



Ciara Monitor B24BFH / B24BSW

Disassembly Procedure

DOC.#: (PR_HYP_EN004_Rev.05)

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1. PURPOSE

This procedure explains the steps to safely disassemble Ciara Monitors. It ensures that internal parts can be accessed for repair, upgrade, or recycling.

2. SCOPE

This procedure applies only to Ciara Monitors. It guides operators on how to remove the external enclosure, access internal components, and separate parts for recycling or reuse. Safety and proper handling must be always followed.

3. DEFINITIONS

FRU (Field Replaceable Unit): A part that can be replaced or upgraded by a trained technician without returning the whole product to the factory.

ESD Protection (Electrostatic discharge): Involves creating a safe environment and using specialized components.

4. RESPONSIBILITIES

The Quality Assurance, Engineering, and Product Management teams are responsible for creating and updating this procedure. Operators must follow all steps and safety instructions in this document during disassembly.

5. DESCRIPTION

5.1. General

This section explains how to safely disassemble the monitor. The chart below lists the Field Replaceable Units (FRUs) in the order they should be removed, from top to bottom.

- Always remove the FRUs listed at the top of the chart before removing those listed below.
- Use the chart to identify which FRUs must be removed first before accessing or replacing the target component.

Once the correct order is identified, follow the section numbers in the chart and begin the removal process step by step.

5.1.1. Preparation

Before starting, prepare the following tools and equipment:

- One 2 mm phillips screwdriver
- Tweezers (for pulling out screws)
- A plastic card (in credit card size)

Safety Precautions

Before you begin to disassembly read the following safety precautions carefully. Be sure to follow them while you are working.

⚠ WARNING:

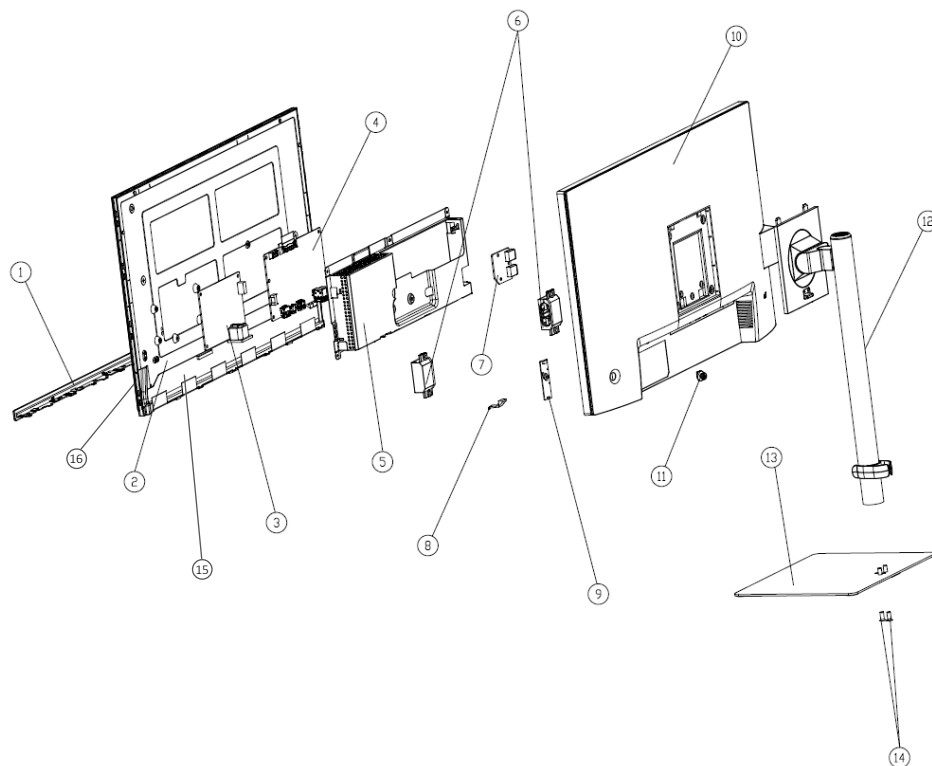
1. To avoid the risk of electrical shock, turn the monitor off and remove the power cord from the electrical outlet.
2. Because of possible static electricity. To avoid the risk of electrical shock, be sure to remove any metal jewelry or accessories such as necklaces, bracelets, and rings before starting work. Never work with damp or wet hands.
3. To avoid personal injury, take care to avoid the sharp edges or corners of the components.

CAUTION:

Before raising an FRU or other component, make sure that all the component cables have been disconnected to avoid the risk of electrical shock caused by accidental contact with the energized components.

Inside the Monitor are components that may become hot during operation. To avoid burns, let the hot components cool down before starting disassembly.

Image 01 – Exploded Drawing B24BFH /B24BSW Schematics
Device Components – Number and Description



No.	Description.
1	Lower front shell
2	Module
3	Power PCB
4	PCB
5	Shielding cover
6	speakers
7	HUB PCB
8	Lens
9	Key PCB
10	Back Cover
11	Key support
12	stand
13	Base
14	Screw Of Base
15	Source Board PCBA
16	LCD Bezel

⚠ Note: In addition to the components, there is a cable package that includes:01 power cable and 01 HDMI cable.

5.1.2. Recommended Disassembly Steps

Reference: Exploded Drawing B24BFH /B24BSW Schematics

Step 1 – Disconnect monitor from power.

Unplug any external cables (power cable, HDMI cable, etc.)
Place face-down on a soft surface to protect the screen.

Step 2 – External Components

Remove stand and base first to stabilize handling.
Remove Base (13) → Unscrew Base Screw (14).
Detach Stand (12); it's usually locked into the back cover bracket.

Step 3 – Rear Enclosure

Remove Back Cover (10); unscrew the 4 screws in the back, gently release the clips around the edge; this exposes internal Printed Boards and cabling.
Disconnect Key PCB (9) and Key Support (11); they are often fixed to the back cover.

Step 4 – Internal Electronic Components

Disconnect Speakers (6), HUB PCB (7) and Key PCB (9).
Remove Shielding Cover (5) if it obstructs access to modules or cables.
Remove Power PCB (3) and PCB (4); it is recommended to mark the connectors to ensure reassembly accuracy.

Step 5 – Display Module

Lift out the display Module (2) carefully; avoid bending or stressing cables.
Remove Lens (8) if integrated with light or sensor systems.

Step 6 – Front Assembly

Remove Lower Front Shell (1) only after the module and electronics are out; it provides the main structure for the display Module (2), and separate it from the LCD Bezel (16).

General Disassembly Notes

- Always remove the stand and back cover first. These two parts open access to all others.
- PCBs and speakers come before the module. Removing the display too early can damage connectors or cables.
- Front shell is last. It's typically cosmetic and structural.
- Use ESD protection, gloves, and non-metal prying tools to avoid damage.

Warnings and Safety Notes

- A) Avoid pressure on the LCD area: Always place the monitor face-down on a soft, clean, and static-free surface during service.
- B) Support the monitor while removing the base and stand: The unit can tip easily once the base screws are removed.
- C) Keep all screws and small parts organized: Improper reassembly may result in mechanical failure or poor fit.
- D) Handle all cables and connectors gently: Excessive pulling can damage connectors.
- E) Label or mark all connectors before disconnection: Ensures correct cable routing and prevents reassembly errors.
- F) Observe proper ESD protection: Use an antistatic wrist strap and grounded work surface when handling PCBs.
- G) Hold printed circuit boards by their edges: Avoid contact with conductive traces and components.
- H) Handle the LCD module with extreme care: Do not twist, flex, or press on the active area.
- I) Clean optical components with microfiber cloth only: Avoid using solvents or paper-based materials that may scratch the surface.
- J) Remove the front shell only after all internal parts are detached: It provides structural support; removing it early can cause cracks or misalignment.

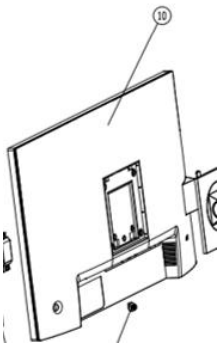
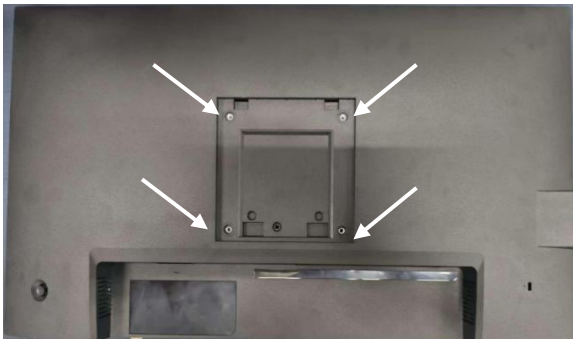
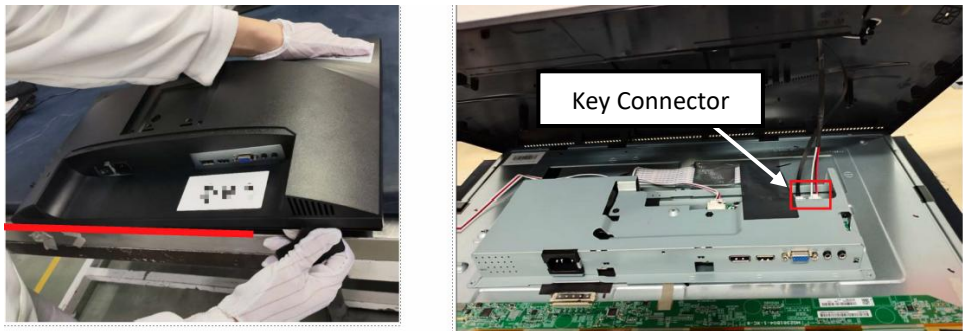
5.1.3. Rear Enclosure and Access to Internal Electronic Components

Access to the internal parts.

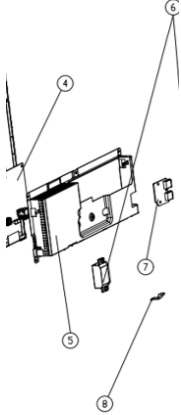
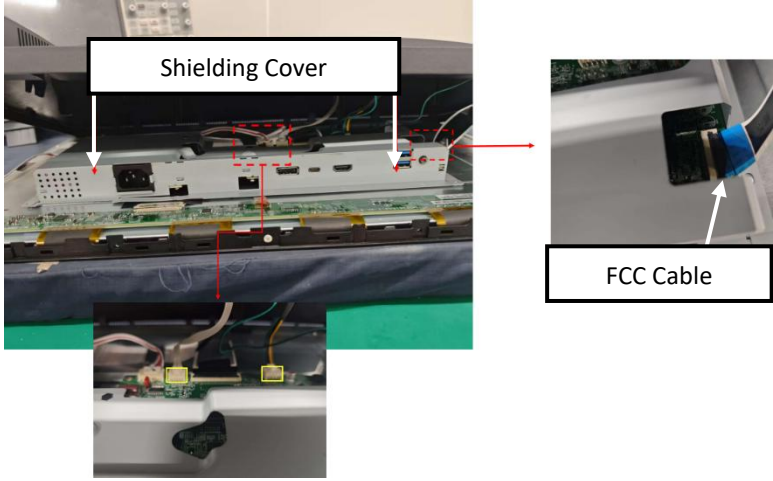
Remove Back Cover (10); unscrew the 4 screws in the back part, gently release the clips around the edge, this exposes internal PCBs and cabling (Section 1)

With your fingers carefully break the inner buckle of the back base (Section 2).

Disassemble the Back Cover (10) and disassemble the key connector (Section 3).

Reference	Device Components
	1 
	2 
	3 

Remove Shielding Cover (5), if it obstructs access to modules or cables. (Section 4).
Unplug the FCC Cable, button board cable and speaker cable.

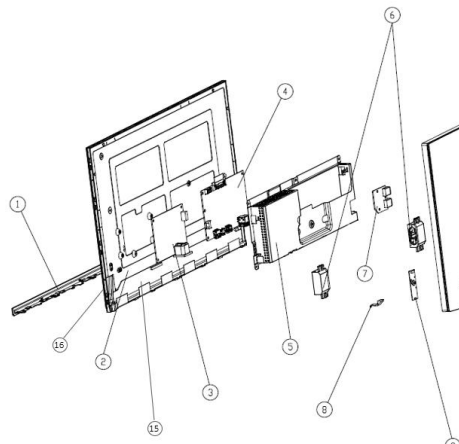
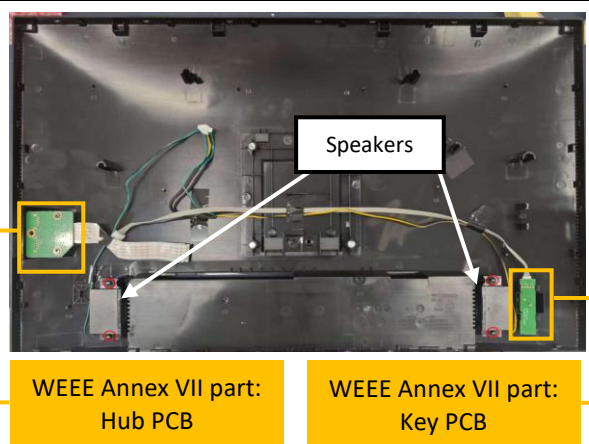
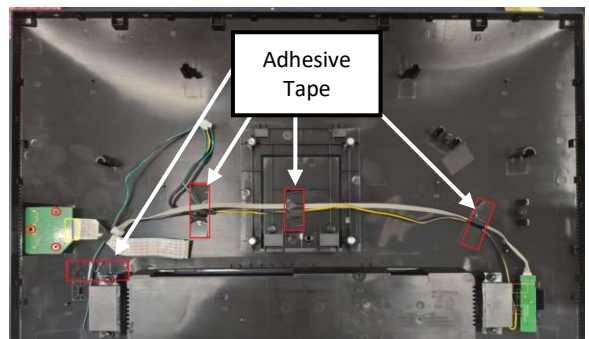
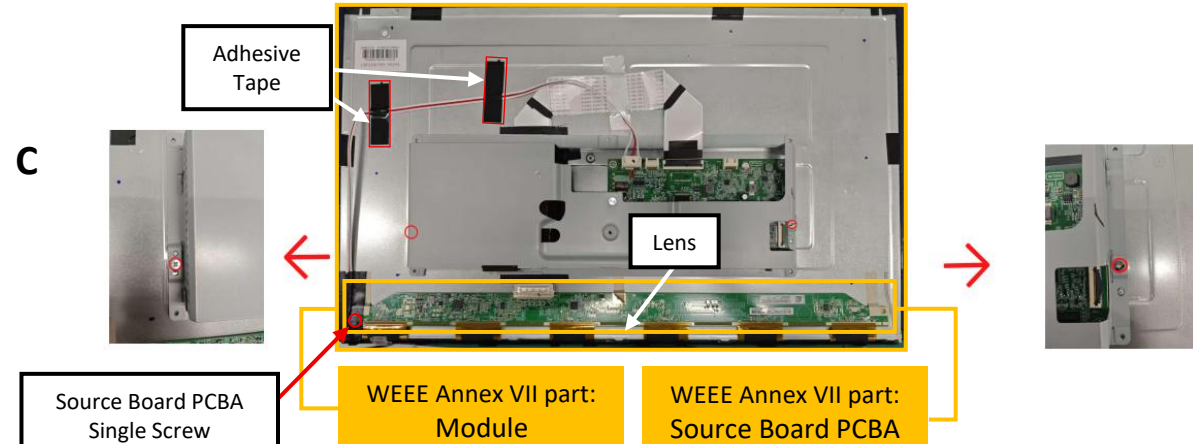
Reference	Device Components
	4 

5.1.4. Internal Electronic Components

Disconnect Speakers (6), HUB PCB (7), and Key PCB (9). (Section A)

Remove the adhesive tape and unplug the wire harness. (Section B and C)

Unscrew and remove the Source Board PCBA (15). Then remove the Panel Module (2). The lens is housed in this module and can be easily detached once the panel is detached (Section C).

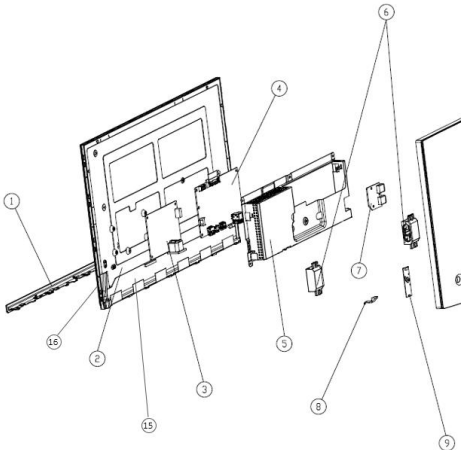
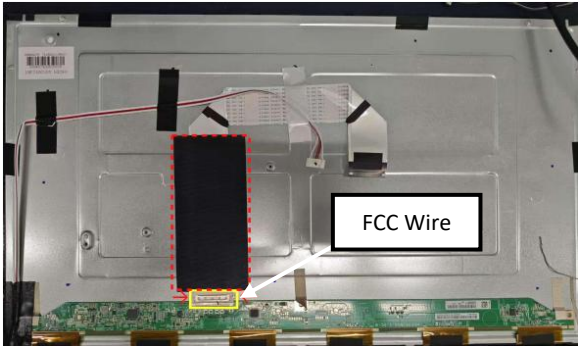
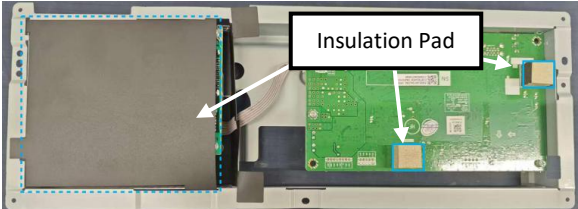
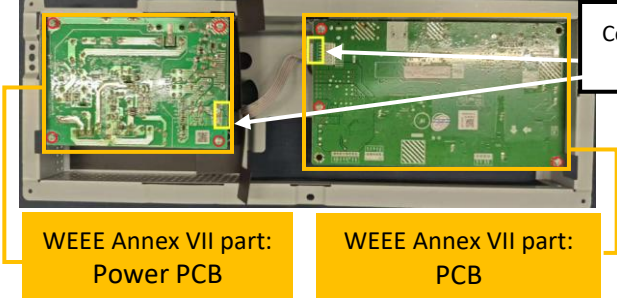
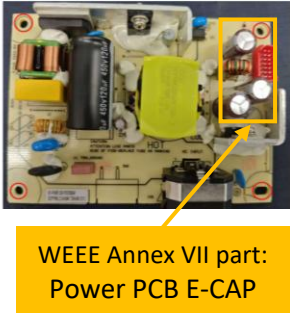
Reference	Device Components
	A 
	B 
	C 

Tear off the barrier and unplug the FFC wire. (Section D)

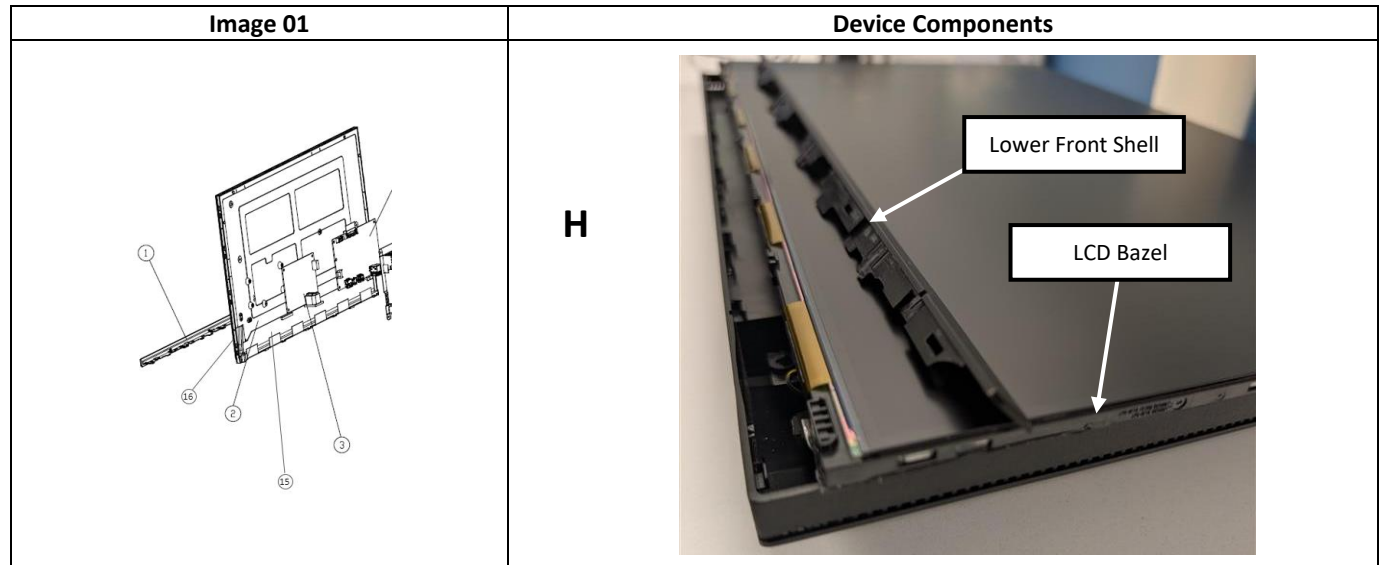
Remove the power strip barrier and remove the insulation pad. (Section E)

Unscrew the printed boards screws and remove the Power PCB (3) and PCB (4) connection cable. (Section F)

You will access the Power PCB E-CAP. (Section G)

Image 01	Device Components
	D 
	E 
	F 
	G 
⚠ Note: Circuit boards larger than 10 cm² are shown in <i>Section C and Section F</i>. Please detach the circuit boards and follow local regulations for their disposal.	

Remove the Lower Front Shell (1) only after the module and electronics have been taken out. Use a plastic card to release the clips. This will expose the LCD Bezel (16) in the main structure of the Display Module (2). Using the same plastic card, release the LCD Bezel (16) from the side structure of Module (2). (See Section H)



5.2. General Information for End-of-Life Management

Practical Guidance for Recyclers

- Follow the disassembly steps to access each component safely.
- Use specified tools (screwdrivers, A plastic card (in credit card size), gloves) as indicated.
- Apply ESD protection when handling PCBs.
- Handle fragile components (LCD module) with care to avoid breakage.
- Label hazardous components clearly to simplify selective treatment.

5.2.1. Plastic Parts Separable and Compatible with Recycling

This section outlines the plastic components, highlighting their separability and compatibility with recyclable streams. Aim to facilitate environmentally responsible end-of-life management.

Device Component	Material Type	Treatment and Instructions
Lower Front Shell (1)	PCR-ABS	Suitable for standard plastic recycling, remove clips. Avoid scratching LCD.
Speaker (6) - Housing	PCR-ABS	Suitable for standard plastic recycling, separate from metal parts.
Back Cover (10)	PCR-ABS	Suitable for standard plastic recycling, remove screws.
LCD Bazel (16)	PC+10%GF	Suitable for standard plastic recycling, remove clips. Avoid scratching LCD.
Miscellaneous	PC+ABS, ABS	Remove any metal inserts before sending them to recycle.
⚠ Note: Cable Insulation is not always recycled. Some recyclers accept; others require sorting. It can be recycled through e-waste programs. Check with your local recycling center.		

5.2.2. Selective Treatment

Selective treatment refers to the careful handling, removal, and recycling of specific materials or components that may pose environmental, health, or safety risks at the end of the product's life. Proper selective treatment ensures responsible disposal, resource recovery, and compliance with environmental regulations.

Step	Device Component	Treatment and Instructions
Step 4	Power PCB (3)	Electronic board with connectors. Observe ESD protection, remove intact, and destinate to certified recyclers.
	Power PCB (3) – E-CAP	Contains capacitors and other electronic components. Handle using appropriate ESD protection. Remove carefully and send to a certified electronics recycler. This assembly includes semiconductors and may contain hazardous substances. Follow approved electronic recycling protocols. Keep the assembly intact to preserve recyclability.
	PCB (4)	Electronic board with connectors. Observe ESD protection, remove intact, and destinate to certified recyclers.
	Speakers (6)	Contains magnets and electronic wiring. Disconnect carefully and recycle according to local electronic waste regulations. Do not incinerate.
	HUB PCB (7)	Electronic board with connectors. Observe ESD protection, remove intact, and destinate to certified recyclers.
	Key PCB (9)	Electronic board with connectors. Observe ESD protection, remove intact, and destinate to certified recyclers.
Step 5	Lens (8)	Non-hazardous. Recycles as plastic material where facilities exist. Defined as optical component.
Step 6	Module (2)	Composed of glass, backlight. Avoid breakage and deliver to specialized recycling facilities for safe glass handling. Properly destinate the metal housing.
	Source Board PCBA (15)	Electronic board with connectors. Observe ESD protection, remove intact, and destinate to certified recyclers.
Step 1	Cable Package – Power Cable and HDMI Cable	Remove the power and HDMI cables and segregate as external electrical cables. Send to a certified recycler for copper recovery and compliant insulation processing. Do not shred. Keep cables intact.
⚠ Note: This monitor does not contain lithium-ion batteries, other types of batteries or mass storage devices, therefore no battery-specific or soldered storage handling instructions are required.		
⚠ Note: Cable Insulation is not always recycled. Some recyclers accept; others require sorting. It can be recycled through e-waste programs. Check with your local recycling center.		

5.2.2.1. Identification of Materials Requiring Selective Treatment (WEEE Annex VII)

During the disassembly shown on Chapter 5.1.4 of this document, pages 8-10, all parts that require special handling under WEEE Annex VII are identified with detailed information in a box.

Table of Materials Identified in Annex VII				
Material	Present?	Quantity	Device Component	Notes
Liquid crystal display >100 cm ²	Yes	01	Module (2)	Main LED-backlit LCD panel
Printed circuit boards >10 cm ²	Yes	03	PCB (3), Power PCB (4),	Page 9, section F
			Source Board PCBA (15)	Page 8, Section C
Electrolytic capacitors >25 mm	Yes	03	Power PCB (4) – E-CAP	Page 9, section G
External Cables	Yes	02	Cable Package	Power Cable, HDMI Cable
Plastic containing brominated flame retardants	No	0	N/A	Not used
Gas discharge lamps (CCFL)	No	0	N/A	LED backlight confirmed
Cathode Ray Tube (CRT)	No	0	N/A	Product is not a CRT
Batteries	No	0	N/A	No internal battery
PCBs (polychlorinated biphenyl) capacitors	No	0	N/A	Not used in modern electronics
Toner cartridges	No	0	N/A	Not applicable
CFC / HCFC / HFC / Hydrocarbons	No	0	N/A	No refrigeration circuits
Components with radioactive substances	No	0	N/A	Not applicable
Asbestos-containing components	No	0	N/A	Not used
Refractory ceramic fibers	No	0	N/A	Not used
⚠ Note: This monitor does not contain lithium-ion batteries, other types of batteries or mass storage devices, therefore no battery-specific or soldered storage handling instructions are required.				
⚠ Note: All Annex VII materials not explicitly marked as “Present” above have been evaluated and are confirmed as not present in this product.				

Table of Electrolytic Capacitors – Measurement and Record				
Device Component	MPN	Quantity	Dimension (mm) Height x Diameter	Notes
Power PCB (4) – E-CAP	81-PWE120-Y070004	03	28 x 10	The power board contains standard radial aluminum electrolytic capacitors equivalent to those used in switch-mode power supplies
⚠ Note: All electrolytic capacitors shall be visually identified and measured during disassembly. Any capacitor with height > 25 mm or diameter > 25 mm (or proportionate volume) shall be classified as WEEE Annex VII and removed for selective treatment. Results must be recorded before routing the PCB to recycling				

The power board of this product incorporates radial aluminum electrolytic capacitors functionally equivalent to standard switch-mode power supply filter capacitors commonly represented by industry series. These components are used for input and output ripple filtering and energy stabilization. In accordance with WEEE Annex VII, all such capacitors are subject to physical measurement at disassembly to verify whether the dimensional threshold (>25 mm in height or diameter, or proportionate volume) is exceeded, which would trigger mandatory selective treatment.

6. RISKS & OPPORTUNITIES

Not Applicable to this document.

7. REFERENCES

EPEAT® Registry
EU WEEE Directive (Directive 2012/19/EU), Annex VII
IEEE 1680 – Standard for Environmental Assessment of Electronic Products
ISO 14001:2015 – Environmental Management Systems
Manufacturer Bill of Materials (BOM) and FRU Documentation

8. HISTORY OF CHANGES

REV	DATE	MODIFICATIONS	CREATED BY/MODIFIED BY	APPROVED BY
01	2025-08-15	Creation	Quality Assurance	Anizio N.
02	2025-10-27	Revision on WEEE Annex VII Identification	Quality Assurance	Anizio N.
03	2025-11-24	Insertion of Annex VII list and general review	Quality Assurance	Anizio N.
04	2025-12-09	Added Source Board PCBA to diagram and general revision.	Quality Assurance	Anizio N.
05	2026-01-22	Explanation to separate the lower front shell.	Quality Assurance	Anizio N.