Ares L
Assembly Guide

Dear customer,

thank you for choosing Ares L model airplane.
Ares L was developed like a 3D Jet airplane after a huge succes of bigger Ares XL. AreS L have the same incredible flying characteristics and performance. Kit in ultimative equipment for competitive 3D flying weighs less than 13 kg when equipment consists from 21 kg thrust jet turbine.
Kit ready to fly full of liquids is around 18 kg

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1. Technical data:

Wingspan	2200 mm
Length	2600 mm
Weight (RTF)	17 - 18 kg
Turbine	130 - 250
Landing gear	20Kg
Minimum RC channels	7
Number of servos	11 - 13

Notice: This Assembly guide only shows how the model could be assembled. According to model specification we expect, that this airplane is assembled by experienced user, which will use his habbits and skills to finish it.

As an accesories (levers, rods, fuel caps and fills, etc.) we recommend Secraft. Sets which you can order as order number:
2051000-44 for Hitec servos
2051000-45 for Futaba servos
2051000-46 for JR servos.

Here is list of Secraft parts for linkage:

Servo arm D40 mm (for rudder)	1
Servo arm D32 mm Ail. + Flap + Ele.	6
SEC Ball links M3 (10)	1
SEC M3 Push rod of ALU 60 mm Ail. + Flaps	3
SEC M3 Push rod of ALU 70 mm Elevator	1
SEC M3 Push rod of ALU 90 mm Rudder	1

2. General informations

- all nuts should be secured against looseninig (use Loctite 243)
- make sure, that all control surfaces can move freely
- all holes drilled in airplane surfaces, that is not factory made, must be reinforced (with rowing, plywood, etc.)
- protect your airplane against **hot** (it can cause material degradation). Please notice that dark surface can heat up to 90°C/194°F in sunny summer days!!
- use protecting coats (you can order them with kit or separetely via sales@krill-model.com email)
- please take into count that there are a lot of carbon fiber in your model, make sure that your receiver has full signal

KRILL model takes no responsibility for damages incurred during the assemblying, flying, using or transporting this model airplane.

3. Setting and set up

3.1.1. Setting – incidence and CG

3.1.2. Basic setup:

Ailerons	deflection 20 millimeters, expo 50 – 60%
Elevator	deflection 25 millimeters, expo 50 – 60%
Rudder	deflection Full, expo 50 – 60%
Flaps	deflection UP 60mm, Down 90mm

Idle 1 for 3D:

Ailerons	deflection 45 millimeters, expo 60 – 70%
Elevator	deflection 30 millimeters, expo 60 – 70%
Rudder	deflection Full, expo 60 – 70%
Flaps	deflection same as ailerons

Idle 2 for 3D:

Ailerons	deflection 65 millimeters, expo 70 – 80%
Elevator	deflection 45 millimeters, expo 70 – 80%
Rudder	deflection Full, expo 70 – 80%
Flaps	deflection same as ailerons

4. Recommended servos:

You can use any strong and fast servos in standard size.
Recommended torque: min 30 kg/cm
Recommended speed: 0,08 – 0,11 s5.

5. Assembly

5.1.1 Rudder

Firstly you must shorten the pegs of Gabriel horns 6/20 to the lenght on the picture bellow..

Than glue in horns into the prepared holes using an epoxy resin.

5.1.2 Horizontal stabilizator

Last step is to place the servo and drill the hole for servo lever. Make sure that lever has enought space for full movement. Otherwise the lever can damage stabilizator surface!

5.1.3 Elevator

Use Gabriel horns 6/20 size from accessories. Glue it to predrilled holes on both elevators. For linkage use Secraft turnbuckle ALU pushrod 70 mm long, from one side is mounted Secraft ball link M3, from second original Gabriel ball link, overall lenght of the link is 90 mm. 32 mm ALU Secraft V2 servo arms is used there.

5.2 Wing

5.2.1 Servo installation

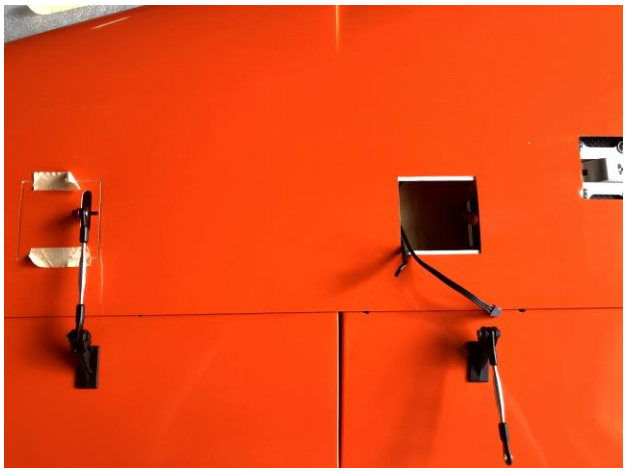
First step is put the servos to the prepared holes and fix it with screws. Second step is stretch the cable (ONE4TWO) through the prepared holes in the wing and connect it to the servos.

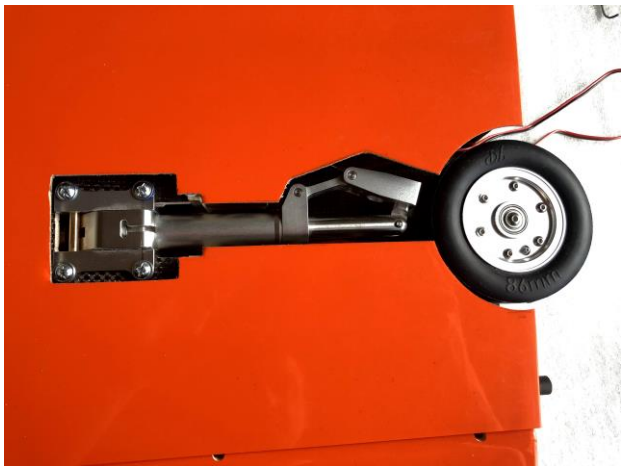
Next step is holes for servo arms, the is prepared a small hole in the right position for this size of servos. All you need to make is drill this small hole for your servo arm and deflection which you want.

One of the last steps is to glue the Gabriel horns into the prepared holes in the ailerons.

5.2.2 Linkage and landing gear

Glue the supplied Gabriel horns size 6/20 into the prepared pair of holes. Glue the horns into the holes with epoxy resin. Servo arm is connected with the Gabriel horn using a linkage made of a 60 mm long pushrod, terminated on one side by an original ball link from Gabriel horn and on the other side by a Secraft ball link. Than you should fix your landing gear into the right position in the wing. You can see the JP gear on the picture bellow.





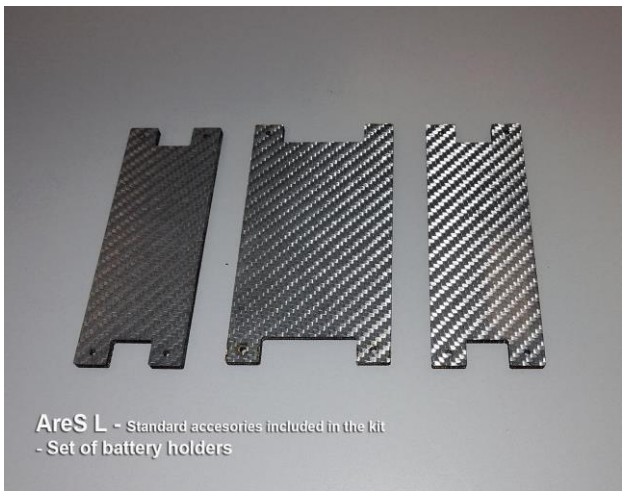
5.3 Fuselage

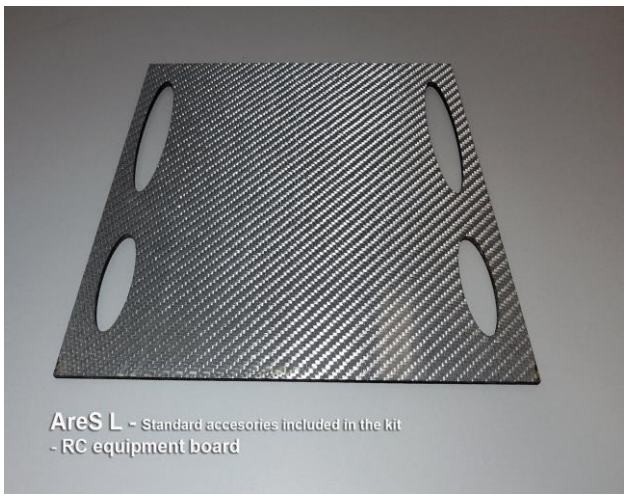
The installation of the internal equipment of the fuselage of the model is very individual, it depends on the habits of the builder, but especially on the equipment used, consider the following lines as informative, what the internal installation of the fuselage may look like.

5.3.1. Accessories

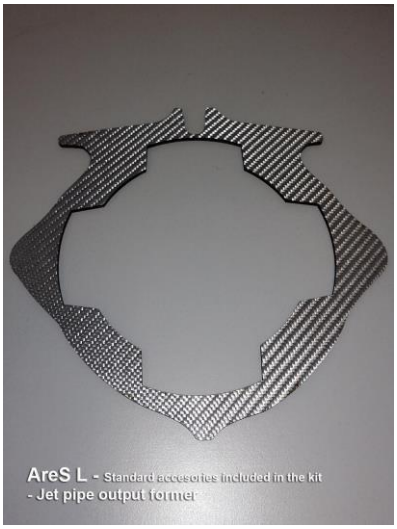
The model comes standard with a number of accessories that you can use

- Battery holders *-equipment board*



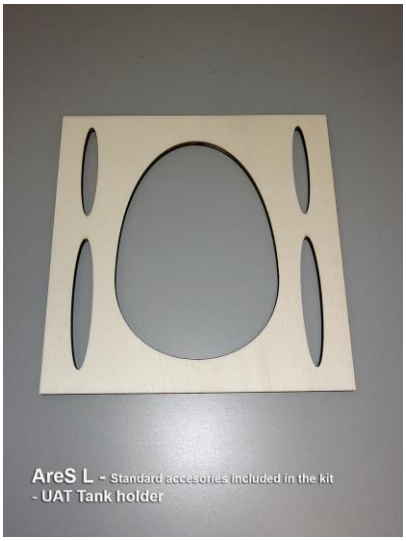


- *Jet pipe former*



- *Turbine holder*

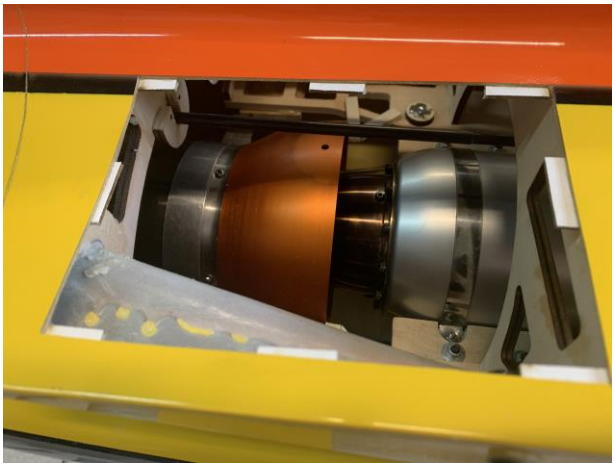
- *UAT Tank holder*



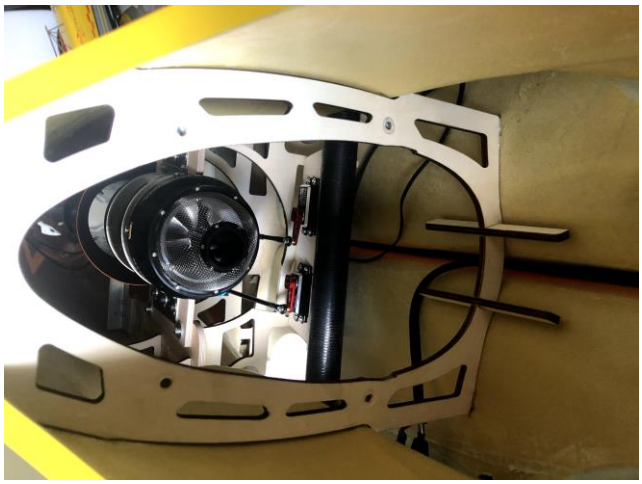
- *Kerosene and smoke holder*

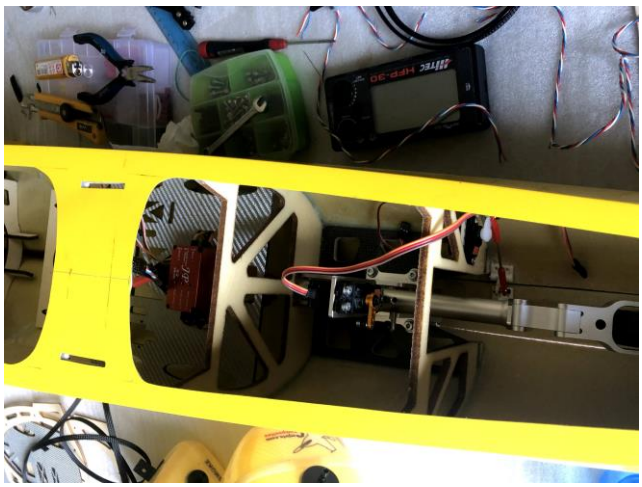
- *Standard horn and screw set*

5.3.2. Turbine installation



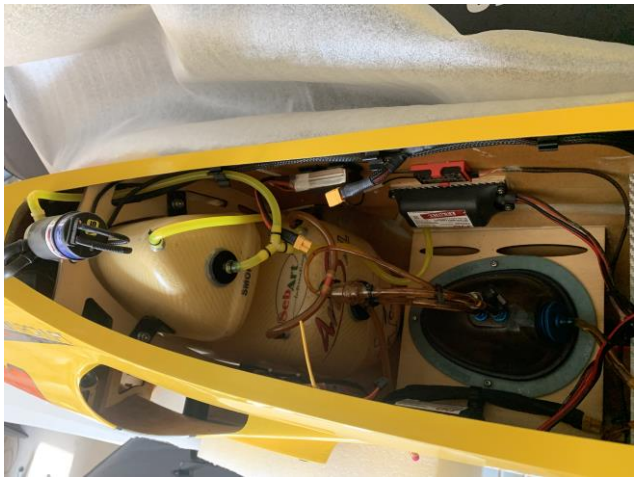
Turbine is installed ton the supplied turbine holders of plywood which are universal for varios tupes of engines.





5.3.3 Fuel & Smoke Tank installation

To install fuel and smoking tanks, you can use the standard delivered holder designed for use with CM Jets tanks - CM Kero tank 5000 ml CM Smoke tank 2000ml. The picture below shows an installation example. The tanks are attached to the holder with supplued screws through „L“ holder.



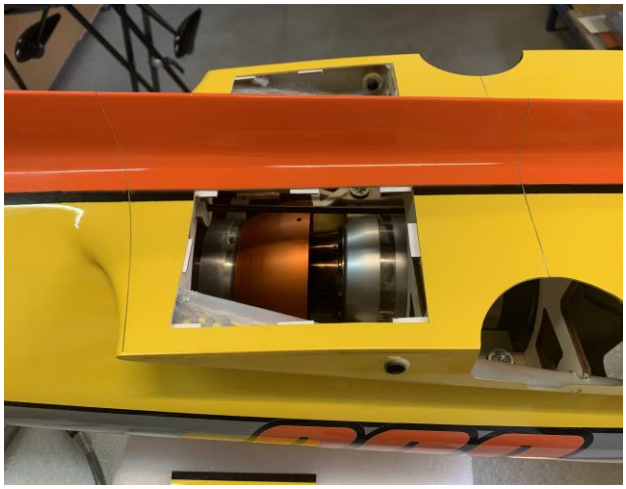
5.3.4. Jet Pipe and Vector installation

There is a lot of different ways how to fix the tube and vector. On the pictures bellow is shown one of them. Important thing is to fix the tube on both ends very carrefully.

Be careful with choose of right pipe diameter concerning to diameter according do you will use type of turbine. Length must be between 1000-1020 mm (without vector).

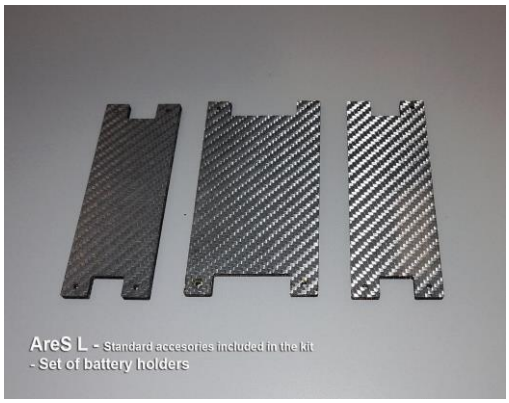
Always ask producer exhaust pipe about possibility use his the pipe for your the turbine !

For example : turbine JetMuns 210 N – Grumania Jet pipe 250 (100mm diam. / 1010 length) .

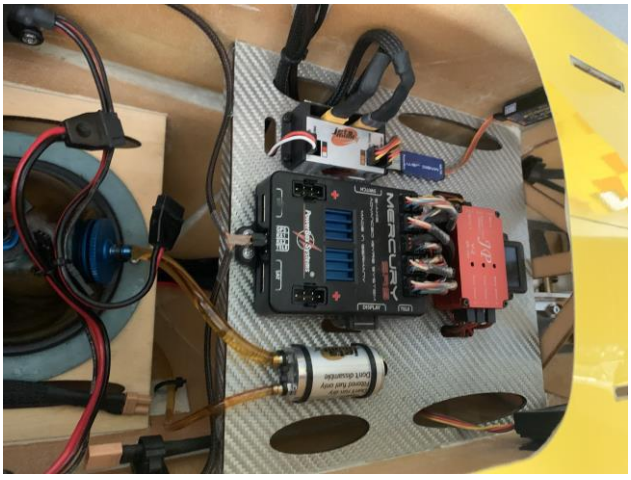


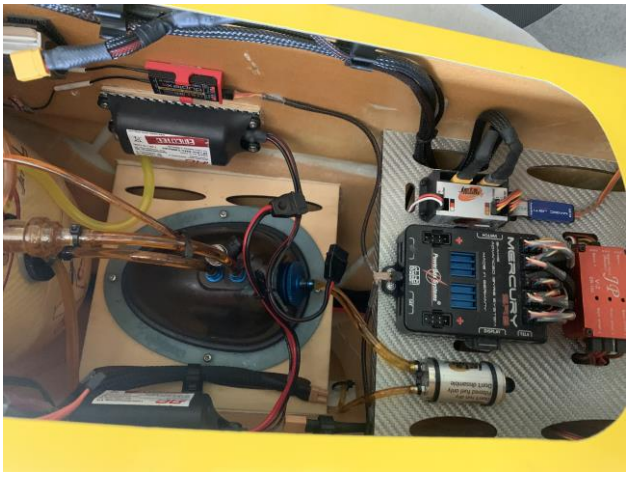
5.3.5. Equipment installation

No deck is installed in the fuselage to install the electronics inside the Fuselage of the kit. Due to the small dimensions and weight of the receivers, their satellites and powerboxes, it is possible to stick them to suitable places directly on the inner walls of the model using double-sided adhesive tapes and velcro. For batteries (typically 2x RX batteries and 1x Turbine batteries) you can then use the standard delivered battery holders.



The pictures below then represent a possible solution for the installation of on-board electronics, here a model equipped with PowerBox Mercury system and JETI Sattelites.





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