



iPad Pro 12.9-inch (3rd generation) Wi-Fi

iPad Pro 12.9-inch (3rd generation) Wi-Fi + Cellular

Apple Recycler Guide

June 2023

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About This Guide

Apple Recycler Guides provide guidance for electronics recyclers on how to disassemble products to maximize recovery of resources. The guides provide step-by-step disassembly instructions and information on the material composition to help recyclers direct fractions to the appropriate material recycler.

To conserve important resources, we work to reduce the materials we use and aim to one day source only recycled or renewable materials in our products. A key path to reaching that goal is resource recovery from end-of-life electronics.

Disassembly procedures are intended to be performed only by trained electronics recycling professionals. The recycler is responsible for independently evaluating and ensuring compliance with all applicable environmental, health, and safety laws related to the work. These include but are not limited to laws relating to the management, handling, shipping, and disposal of the outputs of this work as waste and laws in place to ensure the health and safety of all employees who support this work.

For questions or feedback about this guide, email contactesci@apple.com.

Note: This guide may show images from other similar models, but the procedures are the same.

Identification

You can find the model number on the back of the iPad Pro.



*Model numbers:
(Wi-Fi) A1876
(Wi-Fi + Cellular) A1895, A1983, A2014*

Directive 2012/19/EU Annex VII Components

Directive 2012/19/EU Annex VII requirements apply to the following substances and components.

Substance/Component	Apple Part Name	Removal Instructions
Printed circuit board if the surface is greater than 10 square centimeters	Display logic board, main logic board, power supply logic board	Follow steps 1–20
External electric cables	Power adapter, charge cable	Follow step 1
Battery	Lithium-ion polymer battery	Follow steps 1–8
Cover glass and liquid crystal display (LCD) cell if the surface is greater than 100 square centimeters	LCD cell	Follow steps 1–7
No further substances or components as listed in Annex VII		

Safety Considerations

The recycler is responsible for independently evaluating all activities undertaken by its employees to perform or support the work and ensuring compliance with all applicable health and safety laws related to the work. These include but are not limited to laws relating to the health and safety of all employees who perform or support this work. The recycler is also responsible for evaluating the workspace and ensuring that the area in which the work is to be undertaken is designed using ergonomic best practices and meets all ergonomic requirements to ensure the protection of its employees.

Personal Protective Equipment

Personal protective equipment should be worn during the entire recycling process.



Wear hand protection



Wear protective clothing



Wear eye protection



Wear foot protection

Battery Safety

This product uses a lithium-ion polymer battery. Before beginning any disassembly work, ensure that a safe working procedure for handling lithium-ion batteries has been established, which could include discharging the batteries so that they can be more safely managed. The following considerations may also be included:

- Remove anything from your person that could conduct energy, such as jewelry and watches, to avoid electric shock to yourself or the logic board.
- To avoid the potential for thermal runaway and the release of potentially noxious fumes, don't puncture, strike, or crush lithium-ion polymer batteries or devices powered by them.
- Don't throw, drop, or bend the battery.
- Don't expose the battery to excessive heat or sunlight.
- Don't use tools that are sharp or conduct electricity.
- Keep your workspace clear of foreign objects and sharp materials.
- Dispose of batteries according to local environmental laws and guidelines.

Workspace safety guidelines

- Use heat-resistant gloves and safety glasses.
- Keep a sand dispenser within arm's reach (2 feet or 0.6 m) on one side of the workstation, not above the workstation. The dispenser should be a wide-mouthed, quick-pour metal container with a flip-top lid or tray that contains 8–10 cups (1.9–2.4 L) of clean, dry, untreated sand.
- Keep the battery at least 2 feet (0.6 m) from paper and other combustible materials.
- Work in an area with adequate ventilation.

Handling a thermal runaway

If you notice any of the following signs, a thermal runaway is likely underway, and you should act immediately:

- The lithium-ion polymer battery or a device containing one begins to smoke or emit sparks or soot.
- The battery pouch suddenly and quickly puffs out.
- You hear hissing or popping sounds.

Don't use water or an ABC/CO₂ fire extinguisher on a thermal runaway battery or a device containing one. Water and ABC/CO₂ fire extinguishers will not stop the reaction.

Do smother the battery or device immediately with plenty of clean, dry sand, dumped all at once. Timing is critical; the faster you pour all the sand, the faster the thermal runaway will stop.

Do leave the room for 30 minutes if the thermal runaway causes any irritation.

Do wait 30 minutes before touching the battery. Wear heat-resistant gloves and safety glasses to remove the battery from the sand, or use a touchless thermometer to measure the battery temperature. Only touch the battery when the event has finished.

Do dispose of the damaged battery or device (including any debris removed from the sand) according to local environmental laws and guidelines.

Hazard Warnings



Broken glass hazard



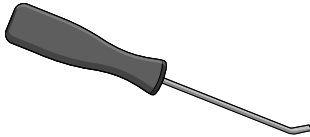
Rechargeable battery hazard



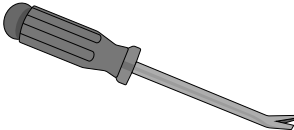
Chemical exposure hazard

Recommended Tools

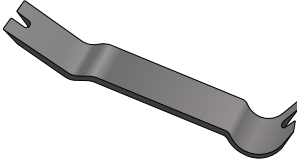
Miniature pry bar



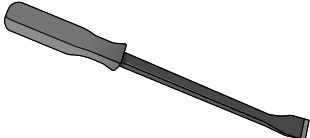
Nail-pulling screwdriver



Plastic pry bar



Screwdriver-handle pry bar



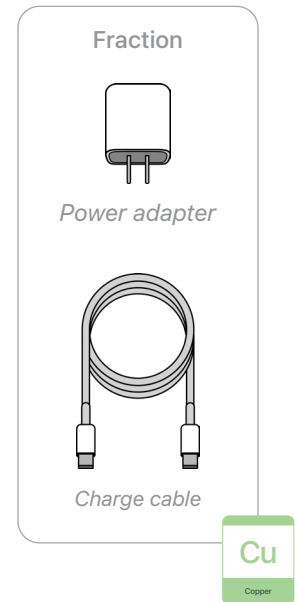
Tweezers



Disassembly Instructions

1. Remove the power adapter and charge cable.

- » *Ensure that the iPad Pro is turned off.*
- » *Unplug the power adapter. Disconnect both ends of the charge cable.*



2. Remove the display.



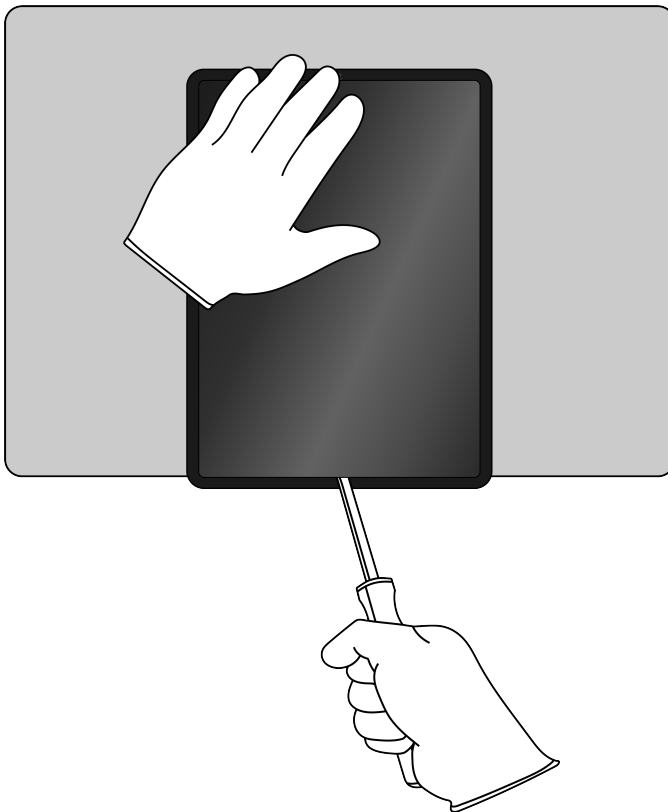
Broken glass hazard



Chemical exposure hazard

- » *Hold the iPad at the edge of a counter with the display facing up.*
- » *Insert the tool tip into the bottom of the display. Push the handle down to pry the display from the enclosure.*
- » *Remove the display by hand. Set the enclosure aside.*

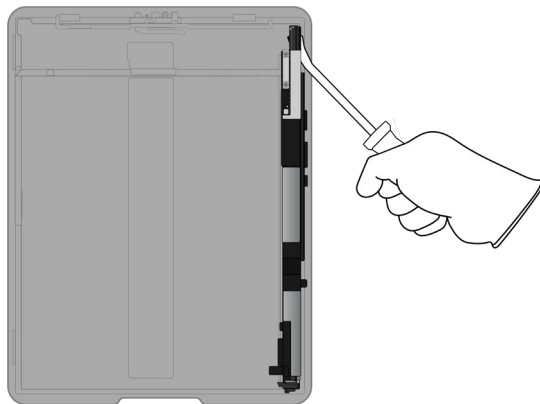
Tools Used



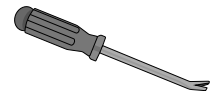


3. Remove the display logic board.

- » Lay the display facedown.
- » Pry off the display logic board.



Tools Used



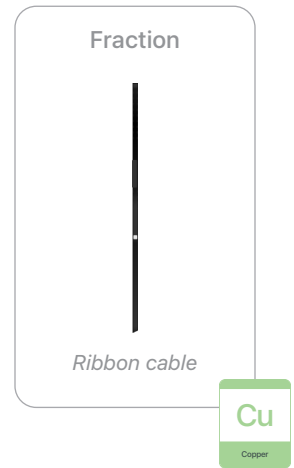
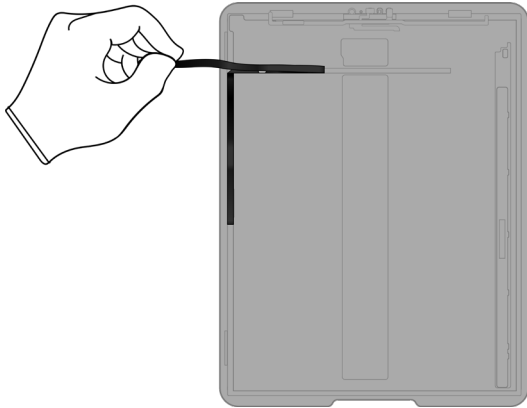
Fraction



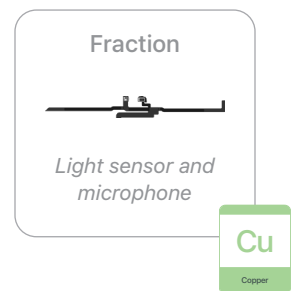
Display logic board



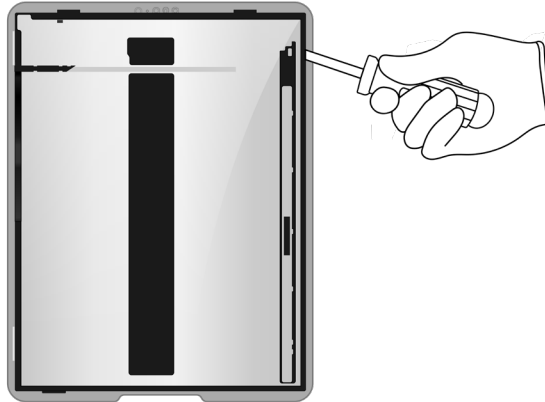
4. Remove the ribbon cable.



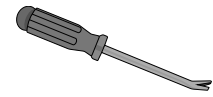
5. Remove the light sensor and microphone.



6. Pry off the display cover.



Tools Used



Fraction



Display cover

Fe

Ferrous

7. From the LCD cell, remove the display films.



Fraction

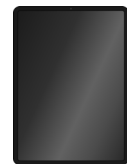


Display films

PL

Plastics

Fraction



LCD cell

GL

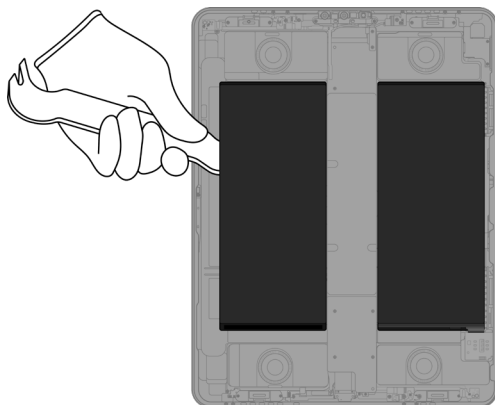
Glass

8. From the enclosure, carefully remove both lithium-ion polymer batteries.

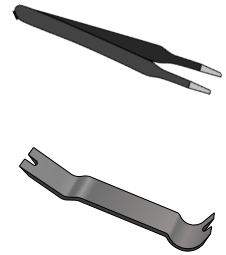


Rechargeable battery hazard

- » *For each battery, use the tweezers to gently peel one of the battery adhesive tabs away from the battery.*
- » *Twist the tab around the tweezers until white adhesive appears. Continue twisting until the entire adhesive strip is removed.*
- » *Repeat this process for the remaining battery tabs. Continue with the plastic pry bar if needed.*



Tools Used



Fraction

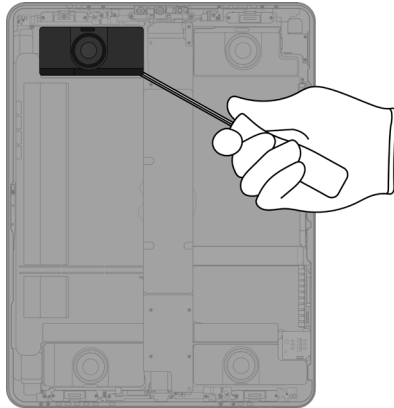


Lithium-ion polymer batteries

BT

Battery

9. Pry off the upper left woofer.



Tools Used



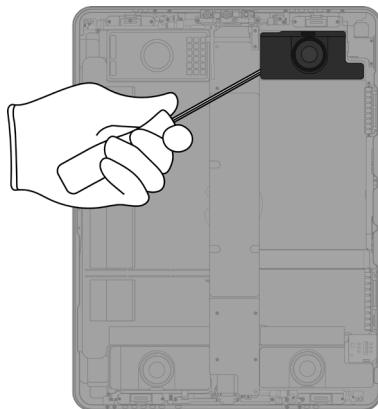
Fraction



Upper left woofer



10. Pry off the upper right woofer.



Tools Used



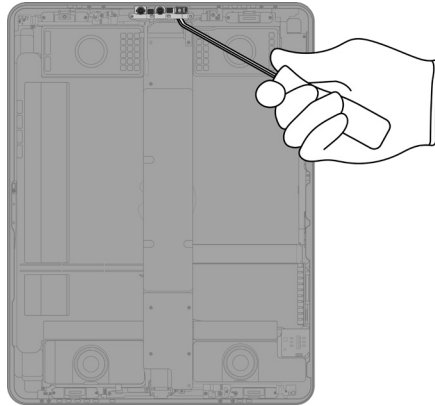
Fraction



Upper right woofer



11. Pry off the front camera.



Tools Used



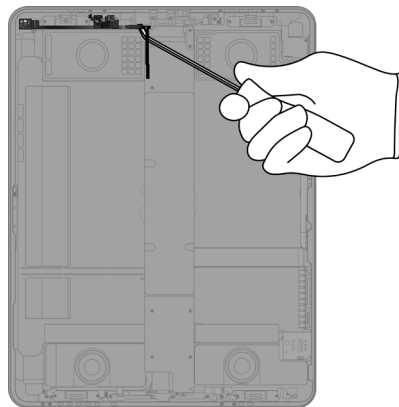
Fraction



Front camera



12. Pry off the upper left ribbon cable.



Tools Used



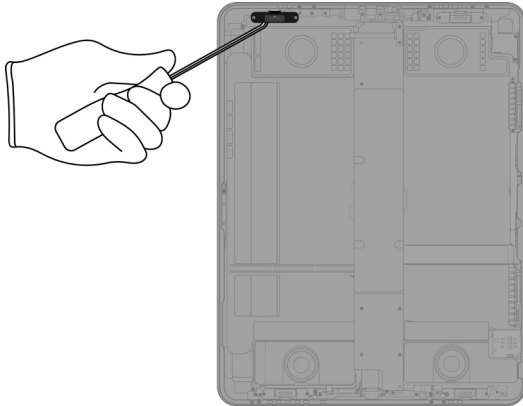
Fraction



Ribbon cable



13. Pry off the upper left tweeter.



Tools Used



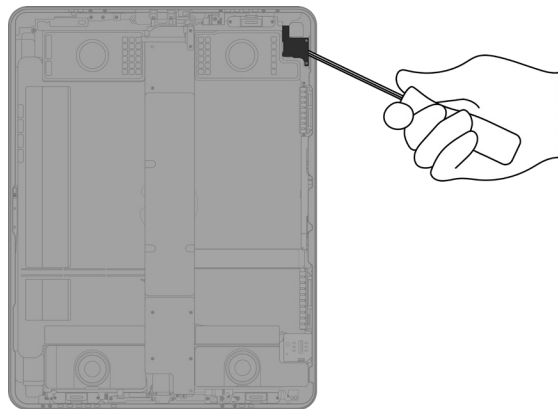
Fraction



Upper left tweeter



14. Pry off the microphone and strobe cover.



Tools Used



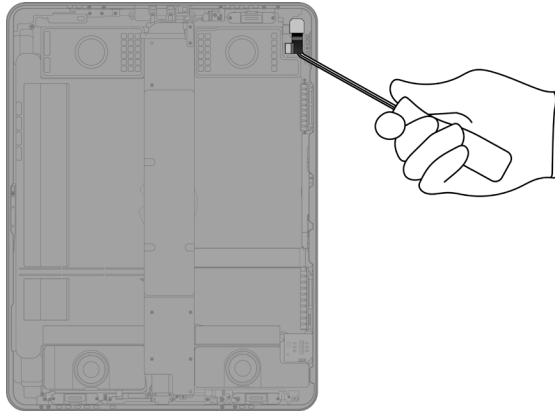
Fraction



*Microphone and
strobe cover*



15. Pry off the rear camera.



Tools Used



Fraction

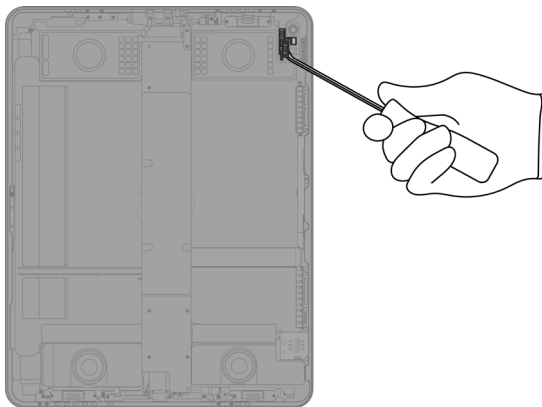


Rear camera

PMs

Precious Metals

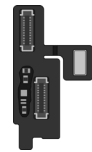
16. Pry off the microphone and strobe.



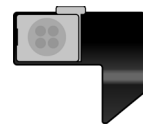
Tools Used



Fraction



Microphone

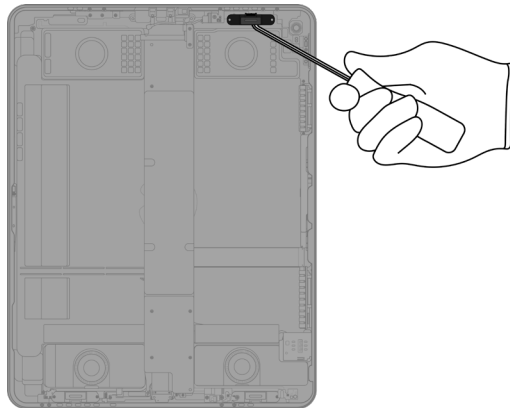


Strobe

Cu

Copper

17. Pry off the upper right tweeter.



Tools Used



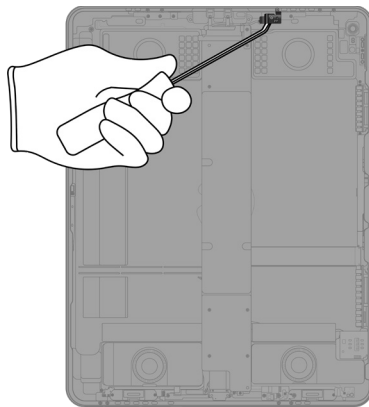
Fraction



Upper right tweeter



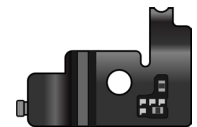
18. Pry off the ribbon cable.



Tools Used



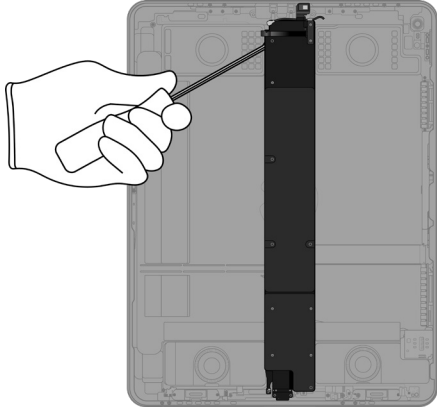
Fraction



Ribbon cable



19. Pry off the main logic board.



Tools Used



Fraction

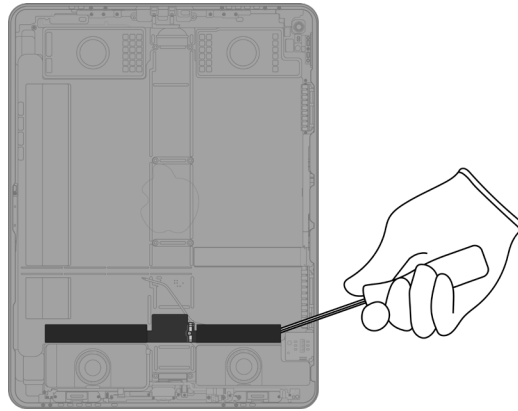


Main logic board



20. Remove the power supply logic board.

» *Pry off the power supply logic board.*



Tools Used



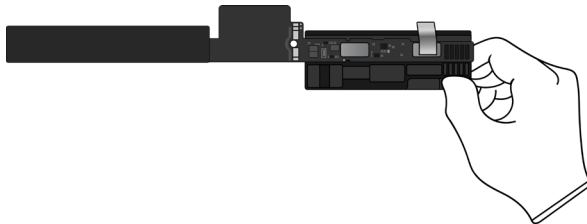
Fraction



Power supply logic board

PMs
Precious Metals

» *Remove the power supply logic board cover by hand.*



Fraction

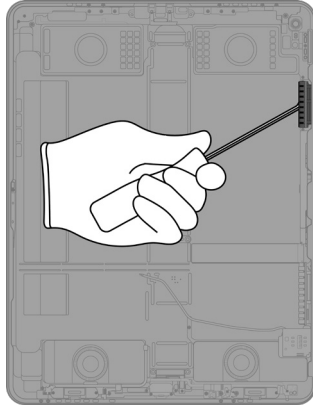


Power supply logic board cover

PL

Plastics

21. Pry off the ribbon cable.



Tools Used



Fraction

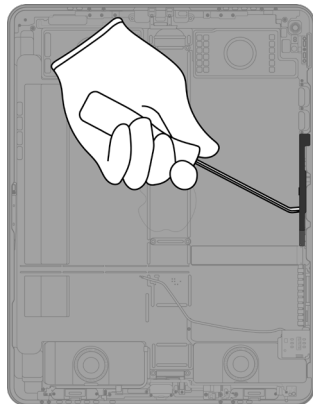


Ribbon cable

Cu

Copper

22. Pry off the Apple Pencil magnetic connector.



Tools Used



Fraction

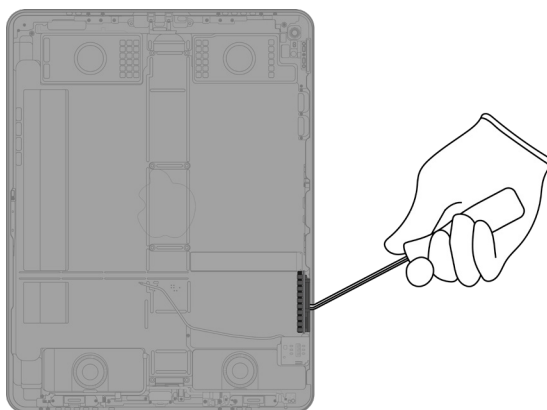


*Apple Pencil
magnetic connector*

Cu

Copper

23. Pry off the ribbon cable.



Tools Used



Fraction

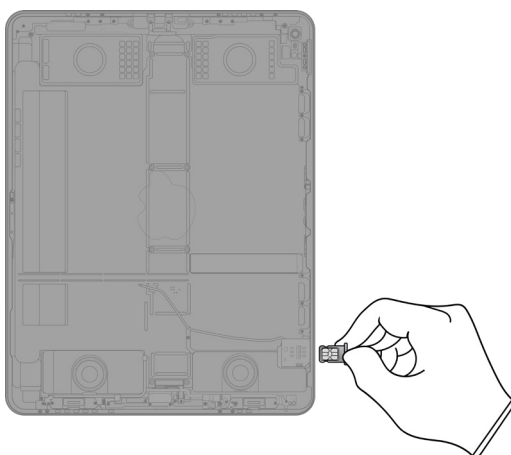


Ribbon cable

Cu

Copper

24. (Wi-Fi + Cellular models only) Remove the SIM card and SIM tray. Separate the SIM card from the SIM tray.



Fraction



SIM card

PMs

Precious Metals

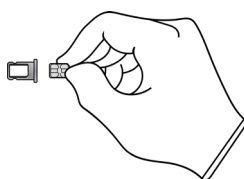
Fraction



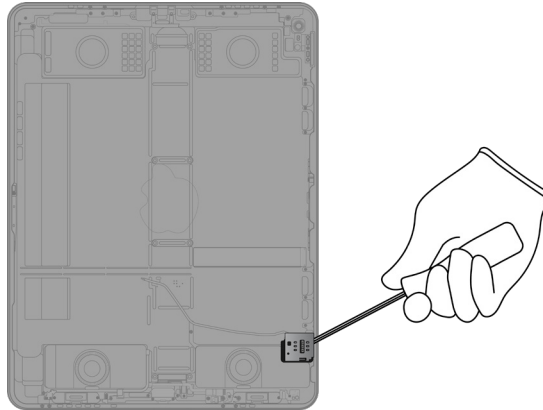
SIM tray

Al

Aluminum



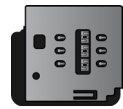
25. (Wi-Fi + Cellular models only) Pry off the SIM reader.



Tools Used



Fraction

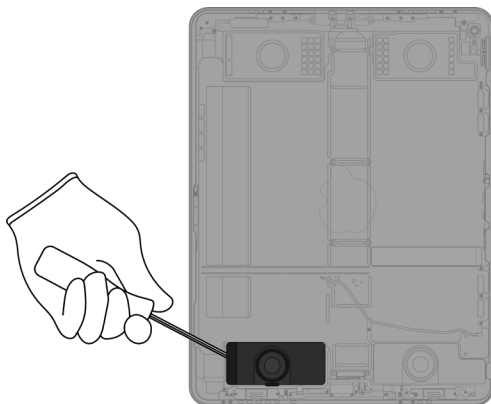


SIM reader

Cu

Copper

26. Pry off the lower left woofer.



Tools Used



Fraction

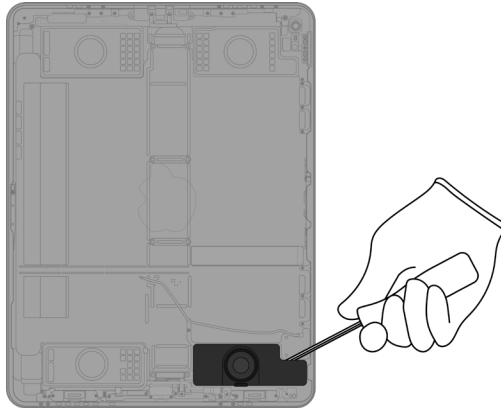


Lower left woofer

REE

Rare Earth
Elements

27. Pry off the lower right woofer.



Tools Used



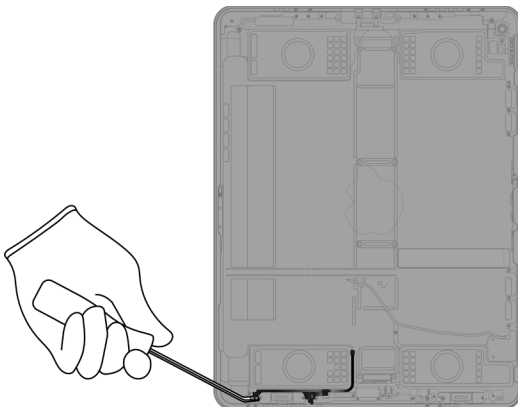
Fraction



Lower right woofer

REE
Rare Earth Elements

28. Pry off the lower left ribbon cable.



Tools Used



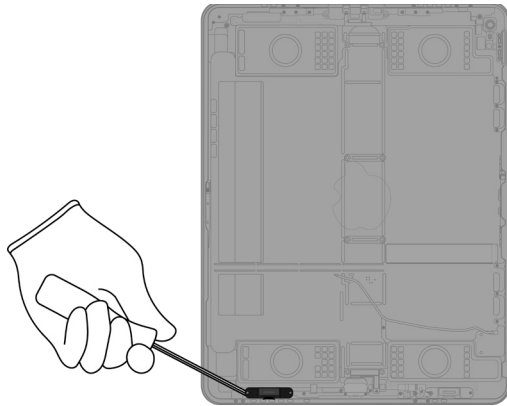
Fraction



Ribbon cable

Cu
Copper

29. Pry off the lower left tweeter.



Tools Used



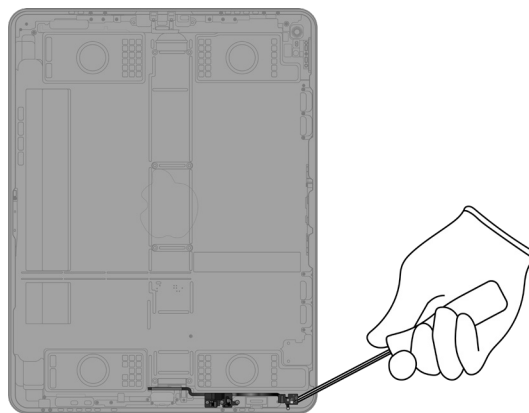
Fraction



Lower left tweeter



30. Pry off the lower right ribbon cable.



Tools Used



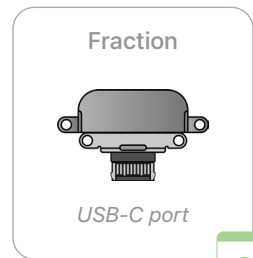
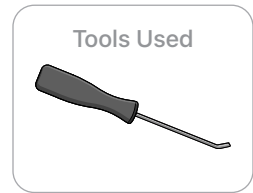
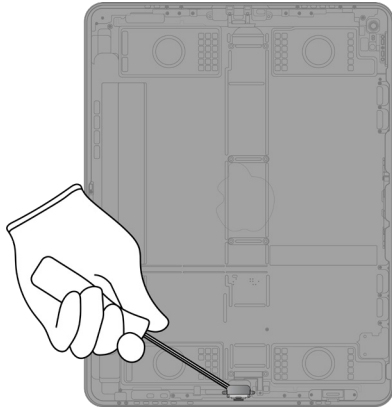
Fraction



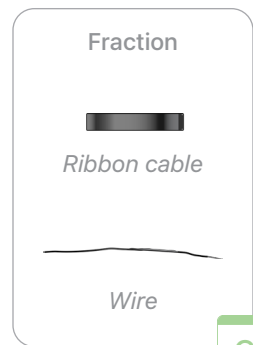
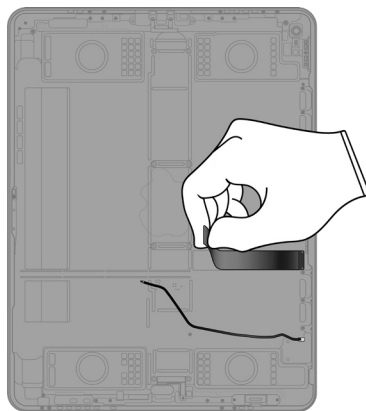
Ribbon cable



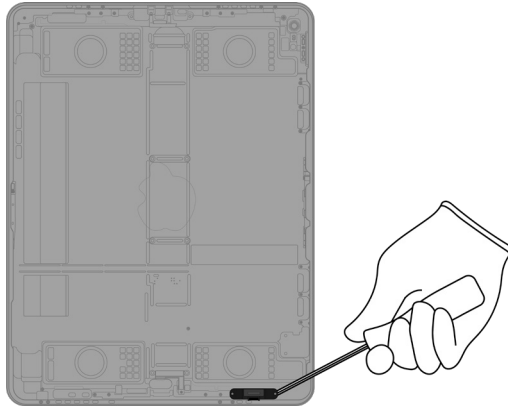
31. Pry off the USB-C port.



32. Pull off the remaining ribbon cable and wire.



33. Pry off the lower right tweeter.



Tools Used



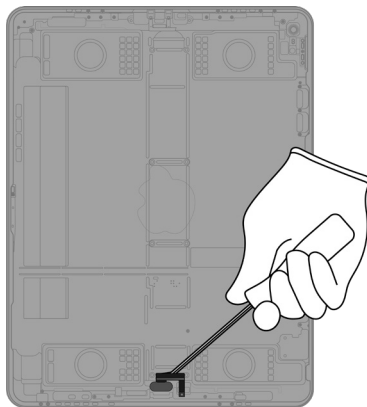
Fraction



Lower right tweeter



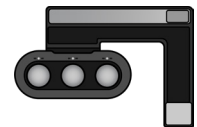
34. Pry off the Smart Connector.



Tools Used



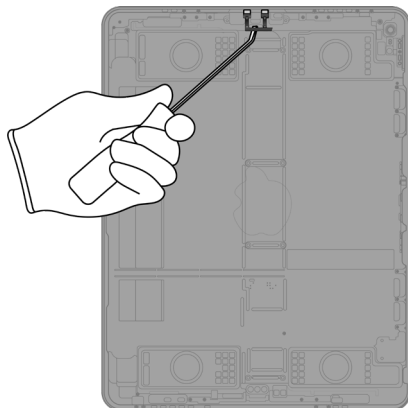
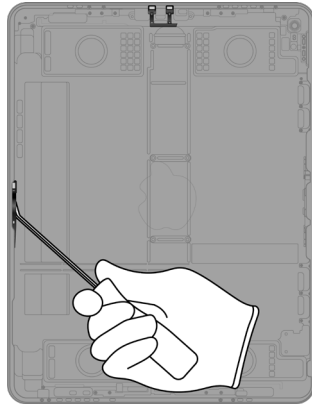
Fraction



Smart Connector



35. Pry off the microphone array.



Tools Used



Fraction

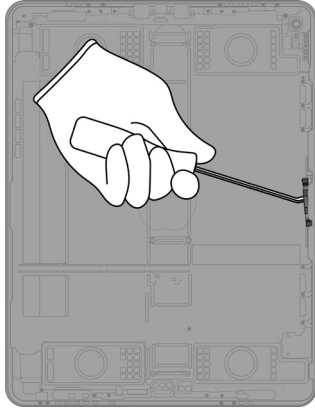


Microphone array

Cu

Copper

36. Pry off the wireless charging coil.



Tools Used



Fraction

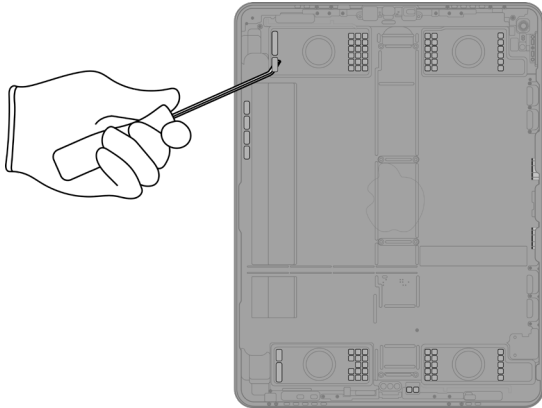


Wireless charging coil

Cu

Copper

37. Pry the 96 magnets off the enclosure.



Tools Used



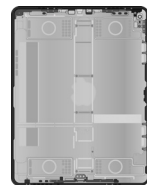
Fraction



Magnets (x96)

REE
Rare Earth Elements

Fraction


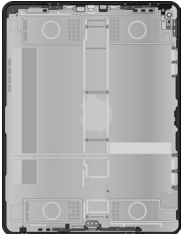



Enclosure

Al
Aluminum

Material Categorization of Output Fractions

All outputs from this process must be managed, handled, and disposed of in accordance with applicable waste laws and regulations, including but not limited to the Waste Framework Directive and its national enactments in Europe.

Fraction	Downstream Processing
<p data-bbox="435 554 570 579">Aluminum</p>  <p data-bbox="461 722 544 743"><i>SIM tray</i></p>  <p data-bbox="451 1045 552 1066"><i>Enclosure</i></p>	<p data-bbox="964 554 1276 579">Primary Target Material</p> 

<p data-bbox="440 1167 565 1192">Batteries</p>  <p data-bbox="358 1453 644 1474"><i>Lithium-ion polymer batteries</i></p>	<p data-bbox="964 1167 1276 1192">Primary Target Material</p> 
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Fraction

Downstream Processing

Ferrous

Primary Target Material



Display cover



Microphone and strobe cover

Glass

Primary Target Material



LCD cell



Potential Additional Materials



Fraction

Downstream Processing

Logic Boards



Display logic board



Front camera



Rear camera



Main logic board



Power supply logic board



SIM card

Primary Target Material



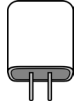
Potential Additional Materials



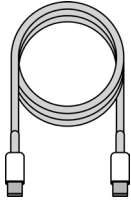
Fraction

Downstream Processing

Mixed Electronics



Power adapter



Charge cable



Light sensor and microphone



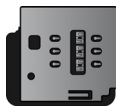
Microphone



Strobe



Apple Pencil magnetic connector



SIM reader

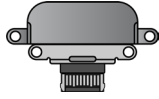
Primary Target Material



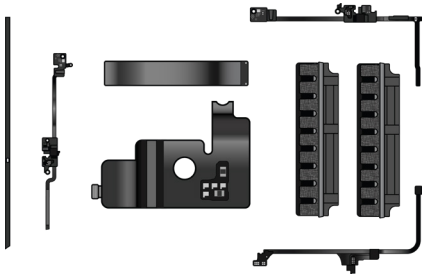
Potential Additional Materials



Mixed Electronics (cont.)



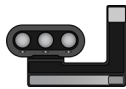
USB-C port



Ribbon cables



Wire



Smart Connector



Microphone array



Wireless charging coil

Fraction

Downstream Processing

Mixed Plastics



Display films



Power supply logic board cover

Primary Target Material



Rare Earth Magnets



Upper left woofer



Upper right woofer



Upper left tweeter



Upper right tweeter



Lower left woofer

Primary Target Material



Potential Additional Materials



Rare Earth Magnets (cont.)



Lower right woofer



Lower left tweeter



Lower right tweeter



Magnets (x96)