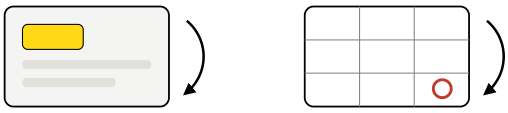
Touch panel: screen turned, touch didn't? 6 checks

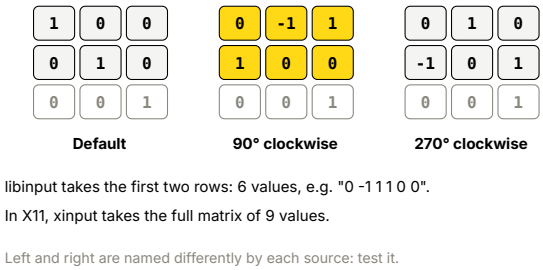
The panel PC boots with the image rotated and the touch still in the old orientation, touches land off target, or the screen stays black. Check these six points in order. Written for panel PCs based on Raspberry Pi with Raspberry Pi OS; for your exact unit, the product documentation comes first.

Display and touch are two settings



Screen turned, touch did not: two separate settings
Rotate the display first, then map or rotate the touch to it

Two rotations: the Raspberry Pi documentation says rotation of touch input is independent of the orientation of the display.



Calibration matrix: the same 3×3 matrix rotates, flips or corrects the touch coordinates.

Version first, recipe second

A forum recipe for X11 (xrandr, xinput) often does nothing in a Wayland session, and the other way round.

Black screen is not a dead system

If the panel answers over SSH, the system is running: look at the video output and the desktop session.

Six checks, in this order

Check	What to do	Good result
1. Power	Supply and cable recommended for your board. Look for undervoltage: vcgencmd get_throttled and the kernel log (dmesg).	No undervoltage warnings in the log.
2. Image	Note the OS version (Bookworm, Trixie) and the session: Wayland (labwc) or X11. Each sets display and touch in a different place.	You know which settings apply.
3. Rotation	Rotate the display first (Screen Configuration or Control Centre, wlr-randr, xrandr). Then map or rotate the touch to that output.	A touch in a corner hits that corner.
4. Calibration	Touches off target: set the calibration matrix (6 values in libinput, 9 with xinput in X11). Test the four corners.	Four corners and centre on target.
5. Drivers	libinput list-devices: is the touch listed? If not, the overlay of your panel in config.txt, the cable or the USB link.	Touch listed, events in libinput debug-events.
6. Black screen	Try SSH. If it answers, read journalctl -b and check the video output. Start your app with the desktop session, not before it.	Image on screen, app after the desktop.

From symptom to check

Symptom	Possible causes	Next step
Reboots or hangs at boot	Weak supply or cable, undervoltage.	Check 1.
Forum recipe does nothing	Different OS version or session (X11 or Wayland).	Check 2.
Image rotated, touch not	Touch not mapped or rotated to the output.	Check 3.
Touch rotated, but off target	Wrong or missing calibration matrix.	Check 4.
Touch dead	Not listed as input device: overlay, cable or USB.	Check 5.
Black screen, SSH answers	Video output, video= in cmdline.txt, desktop session.	Check 6.
App does not appear after boot	Started before or outside the desktop session.	Check 6.

From the documentation

- Rotation of touch input is independent of the orientation of the display.
- video= with rotate in cmdline.txt only rotates the text-mode console.
- Raspberry Pi does not support upgrading a running Bookworm image to Trixie.

Where you set it

Bookworm, X11: xrandr for the display, xinput for the touch.

Bookworm, labwc: Screen Configuration; touch in rc.xml; apps in ~/.config/labwc/autostart.

Trixie: Control Centre; touch in rc.xml; labwc autostart.

If the touch never worked

- Run libinput list-devices and look for the touch.
- Run libinput debug-events and touch the screen.
- Try a clean image with only the overlay your panel needs.

Device tree or desktop?

Some displays accept invx, invy and swapxy in the overlay.

Raspberry Pi warns this can conflict with your input library: when possible, rotate the touch in the desktop or input settings.

References: Raspberry Pi documentation: Touch Display, Touch Display 2, Power supply, config.txt and Configuration; Raspberry Pi News: A new release of Raspberry Pi OS (October 2024) and Trixie; libinput documentation (udev device configuration, libinput(1)); labwc-config(5); wlr-randr(1). The documentation of your device takes precedence over this general guide.