



Electric Turbo Fan Model with Functional Reverse Thrusting



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[VIEW IN BROWSER](#)

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Summary

3D Printed Electric Turbo Fan Model with Functional Reverse Thrusting. Based on a Rolls Royce Trent 1000!

[Learning](#) > [Engineering](#)

Tags: [3dprinting](#) [arduino](#) [turbofan](#) [jetengine](#)

Print your own Electric Turbo Fan Model with Functional Reverse Thrusting! It utilises a brushless motor for the 130mm bypass fan and a MG996R Servo to operate the reverse thrusting function. All controlled by an Arduino NANO.

What's Included when Purchased:

- In-depth step-by-step Instruction Manual
- Hardware List
- Parts List with Print Settings
- Arduino Code

Printer Requirements: 250x210x200mm or larger
Recommended Material: PLA

All parts can be printed without the need of a MMU

Hardware	Quantity
M3x8 Hex Screws	52
M2x8 Hex Screws	57
M2x5 Hex Screws	2
4mm Linear Rods Length = 140mm	4
MG996R Servo with Disc Attachment	1
10k Linear Potentiometer (7mm Mounting Hole)	1
Momentary Push Button (7mm Mounting Hole)	1
Arduino Nano	1
ESC with 5V BEC (I used a Hobbyking YEP 80A with 5V BEC)	1
Brushless motor 25x25MM hole spacing, M5 Shaft (I used a Turnigy 3536 1400kV) I have also included staggered hole spacing for other brushless motor options- See Instruction manual for more information!	1
LiPo Battery (I used a 3S, 2000mAh)	1
20mm Velcro Straps	2
6mm Wire Wrap	1
JST Male and Female Connectors 4 of each (Optional)	8
22awg Wire (Approx. 500mm from potentiometer to the Arduino)	N/A

Tools Required:

- Hex Screwdrivers
- Soldering Iron
- Sandpaper
- Pliers
- Super Glue

Model files



Turbo Fan STLs

47 files





1-inlet-dark-grey.stl



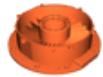
2-inlet-mount-white.stl



3-inlet-insert-dark-grey.stl



4-fan-casing-front-dark-grey.stl



5-fan-casing-rear-iron-grey-metallic.stl



6-compressor-a-iron-grey-metallic.stl



7-compressor-b-white.stl



8-pylon-a-iron-grey-metallic.stl



9-pylon-b-white.stl



10-pylon-top-cover-white.stl



11-reverse-thrust-door-a-iron-grey-metallic.stl



12-reverse-thrust-door-b-iron-grey-metallic.stl



13-reverse-thrust-door-cowling-white.stl



14-cascade-mount-a-dark-grey.stl



15-cascade-mount-b-dark-grey.stl



16-blocker-door-a-iron-grey-metallic.stl



17-blocker-door-b-iron-grey-metallic.stl



18-cascade-a1-iron-grey-metallic.stl



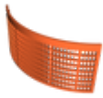
19-cascade-a2-iron-grey-metallic.stl



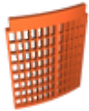
20-cascade-a3-iron-grey-metallic.stl



21-cascade-b1-iron-grey-metallic.stl



22-cascade-b2-iron-grey-metallic.stl



23-cascade-b3-iron-grey-metallic.stl



24-130mm-fan-black.stl



25-130mm-fan-cone-black.stl



26-130mm-fan-cone-swirl-white.stl



27-blocker-door-linkages-iron-grey-metallic.stl



28-blocker-door-linkage-mount-iron-grey-metallic.stl



29-reverse-thrust-actuator-rack-blue.stl



30-linear-bearings-blue.stl



31-reverse-thrust-actuator-a-b-blue.stl



32-30t-reverse-thrust-actuator-gear-blue.stl



33-stand-front-black.stl



34-stand-rear-black.stl



35-thr-rev-housing-blue.stl



36-thrust-lever-iron-grey-metallic.stl



37-thrust-lever-knobs-white.stl



38-cadly-logo-blue.stl



39-warning-decal-red.stl



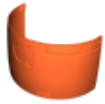
40-stand-wire-loom-clips-black.stl



41-cadly-by-adrian-barsotti-logo-blackblue.stl



42-fan-cowling-a-white.stl



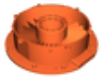
43-fan-cowling-b-white.stl



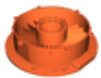
44-pylon-insert-white.stl



45-130mm-fan-nose-cone-multi-material.stl



46-fan-casing-motor-mount-staggered-spacing-m3-rear... .stl



47-fan-casing-motor-mount-staggered-spacing-m2-rear... .stl

Other files



Instruction Manual

1 file



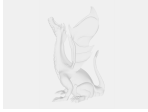
turbofaninstructionmanualrev9-cadly.pdf

Updated: 21.01.24



Arduino Code

1 file



turbofancode_rev2.ino

☐ Updated: 20.01.24 - Added Debouncing to pushbutton

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