

Robot Body Stage 1: Assembly guide

Concept assembly guide derived from the staged build plan. Not a certified engineering drawing. Prices are estimates (Oct 2026); nothing here is a purchase.

Stage 1



Concept render (illustrative).

- 1** **Flash Raspberry Pi OS onto the 64 GB robot microSD card.**
Part R4: 64 GB microSD (robot card) x1 (\$10) Buy: [Amazon search](#)
- 2** **Insert the card into your Pi 4B.**
Part R4: 64 GB microSD (robot card) x1 (\$10) Buy: [Amazon search](#)
- 3** **Connect the Camera Module 3 ribbon to the Pi CAM port (contacts toward HDMI).**
Part R1: Raspberry Pi Camera Module 3 x1 (\$25) Buy: [Raspberry Pi](#)
- 4** **Plug the USB mic into a blue USB 3 port.**
Part R2: USB mini microphone x1 (\$15) Buy: [Amazon search](#)
- 5** **Solder headers onto the MAX98357A amp board.**
Part R3: MAX98357A I2S amp + 3 W speaker x1 (\$10) Buy: [Adafruit](#)
- 6** **Wire amp VIN/GND/BCLK/LRC/DIN to Pi pins 2, 6, 12, 35, 40.**
Part R3: MAX98357A I2S amp + 3 W speaker x1 (\$10) Buy: [Adafruit](#)
- 7** **Screw the 3 W speaker leads into the amp terminals.**
Part R3: MAX98357A I2S amp + 3 W speaker x1 (\$10) Buy: [Adafruit](#)
- 8** **Print the desk stand / dome in PETG.**
Part R6: PETG filament (desk stand / dome, ~\$2 used) x1 (\$2) Buy: [Amazon search](#)
- 9** **Mount the Pi 4B and 10-inch touchscreen on the stand.**
Part R6: PETG filament (desk stand / dome, ~\$2 used) x1 (\$2) Buy: [Amazon search](#)
- 10** **Plug in the 5.1V 3A supply and boot.**
Part R5: Pi 4 USB-C 5.1V 3A supply (if needed) x1 (\$8) Buy: [Raspberry Pi](#)

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Run rpikam-hello and confirm the camera image.

Part R1: Raspberry Pi Camera Module 3 x1 (\$25) Buy: [Raspberry Pi](#)

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Record and play back a test clip to check mic and speaker.

Part R2: USB mini microphone x1 (\$15) Buy: [Amazon search](#)