

Rapidlogger Systems

LCD Display Problems at Power-On

This tech note describes how to diagnose a Rapidlogger display that shows nothing, or stops part way, when the unit is powered on. It covers both the old style monochrome LCD and the colour TFT LCD fitted to Standard units built after 1 January 2026 and to all Max, Mini, SE and ExD units, and it is the companion to Tech Note #47, the full troubleshooting guide for the old style LCD.

Two Types of Display

Rapidlogger units have been built with two different displays. The checks differ, so first identify which one the unit has.

	Old style LCD	TFT LCD
Units	Standard units built before 2026	Standard units built after 1 January 2026, older Standard units fitted with the retrofit, and all Max, Mini, SE and ExD units
Appearance	Monochrome, blue or green background, text only	Full colour
At power-on	Backlight comes on, then text	Rapidlogger logo first, then text
Contrast	Adjustable: press HOME, then UP or DOWN	Not adjustable
Connection	Two flat flex cables direct to the main board	One serial cable (TX, RX, GND, 5 V) to a separate LCD circuit board behind the display

The Rapidlogger Max, Mini, SE and ExD have always had the TFT. A TFT retrofit is available for older Standard units. Contact Rapidlogger with the unit serial number (Tech Note #2).

What a Normal Power-On Looks Like

On either display the unit takes about 10 to 20 seconds from power-on to the first line of text. The old style LCD

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lights its backlight at once and may show a brief flash of random characters while the processor starts; this is normal if it clears. The TFT shows the Rapidlogger logo within a few seconds and holds it until the processor has booted. Wait a full 30 seconds before deciding that the display has a problem.

First Checks for Either Display

1. Confirm that power is reaching the unit: 10 to 30 VDC at the power input terminals, or the AC supply switched on. A unit that is running shows lit LEDs on the main board.
2. Check the main fuse (Tech Note #32). If only LED1 is lit on the main board the fuse is blown.
3. Find out whether the processor has booted. From a computer on the unit's network, ping 192.168.0.5 or connect with RapidVu. If the unit answers, the processor is running and the job is being recorded; the fault is in the display, its cable or its power. If the unit does not answer, the problem is in the main board, not the display.
4. Power the unit off, wait ten seconds, power it on again and watch the display for 30 seconds.

NOTE: The Rapidlogger records data and runs its outputs whether or not the display works. A unit that answers on the network can be left in service while the display is repaired.

Old Style LCD

This display, with its two flex cables to the main board, is found only on Standard units built before 2026. Tech Note #47 is the full troubleshooting guide for it. The table below lists the power-on symptoms and where they lead.

Symptom	Likely cause	Action
No backlight, no text	Fuse blown or no power	Tech Note #32, then the First Checks above
Backlight on, no text	Contrast set too light or too dark	Press HOME, then UP or DOWN to adjust. Look at the screen in a dark room and

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		from a low angle to find faint text (Tech Note #47)
Half of the screen blank, or lines missing	Right side flex cable not seated, or the LCD failing	Reseat the right side cable at J18 (old boards) or J15 (next generation boards), Tech Note #47 Advanced section. If lines are still missing, replace the LCD
Whole screen blank, backlight on, contrast makes no difference	Left side flex cable not seated	Reseat the left side cable at J14 (old boards) or J7 (next generation boards), Tech Note #47
Text slow, faint or leaving ghost images in cold weather	Normal for a monochrome LCD below freezing	No action; the display recovers as the unit warms up. Adjust contrast if needed
Random characters for a moment at power-on, then normal	Display starting before the processor	No action

WARNING: Reseating the flex cables requires the unit to be opened and the CPU module and LCD bracket to be removed. This should only be done by an electronics technician on a bench, with the unit powered off.

TFT LCD

The TFT has its own circuit board behind the display. The main board sends the screen contents to it over a four wire serial cable carrying TX, RX, GND and 5 V. Two power-on faults have been seen.

Symptom	Likely cause	Action
Dark screen, no backlight	No 5 V reaching the LCD circuit board: fuse, or the serial cable unplugged or	Tech Note #32 for the fuse. If the unit answers on the network, check the serial cable at the

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	damaged at either end	LCD circuit board and at the main board. If the cable is good, the LCD circuit board has failed; contact Rapidlogger
Logo appears but text never follows	Processor has not booted, or the serial link is broken	If the unit does not answer on the network: the main board has not booted, see Tech Note #3 (firmware) and Tech Note #44 (CPU module). If the unit answers: reseal the serial cable at both ends and check that TX and RX have not been swapped after a repair
Logo, then text, as expected	Normal	No action

NOTE: The logo is generated by the LCD circuit board itself. Seeing the logo proves that the display and its 5 V supply are good; it does not prove that the main board is running.

If the Problem Is Not Resolved

Contact support@rapidlogger.com with the unit serial number (Tech Note #2), which display the unit has, exactly what appears on the screen and how many seconds after power-on, whether it happens at every power-on or only sometimes, and whether the unit answers on the network. A photo of the screen taken 30 seconds after power-on is useful.