

# Why some MacBook fails to display through your AV?

## 1. Apple is extremely strict with EDID and HDCP handshakes

MacBooks (especially M1/M2/M3 models) are **far less forgiving** than Windows PCs when negotiating:

- **EDID** (monitor capability data)
- **HDCP** (copy protection)
- **Pixel clock limits**
- **Colour space / RGB vs YCbCr**
- **Timing (CVT, CVT-RB, CTA-861)**

If *anything* in your AV chain is slightly non-standard or if the scaler is old, the Mac simply refuses the signal.

Windows PCs "guess" or fallback; macOS does not.

So your AV system/scaler chain is probably returning **bad or incomplete EDID** to the Mac.

## Solution:

### Install an EDID emulator between the Mac and your AV chain

Use something like:

- **Lindy HDMI EDID Emulator**
- **Dr HDMI 4K**

These force a stable EDID so MacBooks don't freak out.

## Temp Solution: USB-C HDMI adapter REWRITES the EDID

Most USB-C → HDMI dongles include a **DisplayPort-to-HDMI converter chipset** (Parade, MegaChips, Realtek, etc.) that **normalizes EDID** and **fixes timing** before sending it to the display.

Meaning:

- The dongle cleans up the EDID

- The dongle negotiates HDCP instead of the Mac having to deal with the AV system
- The dongle outputs a clean, standard HDMI 1.4/2.0 signal
- Your AV system is no longer directly talking to the Mac

Your AV system → (dongle) → Mac

The dongle acts like a **signal diplomat**.

That's why the setup suddenly works.

### **Why the issue only happens with SOME MacBooks?**

- Newer Macs = stricter/cleaner signal
- Some models output **DP alt-mode → HDMI 2.0**
- Others output **HDMI 1.4 fallback**
- Resolution defaults differ between Intel Macs vs Apple Silicon

Also some MacBooks default to:

- **4K60**
- **HDR**
- **RGB 10-bit**

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