HEAT

• Temp < SP → Red LED fades
• Temp ≥ SP → Red LED solid
• LCD alt line: HEAT SP:##°F

OFF

• LEDs: both off
• LCD: time on line 1; alt line shows temp / state+SP
• UART: CSV every 30s

COOL

• Temp > SP → Blue LED fades
• Temp ≤ SP → Blue LED solid
• LCD alt line: COOL SP:##°F

Cycle (Green Button GPIO 24)

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Set Point Buttons (no state change)
• Red (GPIO 25): +1°F
• Blue (GPIO 12): −1°F

UART Output (every 30s):
state,currentTempF,setPoint

Legend
• Fade = PWM LED pulse
• Solid = LED on
• LCD line 1 = date/time
• LCD line 2 alternates: temp / state+SP