

MrBaddeley R2D2 Version 2 Dome Instructions Version 1.0

For other parts and instructions use the link below.

WWW.Patreon.com/mrbaddeley
R2 Printed build, MK2 and V2 Overview
https://youtu.be/VL6NjYcGnEg

Rev1.0DW

R2D2 Features



CSR Accurate



Built in supports

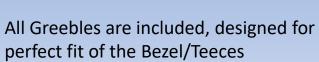


Reduced seam design for easier assembly

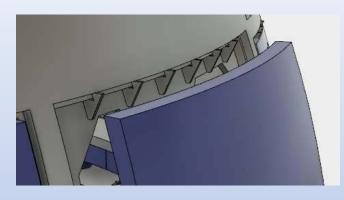




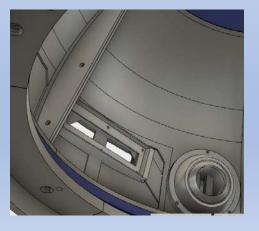
Lower Ring bolts for different Lazy susan options



R2D2 Features

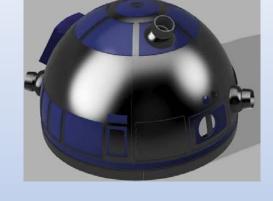


Recessed panels for accurate fitting/gap reduction for easy prints (4mm printed on end)

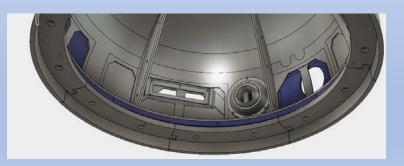


4mm Bolts used to hold the assembly together while gluing.





Two "cuts" for both large and smaller printers



Lower ring has been recessed for Lazy Susan (450mm), (The ring can be drilled for other sizes.

Dome Parts List

- Main Dome full scale 200 cut 6 sections (there is an option to have smaller cuts for smaller printers, there is also an option for a single print dome)
- Upper Pie Part A & Part B
- Dome Pies 6 pie sections, 1 top dome
- Lower Dome Panels 16 panel sections
- PSI Mounts Front PSI, Front PSI Ring, Rear PSI, Rear PSI Ring
- Lower Ring 7 Sections
- Upper Ring 7 Sections
- Greebles
 - Button Qty. 2
 - Radar Eye Qty. 1
 - Radar Lense Qty. 1
 - Small Logic Light Qty. 2 (there is a frameless Rseries option)
 - Large Logic Light Qty. 1 (there is a frameless Rseries option)
 - LED Bezel Large Qty. 1
 - LED Bezel Small Qty. 1
 - Holo projectors
 - Pie Holo Frame Qty. 1
 - Pie Holo Frame B Qty. 1
 - Body Holo Frame A Qty. 2
 - Body Holo Frame B Qty. 2
 - Holo Main Qty. 3
 - Holo Main B Qty. 3

Hardware

- M4x10mm screw Qty. 18
- M4 Washer Qty. 18
- M4 Nut Qty. 18

R2D2 Printed Dome Instructions



Based CS:R specs. It is a fully printed droid and the internal fittings may be exact with the standard club build but should fit easily.

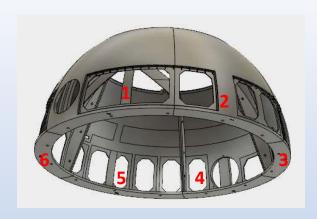
Firstly, the basics... the main dome is made from 6 parts (7 pieces split into two for the smaller cut version)

Recommended 3 layers, 10% infill with a 0.3 layer height. (You can print at higher resolution but it will take ages with no much difference in overall quality. This has been designed to minimize the visible layers when printing at low resolution to speed up the process. The frame is very clean and detailed at 0.3).

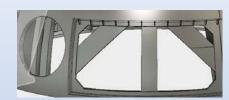
MrBaddeley prints in ABS (as he loves acetone welding) he has also printed in PETG, which is perfect for the dome as it does suffer from warping a little in ABS (this is a common problem with ABS). However (and it's a bid however) PETG is extremely hard to glue. Solvent welding can be used, but it is not recommended as it's nasty stuff, alternatively, Andrew Radovich recommends Gorilla Glue Gel and Baking Powder combination (it's been tested and it's incredible stuff, but please test this before you commit to this form of gluing).

All major parts are numbered and are built in numerical order i.e. 1,2,3,4 etc. for the ring sections.

4mm holes were used for bolting together the dome sections and filament peg holes for the top dome pie section. These small holes just fit a 1.75mm filament so you can make the alignment pegs using what you have on hand.



LARGE CUT: For the main dome, print parts Dome 1 through 6. These assemble as per the diagram shown to the right.



Note, after printing the support tabs should simply snap off with small pliers. If needed a little sanding to clean the surface. There's also support plates which again simply snap out around the holoprojector holes and some of the larger panel holes.



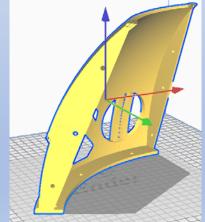
SMALL CUT: This is the same as the Large cut, however part 5 is split into two vertically. The middle dome can be assembled, the lower dome also. Then attach the two together, there is an alignment lip for the domes and the ribs can be used also to align circularly.



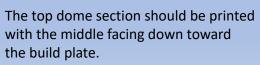
Print Orientation

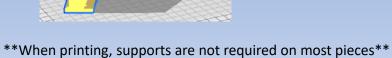


The main dome/pies are to be printed vertically with the base touching the build plate.

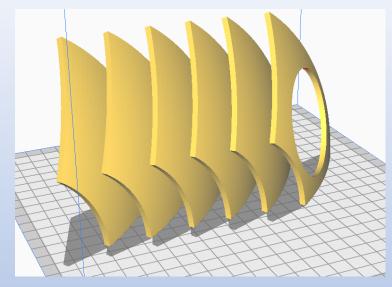


with the middle facing down toward

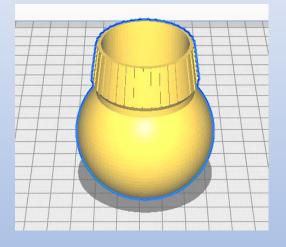




Print Orientation



For the best results, the Radar Eye should be printed flat so that most of the imperfections will be on the back side and will not be seen once it is glued to the dome. You will The pies should be printed in this orientation for the cleanest print. The panels should also be printed in this orientation for best results. It is also recommended that you use a brim for best adhesion.



The Main Body for the holoprojector Should be printed in this orientation for best results

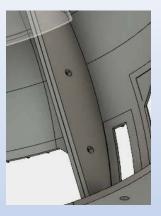
need supports to print it in this direction.

Should be printed in the for best results.

When printing, supports are not required on most pieces



Assembly and Gluing



This should be fairly self explanatory. The ribs fit together and the 4mm holes allow the 4mm bolts, washers, and nuts hold the dome whilst gluing (superglue/epoxy for PLA, Acetone welding for ABS and whatever you can get to work for PETG). Pegs for clamps can also be used to add extra support. A little sanding can make a cleaner joint and the overall dome should be aligned and level. (You will still need to fill any gaps at a later stage so do not panic if it's not absolutely perfect).

When all of the pie sections are glued together, this should give you the base dome. Next Is the pie section at the top. There are two options included (one in the larger cut folder And one in the smaller cut folder). Both are interchangeable... The larger one is two pieces Which fit together with 1.75mm pegs for alignment during gluing. The smaller cut is 6 parts Which fit together in order, note the ABCDEF before for the order, they are printed on the dome.

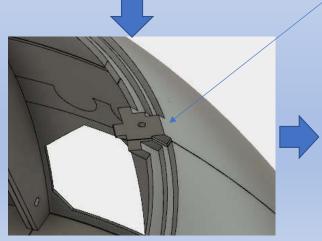


Assembly and Gluing



Don't worry, the dome and upper pie Can be glued by eye without the alignment "tab" or the filament, so this is optional...

Assembly and gluing of the top dome and upper pie is simple as fitting them together. 1.75mm holes have been put into the design to align the pie on top. Also there is a square "tab" for circular alignment, this is probably not needed as it can fit in any direction but thought this should be added in to make sure it's spot on. The filament holes may not align if the circular tab doesn't match up. You will see it on both the dome and upper pie.

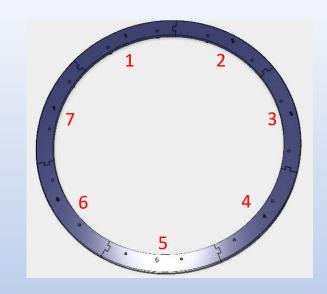


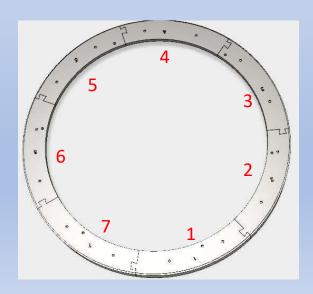


Assembly and Gluing



The upper ring is clockwise (1-7)





The Lower ring is counterclockwise (7-1).

**The rings again are fairly obvious, or they would have been if I hadn't reversed the order. Why? I don't know, tiredness or just stupidity on my part, but all dovetailed and easy to glue!

MrBaddeley**



Finishing your Dome

So, it's time to sand, fill and repeat, to create a smooth finish on the dome.

Sand-able primer / Spray putty is recommended and finish with paint of choice. There is loads of Information on Astromech on obtaining the silver color, so it is recommended that you take a look there.

Priming: Black and Aluminum spray seems the recommendation, but Rub-n-Buff is also used. Same on the lower ring and the upper ring. The rings bolt to the dome and should fit a 450mm Lazy Susan, but it's easy enough to drill extra ones if you are using a different on than the one typically used. There may be some optional lower rings for different configurations later on.

Panels, these should all be printed, some supports will be needed with the holes, either flat or on end depending on your preference. The Greebles, again print them, clean, sand, finish and paint. Notice the tap holes for the Logic Lights, these fit a standard Bezel and Lenses (incredibly hard to Print those due to the gaps, so recommended lazer cut bezels.

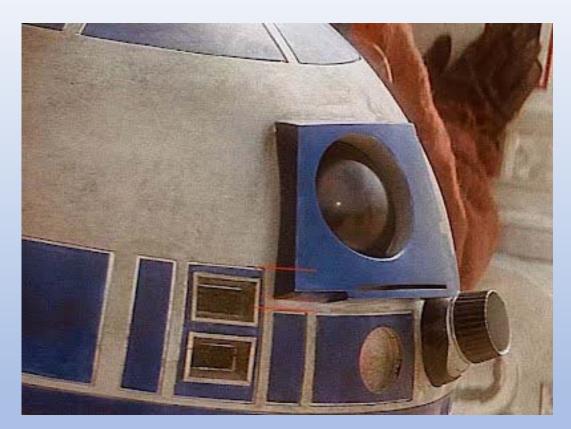
Tip: If the holoprojectors are a tight fit, the hole can be slightly sanded and increased in size. You can do this with the "wine bottle" trick and is a favorite amongst the Astromech builders, Wrapping sandpaper around the neck of a wine bottle allows circular sanding which opens up The hole gradually.

Fixing Panels: You'll see the panels are recessed, so once they are finished and painted, the end Panels into the main dome (again it is your choice to super glue, ABS weld, hot glue, etc.). If You're fitting teeces, ideally you will build, and test fit all pieces before final assembly.

Finishing your Dome

Final assembly should be simple, the Radar Eye moves around in the movies anyhow, so take a look and choose the best place to fit. The actual lense, take care on finishing, filling and painting. A final coat of lacquer (or two), a bit of polish and it can make a perfect finish.

Holoprojectors should fit nicely, if necessary, an inner reflector for Mounting LED's will be published if needed and again for the lenses Check out www.Astromech.net, loads of information. The Current Lenses were purchased from ebay, they are jewellery lenses.





Supported and tested by Spenori golds. Samel Groy, Jeersy Rile. Sup Misson, Care Society Williams, Mark Sawy. Dougland and tested by Spenori golds for the Peterson, Jersey, Long Board Land, Sawy Sawy. Saw



Jeremy Polston, Robert Ripple, Thorsten Wolf, Jay, Fric Hanson, Alex Hills, Eric Brager, Malcon Akitan, Thomas Campbell, Mike Garvey, Duke Duel, Andy Westenberger, Andrew Whiteley, Ben Black, Omar, Shawn Collier, Joshua Cockrum, Andy Jeffrey, Robert Van Meter, Ton W., Tony Royer, Son Pham, Stuart Paton, Paul glovannucci, Sven Van Heerden, Mister Machode, James Newman, Scott Rogers, Jef Lepine, Joe Boll, The Dragon's Rest, Olivier Labbé, Scott Davis, Dalton Mister, Canada, C

