

A Step-by-step production and assembly guide for

Spray Plane Adaptive Costume

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PRODUCT DEFINITIONS

WHO?

This costume design and assembly approach was created to enable and empower wheelchair users of all sizes and ages to enjoy dressing up without feeling left out or limited! In fact, we believe that wheelchair users have an advantage - an amazing base for an awesome structure! So this guide is how to make a wheelchair part of a costume :)

WHY?

Although there is some adaptive clothing costumes on the market for individuals with disabilities, there remains a lack of options including assistive equipment and technologies such as wheelchairs, walkers and strollers in the design. This lack of inclusion often leaves users feeling segregated from peers.

HOW?

This costume is more a guiding template than a single-directed-use design. It includes multiple components intended to be independently attached to the user's wheelchair and uses basic square materials such as cardboard and zip ties to enable size and aesthetic personalization while remaining affordable.

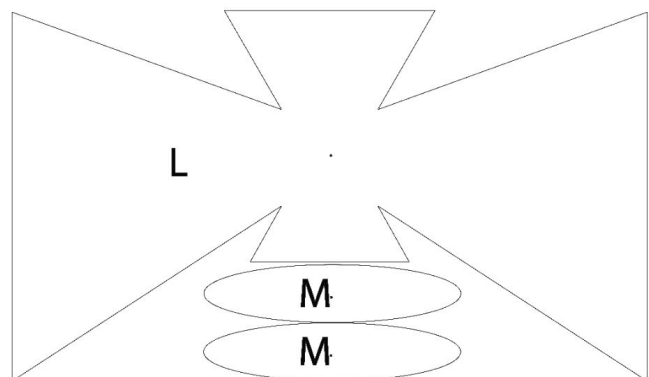
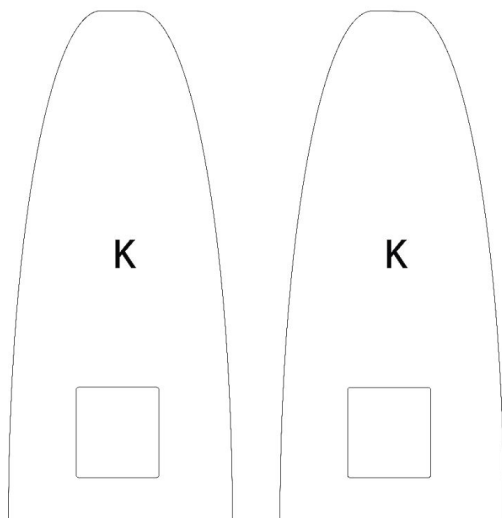
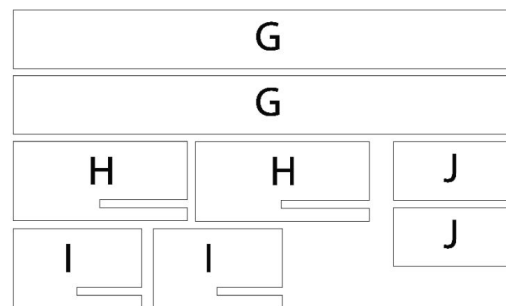
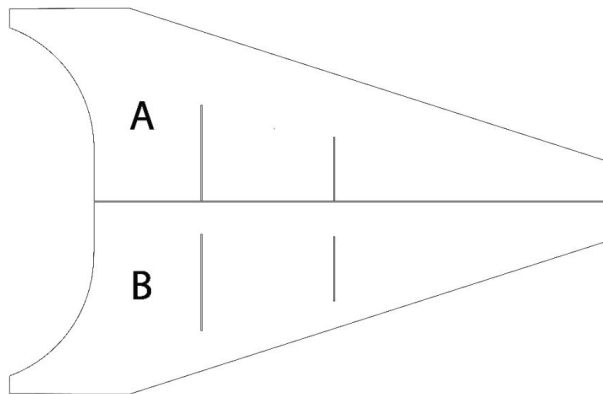
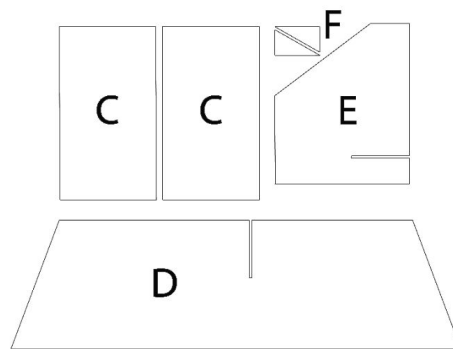
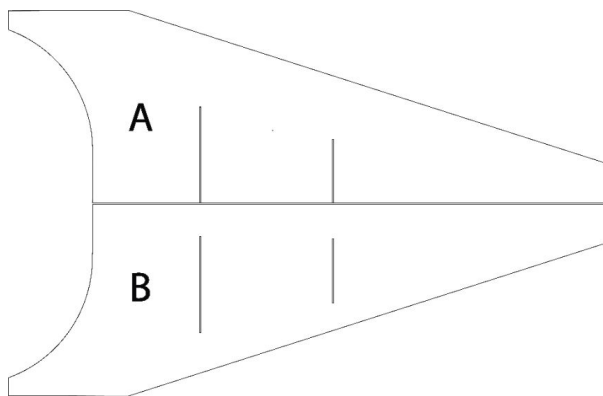
WHAT?

This is an adaptive, customizable costume for use with assistive equipment. It was originally designed to be a spray plane, however, it can, and is encouraged to be, used as a base template for any costume you might imagine!

Please share with us any new designs you come up with!

EXPLODED PRODUCT VIEW

Labels matching parts in BOM:





PRICING + SPECIFICATIONS

ESTIMATED COST

Materials:

If buying new cardboard

20 USD

or

If using recycled cardboard

5 USD

Laser Cutter Machine Time

0.5 HOURS

or

Manual Trace & Cut Time

1 HOUR

Assembly Time

1.5 HOURS

DIMENSIONS

Height

150 CM

Width

240 CM

Length

200 CM

PRODUCT VIEWS / page 1





Spray Plane Adaptive Costume

PRODUCT VIEWS / page 2





BEFORE YOU START



Carefully read the entire product file to ensure that you have all the required tools, materials and correct printer settings **BEFORE** you start making the product.



Always wear protective gear when working with power tools.



Send us feedback if you are having difficulty building this product - hello@tomglobal.org



Have fun and give yourself a pat on the back for making the world a better place!

TOOLS NEEDED

- Cardboard
- Masking tape
- Hot glue gun
- Velcro or zip ties
- Ruler
- Pencil/marker
- Scissor and/or exacto knife
- Screw driver
- Child safe paint
- Pain brushes/rollers



SAFETY! **Always** wear protective gear when working with power tools.





Bill Of Materials / page 1

Item	Item Description	Material	Manufacturing Technology	Dimensions	QTY	Supplier
A	Bottom wing	Cardboard	Laser cut or by hand	91.94cm * 29.64cm	2	Maker - Full DXF
B	Top wing	Cardboard	Laser cut or by hand	91.94cm * 29.64cm	2	Maker - Full DXF
C	Tail flap	Cardboard	Laser cut or by hand	14.8cm * 22.7cm	2	Maker - Full DXF
D	Tail base	Cardboard	Laser cut or by hand	69.2cm * 19.8cm	1	Maker - Full DXF
E	Tail wall	Cardboard	Laser cut or by hand	20.1cm * 24.7cm	1	Maker - Full DXF
F	Tail connection	Cardboard	Laser cut or by hand	6.9cm * 4cm	2	Maker - Full DXF
G	Wing long front cover	Cardboard	Laser cut or by hand	77cm * 9cm	2	Maker - Full DXF
H	Wing long infill	Cardboard	Laser cut or by hand	26.8cm * 12.2cm	2	Maker - Full DXF
I	Wing short infill	Cardboard	Laser cut or by hand	19.8cm * 12.2cm	2	Maker - Full DXF
J	Wing short front cover	Cardboard	Laser cut or by hand	18.5cm * 9cm	2	Maker - Full DXF
K	Window	Cardboard	Laser cut or by hand	79cm * 34.5cm	2	Maker - Full DXF
L	Propellor base	Cardboard	Laser cut or by hand	97.7cm * 57cm	1	Maker - Full DXF
M	Propellor blades	Cardboard	Laser cut or by hand	39.5cm * 8.9cm	2	Maker - Full DXF



Bill Of Materials / page 2

Item	Item Description	Material	Manufacturing Technology	Dimensions	QTY	Supplier
N	M4 Nut	metal	off the shelf	Ring - 20mm Hole - 4mm	1	Local store
O	M4 Washer	metal	off the shelf	Ring - 20mm Hole - 4mm	1	Local store
P	M4 Screw	metal	off the shelf	4mm	1	Local store
Q	Non-toxic paint			*optional*		Link - Non-toxic paint
R	Zip ties					Link - Zip ties
S	Hot glue sticks					Link - Hot glue sticks

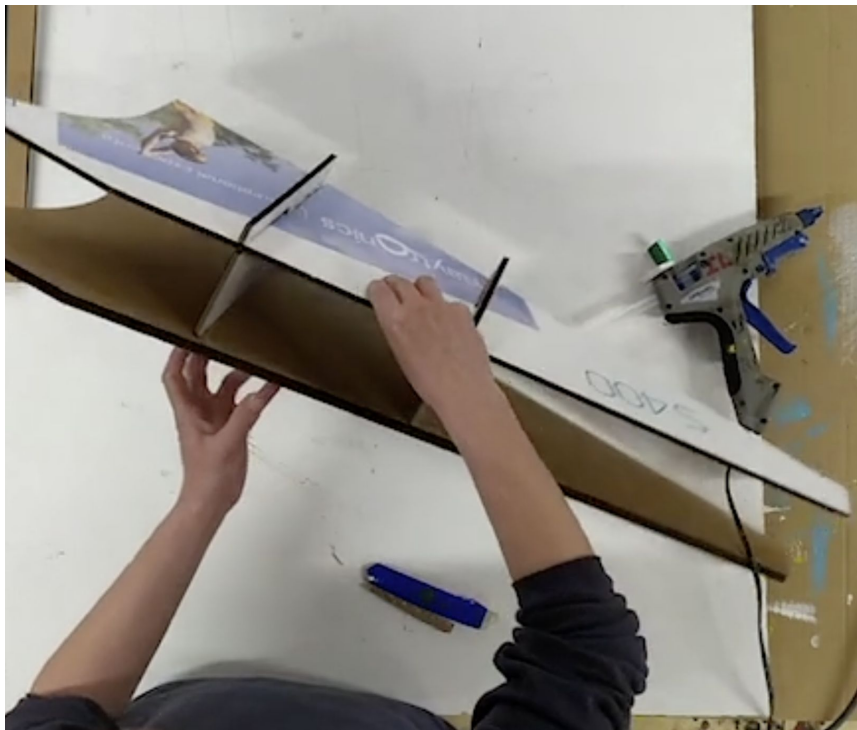
Bill Of Materials - Files

Files:

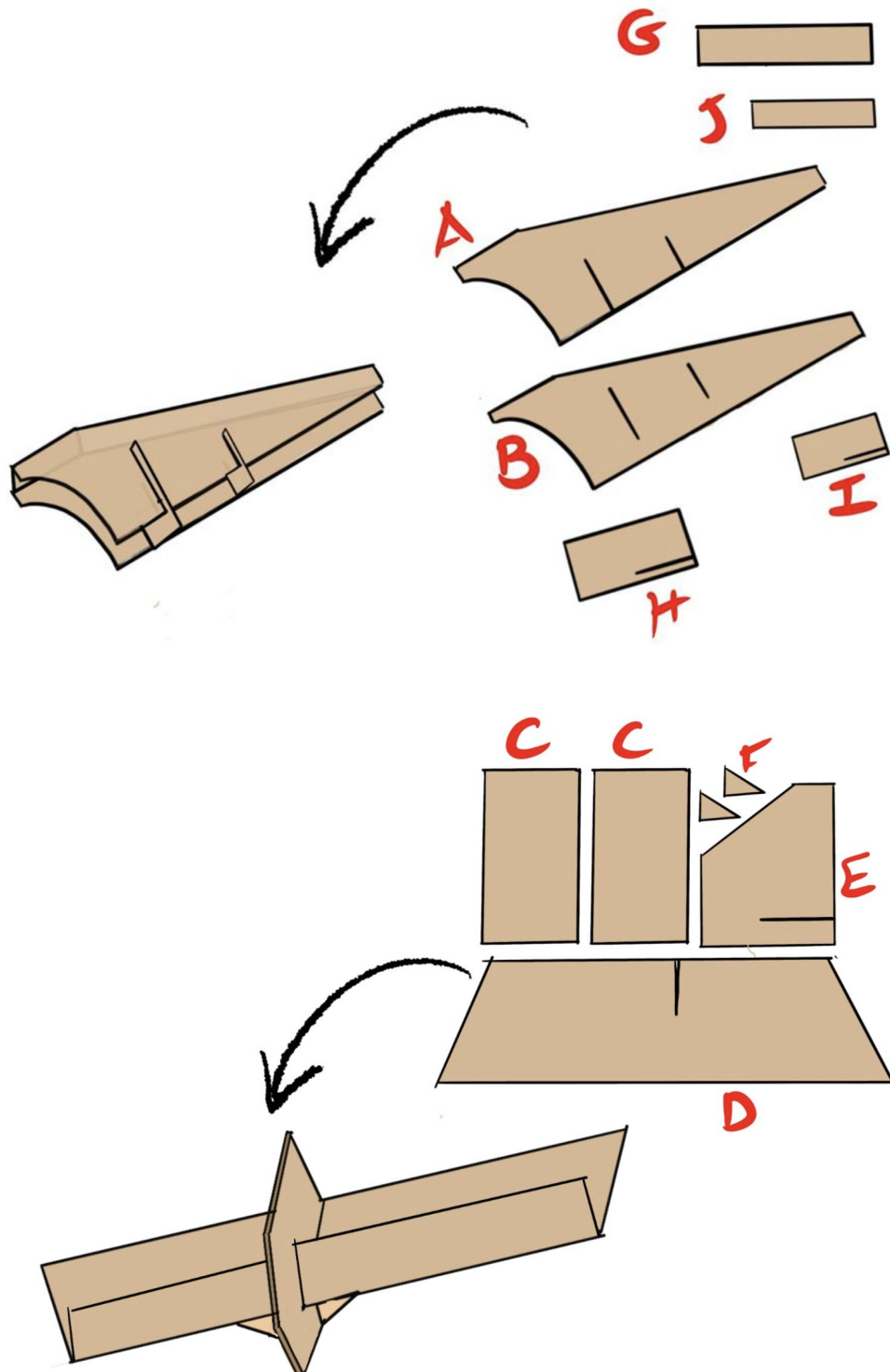
- [Spray Plane Parts Exploded View Labelled True Scale DXF](#)
- [Spray Plane Parts Exploded View Labelled A4 Document](#)

And you are welcome to watch the:

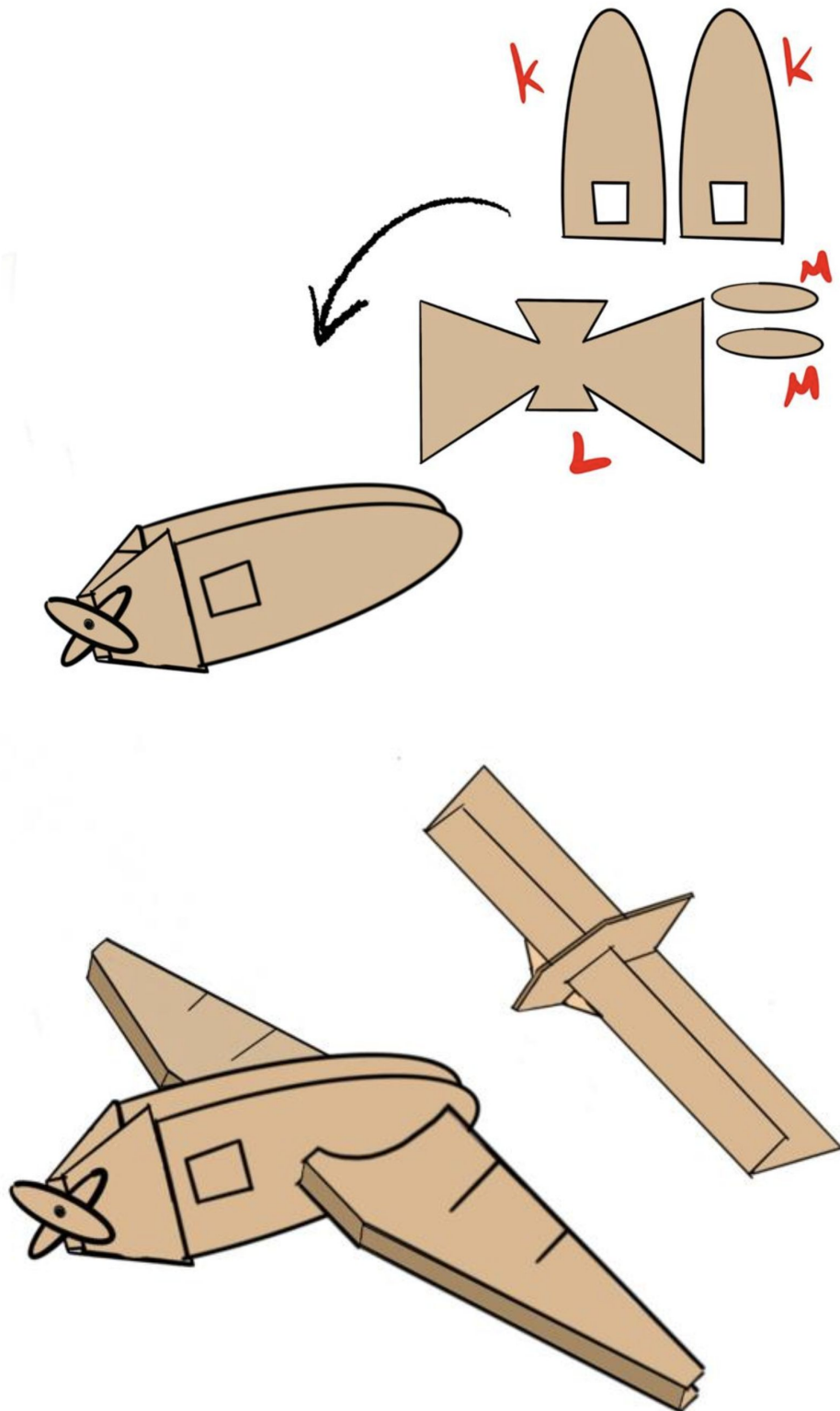
[Spray Plane Assembly Guide Video](#) !



ASSEMBLY GUIDE / page 1



ASSEMBLY GUIDE / page 2





**Spray Plane
Adaptive Costume**



THANK YOU FOR MAKING WITH US SPRAY PLANE ADAPTIVE COSTUME!

Feel free to send us your feedback
to us at hello@tomglobal.org