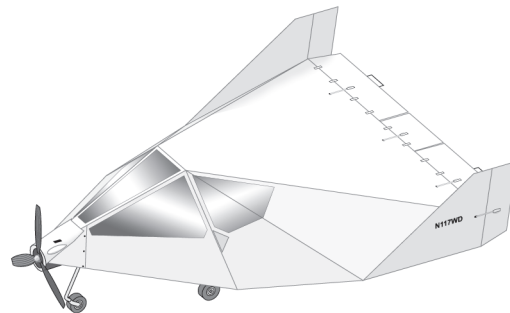


# Assembly instructions for the FMX-4 "Facetmobile"



## About the Facetmobile

The FMX-4 Facetmobile is the creation of aviation engineer Barnaby Wainfan. It is a homebuilt, one-person aircraft designed on the lifting body principle. Unlike a conventional aircraft, where lift is created by wings, the entire body of the Facetmobile generates lift. The FMX-4 has flown over 130 hours since 1993 and has apparently very good flight characteristics. In 1995 the plane was damaged when an engine failure caused a forced landing, but it is presently being repaired and will some day fly again. A larger two-seat version is also planned. More information about the Facetmobile can be found on the internet at <http://users.aol.com/slicklynne/facet.htm>

## The Model

This model builds into a 1:48 scale replica FMX-4. It may be built as either a static display model or a glider. A word of caution: this model is not suitable for assembly by very young children, due to the use of sharp tools and the complexity of some assembly steps. Previous experience with card modeling would be helpful. If you have any comments or suggestions regarding this kit, I can be reached by e-mail at [models@currell.net](mailto:models@currell.net)

Model parts are contained in the document **fmx4\_parts.pdf**. Print out the parts document on 8.5"x11" or A4 size white paper card stock suitable to your printer. 67 lb. cover stock (approx. 8.5 thousandths of an inch or 0,2 mm thick) is recommended.

## Tools

Before beginning, you will need the following tools and materials:

- |                              |   |
|------------------------------|---|
| a) a sharp knife for cutting | e) a scoring tool or blunt knife for creasing the fold lines                |
| b) a flat cutting surface    | f) a glue applicator such as wooden toothpicks or a small paintbrush        |
| c) a ruler or straight edge  | g) (for static display model only) a paper clip or similar stiff wire       |
| d) white glue                | h) (for static display model only) needle-nose pliers to bend wire to shape |

## Hints

- Select a well-lit, comfortable work area that will remain undisturbed when you are not there.
- Keep your hands and tools clean when working, to avoid getting glue on visible parts of the model.
- It's easier to stay organized if you only cut out those parts you need for each step.
- Make sure your knife is sharp. When cutting straight lines, use a straight-edge.
- Study the diagrams carefully, and always test-fit the parts before applying glue

## Assembly

In these instructions, the directional terms are given from the pilot's point of view. "Port" and "starboard" refer to left and right sides respectively. Scoring of parts is indicated by thin black lines outside the part's outline, and by dashed or shaded lines on the part's surface. Score parts *before* cutting them out. In the diagrams, subassemblies are identified by a number within a circle (e.g. ②), corresponding to the step in which it was assembled.

**(Step 1)** fold and glue the internal formers to the non-printed side of base A5. Attach A15 first, aligning the bottom fold with the front fold line of A5. Glue A8 to the base and to the shape printed on A15. Fold and glue the inside tail fins, and attach to the base (**step 2**).

Add nose weight to the base (**step 3**). If building a glider model, a weight of 2.5 grams (roughly the weight of a U.S. penny) is recommended. For a static display model, use two pennies (5 g) or more. Attach connecting strips A4 to the non-printed side of top surface A1 (**step 4**).

Glue the upper body to the base (**step 5**). This is best done by gluing the rear control surfaces together first, followed by the middle glue tabs on the upper body. Finally, attach the nose section of the upper body to the base, using the front tabs and the connecting strips as gluing surfaces. Add the upper engine housing A9 using the locating slots (**step 6**). Fold and attach the outer fin surfaces A2 and A3.

If building the static model, cut and bend a paper clip or other stiff wire to the shapes shown on the parts sheet. Slide plate A11 over the nose strut and glue to the model underside (**step 7**), ensuring the strut lines up with the printed locating guide. Attach the lower engine housing A14 using the locating slots (**step 8**), sliding over the nose strut if present. Glue the engine plate A12 to the front of engine housing.

The remaining steps are only applicable to the static display model. (**Step 9**) attach the main struts to the mounting plate A13, sandwiching each strut between the side flaps of the mounting plate. Glue the plate to the model underside as indicated by the printed shape.

Glue the propeller halves together (**step 10**) and attach to the aircraft nose. Assemble the wheels and attach them to the wheel struts.

## Flight (glider version)

First attempts at flight should be done in a grassy or carpeted area to avoid damage to the model. Bend the rear control surfaces up slightly and throw the model forward. Try different rudder and aileron positions to see what works best.

### 1 Internal structure

A15 Attach this part first.

A8

A5 (Inked side facing down)

Open slots (2 places)

### 2 Nose weight

Flying model: use 2.5 grams (1 penny)  
Static model: use 5 grams (2 pennies) or more

A10

### 3 Upper body connecting strips

A4

A1 (Inked side facing down)

Open slots (2 places)

### 4 Fins (inside surfaces)

A7

port top

Glue tabs together as shown

A7

A6 (mirror image of A7)

### 5 Attach upper body to base

Glue upper body to base in three stages:

First

Second

Third (also glue body surface over connecting strips added in step 3)

Top view of finished assembly

### 6 Fins and upper engine housing

A2

A2,A3 (mirror image)

A9

A3

### 7 Nose wheel strut (omit this step if building flying model)

A11 Slide over strut

Nose strut Make from paper clip using template on parts sheet

### 8 Lower engine housing

A14 Slide over strut, if present

A12

### 9 Main wheel strut (omit this step if building flying model)

A13

Main strut Make from paper clip using template on parts sheet

### 10 Wheels and propeller (omit this step if building flying model)

A16

A17 Assemble as shown

A18 2 pieces