3D LabPrint

User Guide

rev. 2024/04

Fully 3d printable

Fairchild Republic A-10 Thunderbolt II

scale 1:11, wingspan 1.56m / 61.4 inch

LW planes

Fairchild Republic A-10 Thunderbolt II

fully printable R/C plane for your desktop 3Dprinter

Fully 3D printable RC model of a living legend, designed in 100% clean vase mode, esential for printing with PolyLight 1.0 LW-PLA active foaming filament (some parts PolyAir and FlexiLight LW), that allow printed planes to be lighter than any A-10 on the market (wingspan 1.56m). Scale details such as functional decelerons, airframe plating and many more.

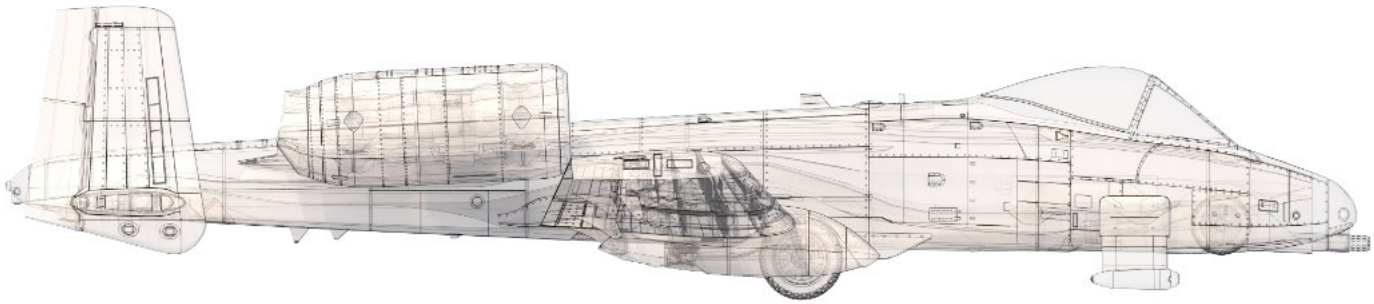
No additional parts needed - for the airframe you don't have to buy and search for additional elements such as carbon rods, nuts / bolts, hinges... You just need filament, CA glue and bunch of standard self-tapping screws.

Filament reinforcement system (press in and glue) - despite the fact that the airframe itself is very rigid (LW) we use this pressing and gluing technique in the stressed parts. You can use any filament you have left at home (we recomend PolyAir strong PLA).

Easy to assembly - despite being a very complex aircraft we tried to make it as easy as possible for you. Detailed step by step PDF/VIDEO is included.

Easy to take off and land - designing with low speed stability in mind.

Durable Landing Gear - with LG socket parts system we increase durability and option to use different retractable chassis systems.



General specifications:

Wingspan:	1560 mm / 61.4 inch
Lenght:	1450 mm / 57.1 inch
Height:	410 mm / 16.2 inch
Wing area:	38,2 dm2 / 4.09 square feet
Wing loading:	91.6 g/dm2
Center of gravity:	85 mm / 3.3 inch from leading edge
Airfoil:	LHK508 modified by 3DLabPrint
Print weight (airframe):	1494 g / 52.7 oz (incl. discs, tyres exl. glue, screws)
Empty weight (w/o battery):	2750 g / 97.0 oz
Takeoff weight (6s 5500 lipo):	3500 g / 123.46 oz
Never exceed speed, VNE:	130 km/h / 81 mph
Design maneuvering speed, VA:	80 km/h / 50 mph
Stall speed, VS:	28 km/h /17 mph

Powerplant

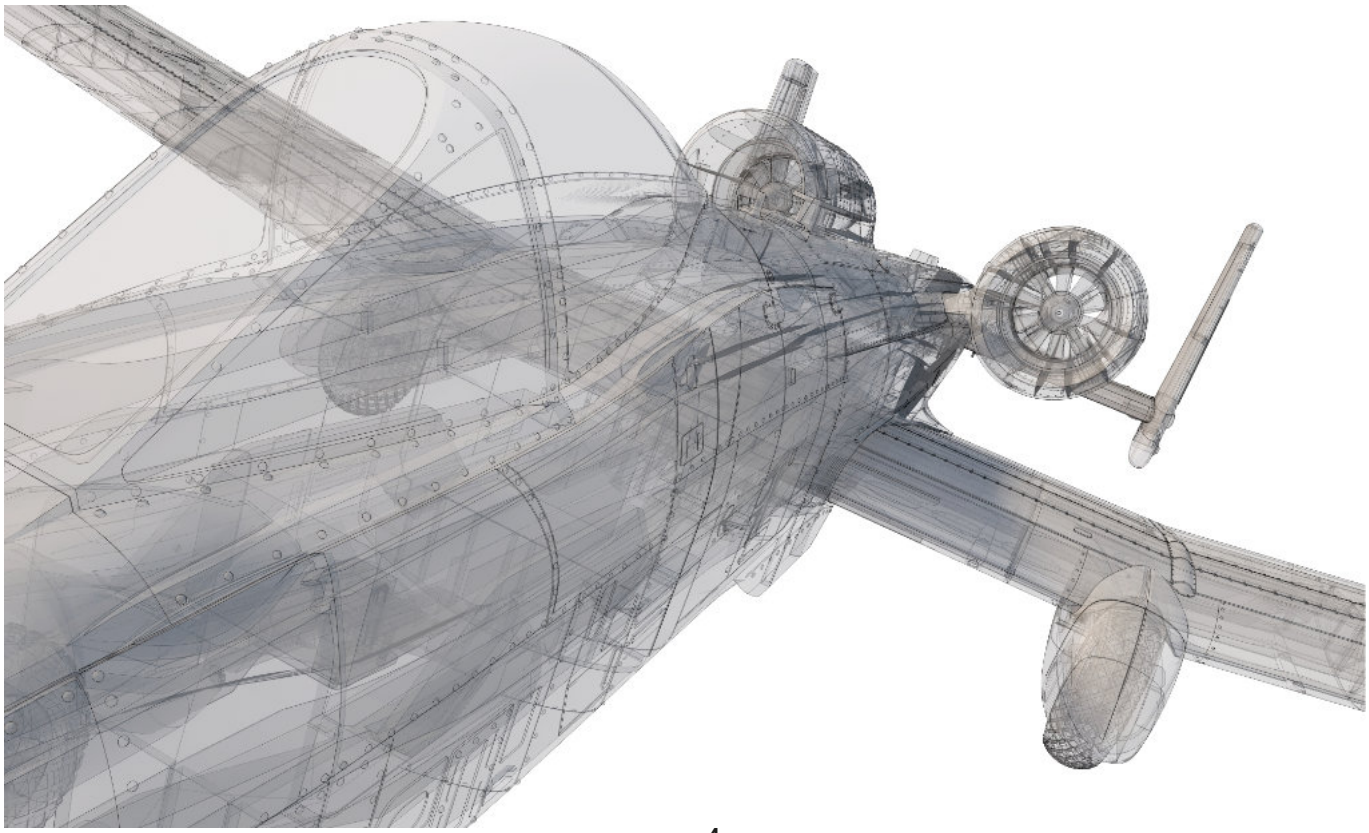
EDF:	2x70mm 12 blade 6/s
ESC:	suitable 2x80-100A/6S
Battery:	1xLi-Pol 5500mAh / 6S

Performance measurement

Max speed VH (level flight):	130 km/h
Rate of climb:	38 m/s
Flight time:	4:30 min

Fairchild Republic A-10 Thunderbolt II

Single-seat, twin-turbofan, straight-wing, subsonic attack aircraft developed by Fairchild Republic for the United States Air Force (USAF). In service since 1976, it is named for the Republic P-47 Thunderbolt, but is commonly referred to as the "Warthog" or simply "Hog". The A-10 was designed to provide close air support (CAS) to friendly ground troops by attacking armored vehicles, tanks, and other enemy ground forces; it is the only production-built aircraft designed solely for CAS to have served with the U.S. Air Force. Its secondary mission is to direct other aircraft in attacks on ground targets, a role called forward air controller-airborne; aircraft used primarily in this role are designated OA-10.

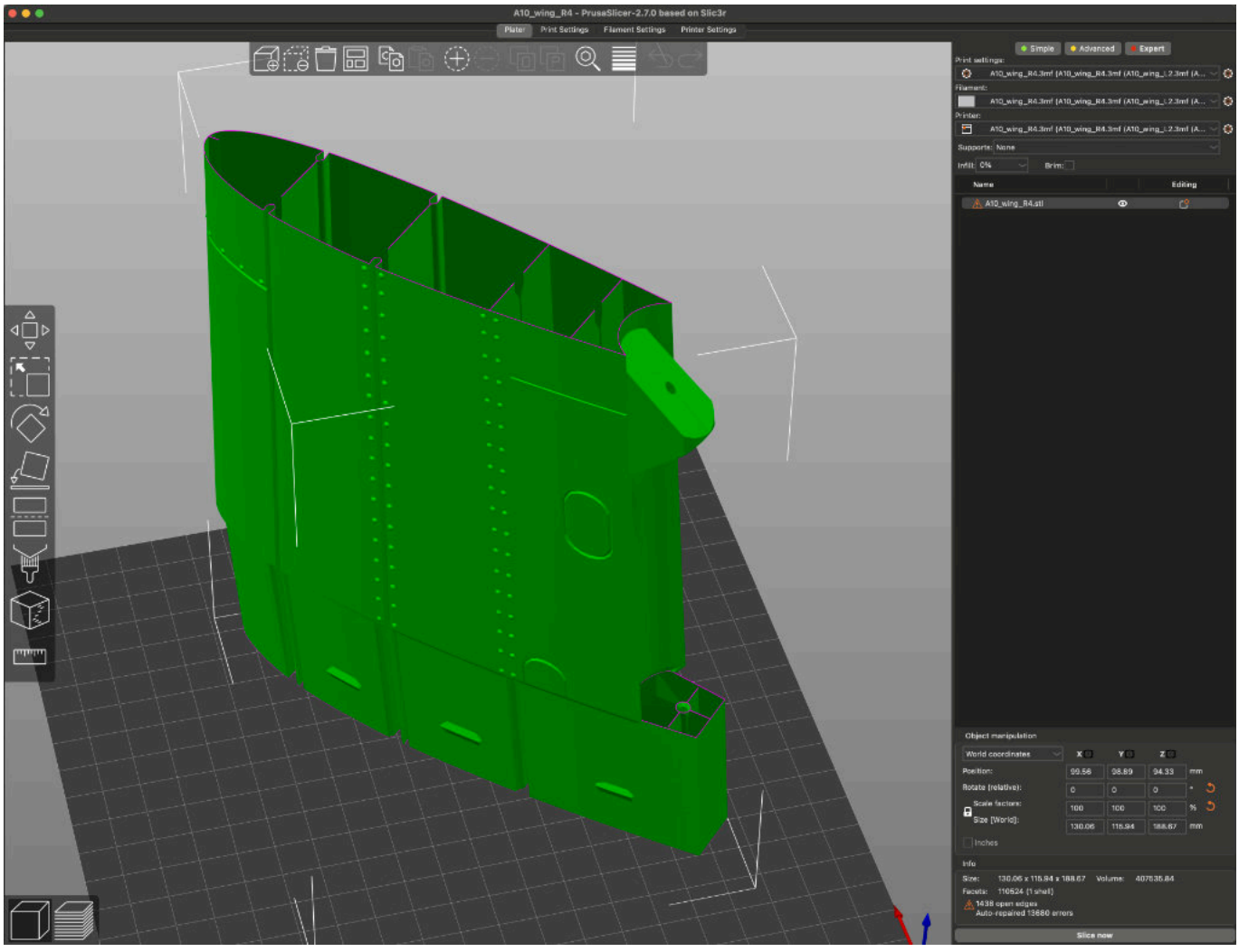


Included:

1. 3MF 3D files Prusa Slicer

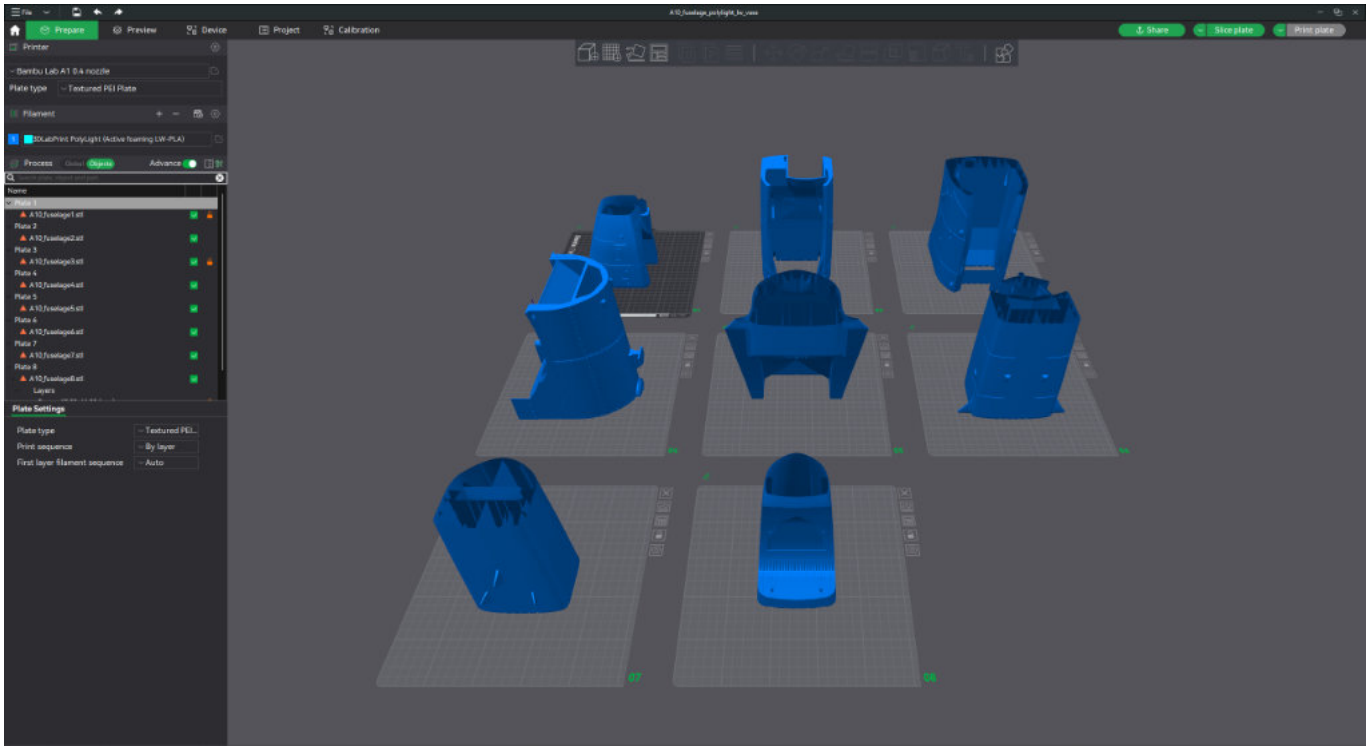
Used instead of STL files

3MF files can be used instead of standard STL files, but also include information about slicing in the new version of Prusa Slicer (since version 2.4). Open them directly in the Prusa Slicer as a project or import to the slicer of your choice. The files contain settings for printing on a direct drive printer with dimensions 200x200x200 (210) mm, that can be further adapted to suit your printer. The generic settings are compatible with Prusa printers.



2. 3MF 3D files for Bambu Studio

For Bambulab users we also prepared a set of 3MF files to be opened in Bambu Studio. The files contains multiple plates grouped by common printing mode (usually vase/non-vase). Each model has the correct modifiers set according to the Prusa Slicer settings. The files are set for A1 printer by default but you can simply select your other Bambulab printer from the list, keeping the print and filament settings. For enclosed printers you may need to adjust the cooling, so you're as close to the room temperature inside the enclosure as possible.



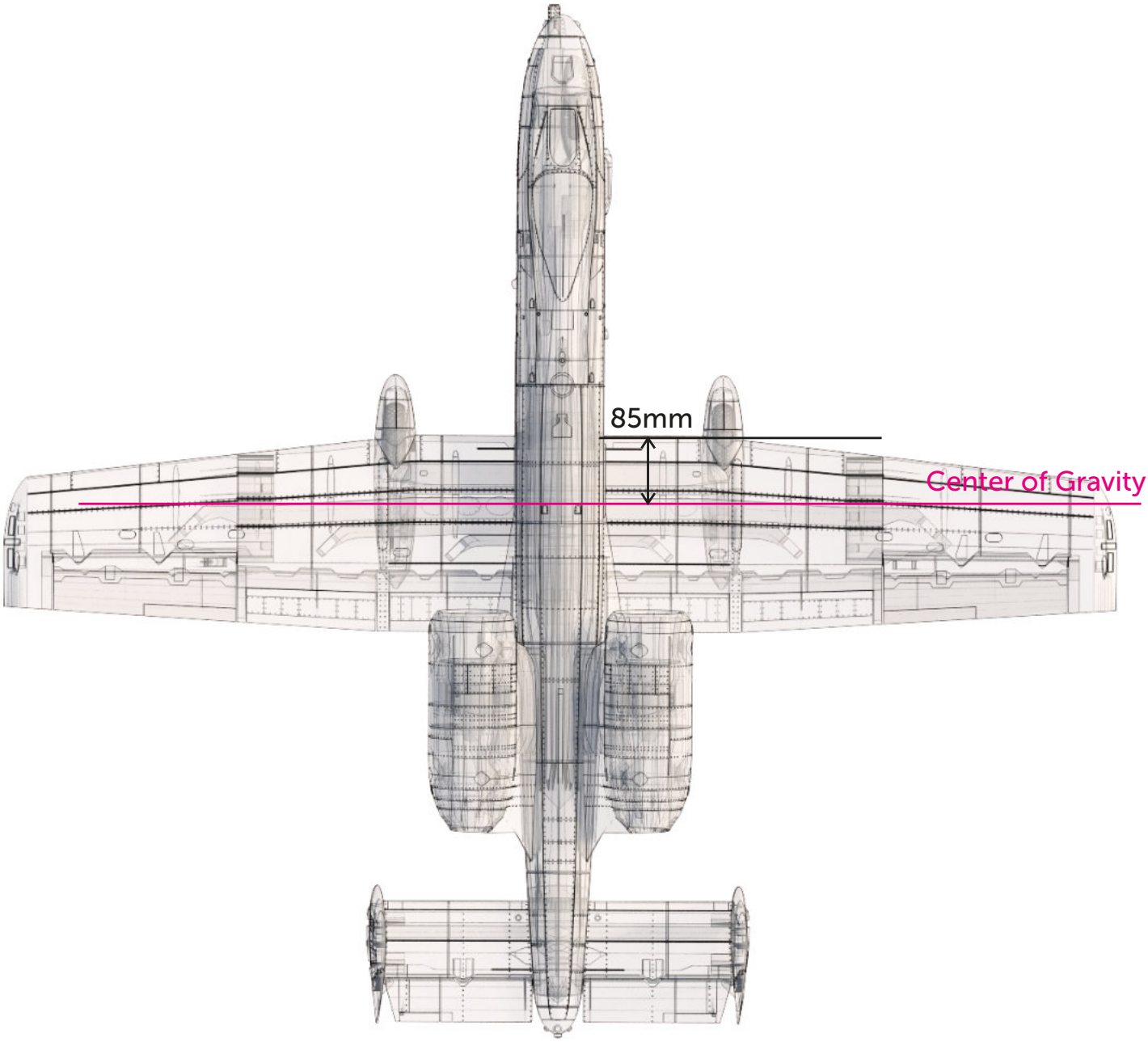
3. Gcodes

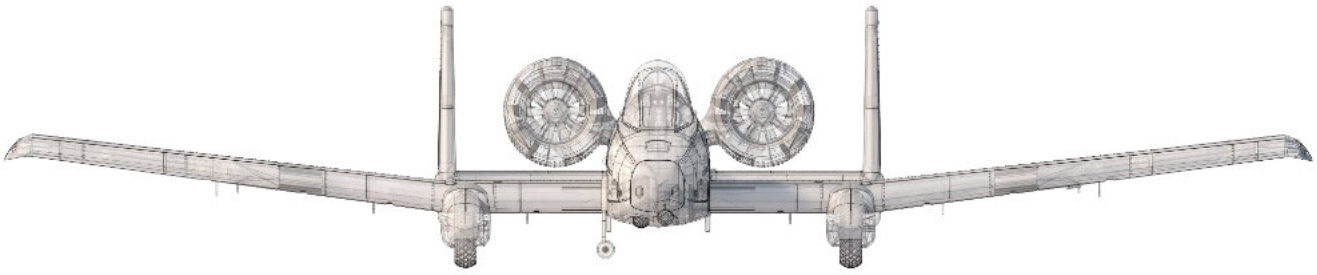
Basic Gcodes prepared for direct use, as universal as possible. Should work on i3 style printers, Give it a try, but we can't guarantee it will work on your printer. Wall thickness should be 0.55-0.67mm.

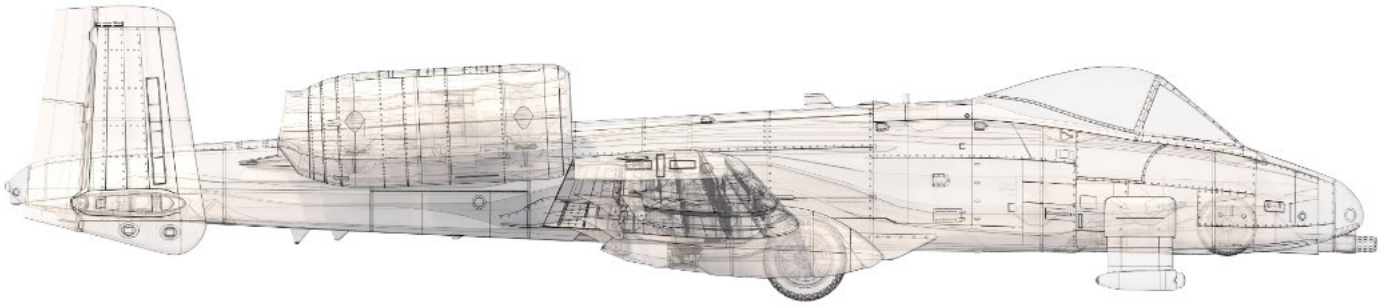
4. Scale markings PDF

You could print and cut the PDF in scale (100%) from thin self adhesive advertisement foil and place it on the model as needed. it is good to contact an advertising/graphic workshop in your area, we have good experience with UV printing on thin film

Fairchild Republic A-10 Thunderbolt


85mm
Center of Gravity






AF 530

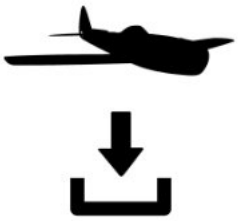
Step By Step PDF/VIDEO userguide

1. Choose airplane at www.3Dlabprint.com, visit our Facebook or 3DLPPA group- for latest info.

Basic requirments for A-10 Thunderbolt are 200/200/210 mm volume, nozzle 0.4mm. Heated bed recommended. Designed to be printed with Polylight LW-PLA filament by 3DLabPrint.
Contact: support@3dlabprint.com

2. Create account, download

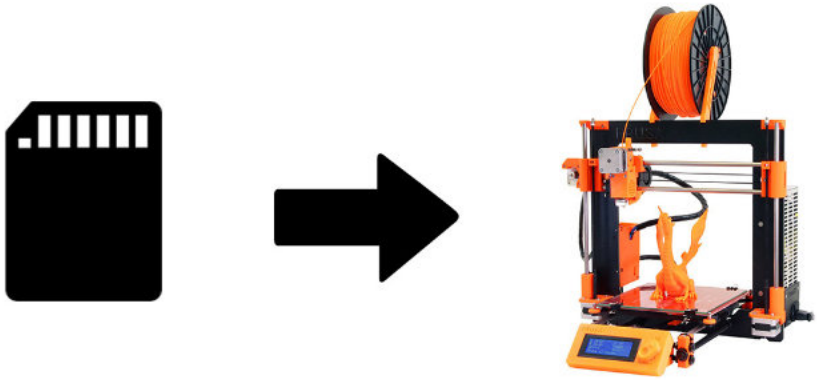
You will receive download link to all the zipped files to your email right after the checkout (please check your spam folder if not). If you are logged in with your account while purchasing the model, you will find the download link in your account's Downloads section on our website. Please contact support@3dlabprint.com if you have trouble getting the files.



3. Prepare Gcodes

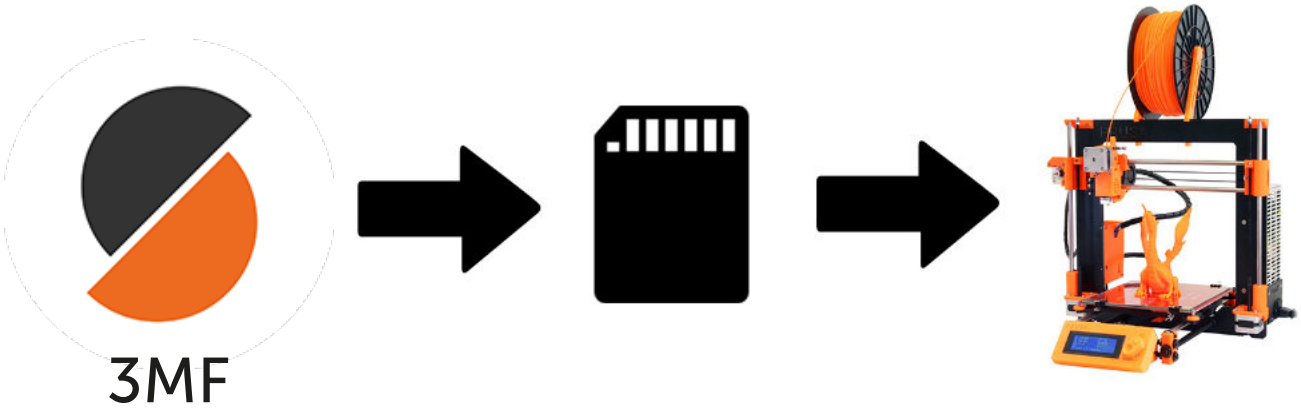
Gcodes:

If your printer is i3 comptatible you can use prepared gcodes directly. Just save them to the SD card and let the 3d printer do it's job. HE temperature is set to 240°C so the layers fuse together well, you can adjust temperature only through your printer's LCD. If these Gcodes does not work for you, please proceed to the next options.

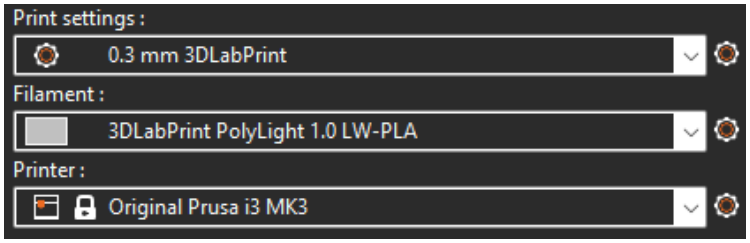


Prusa Slicer 3mf files

Please follow the guide in the Help section of our website about Prusa Slicer setup.
Drag and drop the 3mf file to the Prusa Slicer window and open it as a Project. It will create a Generic 3DLabPrint printer, printing profile and materials. Please use these as a starting point instead of your printer profiles provided by your printer manufacturer. Strong thin wall printing is a different discipline than printing Benchys what are the stock profiles usually optimized for. Once you tweak your profiles (retractions, etc.) you can easily switch the profile everytime you open the 3mf file. All the slicing tweaks, such as added top/bottom layers etc. are stored in the models below, so it won't be overwritten.
Remember: We are using 0.5 multiplier and 0 retraction with LW-PLA.



This method is also suitable for other common brands of printers, such as Creality (Enders), and other. Prusa Slicer provides all the features we need and the settings are preconfigured in the 3mf files. Use the Print Settings and Filament profiles from our 3mf files and your Printer profile to ensure the compatibility.



Bambu Studio

For Bambulab users we also prepared a set of 3MF files to be opened in Bambu Studio. The files contains multiple plates grouped by common printing mode (usually vase/non-vase). Each model has the correct modifiers set according to the Prusa Slicer settings. The files are set for A1 printer by default but you can simply select your other Bambulab printer from the list, keeping the print and filament settings. For enclosed printers you may need to adjust the cooling, so you're as close to the room temperature inside the enclosure as possible.

4. Print it

Save the Gcodes to the SD card and insert into your printer, or send it to your printer. Prepare your printer and start printing. Scaling the model will lead to unusable result! Check your first layer to ensure good bed adhesion (tune your Z height). Use kitchen sponge for bed adhesion...
LG gondola L2 and R2 should be printed with PolyAir strong PLA and 5% infill for better durability. LG sockets printed with PolyLight LW PLA infill 20% (nose 30%) and 4 top and bottom layers.

you will need: PolyLight LW PLA, PolyAir strong PLA, Flexilight LW
3DLac, Strong hair spray, PEI or your favorite adhesive bed surface

AND... please watch our VideoGuides.

LW planes

Basic Tips and Advice

This plane has been designed to be printed from active foaming LW-PLA that means about 50% weight reduction on printed parts.

Please Experiment with temperature and extrusion multiplier (0.55-0.67mm Wall thickness). Hotend temperature is very important (220° up to 260° celsius). The temperature determines, how much the LW-PLA foams while printing. Cranking up temperature means, you can go lower on multiplier as the material will gain on volume. Turn OFF cooling fan for better layer adhesion (HE fan should be ON). We dont need it for thin wall printing. Heated bed is very recommended, 55-58° Celsius (to prevent warping ends).

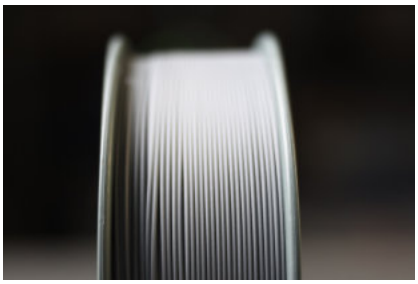
Price of the LW-PLA may look a bit steep at first glance, but since we're using 50% less material thanks to the foaming feature, the cost difference is not so high as it looks.

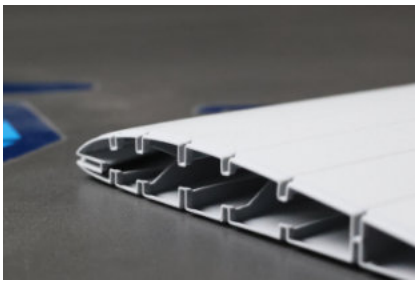
Please see the Printing Guide (Help Section)

How to print PolyLight LW-PLA?

The basic print setup is almost the same as we use for standard PLA. The only difference is in extrusion multiplier set to 0.5 and turning off the retractions completely.

This results in parts with half the weight and still suitable mechanical properties, this model is designed mainly in VASE mode, even that expect some stringing inside and outside in some inpossible spots. Of course you can try to tweak the retractions for less stringing inside the parts, but there's a high risk of clogging the nozzle or throat. Increasing the retraction distance above 1 mm is not recommended at all and leads to nozzle clogs caused by foaming. Cleaning the hairy, but functional parts after printing with retractions completely disabled seems to be more efficient method. The nozzle is permanently pressurized and you don't need to worry about print failures. This method works fine even for bowden printers. Avoid crossing perimeters helps when printing in non vase mode.
Extrusion multiplier 0,5 has been tested for easy print with massive weight saving around 50%. Feel free to experiment with extrusion multiplier and temperatures at will for the best results on your printer. This airplane is designed for **0.55 - 0.67mm** Wall thickness.
Cosmetic issues of the prints are easily fixed with snap knife or sand paper, as the LW is easily sanded and cut.





A-10 Thunderbolt II, list of printed parts (weights):

fuselage

F front (PolyLight LW PLA)	4 g
F1 (PolyLight LW PLA)	23 g
F2 (PolyLight LW PLA)	41 g
F3 (PolyLight LW PLA)	57 g
F4 (PolyLight LW PLA)	68 g
F5 (PolyLight LW PLA)	56 g
F6 (PolyLight LW PLA)	56 g
F7 (PolyLight LW PLA)	36 g
F8 (PolyLight LW PLA)	21 g
F back (PolyLight LW PLA)	3 g
Canopy 1 (PolyLight LW PLA)	8 g
Canopy 2 (PolyLight LW PLA)	11 g
Canopy 3 (PolyLight LW PLA)	4 g
Canopy 4 (PolyLight LW PLA)	2 g
Engine gondola L1 (PolyLight LW PLA)	28 g
Engine gondola L2 (PolyLight LW PLA)	21 g
Engine gondola L3 (PolyLight LW PLA)	33 g
Engine gondola L4 (PolyLight LW PLA)	16 g
Engine gondola R1234 (PolyLight LW PLA)	98 g
Out vector L+R (PolyAir strong PLA)	24 g
Cover lock (PolyAir strong PLA)	2 g
Gun (PolyAir strong PLA)	6 g
UTLT (PolyLight LW PLA)	6 g
Batt holder (PolyAir strong PLA)	17 g
fuselage total	**641 g**

wing

wing L1 (PolyLight LW PLA)	43 g
wing L2 (PolyLight LW PLA)	35 g
wing L3 (PolyLight LW PLA)	20 g
wing L4 (PolyLight LW PLA)	25 g
wing L5 (PolyLight LW PLA)	12 g
wing L6 (PolyLight LW PLA)	11 g
wing R1 (PolyLight LW PLA)	44 g
wing R2, 3, 4, 5, 6 (PolyLight LW PLA)	103 g
flap L1, 2 (PolyLight LW PLA)	10 g
flap L3, 4 (PolyLight LW PLA)	10 g
flap R1, 2 (PolyLight LW PLA)	10 g
flap R3, 4 (PolyLight LW PLA)	10 g
aileron L1, 2 (PolyLight LW PLA)	18 g
aileron R1, 2 (PolyLight LW PLA)	18 g
deceleron L1, 2, 3 (PolyLight LW PLA) option	9 g
deceleron R1, 2, 3 (PolyLight LW PLA) option	9 g
wing C1 (PolyLight LW PLA)	23 g
wing C2 (PolyLight LW PLA)	13 g
Peg (PolyAir strong PLA)	16 g
addition L2, 3 R2, 3 (PolyLight LW PLA)	4 g
wing total (decelerons included)	**443 g**

tail

elevator L1 (PolyLight LW PLA)	1 g
elevator L2 (PolyLight LW PLA)	6 g
elevator L3 (PolyLight LW PLA)	4 g
elevator R1, 2, 3 (PolyLight LW PLA)	11 g
H stabilizer L1 (PolyLight LW PLA)	15 g
H stabilizer L2 (PolyLight LW PLA)	10 g
H stabilizer R1, 2 (PolyLight LW PLA)	25 g
rudder L1 (PolyLight LW PLA)	1 g
rudder L2 (PolyLight LW PLA)	4 g
rudder L3 (PolyLight LW PLA)	3 g
rudder R1, 2, 3 (PolyLight LW PLA)	8 g
V stabilizer L1 (PolyLight LW PLA)	8 g
V stabilizer L2 (PolyLight LW PLA)	6 g
V stabilizer L3 (PolyLight LW PLA)	3 g
V stabilizer L4 (PolyLight LW PLA)	2 g
V stabilizer R1, 2, 3, 4 (PolyLight LW PLA)	19 g
H stabilizer C1, 2 (PolyLight LW PLA)	8 g
tail total	**126 g**

landing gear

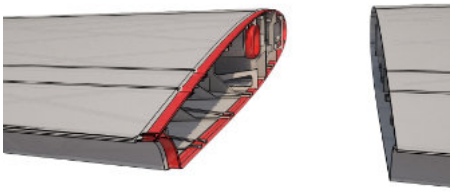
LG gondola L1 (PolyLight LW PLA) 5% infill	8 g
LG gondola L2 (PolyAir strong PLA) 5% infill	46 g
LG gondola L3 (PolyLight LW PLA) 5% infill	2 g
LG gondola R1 (PolyLight LW PLA) 5% infill	8 g
LG gondola R2 (PolyAir strong PLA) 5% infill	46 g
LG gondola R3 (PolyLight LW PLA) 5% infill	2 g
LG disc L+R + nose (PolyAir strong PLA)	50 g
main tyre L+R (FlexiLight)	24 g
Nose tyre (FlexiLight)	9 g
main LG socket L+R (PolyLight) 20% infill	28 g
nose LG socket (PolyLight LW PLA) 30% infill	21 g
landing gear total	**244 g**

PolyLight LW PLA total	**1214 g**
PolyAir strong PLA	**207 g**
13m PolyAir reinforcement	**40 g**
FlexiLight	**33 g**

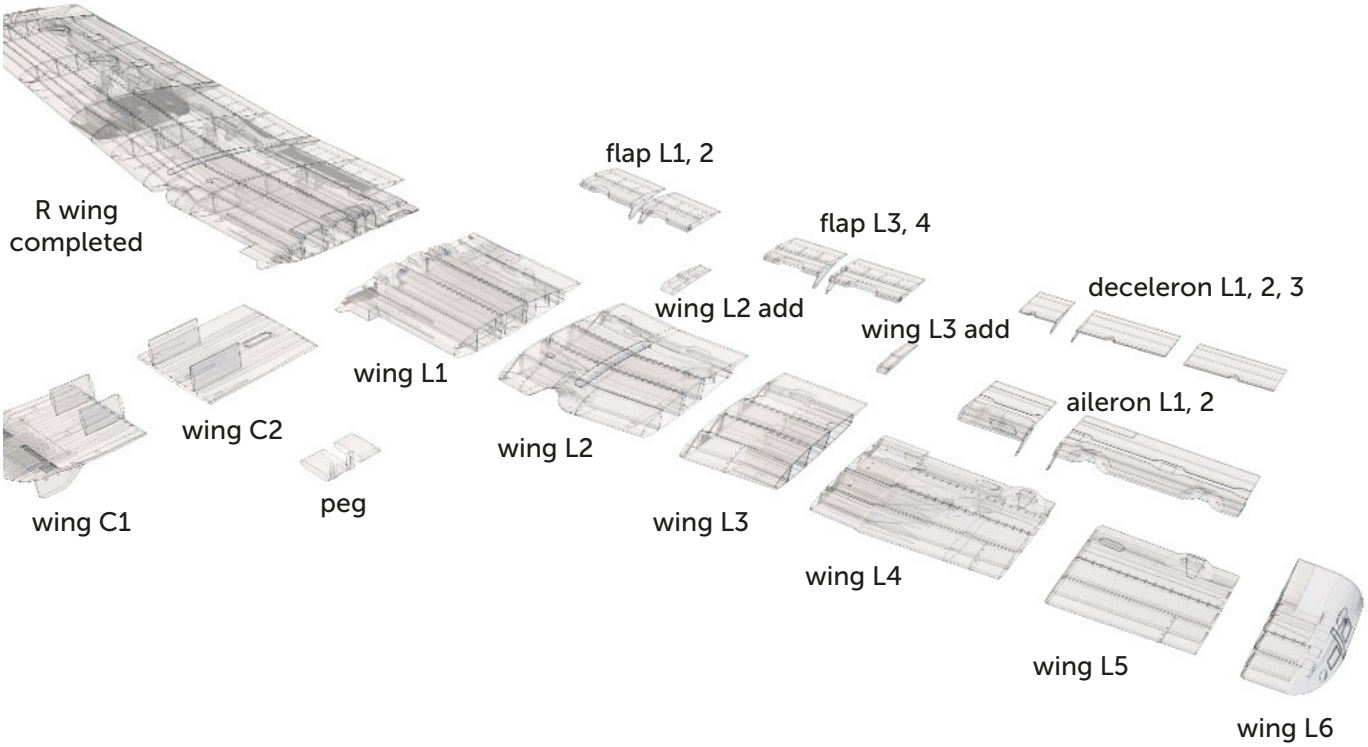
Wing assembly

Glue main wing parts 1-6 together. Glue both halves of the wing together (insert carbon tube as a option). Use medium CA glue, and use activator to speed up the glue curing. Press in and glue a piece of 1.75 filament into the top and bottom openning to create a wing spar and improve the rigidity of the wing, than add thin CA (if you don't have one, use a medium) glue over and use activator for CA glue.
Glue the ailerons/flaps. Use a filament as a hinge. Just slide it in, there's no need to glue the hinge (for easy aileron or servo replacement). Then glue the wing additions.
The control surfaces may need to be warmed up for full range. Note: you have two option ailerons or ailerons + decelerons.

Video guide A-10 wing assembly



you will need: CA Glue - medium + Activator for CA Glue
PolyAir or any strong 1.75 filament
10/9 40cm carbon tube (option)

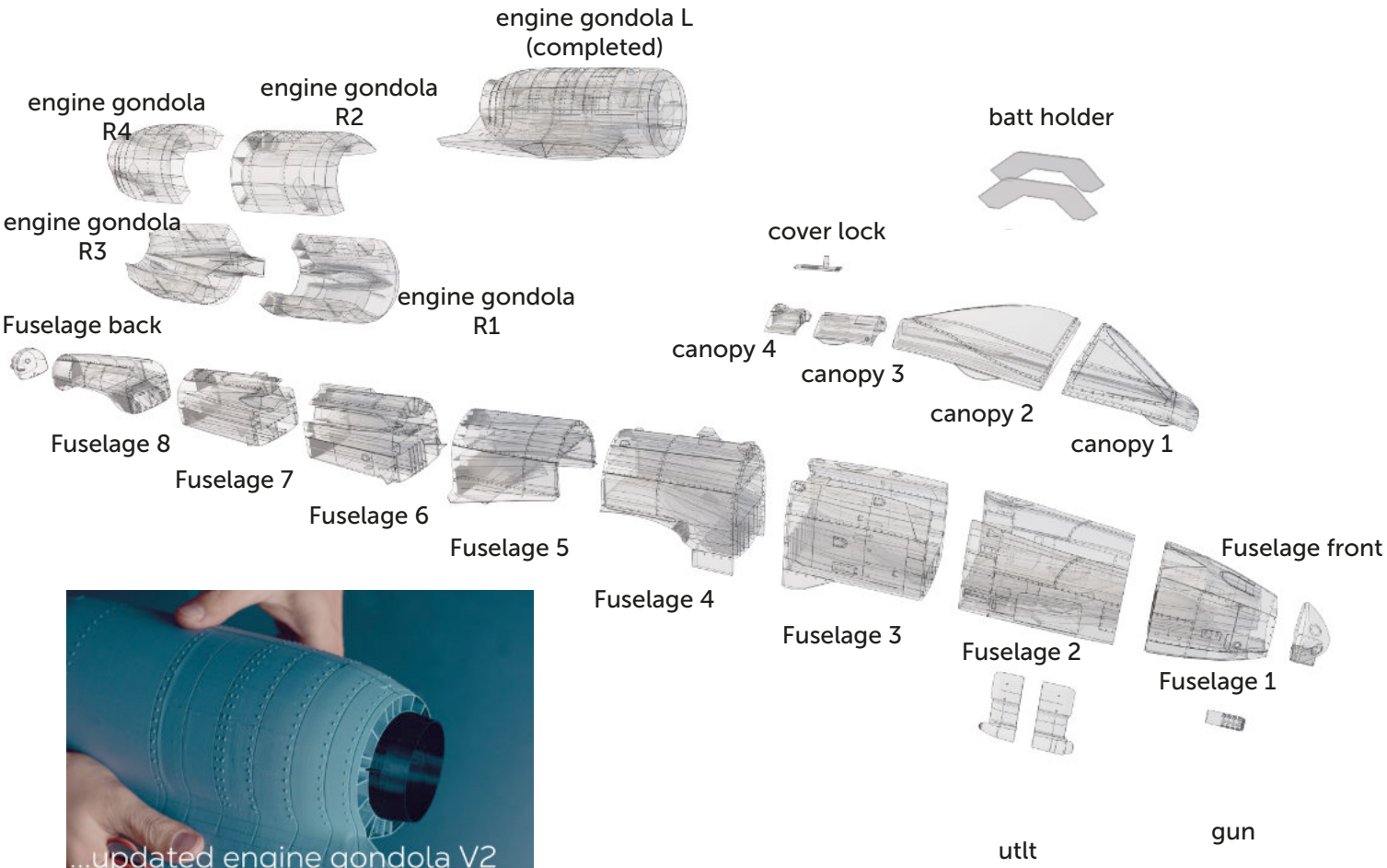


Fuselage assembly

You can use snap knife for cleaning the surface of printed parts, but mostly it is not necessary. Glue fuselage parts with CA glue together. Press in and glue a piece of 1.75 filament into the inner fuselage space. Cut out holes with hot knife. For fuselage cover lock use a ball pen spring. Then glue in engine (EDF) gondolas.

Video guide A-10 fusselage assembly

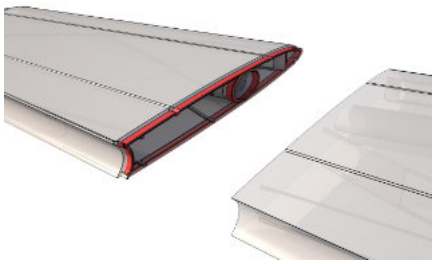
you will need: CA Glue - medium + Activator for CA Glue
PolyAir or any strong 1.75 filament
Ball Pen Spring



Tail assembly

Glue parts of the V, H C, stabilizer, elevator and rudder, do not glue C and H parts together. Press in and glue a piece of 1.75 filament into the top and bottom openning to create a wing spar and improve the rigidity of the stabilizer. Use a filament as a hinge. Just slide it in, there's no need to glue the hinge (for easy replacement) Check the functionality of the elevator and rudder assembly carefully. The control surfaces may need to be warmed up for full range.

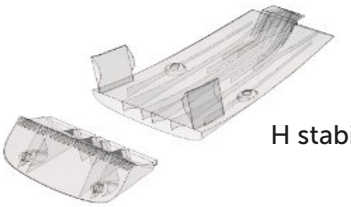
Video guide A-10 tail assembly



you will need:

CA Glue - medium + Activator for CA Glue
PolyAir or any strong 1.75 filament
6x self-taping screw 3.5-4x30mm
2x self-taping screw 3.5-4x40mm

Elevator/Rudder R completed

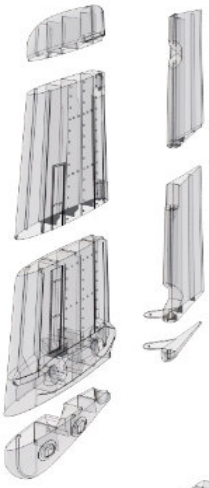


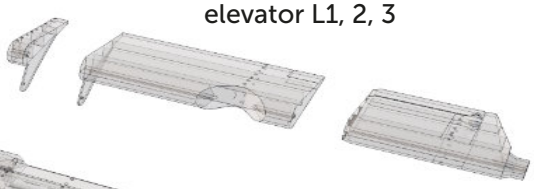
H stabiliser C2

H stabiliser C1

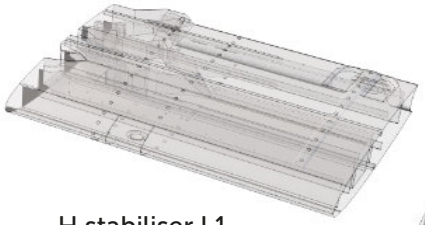
V stabiliser 1-4

rudder 1-3

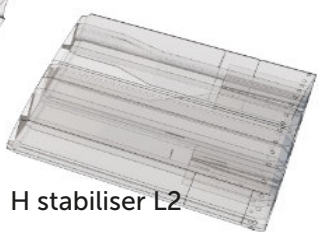




elevator L1, 2, 3



H stabiliser L1

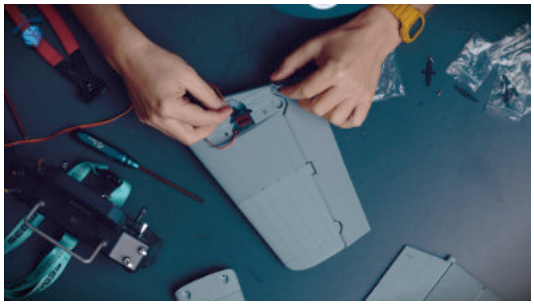


H stabiliser L2

Servos installation

Check the servos with servotester or your RC system, set central position. Install the prepared servos in servo bays add servo extensions. Use a 1.2mm steel wire with Z bends as a linkage between the servos and control horns.

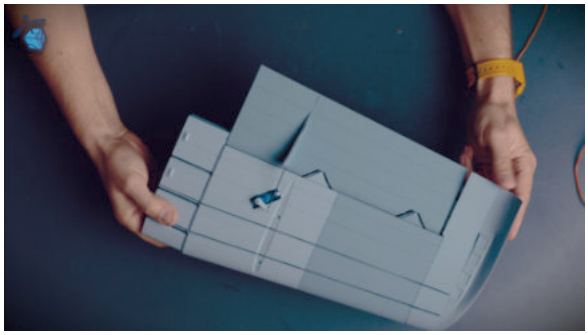
Video guide A-10 servo installation



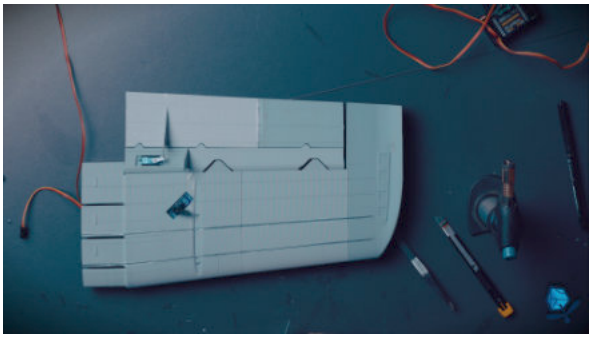
you will need:

7-11x HXT900 or any similar sized 9g servos
23x12x26 mm / 0.74x0.42x0.78 inches
2x 5grams servo for decelerons (optional)
Servo cable extension
Z pliers
1.2mm steel wire

Aileron:



Aileron + deceleron:



Channel count (6-15)

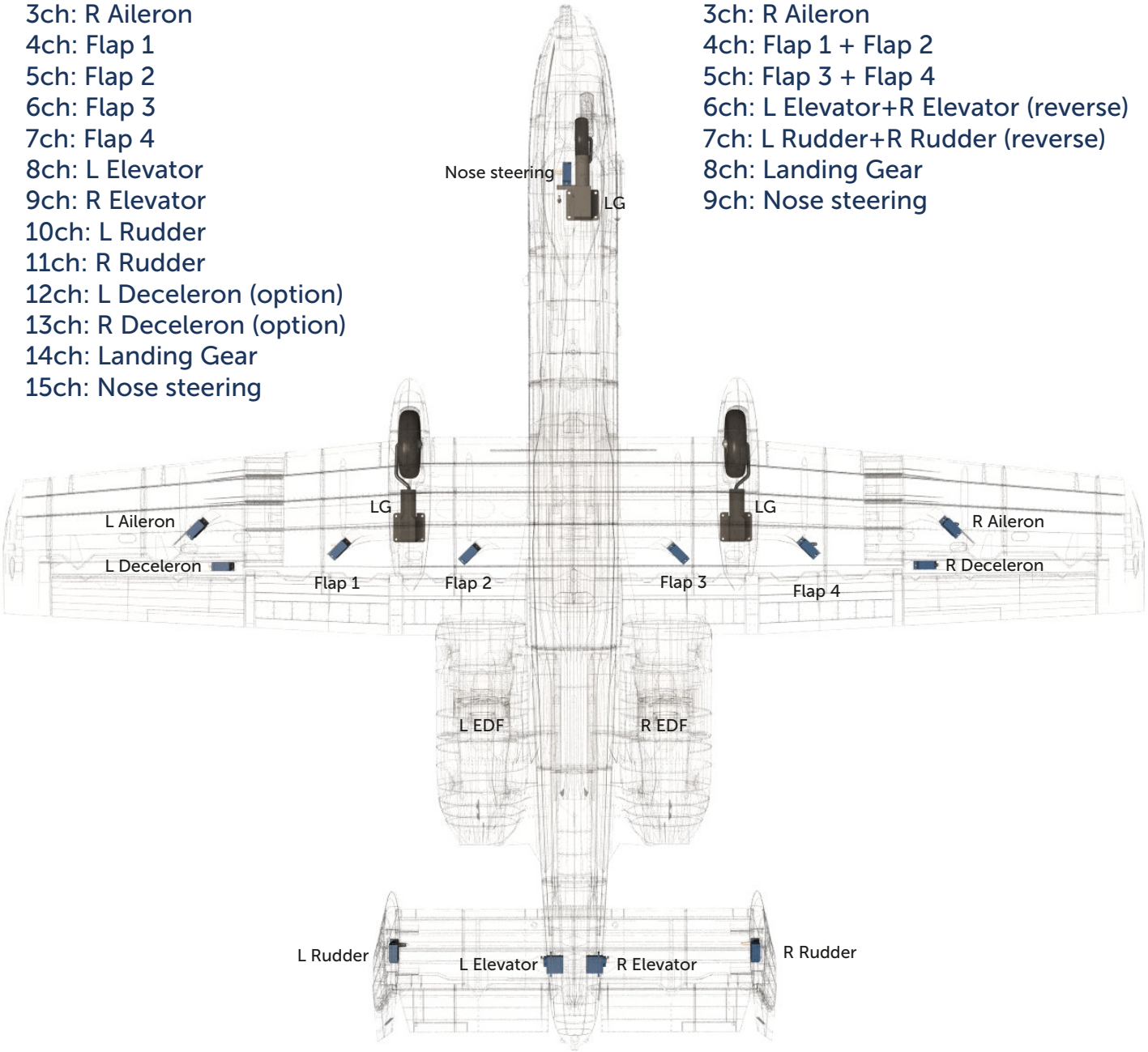
For full functionality and independent setting of all servos you will need up to 15 chanels (including decelerons), on the other hand you can go to the minimum setting of 6 channels and still enjoy this RC airplane perfectly using servo reversal and at the cost of taking off and landing without retracted flaps (which is not a big problem with this light airframe).
How to reverse servo

Full setting (13-15 ch):

1ch: L+R EDF
2ch: L Aileron
3ch: R Aileron
4ch: Flap 1
5ch: Flap 2
6ch: Flap 3
7ch: Flap 4
8ch: L Elevator
9ch: R Elevator
10ch: L Rudder
11ch: R Rudder
12ch: L Deceleron (option)
13ch: R Deceleron (option)
14ch: Landing Gear
15ch: Nose steering

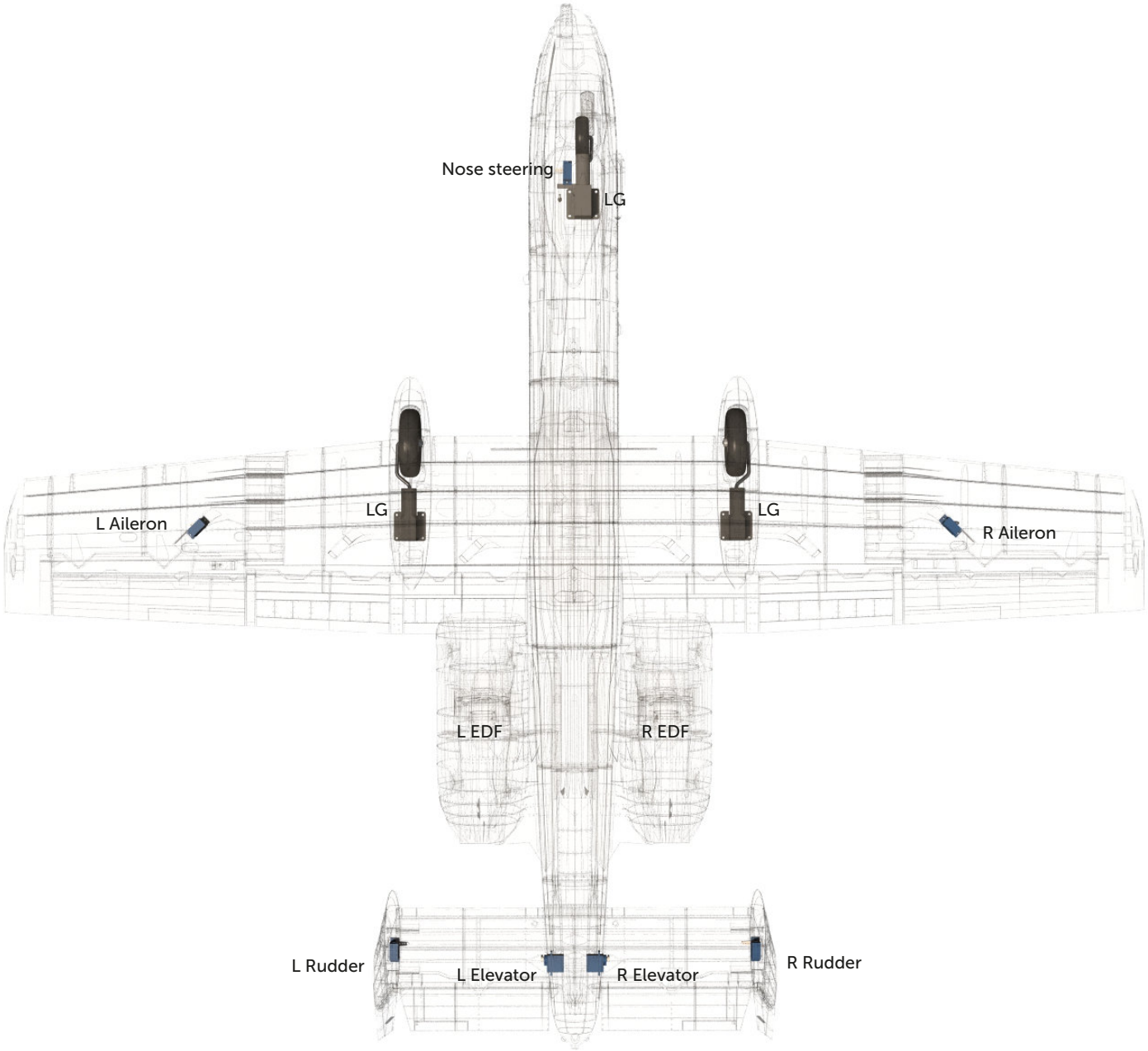
Medium setting (9 ch):

1ch: L+R EDF
2ch: L Aileron
3ch: R Aileron
4ch: Flap 1 + Flap 2
5ch: Flap 3 + Flap 4
6ch: L Elevator+R Elevator (reverse)
7ch: L Rudder+R Rudder (reverse)
8ch: Landing Gear
9ch: Nose steering



Minimal setting (6 ch):

1ch: L+R EDF
2ch: L Aileron
3ch: R Aileron
4ch: L Elevator+R Elevator (reverse)
5ch: L Rudder+R Rudder (reverse) + Nose steering
6ch: Landing Gear

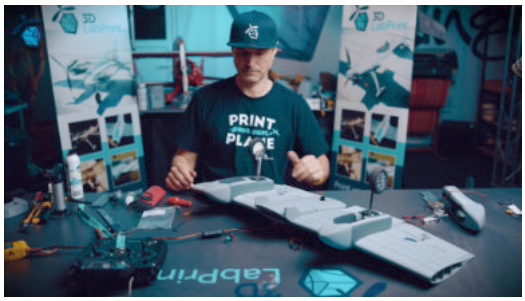


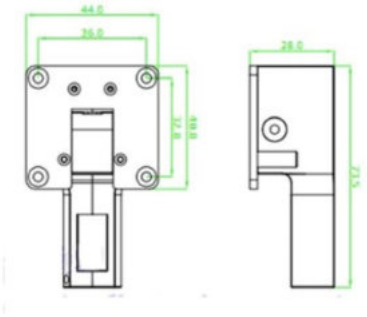
Main Landing Gear assembly

In this step screw in main retracts to LG socket and glue it in to LG gondola.
Choose suitable LG socket for your retracts or you can createown sockets for your case.
LG gondola L2 and R2 should be printed with PolyAir strong PLA and 5% infill for better durability. Main LG socket printed with PolyLight LW PLA infill 20% and 4 top and bottom layers.
We recommend use of spring/damping oleo legs.

NOTE: retraction of the landing gear must pass smoothly without any contact with the fuselage, the landing gear (mainly wheels) must NOT touch in any case, or there is a risk of LG failure and crash... (we know this is the most common reason of the LG failure, not the QC problem). Check LG function after each landing.

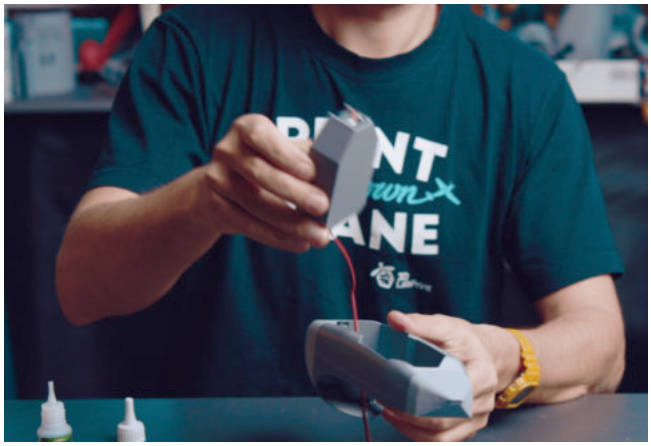
Video guide A-10 landing gear assembly

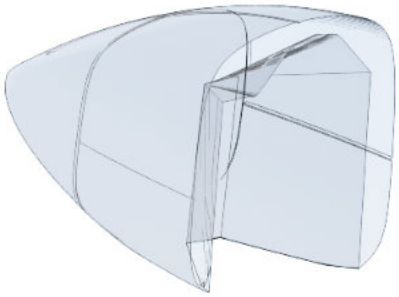




you will need:

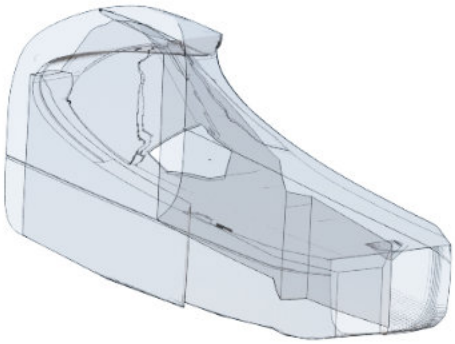
2x Retract 44mm x 41mm, JP Hobby or similar (5mm mounting pin)
Pair of 80 mm oleo legs (5mm mounting pin)
Printed tyres and discs
Printed LG sockets
Servo Lead Extension + Y servo cabel
8x self-taping screw 3.5-4x30mm



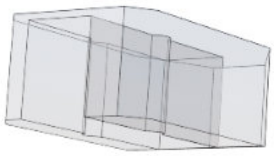


LG gondola
L1

LG gondola L2 PolyAir PLA



LG gondola
L3



LG Socket L

main LG tyre
(FlexiLight LW Rubber)

Main LG disc

Insert the prepared main leg with wheel, properly tighten the side screws, you can make seating pads with dremel (likewise the included ones) and use thread locker (Loctite) here.

Insert completed main LG in to the slot and secure with self-tapping screws. Remember that you must slide all servo cables in to the „servo cable tunnel" and the servo cable extension must reach the battery/receiver comparment in the nose of the fuselage (cut prepared hole in LG gondola) .

main LG tyre
(FlexiLight LW Rubber)

Main LG disc 5mm

main LG leg
pattern

Alternatively you can shape own legs with the 5mm steel rod using table vice, (you can add fire) and hammer according to the 3D printed template, cut the ends, slide in main wheel and secure it with Wheel Stop Colar. Relase both side screws in your LG retracts units and remove the included 5mm LG pin. Insert the prepared main leg with wheel, properly tighten the side screws, you can make seating pads with dremel (likewise the included ones) and use thread locker (Loctite) here.

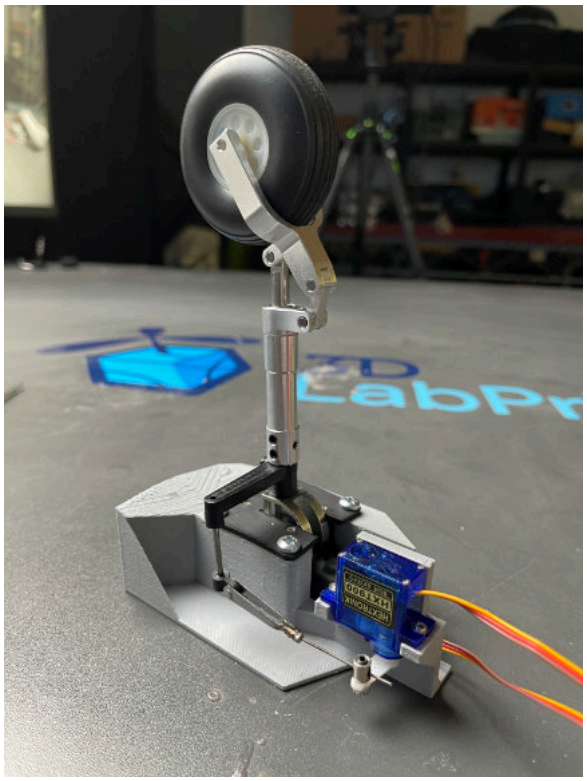
Insert completed main LG in to the slot and secure with self-tapping screws. Remember that you must slide all servo cables in to the „servo cable tunnel" and the servo cable extension must reach the battery/receiver comparment in the nose of the fuselage (cut prepared hole in LG gondola) .

Nose Landing Gear assembly

In this step screw in main retracts to LG socket and glue it in to front fuselage.
Choose suitable LG socket for your steerable retract.
We recomend use of spring/damping oleo legs.
Nose LG socket printed with PolyLight LW PLA infill 30% .
We recommend use of spring/damping oleo legs.

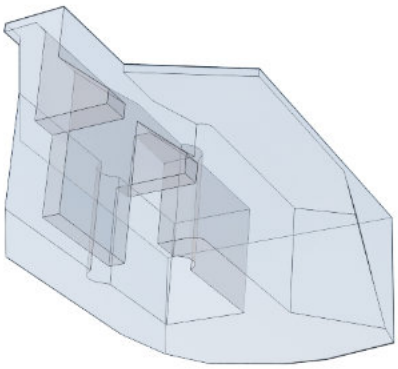
you will need:

Steerable Retract 44mm x 41mm, JP Hobby or similar (5mm pin)
Servo Lead Extension
4x self-taping screw 3.5-4x30mm
1x9g servo
105 mm nose oleo leg (5mm mounting pin)
Printed tyre and disc
Printed nose LG socket
Clevis and 1.2mm wire for link conection



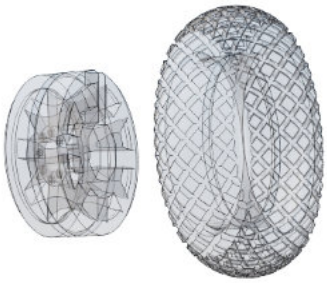
Front Landing Gear assembly

Nose LG gear is similar, proceed the same way as with main LG, but here is the difference. Install steering servo and clevis with wire.



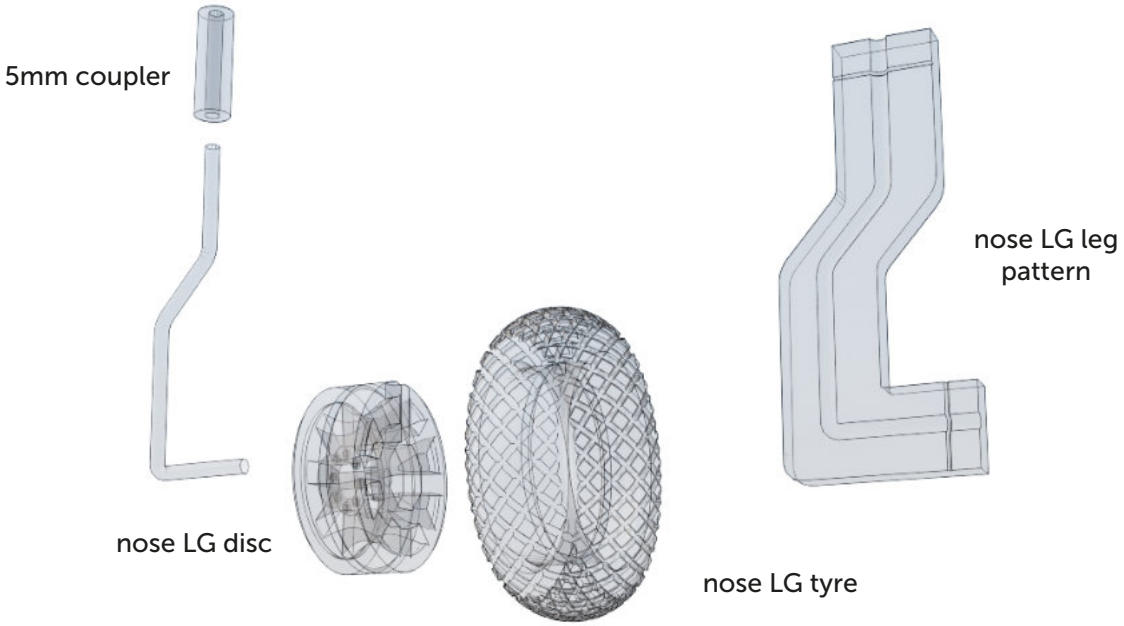
nose LG socket

nose LG disc



nose LG tyre

Alternatively you can shape own legs with the 5mm steel rod using table vice. Nose LG gear is similar, proceed the same way as with main LG, but here is the difference. Don't remove the 5mm LG pin, but use a shaft coupler to connect the LG leg. Depending on a coupler used, glue it with epoxy, tighten the screws or make a solder joint.



EDF Setup

Create a Y power cable between the battery and both ESC. Inser EDF to engine gondola and secure with self-tapping screws. Pull the cables through the fuselage (steel wire can help you. Check rotation, add a angeled adapter to the outlet this is mandatory and complete the gondola with upper part and

Video guide A-10 EDF setup

you will need:

12x self-taping screw 3.5-4x30mm
2x EDF 70mm 12 blade
2xESC80-100A/6S
Battery 1xLi-Pol 5500mAh / 6S
70cm Y cable from battery to ESC (12 AWG cable) + conenctors
Servo extensions

Painting/marking decals

Another advantage of Polylight LW-PLA is that it can be dyed with almost anything. The surface for self-adhesive decals is ideally treated with a clear acrylic spray varnish. Use your imagination and send us photos of your aircraft on social networks. You could print and cut the PDF in 100% scale from thin self adhesive advertisement foil and place it on the model as needed. it is good to contact an advertising/graphic workshop in your area, we have good experience with UV printing on thin film

Video guide A-10 decals/marking

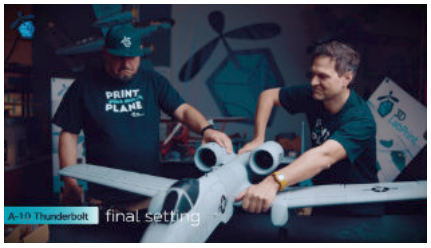
Final assembly/setting

Refer to your R/C system userguide for setup information.

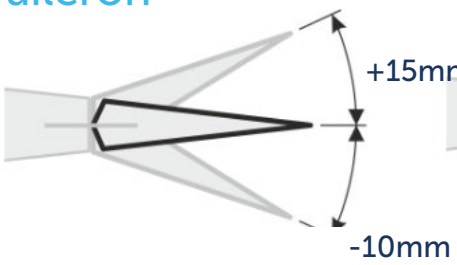
you will need: Your own Rx/Tx system (6-15ch)
Velcro strip for securing battery

Install your reciever, connect battery, setup servos and etc. with your trasmitter, check servo position.
Make sure the battery is positioned properly and secured with velcro and battery holder, if battery moves during flight it can shift the center of gravity backwards and aircraft will become uncontrollable!

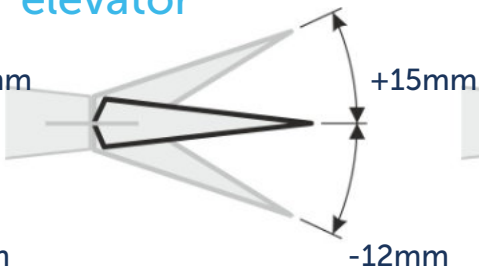
Video guide A-10 final setting



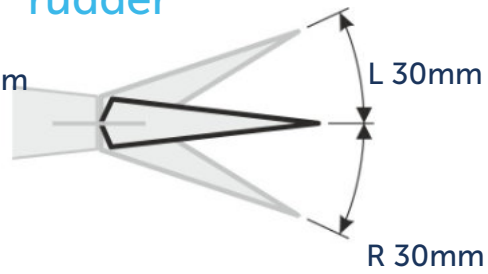
aileron



elevator



rudder



9. Go flying

Pre-flight check center of gravity is very important, battery properly charged, ailerons, elevator, rudder, flaps and landing gear checked, your own flying skills or RC simulator training ...

Flight video

Pilots Please Attention!

Increasing expo settings on your transmitter for elevator and ailerons to 80 % calms response from your stick inputs.
Make sure the battery is well fixed in proper possition. If it moves during flight it will cause shifting of CoG aft and will result in uncontrolable flight behavior.

After gaining some confidence you can set Expos to 60 % this gains back extra maneuverability.

Never fly aft positioned Center of gravity.

Please, use these files only for your own purpose, do not redistribute or publish. Thank you very much.
Enjoy your flight.

Shopping list

Printing material:	2x Polylight LW-PLA (1250g) 1x PolyAir strong PLA (250g) 1x FlexiLight LW Rubber (33g)
EDF:	2x 70mm/12 blade/6s, opt1, opt2CW+!choose CW+CCW!(combo with ESC)
ESC:	2x 80-100A/6s or similar suitable for your EDF
Battery:	1x5500mAh/6s (aprox 760g)
Y power cable:	2x80cm 12AWG (4mm2) (blck, red) connectors XT90 male,3x4,5mm m+f
Servos:	7-11x HXT900 or any similar quality 9g servos 23x12x26 mm / 0.74x0.42x0.78 inches 2x 5g servo for decelerons (optional) Servo cable extension Z pliers Y servo cabel
Glue:	CA Glue - medium + Activator for CA Glue or any fresh from your local RC hobby store.
Retractable gear:	Retracts 44mm x 41mm, JP Hobby+Controler or similar (5mm mounting pin) !2xmain+nose!
Main Legs:	Pair of 80 mm oleo legs (5mm mounting pin) !choose 80mm var!
Nose Leg:	105 mm nose oleo leg (5mm mounting pin) !choose 105mm var!
Other:	1.2 mm pushrod wire 30x self-taping screw 3.5-4x30mm 2x self-taping screw 3.5-4x40mm Ball Pen Spring 10mm/40cm carbon tube (optional) Clevis for steering link Shrink tube, soldering kit
RC:	R/C system, 6-15 chanels