, then positioning the A6M Zero



Fit the drop tank assembled in Stage 81 into the large and small holes between the two main wings, and fit the two protrusions on the bombs suspension 070-02 and 080-03 into the holes of both main wings.



Place the top boards 100-01 and 100-02 on the pedestal. The top board 100-02 should have a semi-circular notch on the inside.



Place the left and right wings of the Zero Fighter on the two support bars at the front of the pedestal, and connect the connector at the rear of the aircraft to the power connector at the rear of the pedestal.

STAGE COMPLETE



This completes the "Zero Fighter Type 52"! Let's check the controls on the next page.

Zero Fighter Manoeuvring

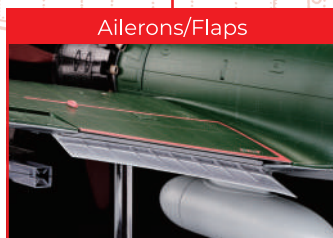
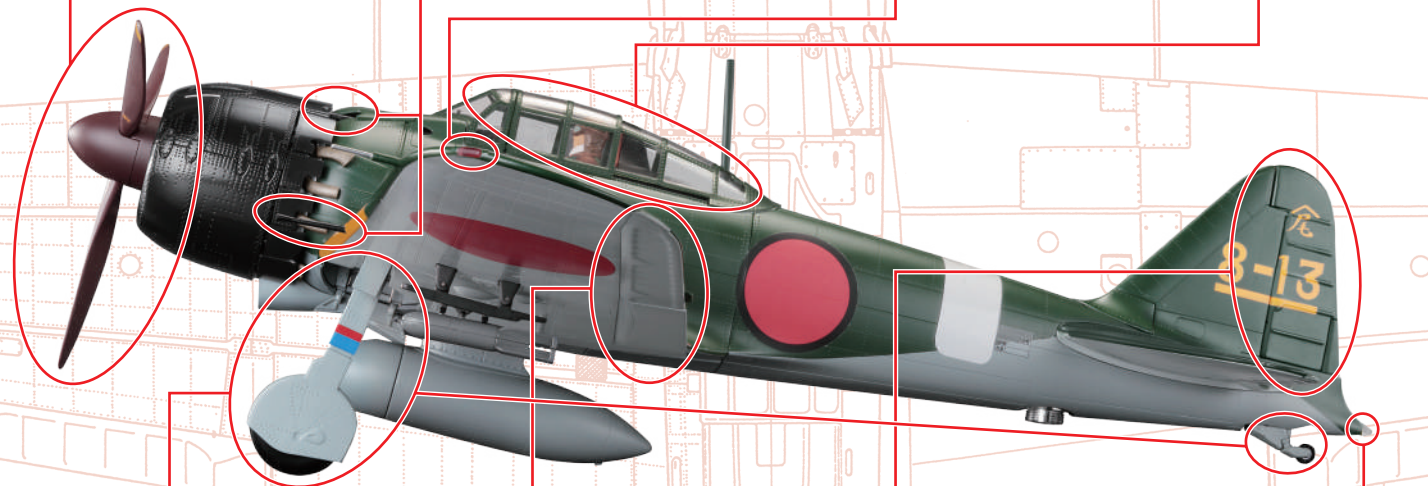
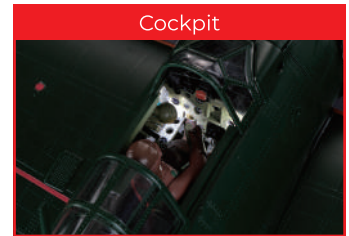
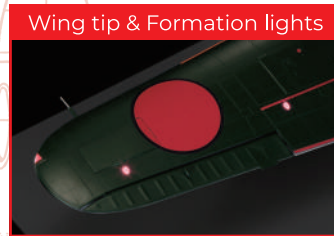
The Zero Fighter Type 52 is equipped with various manoeuvres that can be operated with a controller. Here, we will explain how to operate those manoeuvres.

How to charge the controller

Prepare a micro USB Type-B cable and plug it into the pedestal. When charging starts, the lamp on the left lights up in red. When charging is complete, the lamp will turn green, so unplug the cable.

How to turn on the power

First, insert a button battery CR2025 into the controller and turn on the power. Press the main power switch on the upper right once to turn on the power. The light on the controller will come on. Then turn on the pedestal by pressing the "-" switch on the right side of the pedestal. Now you can operate the controls.



How to use the remote control

Engine start
The propeller starts to rotate with engine sound.

Take off
The main landing gear and tail legs of the Zero Fighter are stored, and the aircraft takes off and rises.

Bank left
The aileron of the left wing goes up, and the aileron of the right wing goes down. The rudder turns to the left and the aircraft turns to the left.

7.7mm Machine gun
Two 7.7mm machine guns mounted on the upper part of the cowl blink with a firing sound.

Power switch

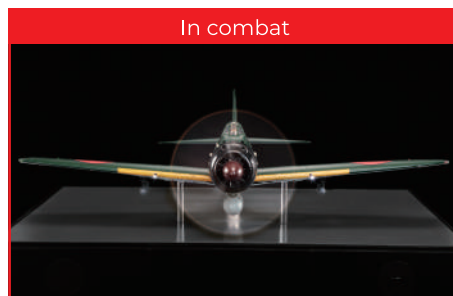
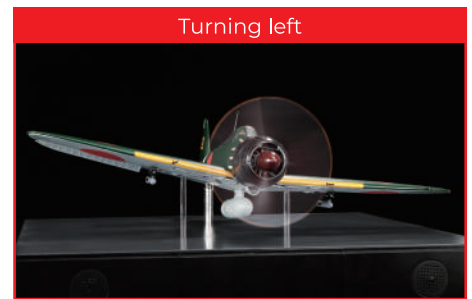
Engine stop
The engine stops.

Landing
The main landing gear and tail legs are deployed, and the aircraft is ready for landing.

Bank right
The right aileron goes up, and the left aileron goes down. The rudder turns to the right and the aircraft turns to the right.

20mm Wing canon
The 20mm machine gun mounted on the main wing flashes with the sound of firing.

Lights
Wing tip lights, formation lights, tail lights, and interior lights are lit.



Zero Fighter Type 52: Moving parts and lights checklist

Connector code	Moving part/light	Components
A	Propeller	2-pole motor
B	Cockpit interior light	LED
C1	Left wing lights	LED
C2	Right wing lights	LED
D1	Left main landing gear limit switch	
D2	Right main landing gear limit switch	
E1	Left wing 20mm machine gun	LED
E2	Right wing 20mm machine gun	LED
F1	Left main landing gear motor	2-pole motor
F2	Right main landing gear motor	2-pole motor
F3	Flaps	2-pole motor
F4	Tail gear motor	2-pole motor
H1	Ailerons	3-pole servo motor
H2	Rudder	3-pole servo motor
H3	Elevators	3-pole servo motor
L	Tail lights	LED
Q	Engine-mounted 7.7mm machine gun	LED
T2	Display base outward connection	
W2	Display base mains connection	

Display base problems	Possible causes	Check points and troubleshooting	Reference issues
Initialisation procedures do not run when the base is switched on	Faulty base board, faulty battery, incorrect wiring	Check the wiring. →If it still doesn't work, replace the base board and battery.	See stages 97, 99.
Vertical lifting devices won't stop	Insufficient limit switch adjustment	Adjust the limit switch	This is also explained in the following pages & YouTube video "Checking effects operations and maintenance").
Vertical lifting devices won't move	Electricity not being delivered to parts possibly due to wiring problems, faulty motor, faulty base board	Dismantle and reassemble faulty lifting devices →If it still doesn't work then try replacing the motor and base board.	See stages 66, 67, 79, 82, 85, 99 (This is also explained in the following pages & YouTube video "Checking effects operations and maintenance")
The rear (tail) section of the base won't move	Electricity not being delivered to parts possibly due to wiring problems, faulty motor, faulty base board	Connect the Z3 connector to the tester to make sure it's working; reassemble. → If it still doesn't work then try replacing the motor and base board.	See stages 85, 87, 99. (This is also explained in the following pages & YouTube video "Checking effects operations and maintenance")
Lifting devices work during initialisation but won't move once the aircraft is mounted	Insufficient limit switch adjustment, faulty motor, faulty base board	Adjust the limit switch, reassemble the lifting device's gearbox, grease parts →If it still doesn't work then try replacing the motor and base board.	This is also explained in the following pages & YouTube video "Checking effects operations and maintenance").
The right wing side of the display base won't stop moving	Insufficient limit switch adjustment	Adjust the limit switch	This is also explained in the following pages & YouTube video "Checking effects operations and maintenance").
The left wing side of the display base won't move	Electricity not being delivered to parts possibly due to wiring problems, faulty motor, faulty base board	Connect the Z1 connector to the tester to make sure it's working; reassemble. →If it still doesn't work then try replacing the motor and base board.	See stages 66, 67, 85, 99
Model not working after initialisation	Insufficient limit switch adjustment, faulty base board	Adjust the limit switch, replace the base board	This is also explained in the following pages & YouTube video "Checking effects operations and maintenance").
The right side of the display base won't move	Electricity not being delivered to parts possibly due to wiring problems, faulty motor, faulty base board	Connect the Z2 connector to the tester to make sure it's working; reassemble.	
→If it still doesn't work then try replacing the motor and base board.	See stages 79, 82, 85, 99		
Instead of stopping in the parked position it stops erratically.	Insufficient limit switch adjustment, faulty base board	Adjust the limit switch, replace the base board	This is also explained in the following pages & YouTube video "Checking effects operations and maintenance").

Display base problems	Possible causes	Check points and troubleshooting	Reference issues
Nothing works except for the vertical lifting devices	The power connector joining the display base to the rear of the fuselage has been disconnected	Make sure the power connector base has not been damaged or severed →Replace the power connector in the event it has been damaged or severed.	See stages 56, 95
Once the power was switched on and the lifting device worked, but then it suddenly turned off and stopped working	Suspected disconnection in various parts faulty charging board, faulty base board, faulty battery	Dismantle and reassemble →If it still doesn't work, replace the battery / charging board / base board	See stages 66, 67, 79, 82, 85, 99, (This is also explained in the following pages & YouTube video "Checking effects operations and maintenance").
Left aileron rises too high, unbalanced between left and right	Faulty assembly, insufficient limit switch adjustment	Dismantle and reassemble Adjust the limit switch	See stages 66, 67, 79, 82, 85, 99, (This is also explained in the following pages & YouTube video "Checking effects operations and maintenance").
Only the lifting device continues to move; nothing else works	Disconnection of the power connector to the base at the rear of the fuselage	Check for disconnection at the base of the power connector →Replace the power connector in case of disconnection	See stages 56, 95.
The lifting devices work one at a time	Insufficient limit switch adjustment, faulty battery	Adjust the limit switch →If it still doesn't work, replace the battery	See following pages & the YouTube video "Checking effects operations and maintenance".
Only the tail section of the base doesn't stop moving	Insufficient limit switch adjustment, faulty base board	Adjust the limit switch, replace the base board	See following pages & the YouTube video "Checking effects operations and maintenance".
The left wing section of the base doesn't stop	Insufficient limit switch adjustment, faulty base board	Adjust the limit switch, replace the base board	See following pages & the YouTube video "Checking effects operations and maintenance".
Gears not meshing	Faulty assembly	Dismantle the gearbox, reassemble, grease each part	See stages 66, 67, 79, 82, 85
The lifting device stops halfway	Faulty lifting device, faulty battery	Dismantle the gearbox, reassemble, grease each part, replace the battery	See stages 66, 67, 79, 82, 85, 97, 99.
Faulty limit switch	Insufficient limit switch adjustment	Adjust the limit switch	See following pages & the YouTube video "Checking effects operations and maintenance".
Gaps in the base make it impossible to assemble	Faulty assembly	Dismantle and reassemble	See stages 63–99
No sound (issue 76)	Faulty speaker, faulty base board	Replace the speaker, base board	See stages 76, 97, 99
No infrared signal from the remote control	Faulty remote control	Replace the remote control	See stage 66

Problem with the aircraft	Possible causes	Check points and troubleshooting	Reference issues
Propeller not moving, possible motor failure	Fault with the aircraft's internal board, faulty connector in the engine, faulty cable leading from the board to the connector	Remove the engine from the aircraft, connect to the battery box and check operation →If it doesn't work, replace the motor. If it does work, connect the engine to the aircraft, and then insert connector A (connected to the aircraft's internal board) into the tester and check operation →If it doesn't work, replace the connector and the cable leading from the board to the connector If it works, replace the aircraft's internal board	See stages 11, 15, 49, 64
The propeller worked in the test but doesn't work when installed on the main unit	Fault with the aircraft's internal board, faulty connector in the engine, faulty cable leading from the board to the connector	Insert connector A (connected to the aircraft's internal board) into the tester and check operation →If it doesn't work, replace the connector and the cable leading from the board to the connector If it works, replace the aircraft's internal board	See stages 15, 64
The aircraft doesn't move	Disconnection of the power connector to the base at the rear of the fuselage, faulty assembly, fault with the aircraft's internal board	Check for disconnection at the base of the power connector →Replace the power connector in case of disconnection, replace the aircraft's internal board	See stages 56, 64, 95
The main landing gear doesn't move (or only one of the gear moves)	Faulty assembly, faulty motor, poor gear meshing, fault with the aircraft's internal board	Test the motor on its own: Check operation after connecting the F1 (left main landing gear), and F2 (right main landing gear) connectors to the tester. →If it doesn't work, replace the motor. If it works, reassemble the working parts and replace the aircraft's internal board	See stages 28–35, 41–47, 64
Not working with the remote control	Faulty remote control, faulty infrared receiver	Replace the remote control / infrared receiver	See stages 66, 96
Doesn't work so re-connect the charging base of the main unit	Disconnection of the power connector to the base at the rear of the fuselage	Check for disconnection at the base of the power connector →Replace the power connector in case of disconnection	See stages 56, 95
LED light on the machine gun device doesn't turn on	Faulty LED, disconnection, machine gun not transparent	Insert the E1, E2, Q connectors into the tester and check operation →Replace the LED if it doesn't light up Check the machine gun parts (remove and visually inspect them to make sure they are transparent) →Replace the machine gun parts if not transparent	See stages 16, 33, 46

Problem with the aircraft	Possible causes	Check points and troubleshooting	Reference issues
Faulty propeller parts (insertion point is too wide and hangs down under weight)	Faulty assembly, faulty parts	Replace parts	See stages 1, 11, 15
The tail gear doesn't move	Interference of tail light cable with tail gear linkage, faulty motor	Adjust so that the tail light cable doesn't interfere with the tail gear linkage Insert connector F4 (connected to the aircraft's internal board) into the tester and check operation →If it doesn't work, replace the motor	See stages 50, 51, 53, 55
Smoke or burning smell from the motor	Faulty motor	Replace the motor (do not switch on until it has been replaced)	
Nothing works except the propeller	Fault with the aircraft's internal board, faulty wiring, disconnection	Replace aircraft's internal board Check the wiring, replace	See stages 16–64
LED light stays on	Fault with aircraft's internal board	Replace aircraft's internal board	See stage 64
Wing flaps do not move	Faulty motor, disconnection, fault with aircraft's internal board	Insert connector F3 (connected to the aircraft's internal board) into the tester and check operation →If it doesn't work, replace the motor If it works, replace the aircraft's internal board	See stages 37, 38, 39, 48, 57, 58, 64
The elevator doesn't move	Faulty motor, disconnection, fault with aircraft's internal board	Insert connector H3 (connected to the aircraft's internal board) into the tester and check operation →If it doesn't work, replace the motor If it works, replace the aircraft's internal board	See stages 37, 39, 48, 52, 59, 62, 64
Smoke coming from the tail gear motor	Faulty motor, disconnection	Replace the motor, check that wiring is not pinched by other parts	See stages 50, 51, 53, 55
When the propeller parts are attached, everything stops working.	Fault with the aircraft's internal board, faulty connector in the engine, faulty cable leading from the board to the connector	Remove the engine from the aircraft, connect to the battery box and check operation →If it doesn't work, replace the motor. If it does work, connect the engine to the aircraft, and then insert connector A (connected to the aircraft's internal board) into the tester to check operation →If it doesn't work, replace the connector and the cable leading from the board to the connector If it works, replace the aircraft's internal board	See stages 11, 15, 49, 64

Die-Cast Zero Fighter Type 52 Model

WITH MOTION, LIGHT AND SOUND EFFECTS

Checking effects operation and maintenance

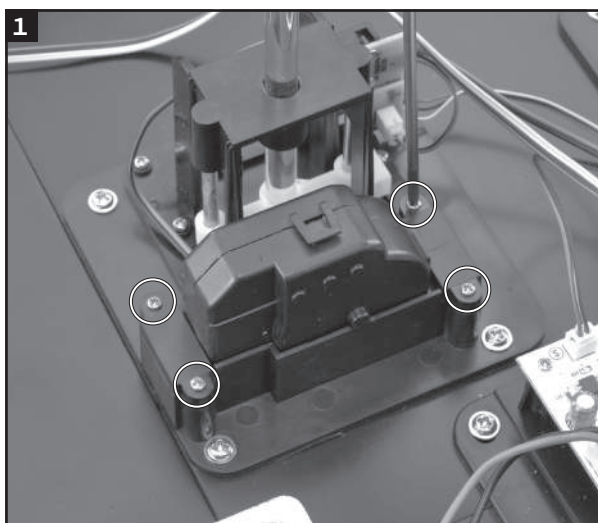
In stage 99 we attached the circuit board to the display base, enabling movement of the lifting devices and other parts making up the motion, light and sound effects. The next few steps cover how to make sure everything is working properly, as well as what to do if this is not the case.

L

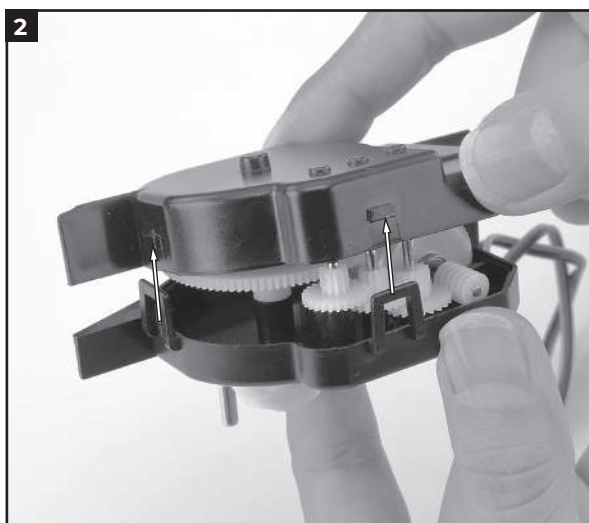
STEP 1 Applying grease to the vertical lift shafts

Grease should be applied to gears and other gearbox parts so they run more smoothly.

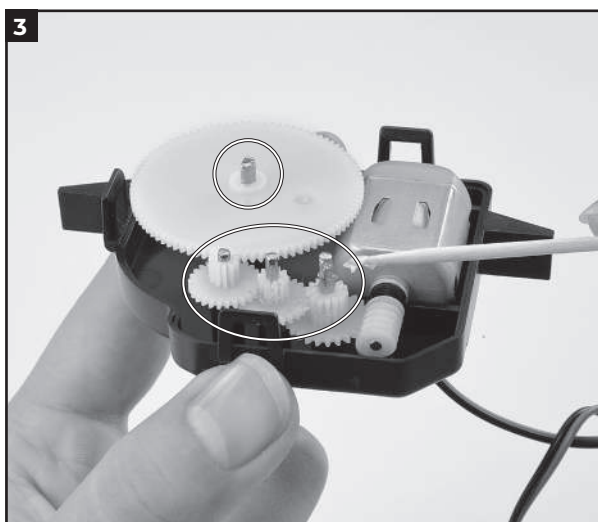
In our example we used KURE Silicone Grease Mate Paste, however any similar silicone grease product will do.



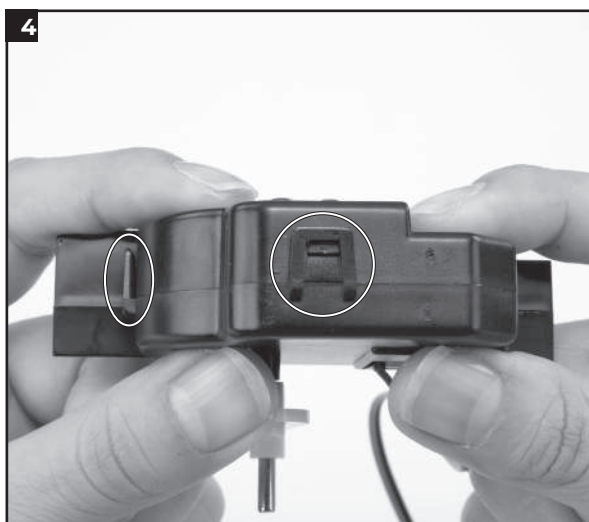
1 Unscrew the two fixings on the base of the left vertical lift and remove the gearbox.



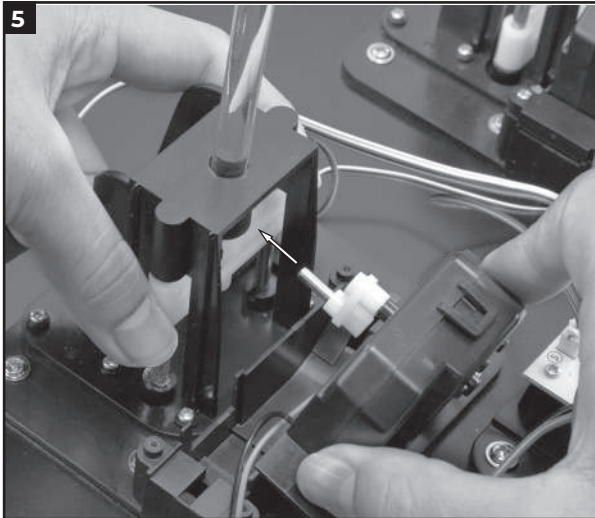
2 Open the gearbox by releasing the three tabs



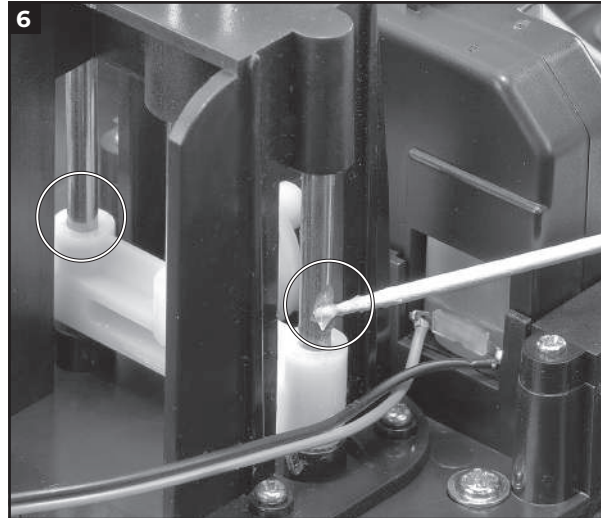
3 Firstly ensure the shafts are fully inserted before applying grease to the gears and shafts.



4 Close the gearbox by reinserting the three tabs.



Reinsert the gearbox into the lift shaft base, reattach the two fixings and then secure the whole with the four screws.



Lastly grease the two vertical lift shafts. Repeat steps 1 to 6 for the other two vertical lifts.

STEP 2 Checking the circuit board

- 1 Compare circuit board no. 099-01 included in this stage with the image on page 19 to ensure there are no broken parts.
- 2 Make sure the date printed on the board is "19/10/11". If a different date is displayed, then contact the customer service team.

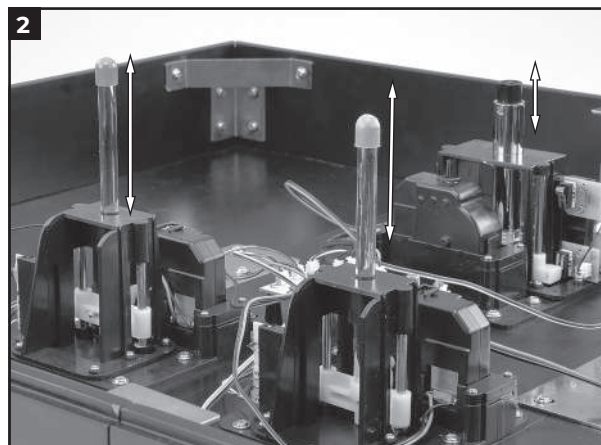
STEP 3 Making sure the display base operates properly

Make sure each part of the display base is working properly prior to mounting the aircraft and top panels.

Plug a micro USB Type-B cable into the charger on the display base. When charging, the light on the left will turn red, turning green once this is completed. Make sure a CR2025 coin cell battery has been inserted in the correct compartment on the back side of the remote control.

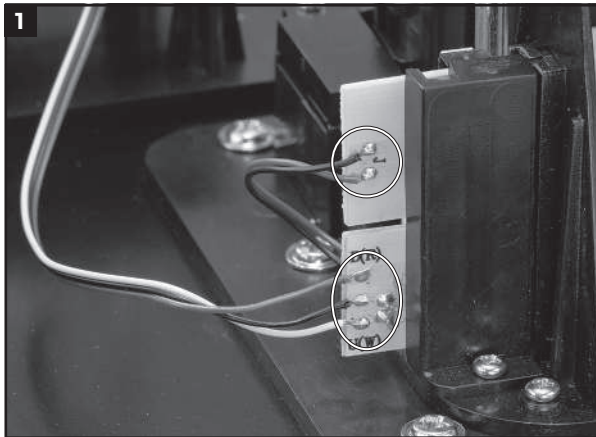


Turn the display base switch on and then press the power on button on the remote control.

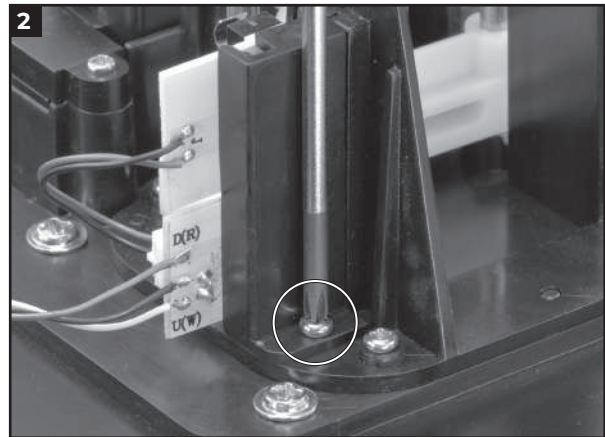


Initialisation should begin shortly afterwards, with the vertical lift shafts moving up and down once and then stopping in the standby position. Wait for about 10 seconds before triggering the various effects. Once proper operation is confirmed, press the power button again on the remote control to turn it off, then turn off the display base switch.

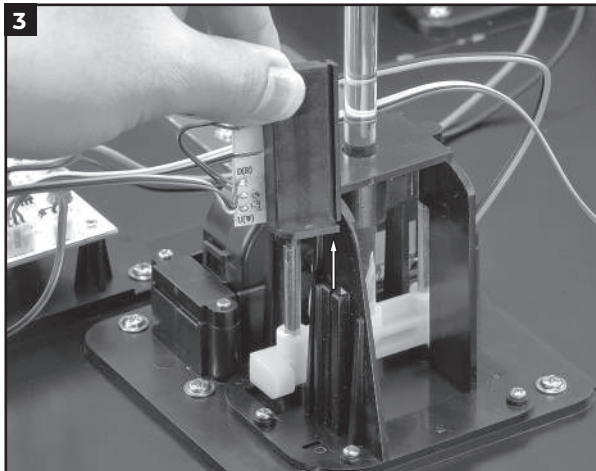
What to do if one of the vertical lifts isn't working properly



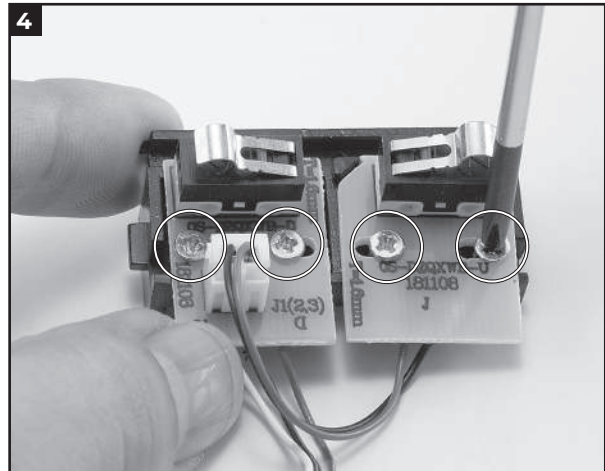
1 Make sure the cables attached to the limit switch for the vertical lift in question have not been damaged or there is a faulty connection.



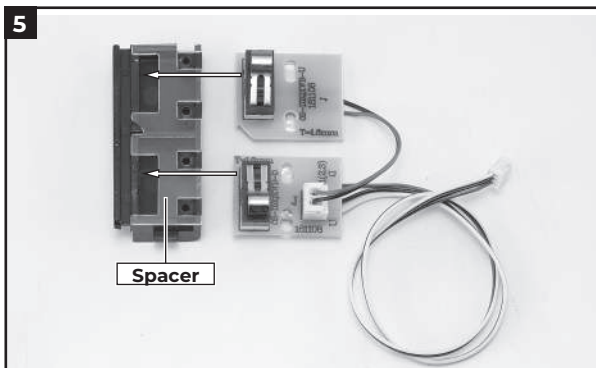
2 To adjust the position of the limit switch, remove the single screw securing the limit switch frame to the vertical lift.



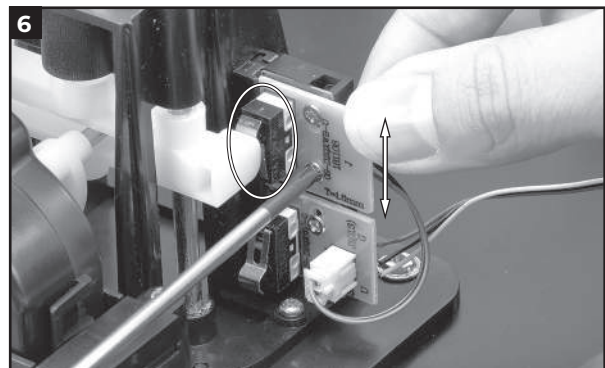
3 Remove the limit switch frame from the vertical lift frame.



4 Remove the four screws securing the limit switch boards, then remove the limit switch from the frame.



5 Position a spacer between the limit switch and the frame, then place the limit switch board back on top and screw it back in. Reinsert the limit switch frame in the vertical lift frame and screw it back in.



6 Check display base operations as described in STEP 3, then loosen the screw securing the limit switch board, moving it up or down until it is in the correct position: where the slider on the vertical lift shaft properly triggers the limit switch. Secure the boards but do not fully tighten the screw once this point has been reached.

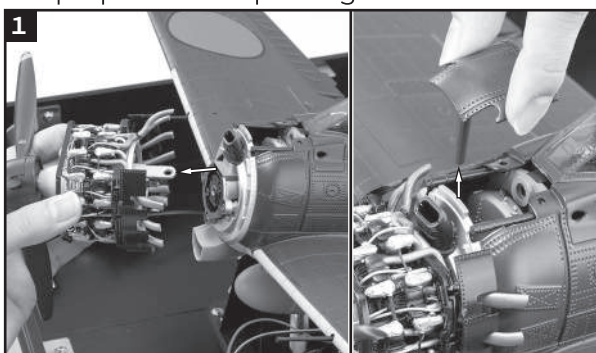
STEP 4 Mounting the aircraft onto the display base

- 1 Place the left and right wings of the aircraft onto the two vertical support shafts at the front of the base, attaching the connection point on the rear of the aircraft to the corresponding connector on the base.
- 2 Turn the display base switch on, then turn on the power switch on the remote control.
- 3 Initialisation should begin shortly afterwards, with the vertical lift shafts moving up and down once and then stopping in the standby position. Wait for about 10 seconds before triggering the various effects.

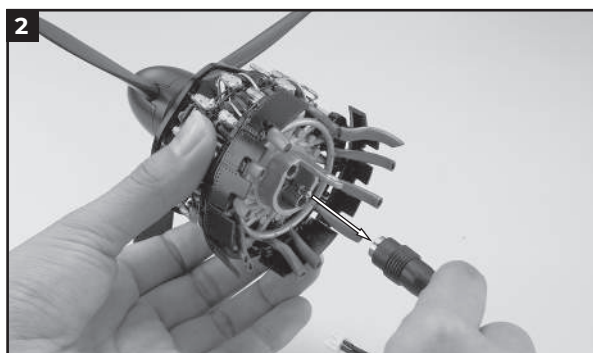


What to do if the aircraft's motion, light and sound effects aren't working

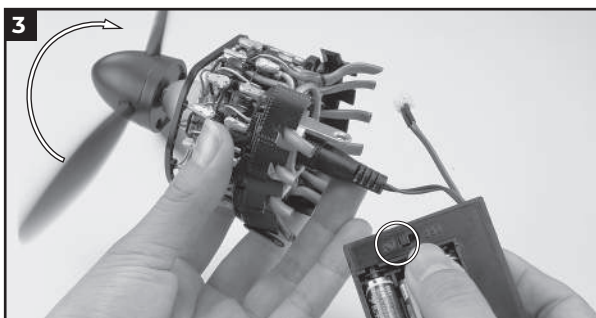
Firstly check the propeller motor in the engine itself, as none of the other effects will work if the propeller isn't spinning.



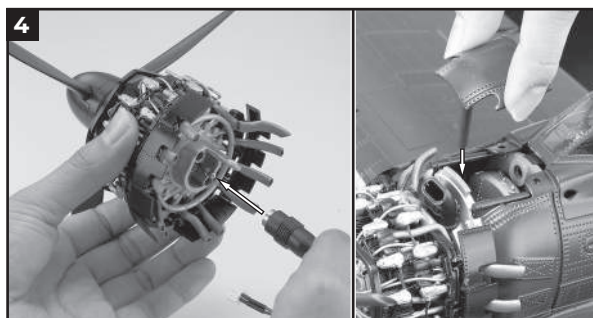
Take off the engine cowl and machine gun cover, then remove the engine and propeller head from the fuselage.



After making sure the tester supplied in stage 12 is in the off position, insert three AA batteries then insert the motor pin into the pin connector.



Switch the tester on and make sure the motor spins. Then switch the tester off again.



Unplug the motor pin from the tester's pin insert and reinsert the engine into the fuselage. Insert the machine gun cover pin into the engine's raised hole, then re-attach the engine cowl.

For more detailed instructions, see our videos at https://youtu.be/GNs_henOZg