



USER GUIDE

print your own plane



EASYMAX001 FPV conversion kit



3D Lab Print FPV kit for EASYMAX001 (fully printable)

Future of flying - Print your own plane

With this conversion you can fly our EASYMAX001 directly via Video.

NOTE: kit includes only modified fuselage part 2 and new FPV teardrop for Camera and Tx. (you will need EASYMAX001 files...)

If you wanna try FPV this is very good choice and you don't need spend lot of bucks to see bird view (see bellow link for recommended FPV set).

This userguide is only for parts which are included in this kit, please refer to standard EASYMAX001 userguide...

Remember you will need check Center of Gravity of whole plane because we add some weight to the nose section. You can figure it out with moving aft carbon tube from fuselage a little bit and then fix it with glue.

STL files included:

[FPV_fuselage_2](#)

[FPV_teardrop_1](#)

[FPV_teardrop_2](#)



EASYMAX001, flight characteristic

This aircraft is based on our Easy001 project which is very suitable plane for beginner, very easy to fly and relatively slow.

We made some changes for better performance EASYMAX001, lower parasite drag and more interesting dynamic characteristic, BUT still maintain friendly flying characteristic

e a s y p e r f o r m a n c e f u n

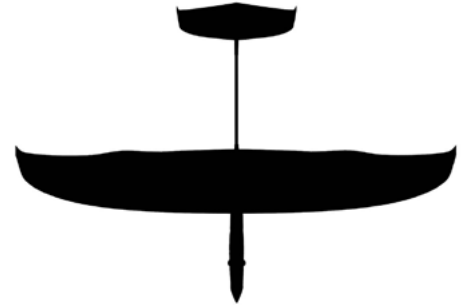
&

b i r d v i e w



General specifications

Lenght:	1033mm
Wingspan:	1527mm
Height:	177mm
Wing area:	29.6 dm ²
Wing loading:	33.8 g/dm ²
Airfoil:	E205 modified
Print weight:	645g
Empty weight(eq. w/o battery):	880g
Takeoff weight (3s 1500 lipo):	990g
Max takeoff weight:	1300g
Never exceed speed, VNE:	110 km/h
Design maneuvering speed, VA:	70km/h
Stall speed, VS:	20 km/h



Powerplant

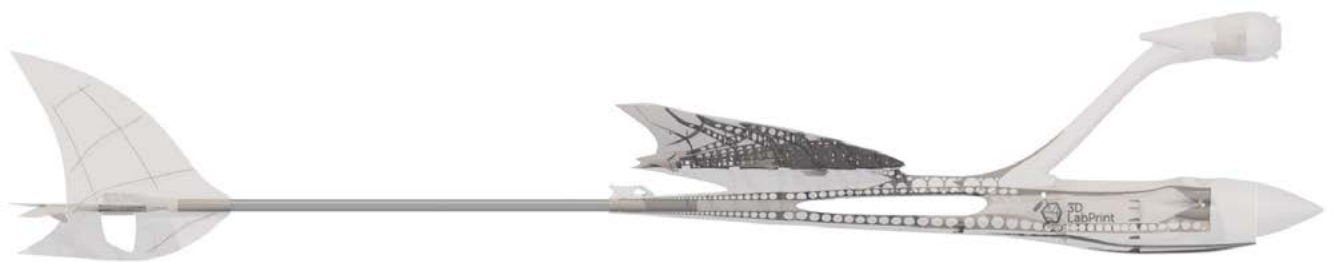
Propeller:	11/6 folding propeller
Motor:	Turnigy D3530/14 1100KV or similar 3530-35, 2830-36 1100kv
ESC:	Aerostar 40A Electronic Speed Controller or similar 40Amps
Battery:	Li-Pol Battery 1500mAh/3s - or similar





1527mm

197mm



1033mm

Step by step PDF/VIDEO user guide:

1. Choose airplane at www.3Dlabprint.com **and please visit youtube!!!**

2. Select and proceed to check out.

The only thing your printer must have is a build volume **195/195/185** or bigger and nozzle diameter **0.4mm**.

You will get STL files, detailed PDF/VIDEO guide.

The only mandatory thing is nozzle 0.4 and sufficient build volume of your printer....

[See video guide #1](#)

3. Download and slice it

PLEASE: before start printing this conversion take a look to EASYMAX001 PDF/VIDEO userguide

After checkout you will get a download link to your email, download it and unzip it.

After unzipping you get several STL files divided into directories (and PDF/VIDEO guide + some accessories and so on...)

See videolinks below for proper slicer setting (very important) or use CURA .ini , or MatterControl .slice , BUT adapt it for your printer!

Scaling the model will lead to unusable result!

Our STLs work with Simplify3D, CURA and MatterControl as we try...)

Setting for Simplify3D:

[See video guide #12Simplify3D](#)

Setting for (use fuselage/wing setting):

[See video guide #2CURA](#)

[See video guide #2MatterControl](#)

MatterControl and CURA are free :-)) and also gives very good result and airframe is still strong enough, slicer setting is very easy.

Slicer setting file included in package (always adapt it for your printer, change build volume, filament diameter and so on... depends on your printer!!!):

CURA_wing_fuse.ini (all FPV kit parts)

OR

MC_wing_fuse.slice (all FPV kit parts)

4. Print it

Save generated Gcodes and insert SD card to your printer, prepare your printer and start printing the first gcode file and then next and so on... (we prefer to use SD than direct connection) Notice: ABS filament is not suitable for this...

you will need: PLA filament - good quality PLA (we get the best result with PLA so far)
Strong hair spray
Razor blade

We recommended 0.7mm **retraction** for non-bowden extruders, for bowden 4-6mm is OK, **we need retraction for all spots** not only for outer perimeters!

If you find underextrusion at layer startpoints increase **extra restart distance** this value add some extra filament after retraction, 0.5-0.2 works (if your slicer is able to)

Good **first layer adhesion** is very important, you should see :-) first layer must be flattened on bed very well, also you can decrease first layer speed.

Turn OFF cooling fan for better layer adhesion (HE fan of course ON) we don't need it for our thin wall printing...

We try a lot of filaments and so far **PLA** is still the best for our models (2015). **HEATED BED** is very recommended, 70°C with strong hair spray (print without warping ends)

Looks like any standard quality PLA is OK for our planes, BUT it always depends on combination **PLA vs. Extruder vs. HotEnd**.

Sometimes you need to experiment with HE temperature.

We find that some color of filament has lower layer adhesion also.

Nowadays there is a lot of 3D printers on the market, very most of them is OK for printing our aircrafts (specific thinwall printing...) sufficient volume, heated bed, 0.4mm nozzle.

We use Prusa i3 ORIGINAL and Makerfarm i3 10 (works well)

Some printers have disproportion in X, Y, Z axis which leads to unusable results... you need repair firmware steps setting.

5. Assembling printed parts + FPV Camera and Tx

5.1 Fuselage with FPV conversion assembling

Glue with CA glue fuselage parts together, use activator, instal Camera and TX

[See video guide #13](#)

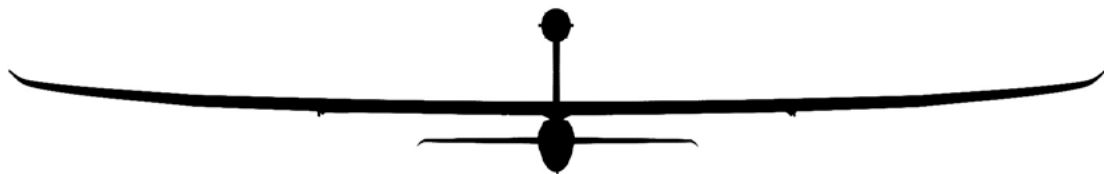
you will need: [CA Glue - medium](#) or similar medium viscosity CA glue
[Activator for CA Glue](#) or similar
[FPV Quantum Bundle Set](#) or similar
Li-Pol Battery 400-1000mAh/2-3s - or any for LCD screen
Some wire hook
Some cloth for wiping CA glue...

6. Before flight check: **center of gravity is very important** (see CG markings), battery properly charged, ailerons and elevator deflection check, your own flying skills or RC simulator training...

For first flight with FPV unit it is good to have a friend nearby to help with orientation.

Then go flying: set full throttle, put the elevator little upwards (1-2mm) and throw it energetically to the wind approx 5 grades up, wait till plane gain speed, then fly it in your manner...

...so, are you ready for flying popcorn, yeah!



11. Pilots Please Attention!!!

For the first flights we recommend setting the center of gravity of the airplane by about 5mm forward of the CG tag (nose heavy, this increases the stability) is also good to increase the expo settings on your transmitter for elevator and ailerons to 70 % (this calms response from your stick inputs)

Also you can decrease a little bit elevator and ailerons deflection.

Make sure the battery is well fixed in proper position if it moves during flight it will cause move CoG aft and will lead to uncontrollable flight behavior...

You can then return to the center of gravity (balance aircraft) the CoG points and expo set to 50 % as stated in the video/instructions... this gain back maneuverability when you will be sure with flying your airplane.

Please use this files only for your own... thanks very much.

!!!Never fly aft positioned CoG!!!
thanks :-)

