

MrBaddeley
MicroDroid build instructions
(Draft)

<https://www.patreon.com/mrbaddeley>

for other parts and instructions

MicroDroid Features

- Simple Build
- No cabling / soldering
- Single day print
- Works with any basic RC controller / Receiver (3 channels, tank mix)
- Cheap, basic electronics (FS90R continuous servos, battery and RC controller)



Printing guidelines

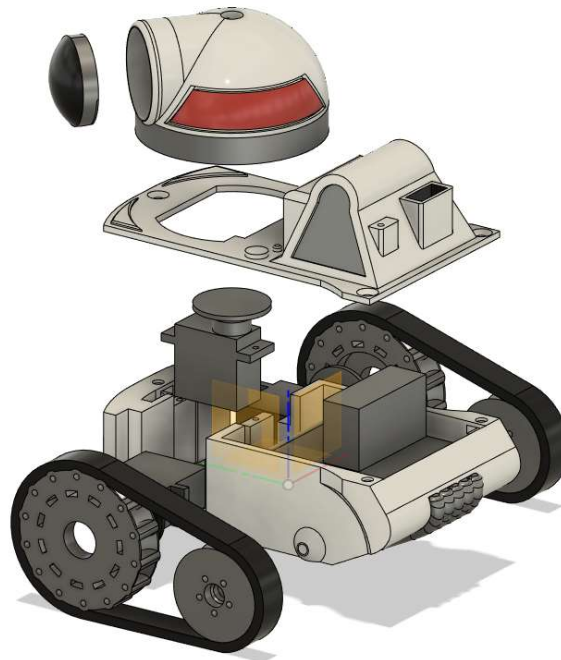
Support Needed:

No parts need support

All parts are oriented for printing!! No support needed.

Generally all parts should be printed with a .2 layer height as maximum. 3 outer walls (1.2mm Cura) and around 15% infill.

The tyres need to be printed in flex, check the web for settings / recommendations. Print slow and hot with no retraction. Loosening the tension on the extruder can also help a lot.



Hardware & electronics

Hardware:

M3 Square nuts x7

M3x30mm Bolts (x2) for rear axis

683-ZZ 3mm bearings (3x7x3) x 4 for rear wheels

M3x6mm Bolts (for top frame)

FS90R Continuous Servo (x3)

4.8v 1200mah Battery (and connector to RC receiver).

SS12F15G5 mini toggle switch

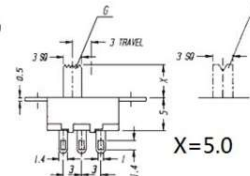
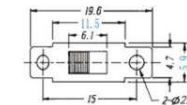
Connector is a JST SM connector, I made one, but you can buy the JST SM connectors from Amazon and cut the connector of an old servo for the other end

6 channel (only 3 needed) RC controller (any type, needs tank mix)

Note it's tight space in the MicroDroid, so the controller shown has a small receiver and this fits all models, I've since done a number of optional tops which also fit larger receivers such as the Flysky i6-x 6 channel receiver



SS-12F15 (1P2T)
Rating:
0.5A 50V DC



Assembling the Wheels



Take the FS90R servos and get the round Servo Horn out, glue this into the large wheels using a two part epoxy glue. Ensure no glue gets near the centre where the horn screws to the servo. Do this for both of the wheels.

While you are gluing the Wheels, you can also glue a servo horn into the dome using epoxy, this fits in the hole underneath, with the servo side facing down.

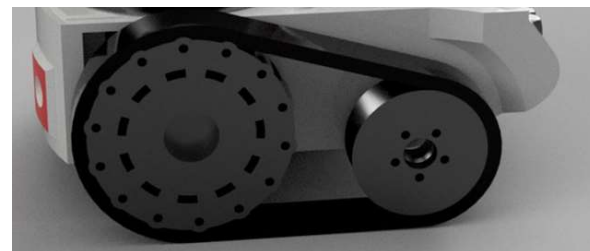
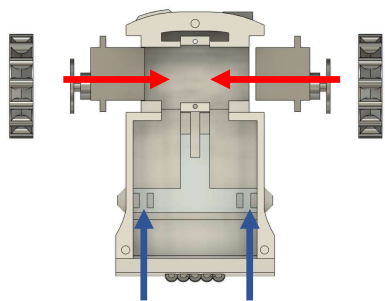
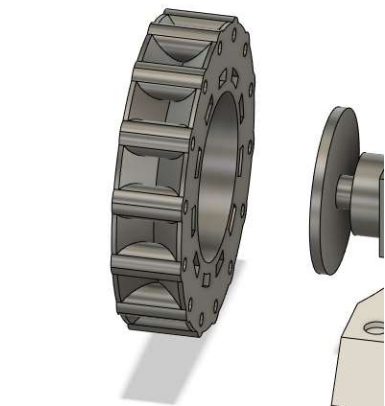
Next take the two rear wheels. You'll see there's space for the bearings, fit 2x **683-ZZ** per rear wheel (on either side) these should just slot in.

Next take two FS90R servos and use the Servo screws to screws them into the main frame. Once both secured, screw the large drive wheels onto the servos directly using the servo screw provided.

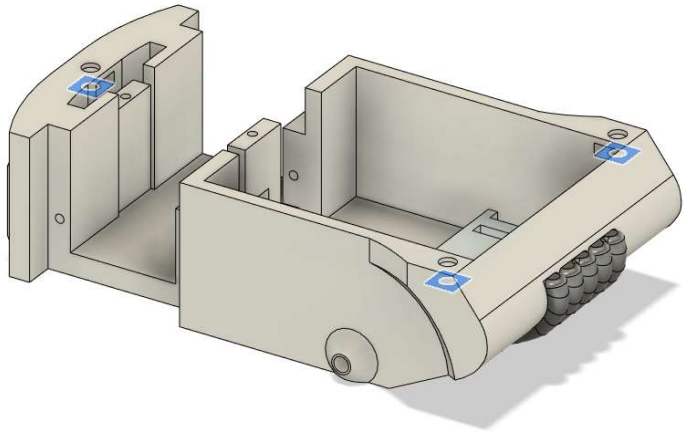
Next, take 4 x M3 square nuts and fit into the four slots in the base for the axles (in blue).

Finally take the two rear wheels, using the M3x30mm (x2) bolts, screw the rear wheels on, tightened them up but just loosen to make them spin freely.

Finally you can take the two flex tyres and put them on the wheels.



Assembling the Body



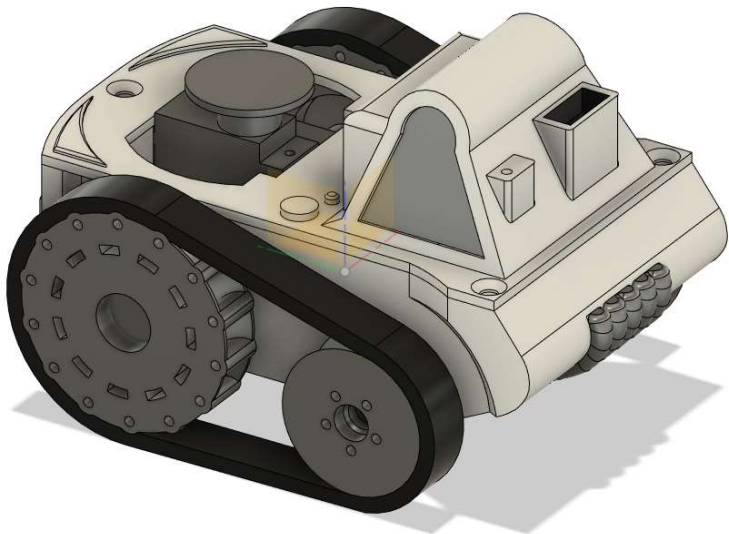
Next, three M3 square nuts into the three slots (as shown in blue), use a file before you do this to open the holes for the bolts if needed.

Take the third FS90R Servo and put this in between the two drive servos and screw into place, note the cable should feed through the hole with all cables going into the battery box.

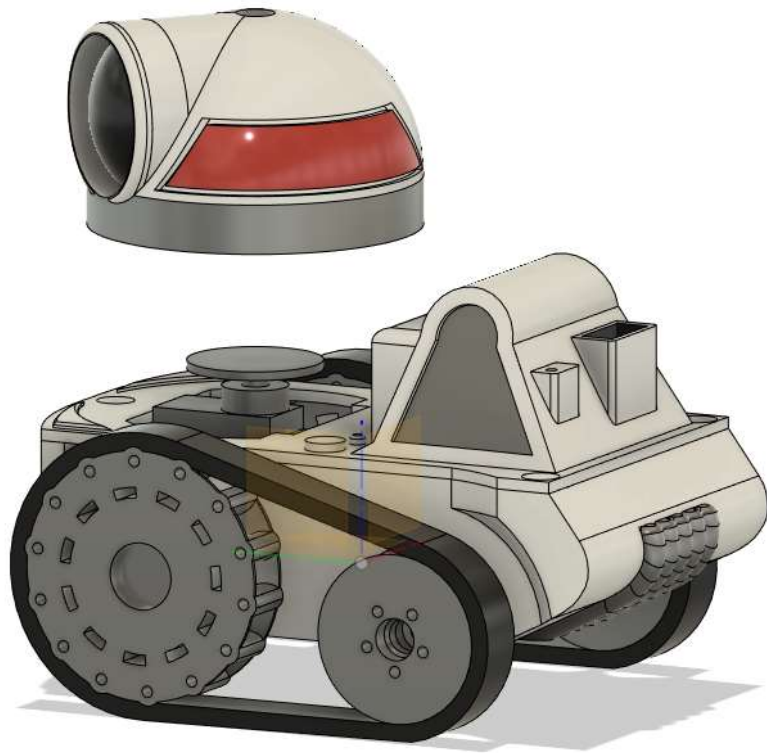
Now, the battery fits into the battery hole on at the rear of the droid, route all the cables as best you can, cable ties are optional if wanted.

Finally take the receiver, plug the two drive servos into channel 1 and channel 2, with the head servo going into channel 3 (or whichever you want to control the dome with). The Receiver, cables and battery all should fit inside the battery box / top frame.

Next, using the M3x6mm bolts (x3), bolt the top frame on the main frame.



Finishing off..



Finally, fit the lense to the dome (again, epoxy glue), once set you're pretty much done.

The dome (servo horn) pushes onto the Servo and you're pretty much done. There's a hole in the top of the dome if you want to screw it on, or friction should hold it fairly firmly as you'll need to remove to change the batteries.

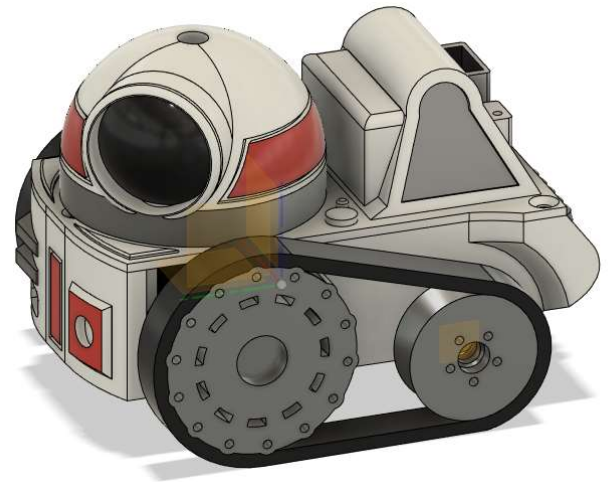
You can test / trim the controller with the top frame off.

Have fun and enjoy!!!!



FlySky i6-x 6 channel
(inc switch hole)

High (Larger receiver)



Basic (Small receiver)





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Smith, Bernd Pentrop, Bill Morris, BjÄrn Giesler, Bob Bennett, Bobby CC Wong, Boyko Kazakov, Brandon Jaschke, Brandon Peden, brendan bradley, Brennan Carrizales, Brent Williams, Brian, Brian Diaz, Brian Elms, Brian Gelb, Brian Groene, Brian Schelde, Brunelie Lauret, Bruno Espezzano, Bryan Clayton, Bryan Haven, Camilo Jarquin , Carelessranger, Carey Hhh, Carl E Jones, Carl Woods, Carlos Flores, carlos pozo, Carsten Wirtz, Cary Christie, Cerebro, Cesar Covarrubias, Chad Jackson, Chad Regensberg, Charles Everette, Charles Williams, Charles Wright, Charley Letham, ChiefGhost, Chris 'Nova' Claus, Chris Carothers, Chris Duffield, Chris Herringshaw, Chris Hunt, Chris Lee, Chris Lewis, Chris Miller, Chris Ondrovic, chris pinter, Chris S, Chris Stroud, Chris Welder, Christian Ramsvik, Christina cato, Christina Cato, Christoffer SchrÄder, Christophe CUEFF, Christophe Kormann, Christopher C Booberg, Christopher Grey, Christopher Herb, Christopher VanDyke, Chsen, Chuck Arrivas, CK Liao, Clement 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Dylan Panarra, Ech03, Ed Johnson, Ed Kraus, Eddie Nielsen, Eduardo Alves, Ely Madrigal, Emily Whitehouse, Eric Beeks, Eric Boyer, Eric C Douglass, Eric Hanson, Eric Ho, Eric Kana, Eric M Gore, Erick Main, esther rimington, Evan Muschinske, Everett Brooks, Fabian Hediger, Felix, Felix Tao, Fernando Sosa, Fidel Aaron, Filippo Dispenza, Florian LEVY, Fran, Francesco Pelosi, Franziska Sauer, Frederic Annet, Freya, Gage Mclvor, Gareth Becker, Gary King, Gary Smith, Geoffro / Hex3D, Georg Schioranji, George Ford, Gilles White, Glenn David, Glynn Turner, Greg, Greg Fowler, Greg MacAusland, Greg Oetker, Greg Tracy, Guillaume JasmIn, Gyorgy Banyar, Hai Pham, Hajuskin, Harold Harmon, Hennequez Frederic, Henry Ford, Hiromichi Yoshida, Horst Krohn, Hugo Barois, Ian Jennings , Ian Klask, Ian Whitehouse, iceowl, Isaac Miller, Ivan Hartley, Ivan Klas, Jacob Edwards, Jadon Flores, Jahosefat, Jake Boone, Jake Danible, Jakob Frabosilio, James, James, James Fender, James Hodson, james kerby, james 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