

Galatea: Robot Maid v3.0.2

Instructions

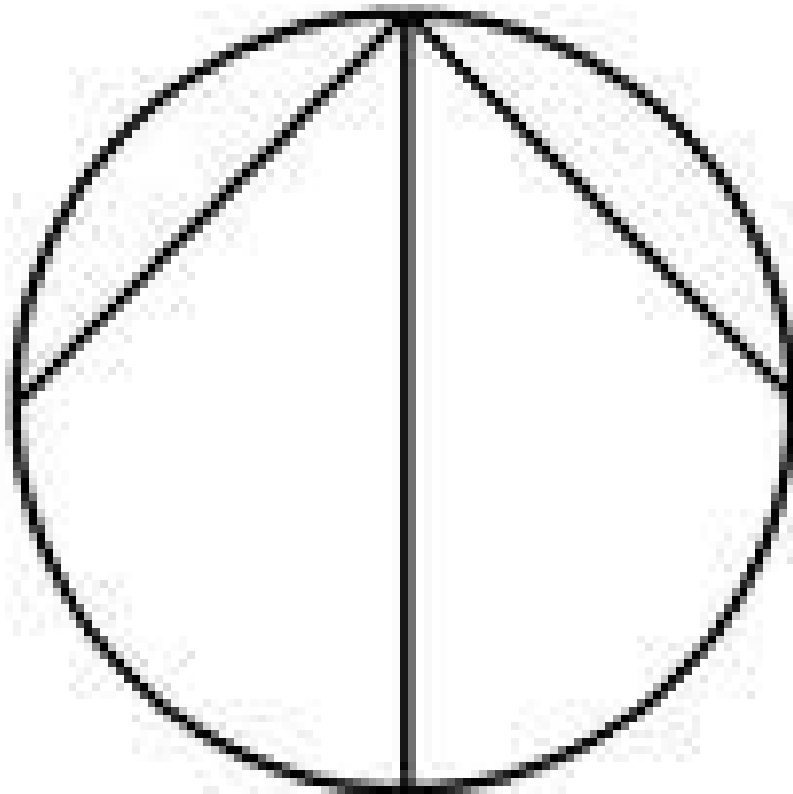


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Construction

Materials

Firstly, you will need a 3D printer with two rolls of filament (assuming 1.75mm 1kg rolls), super glue, hot glue, electrical tape, a sanding sponge, a binder clip, $\frac{3}{4}$ inch wide velcro (~2 feet in length), and a specific robot sweeper base

Robot Sweeper Base;



(alternate designs)

You can find it on Amazon, AliExpress, and Wish.com.

You can use another robot vacuum base, but you will need to find your own location to mount the base. The other base should be 30 cm or wider. The motors should be 14 volts or higher. Make sure it doesn't have lidar capabilities and has a smooth top.

Speaker

You will need a mini bluetooth speaker. This will allow the robot to speak and play music. You can find small bluetooth speakers on Amazon, AliExpress or Wish.

Here is the one I used;



However, there are many types of mini bluetooth speakers, all of them valid



Apparel

My specific design uses a maid dress that you can find from AliExpress or Amazon. Get the small size. However, you can put any clothes you want, as long as it's not too heavy and not too big.

<https://www.aliexpress.us/item/3256806208911460.html>

<https://www.amazon.com/Womens-Japanese-Cosplay-Classic-outfit/dp/B093D5DRVZ/>

<https://www.amazon.com/mzenuop-Halloween-Cosplay-Costume-Costumes/dp/B0BY1JSM57/>

<https://www.amazon.com/dp/B092VMFM4W>



Wig

Here's the wig I used. Make sure to get the "Black" color.

[Amazon.com: MapofBeauty 16 Inch/40 cm Short Side Bangs Synthetic Fiber Cosplay Layered Wig \(Black\) : Clothing, Shoes & Jewelry](https://www.amazon.com/MapofBeauty-16-Inch-40-cm-Short-Side-Bangs-Synthetic-Fiber-Cosplay-Layered-Wig-Black-Clothing-Shoes-Jewelry/dp/B092VMFM4W)

The hairnet that is included is not used.
You can use a different wig if you want.

UV wand

To have the sterilization feature, you will need a UV-C wand.

[Amazon.com: UV-C Light Sanitizer Wand - Powerful 253nm UV Light Rechargeable Handheld Ultraviolet Portable for Home, Office, Travel - Total Transparency UVC Test Card Included : Health & Household](#)

You don't need to use this exact one, however any other wand you use needs to have a grip smaller than 41 mm.

Charger (Optional)

To charge the mini phone without having to take it off the head, you need a 2-meter (6 foot) USB-to-USB C cord, with the associated USB charger. You can find one in Amazon or AliExpress, including glowing ones.

Air Purifier (optional)

For the air purifier, you can use a mini car air purifier, or any other object between 130 grams and 330 grams. You can find the specific air purifier on Amazon, AliExpress, or Shein under "mini air purifier". However, it is more economical to get a larger separate air purifier.



Mini Phone

First, you will need a specific type of phone. You can get it on Amazon or AliExpress under the search terms, “Mini smartphone”, “Soyes Smartphone”, or “Smartphone XS16”. You can use any brand, as long as the screen is approximately 3 inches (diagonal measurement).



Mini Smart Phone

2GB+16GB

3G WCDMA

3.0" HD Screen

Android system

3G Global



You can use a different design, but your Galatea v3.0.2 will look different.

You will also need a wifi connection to access most features. A SIM card and cell connection are not necessary.

For clarity, in the rest of this instruction manual, the phone will be referred as the “mini-phone”

Printing

Print with 0.8 thick walls, with lines infill.

Printing was designed for a 0.4mm nozzle.

Print the files at the following densities;

BODY

- Hips: 1%
- Midsection: 1%
- Chest: 1% with supports
- Backbone: 20% (x2)

HEAD

- Head 3.0.2: 5% with supports (use lightning infill)
- Classic Head and Head 2.1: 0% with supports
- Solid Eyes (for use with Head 2.1 and Classic LED head): 10% (use lightning infill)

ARMS

- Shoulder Left: 1%
- Shoulder Right: 1%
- Arm Segments: 1% with supports (x4)
- Wrists: 1% (x2)
- Robot Nut and Bolt Arms 2.0: 5% (x2)
- Insert: 20% (x4)

CLAW

- Claw Primary: 15%
- Claw Secondary: 15%
- Claw Bolt: 15%
- Claw Nut: 15%

LEGS

- Base 2.0 1% (x2)
- Lower Calf: 5% (x2)
- Upper Calf: 1% (x2)
- Knee 3.0: 1% (x2)
- Thigh 3.0: 1% (x2)
- Hip Segment 3.0: 1% (x2)
- Insert: 20% (x8)

ACCESSORIES

- Plate: 1%
- UV Basket: 15%
- Cat ears: 0%
- Spider Killer: 100%

SPEAKER AND PHONE ACCESSORY

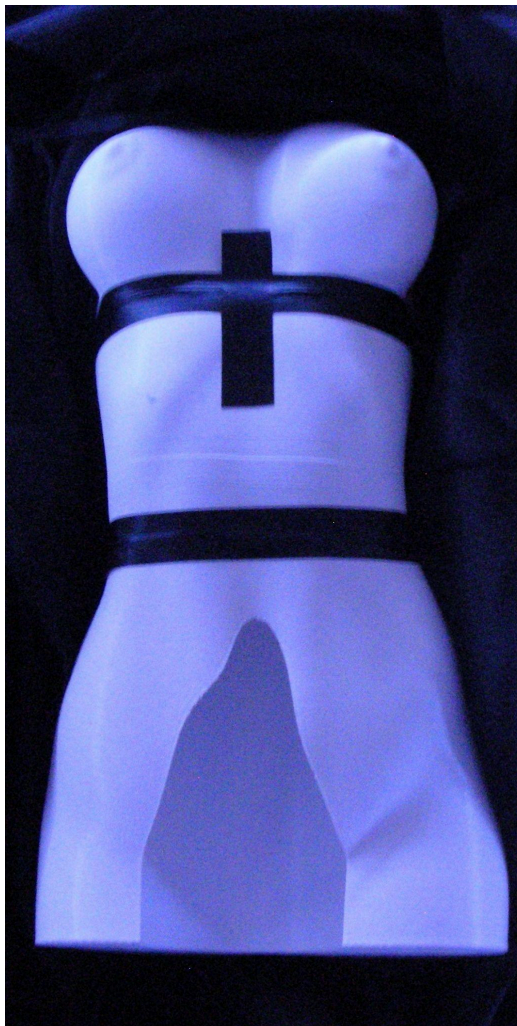
- Speaker Sled: 100% (x2)
- Speaker Mount: 10%
- Vertical Phone Holder: 10%

Putting it all together

The Body

Take one of the Backbone segments, and sand it. Then apply super glue on it, and insert it in the slot on top of the Hips. Then when the glue is dry, put glue on the other side and put the midsection on top. Then take another Backbone segment, and do the same with the midsection and the Chest.

Afterwards, use electrical tape to hold the sections together. Then sand the neck cylinder on top of the Chest, and attach the Head. Put in the speaker, facing downwards, until the switch lines up with the edge. Then wrap 5 and half rotations of electrical tape on the neck plug.

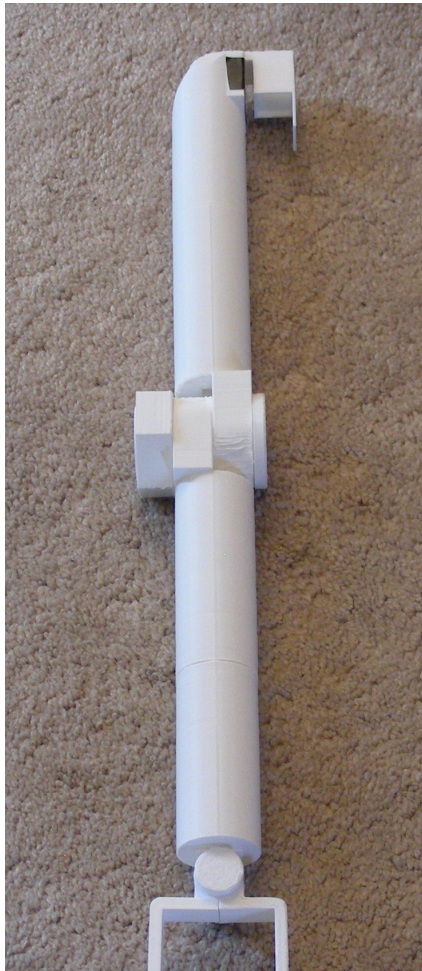


The Arms (do the same technique for both sides)

Take one of the inserts, and sand the sides. Then insert it in the hole opposite the side with the square plug, using the notches to get it exactly halfway. Then apply superglue to the end of the shoulder segment, as well on the insert. Attach an arm segment with the bolt hole on the side of the plug, on the side facing where the body should be. Use the same technique with another Arm Segment and a Wrist Segment.

After you have those two pieces, then sand and push the bolt through both the shoulder half and the lower half, with the bolt head facing where the body should be. Then use the Nut to hold the arm in place.

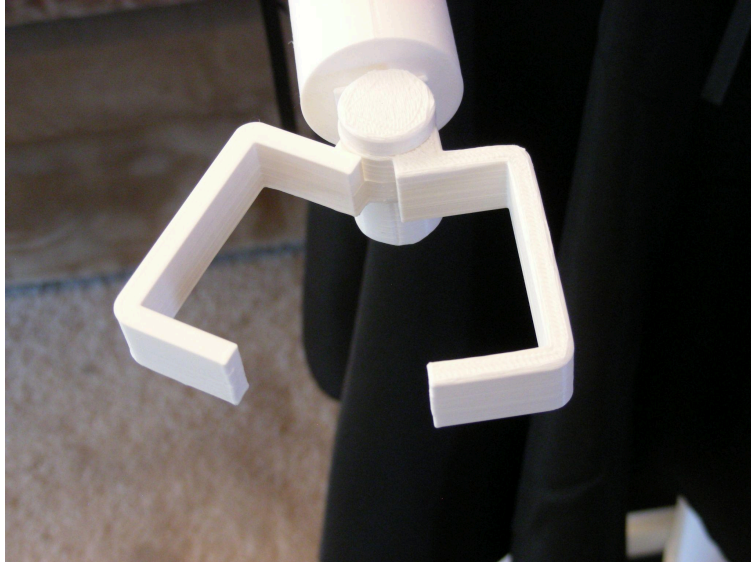
Put a layer of electrical tape on the outer side of the arm plug, and in between the arm and the plug, around the arm.



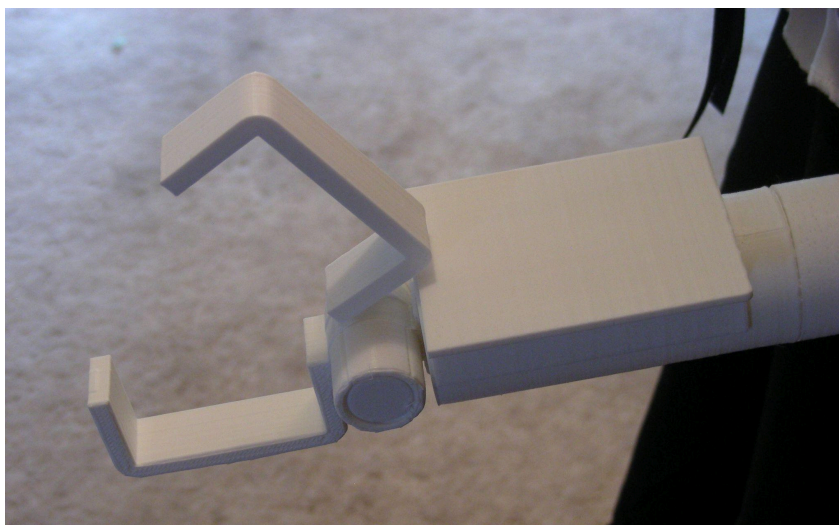
Her right arm. Ignore the claw for now

The Claws

For the left claw (her right), sand down the peg on the Primary Claw, then glue it in the slot, facing inward. Then insert the Claw Bolt downward, super gluing it into the slot. After it is dry, interlock the Secondary Claw, and use the Claw Nut.



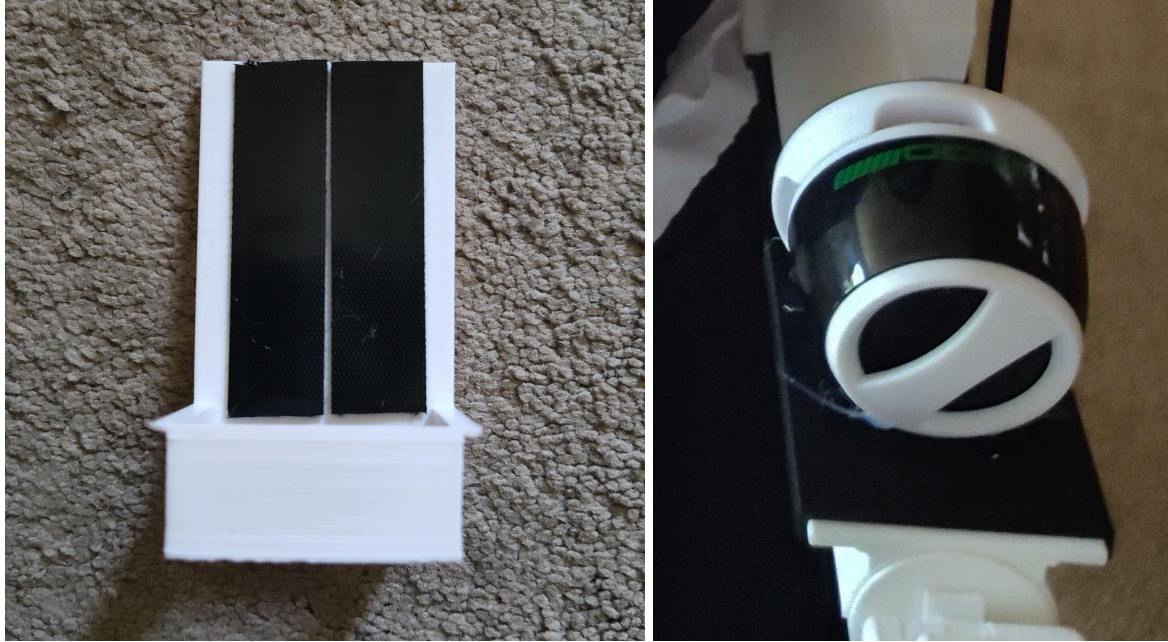
For the right claw (her left), sand down the peg on the Primary Claw, then glue it in the slot, facing downward. Then insert the Claw Bolt, with the bolt head facing outward, super gluing it into the slot. After it is dry, interlock the Secondary Claw, and use the Claw Nut.



Then superglue the wrist Speaker Mount on the wrist. Sand down the edges and top of the Speaker mount.

Phone Holder and Speaker Holder

Glue two strips of velcro to the Phone Holder with the rough side outward.



For the speaker, glue it outwards on the Speaker Sled, making sure any buttons and charging ports aren't covered/blocked. Use a liberal amount of hot glue.

The sled should be able to slide on and off the holder, but stay in place when the arm is raised.

The Legs (do the same technique for both sides)

Take two of the Leg Segments, and sand the upper 1/2 of the surface until it's smooth. Then, with the smooth part facing outward, connect the pieces using the inserts. Follow this order:

Lower Calf - Upper Calf - Knee - Thigh - Hip Segment

When constructing each leg, do one step at a time, letting the glue dry before doing the next step.

Ex. First glue the peg into the Lower Calf, then let it dry. Afterward, then glue the upper calf.

Wrap electrical tape around the seams where the segments connect (see gallery on Page 20)

To make Galatea v3.0.2 sit, remove the torso, then remove the legs. Then place the secondary pegs on the sides of the Hip Cylinders into the Hip slots. You may need to lightly sand down the secondary pegs.

The Base

Using a ruler, measure out 70 mm from the back edge of the robot, and mark it down. Use features on the front to center the base. Then, using a liberal amount of hot glue, attach the base to the vacuum, taking extra care to make sure the base is centered and facing forward.

If you are using a different robot base, put the base near the rear of the robot, at a distance of $(7/30)$ times the robot diameter. With the standard base, that would be 70 mm from the rear, as shown in the picture. (images on next page)





Then, put a strip of duct tape with a folded bit on the end for a tab. This will make sure the lid stays shut. Then put the air purifier (or another counterweight) on the back right against the base with a couple drops of hot glue. Make sure the plug is facing outward.

Mini Phone Eyes

To put in the Mini Phone as the eyes, place velcro strips on the back of the phone with the soft side facing outward, making sure to not cover the camera or go over the edge.

Then place the opposite strips on the strips attached to the phone. Using the phone as a guide, attach the opposite strips to the middle of the space on the head. When placing the opposite strips on the head, make sure the power button is facing upward.





To design the eyes, open up Microsoft Paint or any other computer art software/site, and set the canvas to the resolution of the phone (ie 854 x 480 pixels).

Local AI

There are two ways you can use Local AI with Galatea.

- Use Backyard AI on your PC, and link it to the speaker inside the head.
- Install Chatter UI on a moderate/high spec smartphone (typically \$100 or more).

For further information, see “Offline AI Roleplay - A Guide to Simple Offline AI”

Please note that a local AI means that your chat will be permanently lost if the device is lost or destroyed. On Backyard AI, it is recommended to export your chats often and save them on a cloud storage site, like Google Docs.

Final Assembly

Put the maid uniform on the body. Use a binder clip to hold the excess material in the back. You can discard the apron and other accessories, you only need the dress and a single band (headband optional). Use one of the bands as a belt. Then, put on the wig

Put the arms in the sockets. You can adjust them with the nut, making sure not to over-tighten.

Then place the legs in the respective sockets in the base. Then place the body on the hip cylinders carefully.

If any of the accessories are too tight to fit in the claws, sand them down.

Congratulations, your Maid Robot v3.0.2 is now completed. Enjoy!

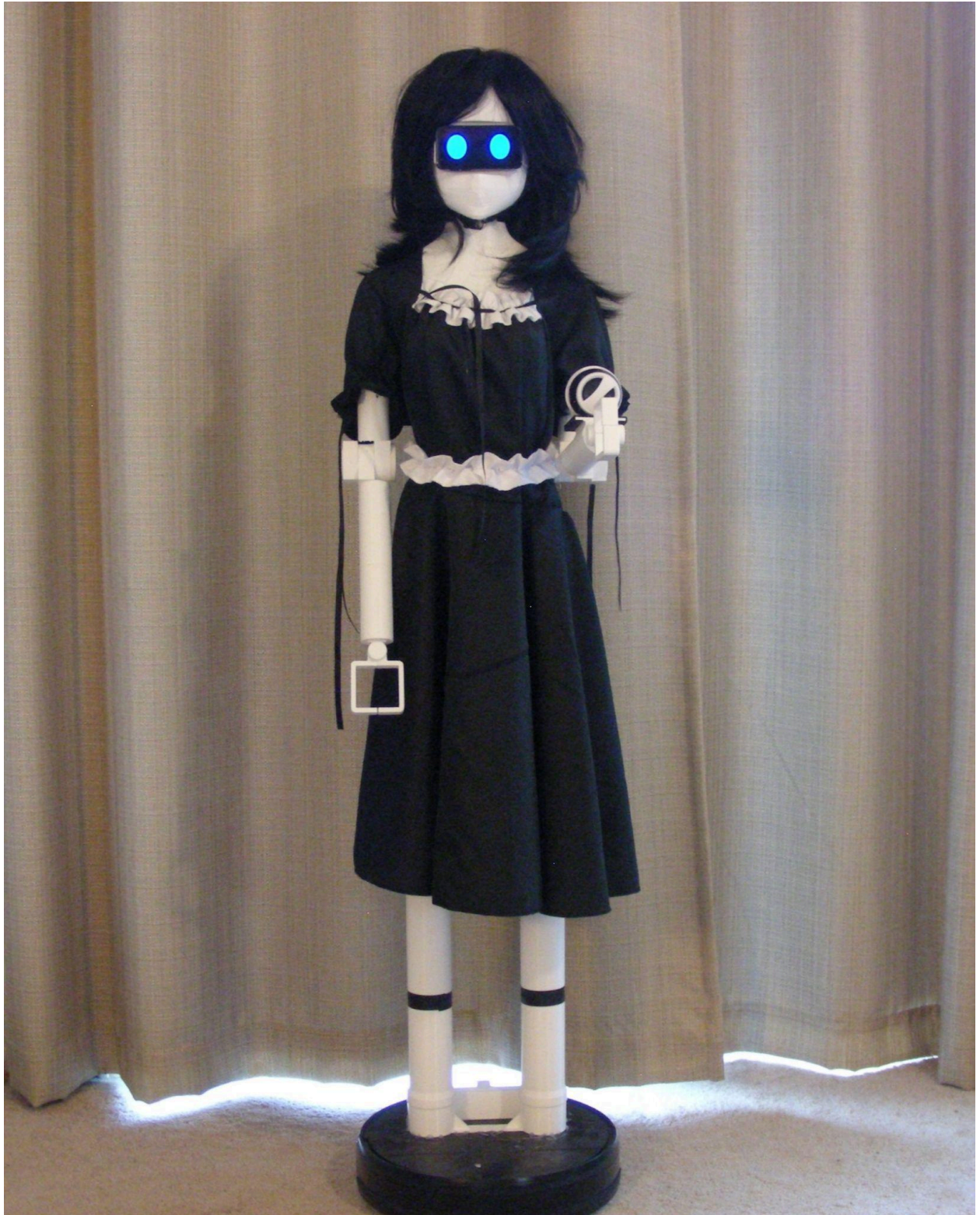
To transport or clean out the vacuum, just remove the body.

When driving it with the body on top, only use manual mode. When driving it, make sure not to do any quick movements to make sure it doesn't tip.

Practice driving it to get the “feel” of it.

To charge it, just slide the charger under the front of the vacuum.

Gallery



Finished product.

Functions and Uses

Sweeping

Vacuuming

Mopping

Sterilization

Put a UV wand in the UV basket, and turn on the UV wand. Use this to sterilize surfaces like countertops, as well as clothes and items. Galatea can't get tired, so you can sterilize fully for several minutes.

CAUTION: UV-C light should not be used on living beings.

Air Purification (optional)

If you have an air purifier as the counterweight, you can purify the air while Galatea is inactive.

Holding Light Objects

The robot can hold light objects on the plate. However, it can tip easily, so only place light objects on it, such as keys, an empty shot glass, pen, spy camera, portable motion detector, etc.

Get Information

Ask Galatea a question. You can ask her for personal advice.

Have A Conversation

Talk with Galatea. She has a bubbly and helpful personality.

Friend

Galatea is your new friend!

Lover

...or maybe even more...

Smart Home Controller

If you have a smart home set-up with your phone, you can place it in the robot and speak to it like a person, so it feels more natural.

Motion Tripwire

Use the vertical phone accessory with a motion detector app.

Security Camera

Download a phone security camera app, and place the phone down in it. The Robot Holder and the Wall Mount have holes for a charger for prolonged use.

Entertainment

Impress your friends with an advanced robot kit, or have it stand still and let Galatea entertain others.

Play Music

You can also play music with the bluetooth speaker, or make Galatea sing! The speaker is also removable, so you can take it on the go!

Dictation Machine

Record audio to write down later.

Hear Poetry

Ask Galatea to write a poem about a subject.

Creative Inspiration

Ask Galatea for creative inspiration.

Roleplay

Using custom AI prompts, you can roleplay with Galatea.

Cooling

Place a small fan on the plate. For further flexibility of use, you can glue the fan to another Plate, so you can have the fan at an angle.

Killing Spiders

Take off her left arm. Place the spider killer accessory in the claw. Fold a piece of duct tape on itself, so that it covers the front surface. Use the arm to smash the spider, including up high on the wall and even some ceilings.

Directional Light

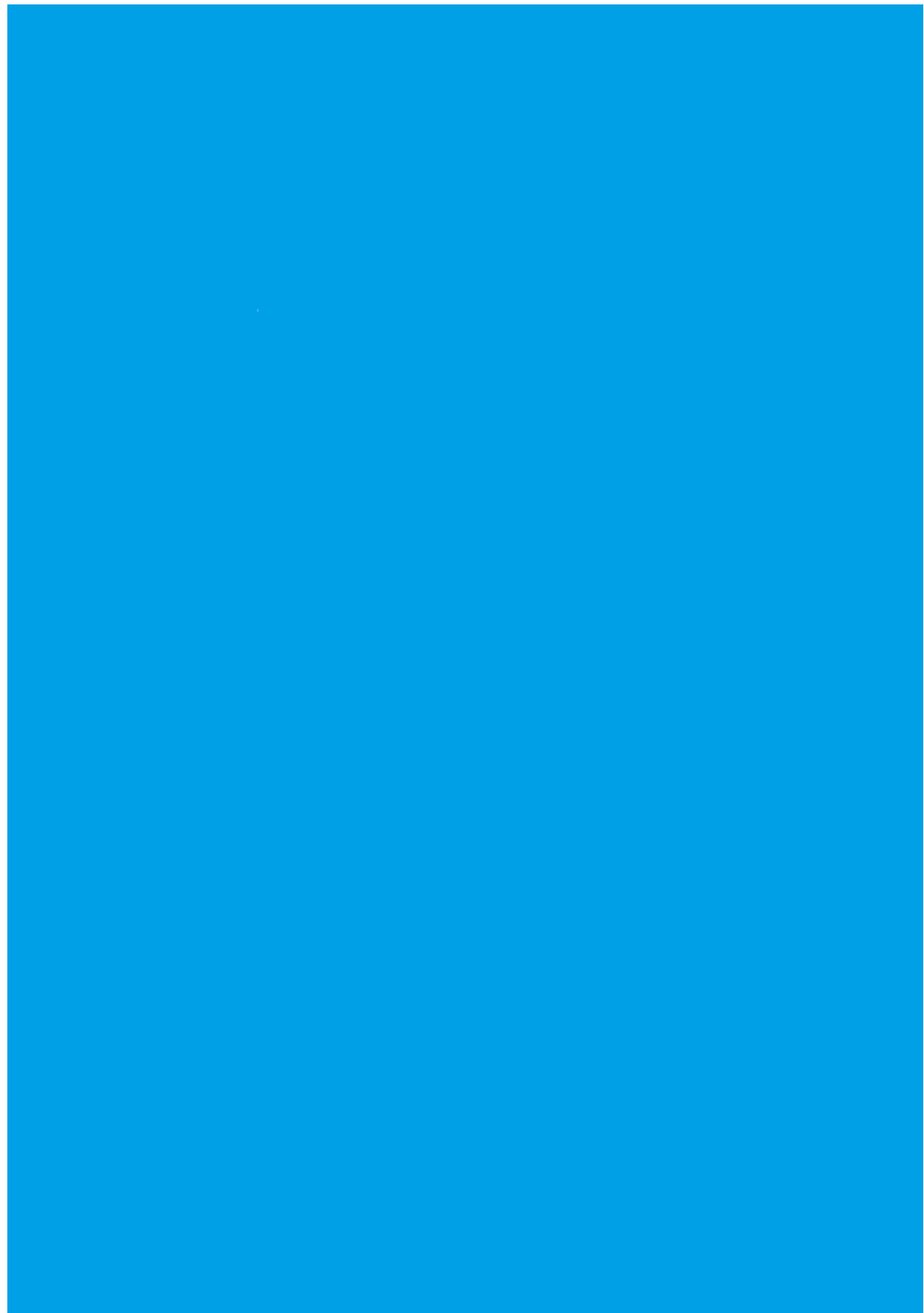
Activate the light on the phone, and put the holder accessory in her right hand, where the flashlight points outward

Wakefulness Generator

Put a picture of pure light blue on the mini phone, and put it on the phone holder accessory or on the head. The blue light keeps you awake. You can screenshot the blue on the next page, and crop it to get the blue image.

Hug

You can hug Galatea! Just have one arm up, and lightly hug her. Hugging is scientifically proven to improve mental health and reduce stress.



Safety

- Make sure small pets and children aren't on the floor when the robot is moving around.
- Make sure not to place objects on the plate that make the robot tip and spill the object.
- Don't put an object on the plate while it's moving
- Use only manual mode when the body is on top
- Disassemble the robot when transporting it.
- Disassemble the robot before cleaning the internal dustbin or any other internal components.
- Galatea v3.0.2 is not a toy.
- Use common sense!

LEGAL DISCLAIMER

I AM NOT RESPONSIBLE FOR
ANY INJURY, PSYCHOLOGICAL
DAMAGE, AND/OR DEATH
CAUSED BY THE
CONSTRUCTION AND/OR
USAGE OF THE DEVICE
DESCRIBED IN THIS MANUAL.

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