

Service spaceship

Artwork

Works in Progress

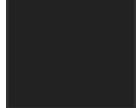
[naturalpainter](#) (naturalpainter) #1 April 27, 2018, 6:50pm

This spaceship provides food, tools and in case of emergencies medical care to astronauts and workers in the asteroid belt mines. In the cargo area there is a cryogenic facility to freeze a human until the ship can be transported to a hospital.

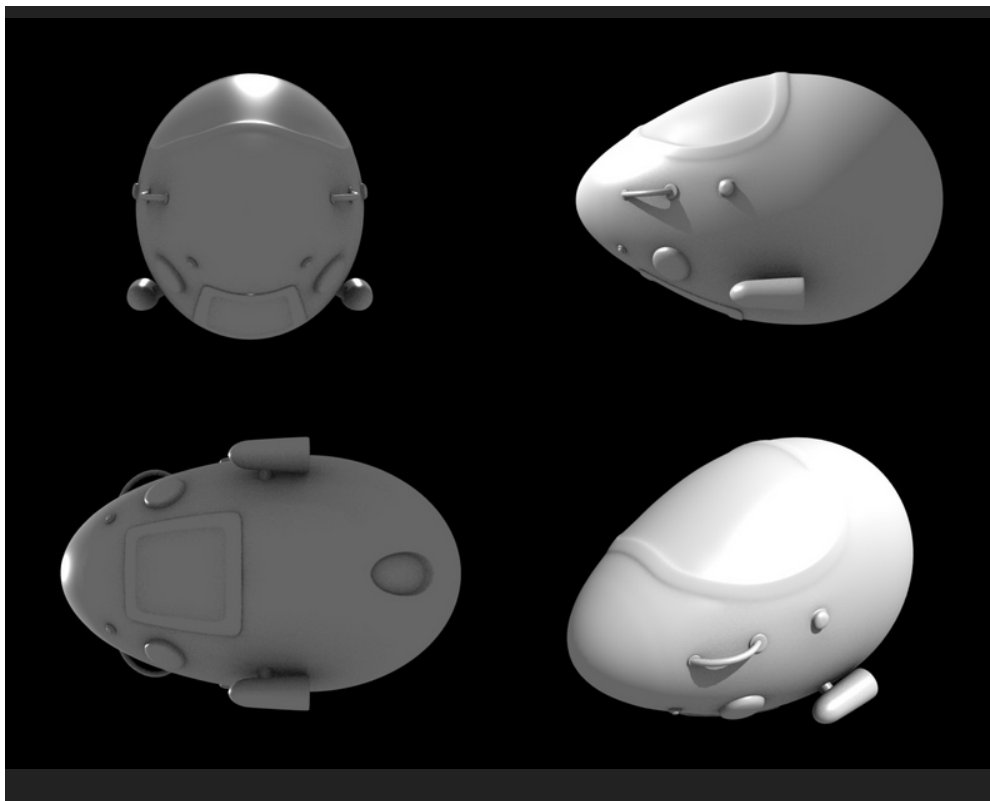
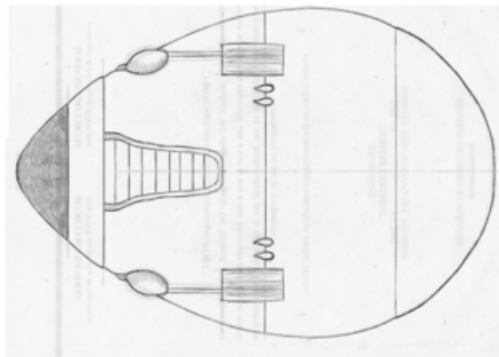
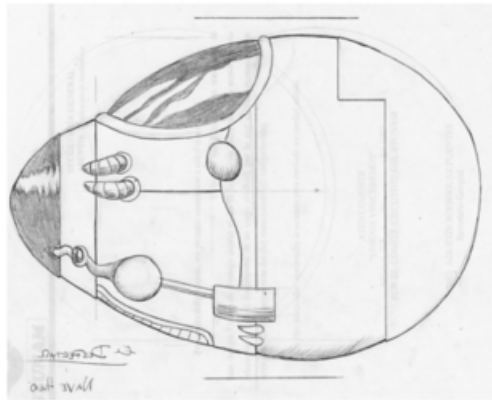
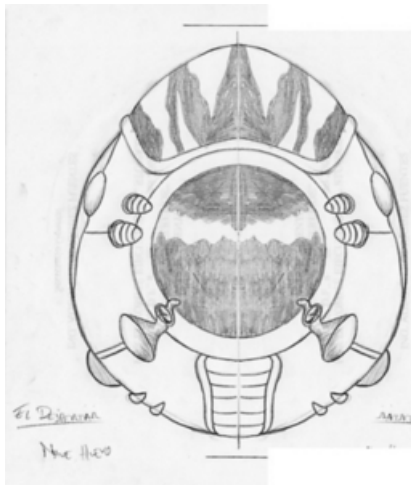
These are the sketches and the first version of the model.

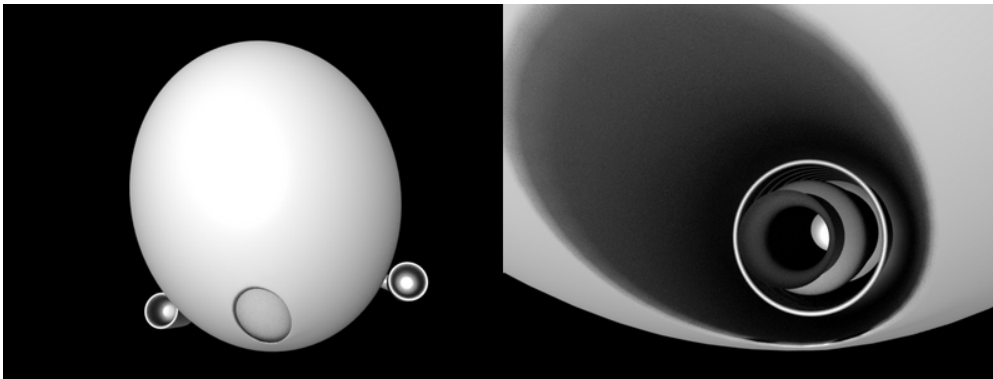
The external engines provide both propulsion and position correction. At the back there is a nuclear [fusion engine](#) used to accelerate for long distances.

What do you think? C & C welcome, please. 😊



Attachments





DichotomyMatt (DichotomyMatt) #2 April 24, 2018, 7:57am

The model look good.

Is this a one man craft or is it a large cargo ship? The Windshield makes it look very small.

Is there a special reason of the egg shape of the craft?

naturalpainter (naturalpainter) #3 April 24, 2018, 7:57am

DichotomyMatt:

The model look good.

Is this a one man craft or is it a large cargo ship? The Windshield makes it look very small.

Is there a special reason of the egg shape of the craft?

Thanks. It is a small cargo ship but not so small. You are right about the “windshield”, that’s the first thing we have to adjust.

Yes. It doesn’t need an aerodynamic shape for it always flies in the space, never in a planet with atmosphere. And the egg, as mother nature teaches, is a good shape for a container. 😊

The other reason is dramatic. It will be used for a man who believes he will save human kind, the egg represents the rebirth of humanity.

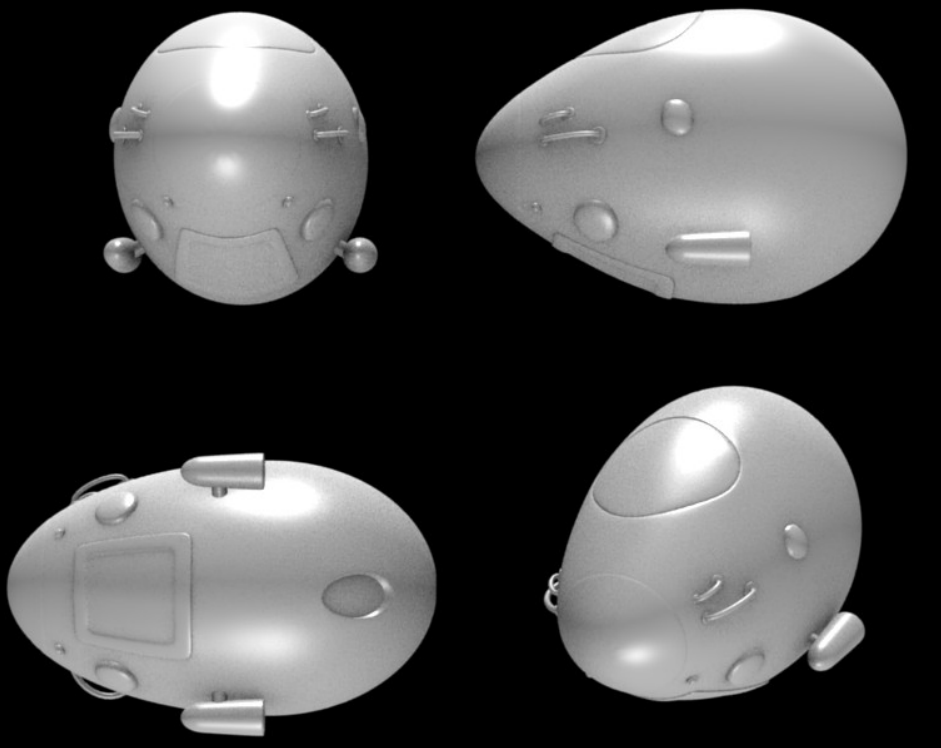
DichotomyMatt (DichotomyMatt) #4 April 24, 2018, 7:57am

Cool, Since the ship so resembled an egg, I figure there was a deeper meaning to it.

naturalpainter (naturalpainter) #5 April 27, 2018, 6:50pm

Reduced the cockpit size and fixed some details. IMHO much better but there are yet things to improve. Please comment & critics.

Attachments



grafixsuz (grafixsuz) #6 April 24, 2018, 7:58am

That is looking good so far. Cute. Keep it coming.

DichotomyMatt (DichotomyMatt) #7 April 24, 2018, 7:58am

Two things I wonder about. First the window, shouldn't it be inset more or have some type of retaining rim? Space craft windows tend to be very thick. Second, how does this thing land? There is no obvious place where landing gear would descend from.

Orinoco (Orinoco) #8 April 24, 2018, 7:58am

I'd guess something working the asteroid belt would need a lot of radar or video greeble all around the ship, to detect any rocks moving it's way. On a related note, the quickest way to avoid those rocks would be to move to one side, so thrusters pointing perpendicular to the line of motion would be useful.

Nyrath (Nyrath) #9 April 24, 2018, 7:58am

Orinoco:

On a related note, the quickest way to avoid those rocks would be to move to one side, so thrusters pointing perpendicular to the line of motion would be useful.

Well, that turns out to be an interesting question. 🤔

First off, **spaceships are not arrows**, that is, the nose of a spacecraft may not necessarily be pointing in the line of motion. Once the engines are shut off, the spacecraft can spin to any orientation it desired, still moving in a straight line. It can move sideways in space, in other words.

Secondly, due to the complicated way that objects move in space, it is easy to avoid meteors and asteroids. If one is on collision course, all you have to do is do a burn to change your spacecraft's velocity in **any** direction. It does not have to be perpendicular to the line of motion.

<http://www.projectrho.com/rocket/rocket3g.html#meteors>

Sometimes situations in space travel are very non-intuitive.

Nyrath (Nyrath) #10 April 24, 2018, 7:58am

The main thing that bothers me about the spacecraft is something that will probably not bother anybody else. Specifically, while thrusting, the pilot will feel like **"down"** is the direction the thrust is going, and the nose will be pointed **"up"**. But since every other spacecraft in movies and TV suffers from this inaccurate

you can get away with doing it as well.

The axis of thrust of all the rockets has to pass through the spacecraft's center of gravity. Otherwise the spacecraft will tumble when you turn on the rockets. This means that the main fusion drive should probably be in the center of the aft end of the ship, instead of at the lower aft.

And a line connecting the two external engines has to pass through the ship's direction of flight. This means they should be on opposite sides of the ship instead of below. Alternatively you could add a third external engine on the "top", so from front view the three engines formed an equilateral triangle.

I am unsure as to the size of the ship. Is it just slightly larger than a man, or is it a titanic egg with a huge front window? An external door and/or ladder would help establish a scale.

I agree with Orinoco that it could use a radar dish.

You might want to add attitude jet clusters aka "Reaction Control System" or RCS.
go to

<http://www.projectrho.com/rocket/rocket3m.html>

and scroll down to "*Things get real nasty if the ship is a tumbling pigeon*". In the pod with arms, the RCS can be seen on the right.

Also go to

<http://www.projectrho.com/rocket/rocket3ad.html>

and scroll down to "How does the pilot aim the ship?"

The ship technically should have a section of hull with ridges to act as a heat radiator, but this can be ignored.

iliketosayblah (iliketosayblah) #11 April 24, 2018, 7:58am

the windsheild thingy still makes it look a little small, as you said, there is a cryogenic chamber and fusion engines and such...my suggestion would be to have a long windsheild (that is small in comparison to the ship) and split it up so it looks like you have a series of windows...did you understand what i just said? if you didnt, sorry 😊

TimH (TimH) #12 April 24, 2018, 7:58am

really cool can i see the wireframe

musk (musk) #13 April 24, 2018, 7:59am

How about adding some artifacts to the ship that resemble human size like a door hatch or something will put the rest of the ship into scale.

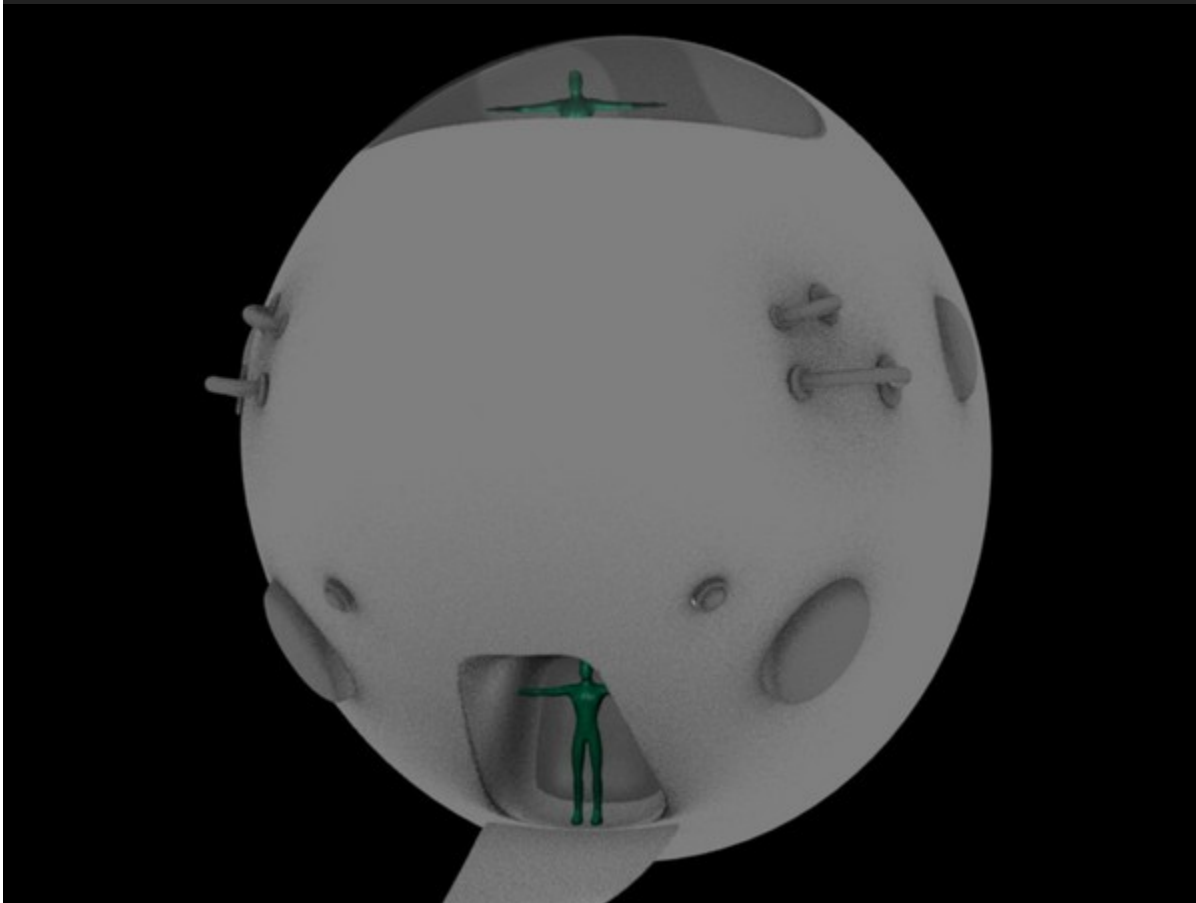
naturalpainter (naturalpainter) #14 April 27, 2018, 6:51pm

Here you can see the intended human scale. The windshield is wide to allow better exploration and the crew can stand in a "**comfortable position**" when the nuclear fusion engine is accelerating the ship.

DichotomyMatt, the huge retaining ring of the first version made the ship look too cartoony. I am sure high technology will make things look simpler. Remember A. C. Clarke third law, "Any sufficiently advanced technology is indistinguishable from magic."

Thank you all for your c&cs. Working on the other details, stay tuned! 😊

Attachments





DichotomyMatt (DichotomyMatt) #15 April 24, 2018, 7:59am

Great the last time I saw little green men getting out of an egg shaped space craft, I blacked-out, woke up three days later, could not remember my name and my ass hurt. 😊

On a serious note the scale makes much more sense now, and I am all for the “suspension of disbelief” when it come to sci-fi stuff.

thelowlander (thelowlander) #16 April 24, 2018, 7:59am

looks cool, reminds me of solar jetman.

Nyrath (Nyrath) #17 April 24, 2018, 8:00am

Much better, Naturalpainter! It is looking very nice.

naturalpainter (naturalpainter) #18 April 27, 2018, 6:52pm

Hello:

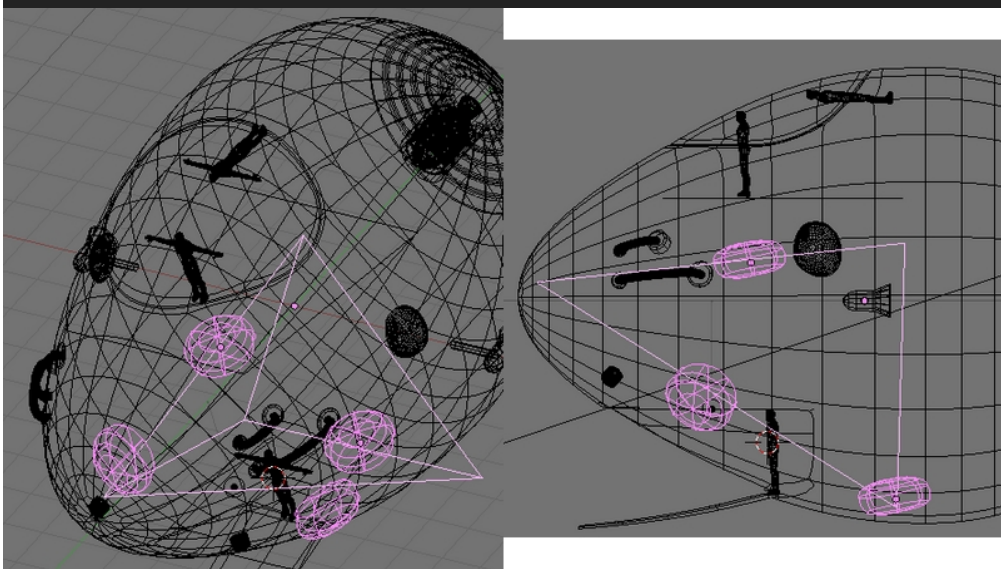
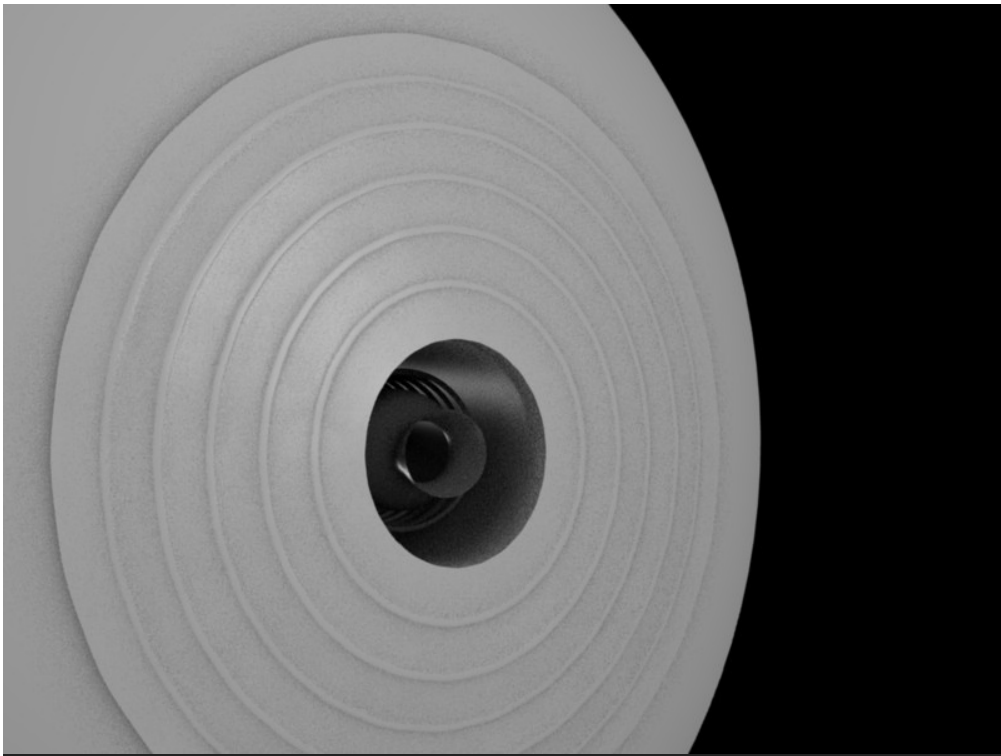
As sugested by Nyrath, I moved the main engine in the center of the aft end of the ship, surrounded by a radiator surface. I am not yet happy with the look of this radiator.

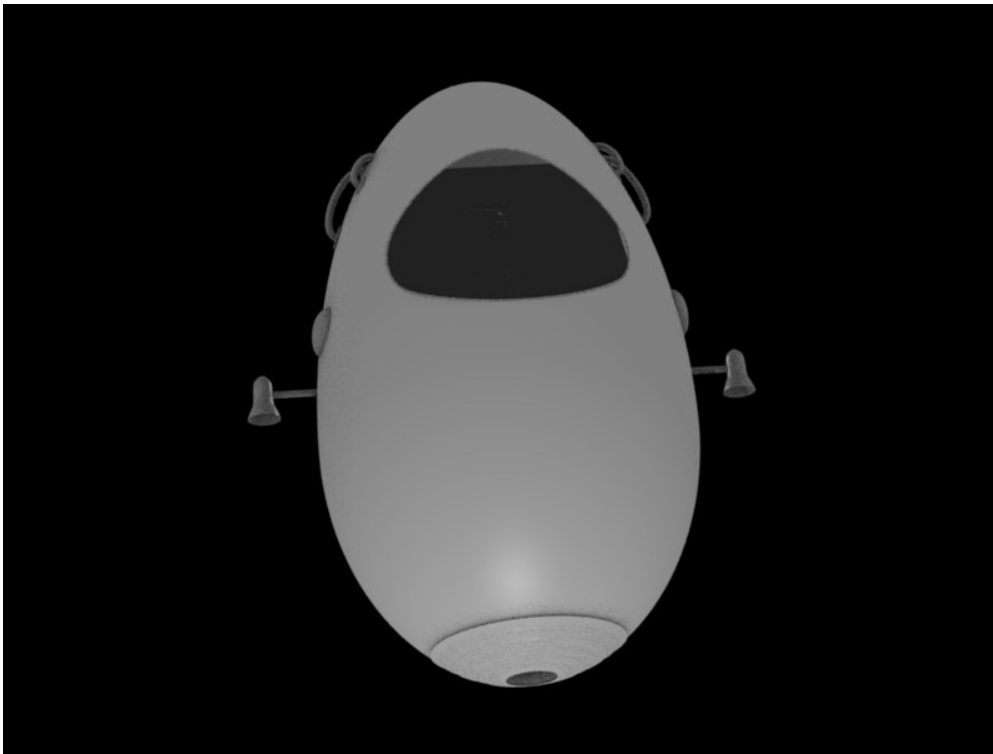
The ship uses 4 **reaction wheels** to aim itself, distributed in the edges of an imaginary tetrahedron, to make them visible outside.

The external small engines are now in the axis of the ship. Still not very happy with their look, but most of the engineering is almost done, only missing details like radar and radio antennas. I assume they should be movable but I like to think on high technology as apparently simple as that in nature, like the sonar system in dolphins.

Thanks for the encouraging comments. Please keep the c&c's. :eyebrowlift:

Attachments





Dudebot13 (Dudebot13) #19 April 24, 2018, 8:02am

Looking nice! I am a noob when it comes to the details so no crits here! Can't wait to see this finished

Nyrath (Nyrath) #20 April 24, 2018, 8:04am

Very nice **naturalpainter**!

Reaction wheels, excellent! If it is good enough for the International Space Station, it is good enough for your spaceship.

RE: high tech=simple in nature. Have you ever seen a Phased Array radar?http://en.wikipedia.org/wiki/Phased_array

They do not move. The radar beam is bent electronically. They look like a checkered flat disc or flat polygon. You do need two, one on each side of the ship. Three if you want finer coverage.

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