

Galatea: Robot Maid v3.0

Instructions

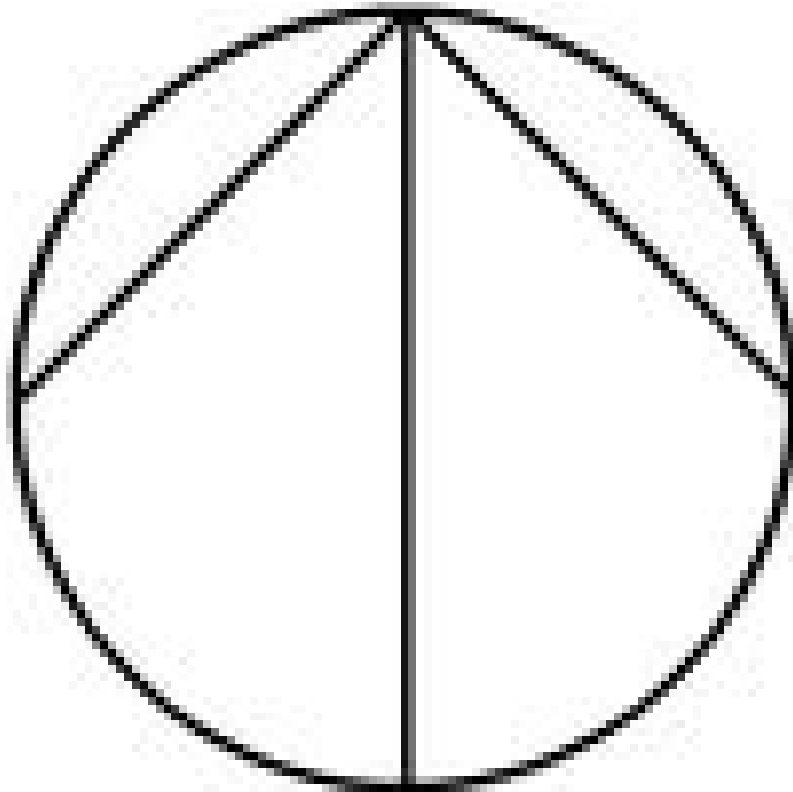


Table of Contents

Construction.....3

-Materials

-Speaker

-Apparel

-UV Wand

-Charger

-Counterweight

-LED Eyes

-Printing

Putting it all together.....11

-The Body

-Speaker

-The Arms

-The Claws

-The Legs

-The Base

-LED Eyes

-Local AI

-Final Assembly

Gallery.....21

Functions and Uses.....22

Safety.....25

LEGAL DISCLAIMER.....26

Construction

Materials

First, 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, a sanding sponge, a specific robot sweeper base, a wig, a maid dress, a bluetooth speaker, a 2-meter (6 foot) USB-to-USB mini cord, a UV wand, and a mini phone for some features.

Robot Sweeper Base;



You can find it on AliExpress or 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.

Speaker

You will need a specific bluetooth speaker. This will allow the robot to speak and play music. You can find it on AliExpress or Wish. Make sure to get either the white or black color.

[Bluetooth Mini Speaker Wireless Speaker Colorful LED TF Card USB Subwoofer Portable MP3 Music Sound Column For PC Phone - AliExpress](#)

It doesn't have to be this exact seller, but make sure you have the right type.

If this type of speaker is no longer available, or you want to use your own, you can use any speaker which fits within the 62mm X 62mm X 53mm cylindrical space in the head. However, some features like FM radio or emergency charging won't be available.

Apparel

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

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



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/dp/B08K9K9K9K)

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

To charge the speaker and the LED Eyes without having to take off the head, you need a 2-meter (6 foot) USB-to-USB micro cord, with the associated USB charger. You can find one in AliExpress, including glowing ones. Make sure the USB mini plug is not too thick.

To charge USB-C devices, including the mini-phone and certain models of the air purifier, you can get a USB micro to USB-C adapter.

Counterweight

For the counterweight, you can use a mini car air purifier, or any other object between 130 grams and 500 grams. You can find the specific air purifier on AliExpress or Shein under "mini air purifier".



LED Eyes (skip if using Classic Head)

For the LED Eyes, you will need an LED Name Tag. The color is up to your own preference.



It doesn't have to be the exact model, however it does have to be exactly 93mm x 30mm x 6mm, as well as have bluetooth capabilities for rapid changes.

If the LED badge is unavailable, you can use the Solid Eyes. To color the solid eyes, first use a highlighter to color in the eyes. Then, using a sharpie, color the rest of the surface. You will need white filament for this.


Mini Phone


First, you will need the specific phone. You can get it on AliExpress, under the search term “Smartphone XS16”.



Mini Smart Phone

2GB+16GB

 3G WCDMA

 3.0" HD Screen

 Android system

 3G Global



You can get it from other vendors, but make sure it's the same model.

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
- Head 2.1: 0% with supports (same for Classic Head)
- Backbone: 20% (x2)
- Solid Eyes: 1%

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
- Claw Secondary
- Claw Bolt
- Claw Nut

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%

PHONE ACCESSORY

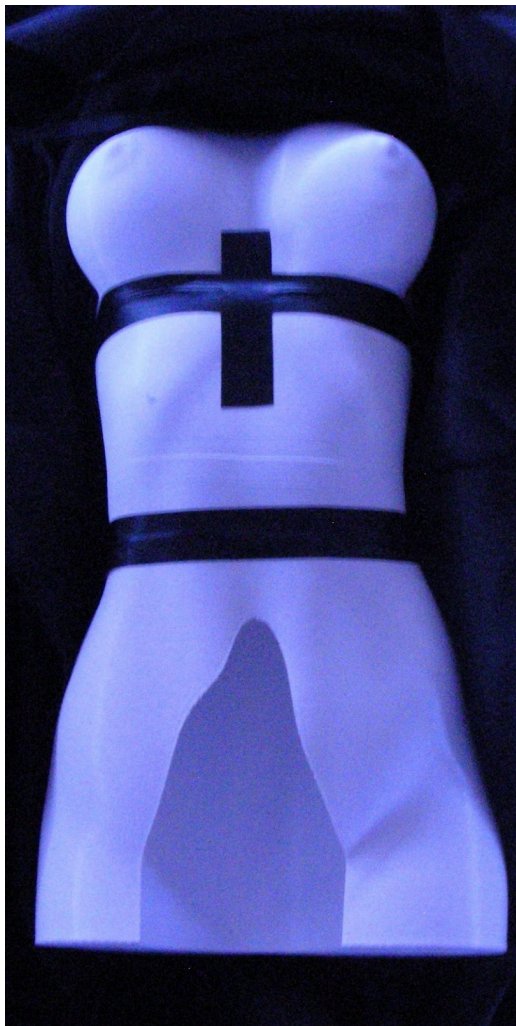
- Mini Phone Sled: 10%
- Mini Phone Wrist Mount: 10%
- Vertical Phone Holder: 10%

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 4 layers of electrical tape on the neck plug.



Speaker

Take the speaker, and remove the “cracked” outer sheath by gripping it and twisting it off. Put it in the head, with the USB slot aligned to the left (from the robot’s perspective) with a USB cable plugged in to see how far you can put it in. Then hot glue it in place, making sure it is still in place.



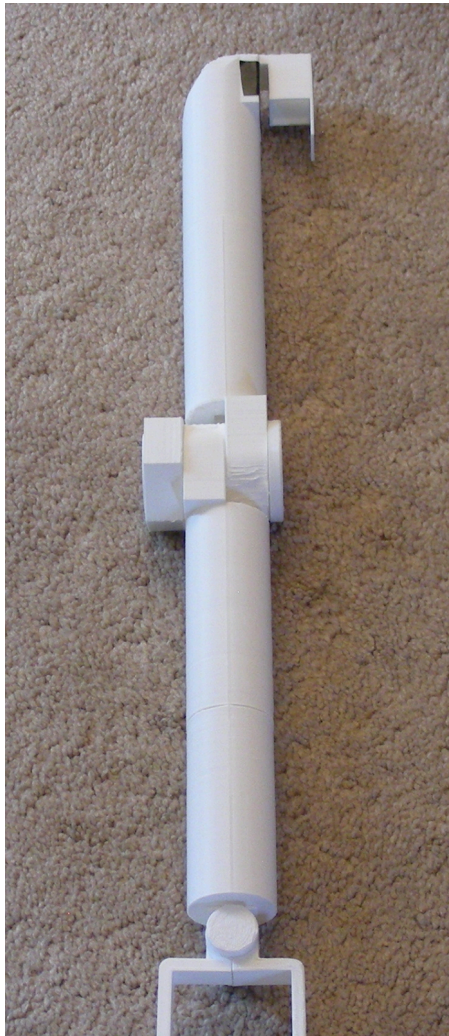
If you're using the old head design, refer to the original Galatea manual.

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.

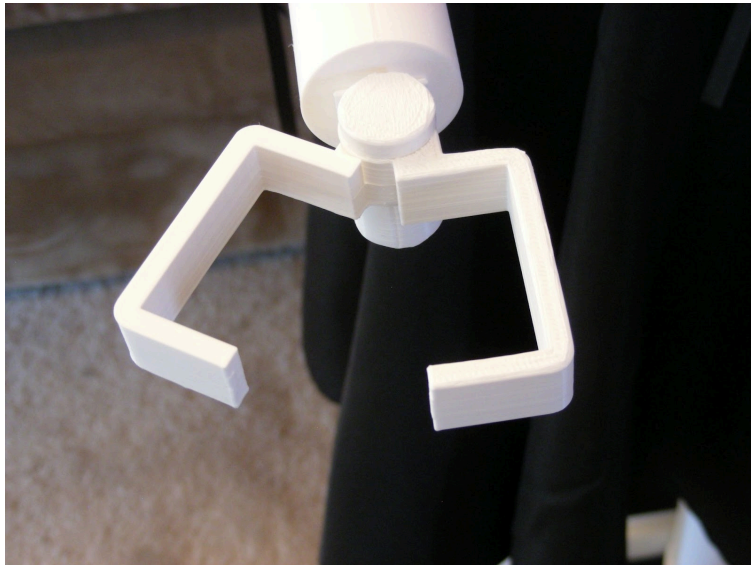
Put a layer of electrical tape on the outer side of the arm plug, and in between the arm and the plug, around the arm.



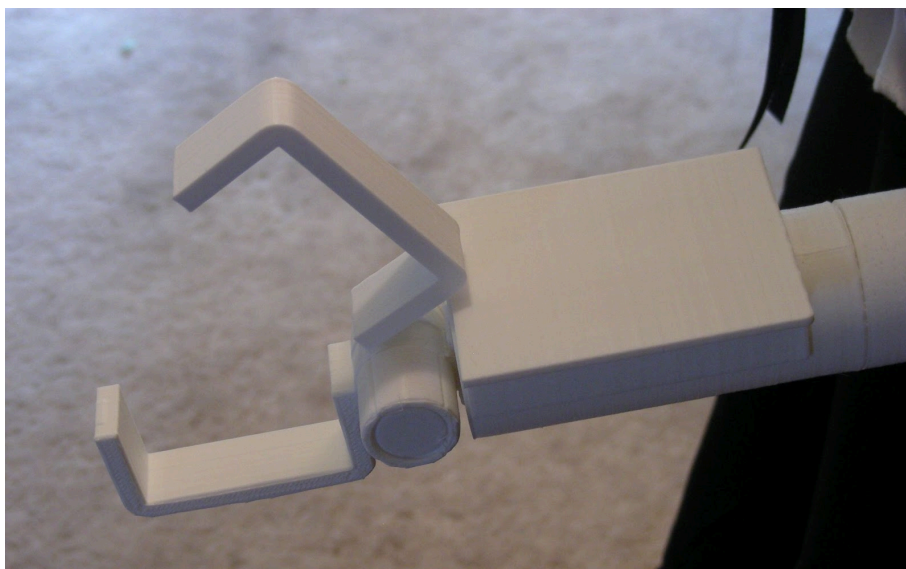
Her right arm. Ignore the claw for now.

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 phone holder on the wrist.

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, do one step at a time
Ex. First glue the peg into the Lower Calf. Then glue the upper calf.

Wrap electrical tape around the seams where the segments connect (see gallery on Page 21)

To make Galatea v3.0 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.

LED Eyes

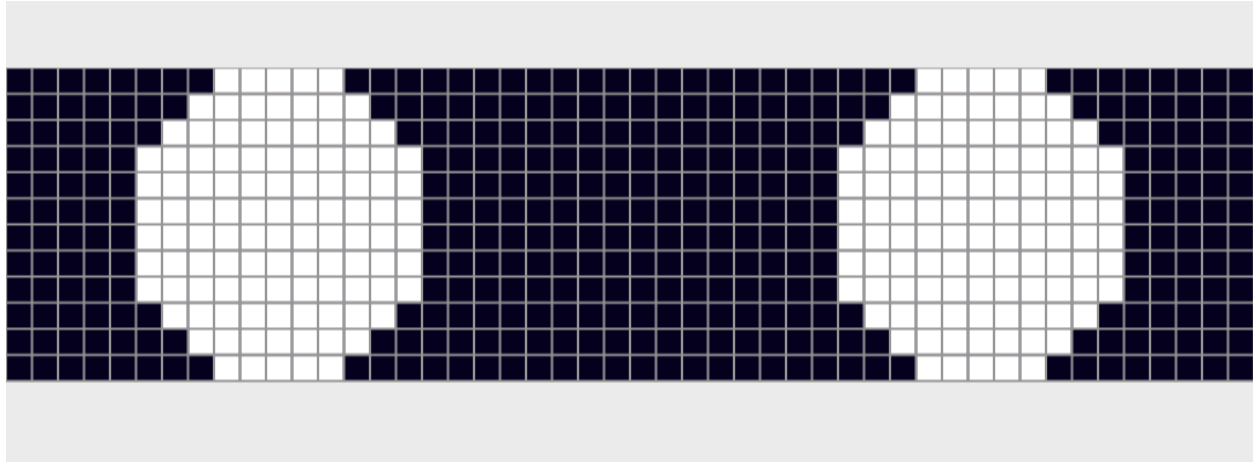
To put in the LED Eyes, first take the magnets off and any stickers. Then use electrical tape folded in on itself to attach it on both sides.



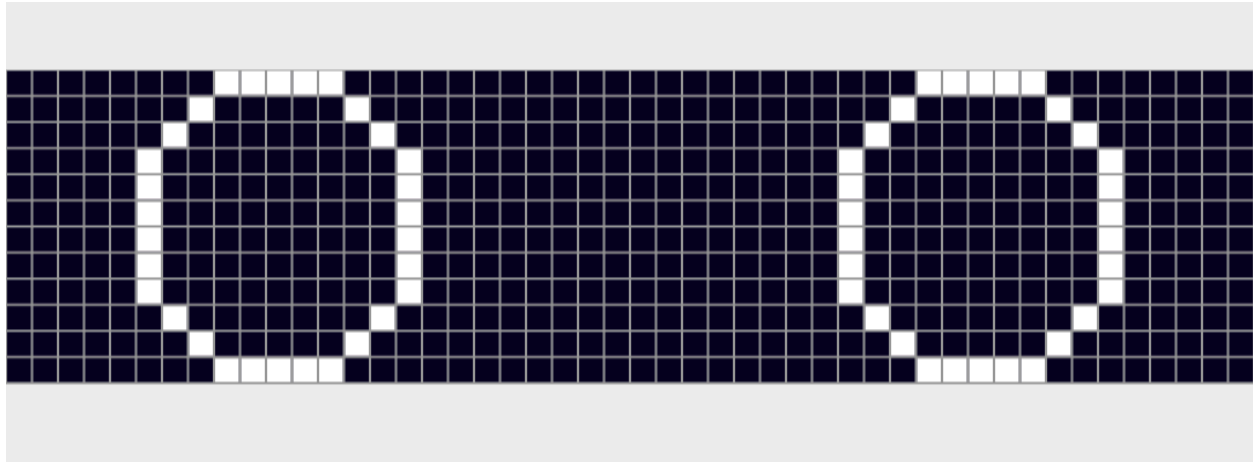
To control the eyes, install the app on either the mini-phone accessory or your personal phone.

To make the eye design, follow these patterns. Of course, you can make your own patterns.

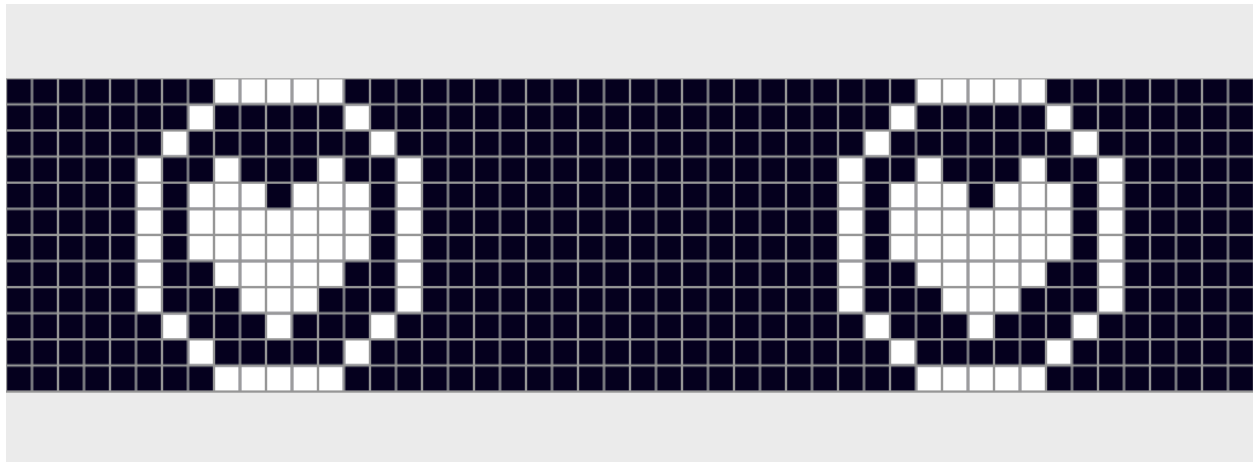
Normal:



Hollow:



Heart:



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.

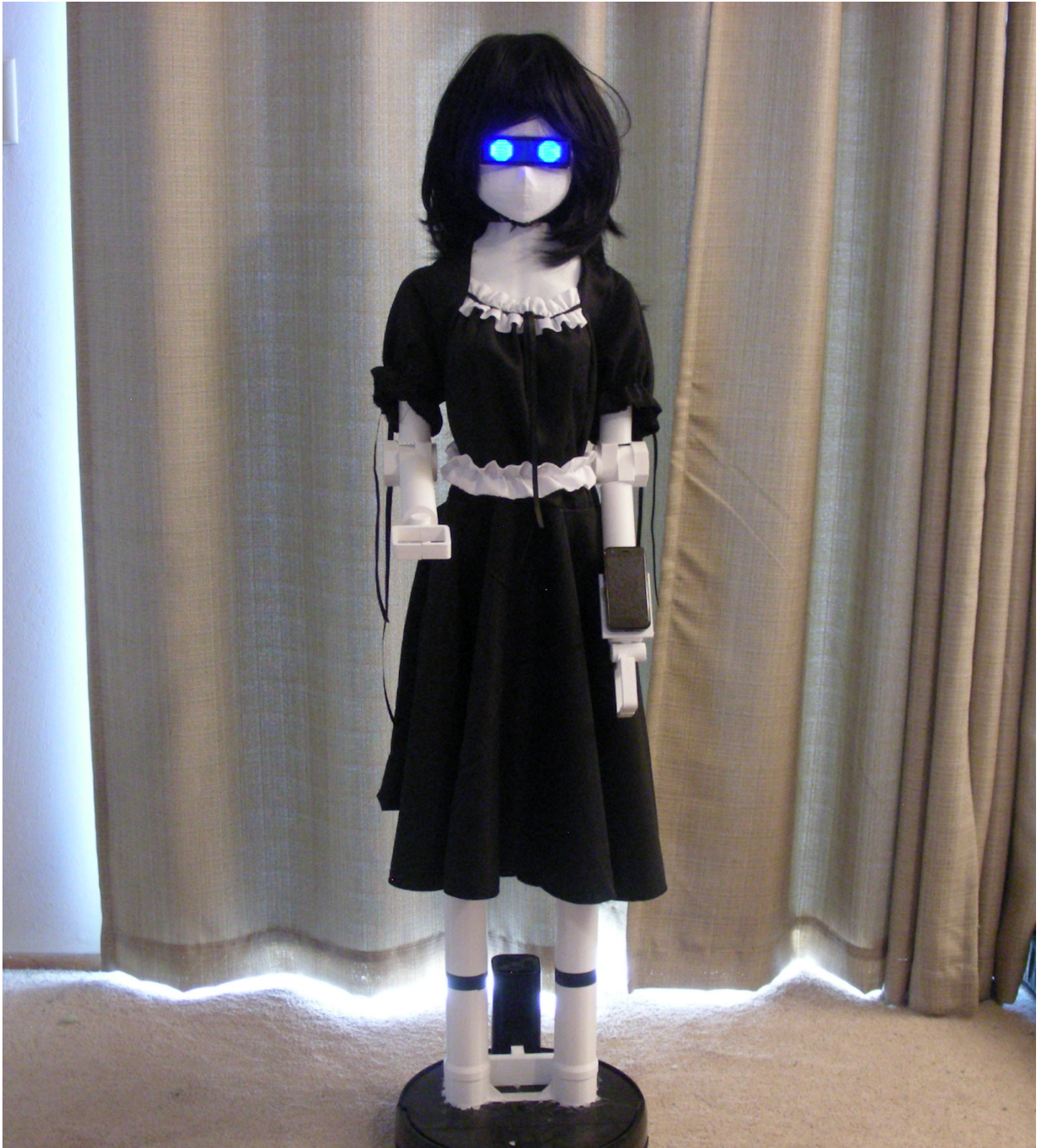
Congratulations, your Maid Robot v3.0 is now completed. Enjoy!

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.

Gallery



Finished product.

Functions and Uses

Sweeping

Vacuuming

Mopping

Sterilization

Put a UV wand in the UV basket, and turn on the UV wand.

Air Purification

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!

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.

FM Radio (only with specific speaker)

Plug a long USB cable into the speaker, and use the FM radio mode on the speaker.

Emergency Charger (only with specific speaker)

Plug in a USB charger into the speaker and charge your device. The speaker needs to be turned on in order to charge.

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 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.

I AM NOT RESPONSIBLE FOR ANY CRIME COMMITTED BY THE CONSTRUCTION, POSSESSION, OR USAGE OF THE DEVICE DESCRIBED IN THIS MANUAL.