

The CardPulse Tracker

User Manual

Multi-Card TCG Price Monitor

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Table of Contents

| | |
|--|----|
| 1. What Is The CardPulse Tracker? | 3 |
| 2. In the Box | 3 |
| 3. Physical Overview | 3 |
| 4. First-Time Setup | 4 |
| 5. The Setup Portal | 5 |
| 6. Understanding the Screens | 7 |
| 7. Buttons Reference | 9 |
| 8. LED Indicators | 10 |
| 9. Alert System | 11 |
| 10. Audio Alerts | 12 |
| 11. Night Mode | 13 |
| 12. Multi-Card Watching | 13 |
| 13. Audio File Management | 14 |
| 14. Troubleshooting | 15 |
| 15. Technical Specifications | 16 |

1. What Is The CardPulse Tracker?

The CardPulse Tracker is a dedicated desktop device that monitors the real-time market prices of up to 8 trading card game (TCG) cards simultaneously. It displays live pricing data, historical statistics, and market mood analysis on a built-in colour display, while providing visual LED alerts and audio cues whenever a card's price moves.

Unlike The CardPulse which is designed around a single card display, the Tracker is built for investors, collectors, and shop owners who need to keep an eye on a portfolio of cards at once. It features an underglow LED strip on its base rather than card holder wings, providing ambient lighting and alert effects without requiring a dedicated card slot.

Supported games include Pokémon, Magic: The Gathering, Yu-Gi-Oh!, One Piece Card Game, Digimon, Disney Lorcana, Dragon Ball Super: Fusion World, Gundam Card Game, Star Wars: Unlimited, Grand Archive TCG, Union Arena, Flesh and Blood, Hololive Official Card Game, Riftbound, and more. Price data is provided through the JustTCG API.

Note: Requires a free JustTCG API key and a WiFi connection. The free tier supports up to 1,000 requests per month — sufficient for tracking up to 8 cards at any refresh interval. See Section 4 for setup instructions.

2. In the Box

- The CardPulse Tracker base unit (display, speaker, controls, underglow LEDs)
- USB-C power cable

Note: A USB power adapter (5V, 1A minimum) is required but not included. A standard phone charger is sufficient. No card holder is included — the Tracker is designed for portfolio monitoring, not single-card display.

3. Physical Overview

Base Unit

The base unit houses the display, speaker, controls, and underglow LED strip. Dimensions: 115mm wide x 50mm deep x 40mm high. The unit sits elevated on four corner legs to allow the underglow light to spread across the desk surface.

| Component | Description |
|-----------|-------------|
|-----------|-------------|

| | |
|---------------------|---|
| Display | Colour LCD screen showing price, statistics, and mood data. Flush-mounted on the front face. |
| Speaker | Audio alert speaker. Located on the right side of the base unit, facing right. |
| BOOT Button | Front-accessible button. Used to enter Setup Mode or trigger a Factory Reset at startup. |
| TOP Button | Front-accessible button. Used to manually rotate screens, change the displayed card, or trigger a manual price refresh. |
| Volume Button | External button on the back. Cycles through audio volume levels. |
| Brightness Button | External button on the back. Cycles through LED brightness levels. |
| USB-C Port | Power input. Connect to a 5V USB power adapter or PC USB port. |
| Underglow LED Strip | 12 WS2812B LEDs mounted on the underside of the base unit, facing downward. Produces an ambient glow on the desk surface and provides alert lighting visible from all angles. |
| Corner Legs | Four elevated corner feet that raise the base unit to allow LED light to spread outward across the desk. |

Note: The CardPulse Tracker does not include a card holder. If you want to display a physical card alongside the Tracker, any standard card stand or frame can be placed next to the unit.

4. First-Time Setup

Step 1 — Get a JustTCG API Key

The CardPulse Tracker uses the JustTCG API to retrieve card pricing data. You will need a free account and API key before proceeding.

1. Visit justtcg.com/dashboard/plans in a web browser.
2. Create a free account and log in.
3. Copy your API key from the dashboard. Keep it safe — you will enter it in the next steps.

Note: The free JustTCG tier allows 1,000 requests per month and 100 per day. Because the Tracker fetches all watched cards in a single batch request per interval, tracking 8 cards costs the same number of API requests as tracking 1 card.

Step 2 — Find Your Cards' TCGplayer IDs

Each card is identified by a unique TCGplayer ID number. To find it:

4. Go to tcgplayer.com and search for your card.
5. Open the card's product page.
6. Look at the URL — the number at the end is the TCGplayer ID. For example: tcgplayer.com/product/219042 has the ID 219042.
7. Repeat for each card you want to track (up to 8 total).

Step 3 — Enter Setup Mode

On first boot, The CardPulse Tracker automatically enters Setup Mode. Simply plug it in via USB-C and it will enter Setup Mode on its own.

To manually enter Setup Mode on a device that has already been configured:

8. Power off the device by unplugging the USB-C cable.
9. Hold the BOOT button.
10. Plug the USB-C cable back in while continuing to hold BOOT.
11. Release BOOT after 2 seconds. The display will show a Setup Mode screen.

Step 4 — Connect to the Setup Portal

12. On your phone or computer, open WiFi settings.
13. Connect to the WiFi network named "CardPulse-Setup".
14. Open a web browser and navigate to 192.168.4.1.

15. The CardPulse Setup Portal will load.

Tip: If the portal does not load, ensure you are connected to "CardPulse-Setup" and not your home WiFi.

Step 5 — Configure and Save

Fill in all required fields in the Setup Portal (see Section 5), then tap Save & Restart. The device will reboot, connect to your WiFi, and fetch the first prices automatically.

Factory Reset

16. Hold the BOOT button while plugging in the USB-C cable.
17. Keep holding BOOT. After about 1.5 seconds the display will show a Factory Reset confirmation.
18. Continue holding until the reset completes.

⚠ Warning: A Factory Reset permanently erases your WiFi credentials, API key, all card IDs, and all saved settings. This cannot be undone.

5. The Setup Portal

The Setup Portal is a web page served directly by The CardPulse Tracker. It is accessible any time the device is in Setup Mode by navigating to 192.168.4.1.

WiFi & API Settings

| Setting | Description |
|------------------------|--|
| WiFi SSID | The name of your home or office WiFi network. |
| WiFi Password | Your WiFi password. Leave blank to keep the existing password when updating other settings. |
| JustTCG API Key | Your personal JustTCG API key. |
| TCGplayer ID (Card ID) | The primary card to track. This card is always shown first on boot and is always included in the watch list. |

Display & Theme Settings

| Setting | Description |
|-----------------------|--|
| Theme Mode | Per-Game themes (each TCG has its own colour palette) or Standard theme. |
| Night Signature Theme | When Night Mode is active, enables a special purple and cyan colour palette on the display and a magenta-to-blue gradient on the LEDs. |
| Mood Market Screen | Enable or disable the Mood Market screen in the rotation. |

Idle LED Color

Controls the colour of the underglow LED strip when no alert effect is active.

| Setting | Description |
|--------------------|--|
| Solid Colors (0-9) | A fixed colour for the underglow strip. Options include White, Ice Blue, Warm Amber, Electric Violet, Soft Cyan, Neon Pink, Emerald Green, Sunset Orange, Deep Sky Blue, and Royal Purple. |
| Slow Rainbow | Animated. The full colour spectrum rotates smoothly around the underglow strip approximately every 8 seconds. |

| | |
|--------------------------------------|--|
| Fast Rainbow | Animated. Same as Slow Rainbow but approximately 3x faster. |
| Breathing Pulse (select color below) | Animated. The LEDs gently fade in and out. A secondary color picker appears when selected. |

Screen Rotation

| Setting | Description |
|-----------------------|--|
| Price Screen Duration | How long the Price screen displays before rotating. Options: 1, 3, 5 (default), or 10 minutes. |
| Stats Screen Duration | How long the Stats and Mood screens display. Options: 15, 30, 60 (default), or 120 seconds. |
| Rotation Order | Price → Stats → Mood (default), Price → Mood → Stats, or Disable auto-rotation. |

Price Refresh Interval

How often The CardPulse Tracker fetches fresh prices for all watched cards. Options: every 30 minutes, 1 hour, 2 hours (default), or 4 hours. All cards are fetched in a single API request per interval.

Night Mode

| Setting | Description |
|-------------------|--|
| Enable Night Mode | Master switch. Off by default. |
| Night Start / End | The time window (24-hour format) during which Night Mode is active. |
| Brightness Cap | Maximum LED brightness during Night Mode. |
| Time Zone | Your local time zone, used to correctly apply the Night Mode window. |

Multi-Card Watching

The Tracker's core feature. Allows tracking up to 8 cards simultaneously. See Section 12 for full details.

Alert Thresholds (%)

Controls how large a price move needs to be before each alert tier fires. All thresholds apply symmetrically to both gains and losses.

| Threshold | Description |
|---------------------------------|--|
| Small Move (default 3%) | Triggers the UP Pulse or DOWN Pulse LED effect and a subtle audio alert. |
| Big Move (default 8%) | Triggers the Card on Fire UP or DOWN LED effect. |
| Medium-Large Move (default 12%) | Triggers the Green Siren (gain) or Robbery (loss) LED effect. |
| Huge Move (default 20%) | Triggers the Double Rainbow (gain) or Bloodfall (loss) LED effect. |

Tip: For high-value cards lower all thresholds. For inexpensive bulk cards raise them to avoid constant alerts on noise.

6. Understanding the Screens

The CardPulse Tracker rotates through up to three screens automatically, or you can cycle through them manually using the TOP button. In multi-card mode, the displayed card advances each time the rotation returns to the Price screen.

Shared UI Elements (all screens)

| Element | Description |
|------------------|--|
| WiFi Signal Bars | Four small bars in the top-left corner. Green = strong, Yellow = fair, Red = weak, Grey = no signal. |
| Moon Icon | Appears in the bottom-right corner when Night Mode is active. |
| Lock Icon | Appears in the bottom-right corner when auto-rotation is disabled. |

Price Screen

| Element | Description |
|-----------------|--|
| Card Name & Set | The name and set of the card currently being displayed. |
| Current Price | Large display of the card's current market price in USD. |
| Trend Arrow | Indicates whether the price has moved up, down, or stayed flat since the last fetch. |
| Delta Line | Shows the dollar amount and percentage change since the last fetch. Green for gains, red for losses. |
| Last Updated | The date and time when the price was last fetched from JustTCG. |
| Countdown Bar | A thin horizontal bar above the Last Updated line. Fills left to right as the next refresh approaches. Green → yellow → red. |

Stats Screen

| Stat | Description |
|--------------|---|
| 7 Day Range | The lowest and highest prices recorded in the last 7 days. |
| 30 Day Trend | The direction of the price trend over the last 30 days (UP, DN, or FLAT). |

| | |
|---------------|---|
| All-Time High | The highest price ever recorded for this card variant, with the date it occurred. |
| All-Time Low | The lowest price ever recorded for this card variant, with the date it occurred. |

Mood Market Screen

A fun, personality-driven interpretation of the card's market data. Can be enabled or disabled in the Setup Portal.

| Section | Description |
|-------------------|--|
| Card Mood (7d) | How the card has been performing over the last 7 days. Labels range from Rocket fuel through to Freefall. |
| Volatility (7d) | How stable or erratic the card's price has been. Labels range from Calm through to Unhinged. |
| Market Mood (30d) | The 30-day market context. Labels range from Bull run through Cooling to Capitulation. |
| You & This Card | Compares current price to when you first added this card. Labels range from Soulmates to Bad breakup energy. |

7. Buttons Reference

Front Buttons

| Button | Action | Result |
|--------|---------------------------------------|---|
| BOOT | Hold during power-on (<1.5s) | Enters Setup Mode |
| BOOT | Hold during power-on (>1.5s) | Factory Reset — erases all settings |
| TOP | Short press (while running) | Advances to the next screen. When returning to the Price screen in multi-card mode, also advances to the next card. |
| TOP | Long press >2 seconds (while running) | Forces an immediate manual price refresh for all watched cards and resets the countdown timer. |

Back Buttons

| Button | Action | Result |
|-------------------|-------------|--|
| Volume Button | Short press | Cycles audio volume: Mute → 25% → 50% → 75% → 100% → Mute. A short beep plays at the new level. |
| Brightness Button | Short press | Cycles LED brightness: 10% → 30% → 50% → 80% → 10%. Takes effect immediately on the underglow strip. |

Note: Volume and brightness settings are saved automatically and restored on next power-on.

8. LED Indicators

The CardPulse Tracker has a single underglow LED strip (12 LEDs) mounted on the underside of the base unit. It is always on when the device is powered and produces an ambient glow on the desk surface visible from all directions.

Idle Mode

| Idle Mode | Description |
|-----------------|--|
| Solid Color | The strip glows a fixed colour. Choose from 10 presets. |
| Slow Rainbow | The full colour spectrum rotates smoothly around the strip over approximately 8 seconds per cycle. |
| Fast Rainbow | Same as Slow Rainbow but approximately 3x faster. |
| Breathing Pulse | The chosen colour gently fades in and out. A soft glow remains visible at all times. |

Alert Effects

When a price change is detected, the underglow strip switches to an alert animation for 30 seconds before returning to idle. Alerts fire based on whichever card is currently displayed on screen at the time of the fetch.

| Effect Name | Trigger & Description |
|-------------------------|---|
| UP Pulse (green) | Small gain. A steady green pulse. |
| DOWN Pulse (red) | Small loss. A steady red pulse. |
| Card on Fire UP | Big gain. An intensifying orange-red fire effect. |
| Card on Fire DOWN | Big loss. Same fire effect in cooler blue tones. |
| Green Siren | Medium-large gain. Alternating bright green flashes. |
| Robbery / Police Lights | Medium-large loss. Alternating red and blue police-style flashing. |
| Double Rainbow | Huge gain. A full multi-colour rainbow sweeps repeatedly across the strip. |
| Bloodfall | Huge loss. Deep red drips cascade across the strip in a Tetris-like effect. |

Note: Night Mode applies a brightness cap to all LED effects during your configured quiet hours.

9. Alert System

The CardPulse Tracker checks all watched card prices on every fetch. If the price change for the currently displayed card crosses a threshold, an alert fires — simultaneously triggering the LED effect and audio alert.

How Thresholds Work

Thresholds are evaluated from largest to smallest. Only the highest matching tier fires. All thresholds are symmetric — the same percentage applies to both gains and losses.

Default Alert Thresholds

| Tier | Default Threshold | LED Effect (Gain / Loss) |
|-------------------|-------------------|-------------------------------------|
| Small Move | ±3% | UP Pulse / DOWN Pulse |
| Big Move | ±8% | Card on Fire UP / Card on Fire DOWN |
| Medium-Large Move | ±12% | Green Siren / Robbery |
| Huge Move | ±20% | Double Rainbow / Bloodfall |

Thresholds are fully adjustable in the Setup Portal under Alert Thresholds (%).

Alerts in Multi-Card Mode

When tracking multiple cards, alerts fire based on the price change of whichever card is currently displayed on screen at fetch time. All cards are refreshed simultaneously on every interval, but only the on-screen card triggers LED and audio alerts.

Debug / Preview Mode

The Setup Portal includes a Debug Test page (accessible via the /test URL while in Setup Mode) that lets you preview any alert effect and audio combination without waiting for a real price move.

10. Audio Alerts

Each alert tier has a unique set of audio sounds that play with the LED effect. Three variations are included per tier, selected randomly each time.

| Tier | Sound Theme |
|-------------------|------------------------|
| Small Gain | Small Gain sounds |
| Small Loss | Small Loss sounds |
| Big Gain | Card Fire Up sounds |
| Big Loss | Card Fire Down sounds |
| Medium-Large Gain | Green Siren sounds |
| Medium-Large Loss | Heist / Robbery sounds |
| Huge Gain | Double Rainbow sounds |
| Huge Loss | Bloodfall sounds |

Volume Control

Press the Volume button on the back to cycle through five volume levels: Mute, 25%, 50%, 75%, and 100%. A short beep plays at the new level. The setting is saved automatically.

Night Mode Audio

When Night Mode is active, all audio is automatically muted regardless of the volume setting.

Startup Sound

A startup sound plays when the device boots into normal operating mode. This sound is built into the firmware.

11. Night Mode

Night Mode automatically reduces LED brightness and mutes audio during a configurable quiet window.

Night Mode Settings

| Setting | Description |
|-----------------------|---|
| Enable Night Mode | Master switch. Off by default. |
| Start Time | The time Night Mode begins each day (24-hour format, e.g. 23 = 11pm). |
| End Time | The time Night Mode ends each day (e.g. 7 = 7am). |
| Brightness Cap | Maximum LED brightness during Night Mode. A value of 5 produces a very dim ambient glow. |
| Time Zone | Required for Night Mode to operate correctly. |
| Night Signature Theme | Optional. Replaces the display colour palette and idle LED colour with a special purple and cyan theme. |

Note: Night Mode requires a successful NTP time sync at startup. Ensure your WiFi is working on boot.

12. Multi-Card Watching

The CardPulse Tracker can monitor up to 8 cards simultaneously. All watched cards are fetched in a single API batch request on every refresh interval, so tracking 8 cards costs the same API quota as tracking 1 card.

Setting Up Multi-Card Watching

19. Open the Setup Portal.
20. Enter your primary card's TCGplayer ID in the TCGplayer ID (Card ID) field. This card is always shown first on boot.
21. Scroll to the Multi-Card Watching section.
22. Enter additional TCGplayer IDs in the text area, one per line (up to 7 extra cards).
23. Tap Save & Restart.

Note: Leave the Multi-Card Watching text area blank to track only the primary card.

How Card Rotation Works

All cards are refreshed together on every interval. The display shows one card at a time, advancing to the next card each time the rotation returns to the Price screen.

| Action | Card Shown |
|---|----------------------------|
| Boot / first fetch | Primary card (Card 1) |
| Full rotation cycle completes (returns to Price screen) | Advances to the next card |
| TOP button short press cycles back to Price screen | Advances to the next card |
| After last card | Wraps back to primary card |

Alerts in Multi-Card Mode

Alert effects fire based on the price change of whichever card is currently displayed on screen at the time of the fetch. All cards are refreshed simultaneously, but only the on-screen card triggers LED and audio alerts.

API Usage

The Tracker uses a single POST batch request to the JustTCG API per refresh interval, regardless of how many cards are being watched. The free JustTCG tier (1,000 requests/month, 100/day) is more than sufficient for all use cases.

13. Audio File Management

The CardPulse Tracker stores alert audio files on its internal storage partition (FFat). Alert sounds come pre-loaded from the factory.

Accessing the File Manager

While in Setup Mode, navigate to 192.168.4.1/list to view all files on the device. From this page you can see file names and sizes, and delete individual files.

Uploading Audio Files

Navigate to 192.168.4.1/upload while in Setup Mode to upload new WAV files. Audio files must meet the following requirements:

- Format: WAV (PCM, 16-bit, mono)
- Sample rate: 22050 Hz
- File names must match the expected names exactly (see below)

⚠ Important: Internal storage space is limited. Check available space before uploading.

Expected Audio File Names

Each alert tier expects exactly 3 WAV files numbered 1, 2, and 3. Files must be placed in the /alerts/ folder.

| Alert Tier | Expected File Names |
|-------------|---|
| Small Gain | /alerts/small_gain_1.wav, _2.wav, _3.wav |
| Small Loss | /alerts/small_loss_1.wav, _2.wav, _3.wav |
| Big Gain | /alerts/big_gain_fire_1.wav, _02.wav, _3.wav |
| Big Loss | /alerts/big_loss_fire_1.wav, _2.wav, _3.wav |
| Medium Gain | /alerts/medium_gain_siren_1.wav, _2.wav, _3.wav |
| Medium Loss | /alerts/medium_loss_heist_1.wav, _2.wav, _3.wav |
| Huge Gain | /alerts/huge_gain_rainbow_1.wav, _2.wav, _3.wav |
| Huge Loss | /alerts/huge_loss_bloodfall_1.wav, _2.wav, _3.wav |

Customizing Alert Sounds

You can replace any or all of the pre-loaded alert sounds with your own custom audio files. This section walks through the full process from creating your sound to hearing it play on the device.

Step 1 — Create or Source Your Sound

Your replacement sound can be anything — a recorded voice clip, a sound effect, or a music snippet. The recommended free tools are:

- Audacity (audacityteam.org) — free, cross-platform audio editor. Best for recording, editing, and exporting in the exact format required.
- Freesound.org — large library of free royalty-free sound effects available for download.
- ZapSplat.com — another free royalty-free sound library with a wide variety of alert and notification sounds.

Tip: Keep alert sounds short — 2 to 4 seconds is ideal. Longer files take up more storage space and the alert LED effect only lasts 30 seconds total.

Step 2 — Export in the Correct Format

The device only plays WAV files in a specific format. If your sound is in any other format, use Audacity to convert it. In Audacity:

24. Open your audio file in Audacity (File → Open).
25. If the track shows as stereo (two waveforms), go to Tracks → Mix → Mix Stereo Down to Mono.
26. Go to Tracks → Resample and set the rate to 22050 Hz. Click OK.
27. Go to File → Export → Export as WAV.
28. In the export dialog, set Encoding to Signed 16-bit PCM.
29. Save the file.

Note: The required format is: WAV, PCM, 16-bit, Mono, 22050 Hz. Files in any other format will be skipped silently by the device.

Step 3 — Name Your File to Match the Expected Name

The device looks for files with specific names in the /alerts/ folder. Your custom file must be named exactly as shown below to replace the corresponding alert. Each alert tier has 3 variations (numbered 1, 2, and 3) — the device picks one at random each time the alert fires. You can replace just one variation, two, or all three.

| Alert Tier | Required File Names |
|------------|--|
| Small Gain | small_gain_1.wav / small_gain_2.wav / small_gain_3.wav |

| | |
|-------------|---|
| Small Loss | small_loss_1.wav / small_loss_2.wav / small_loss_3.wav |
| Big Gain | big_gain_fire_1.wav / big_gain_fire_02.wav / big_gain_fire_3.wav |
| Big Loss | big_loss_fire_1.wav / big_loss_fire_2.wav / big_loss_fire_3.wav |
| Medium Gain | medium_gain_siren_1.wav / medium_gain_siren_2.wav / medium_gain_siren_3.wav |
| Medium Loss | medium_loss_heist_1.wav / medium_loss_heist_2.wav / medium_loss_heist_3.wav |
| Huge Gain | huge_gain_rainbow_1.wav / huge_gain_rainbow_2.wav / huge_gain_rainbow_3.wav |
| Huge Loss | huge_loss_bloodfall_1.wav / huge_loss_bloodfall_2.wav / huge_loss_bloodfall_3.wav |

Note: Note the Big Gain second variation uses `_02` not `_2`. This must match exactly: `big_gain_fire_02.wav`

Step 4 — Enter Setup Mode

The file manager and uploader are only accessible when the device is in Setup Mode.

30. Power off the device by unplugging the USB-C cable.
31. Hold the BOOT button.
32. Plug the USB-C cable back in while continuing to hold BOOT.
33. Release BOOT after 2 seconds.
34. On your phone or computer, connect to the WiFi network named CardPulse-Setup.
35. Open a browser and navigate to 192.168.4.1.

Step 5 — Delete the Existing File

Before uploading your replacement, delete the existing file to free up space and avoid conflicts.

36. In the Setup Portal, navigate to 192.168.4.1/list.
37. Find the file you want to replace in the list (e.g. /alerts/small_gain_1.wav).
38. Click the Delete button next to that file.
39. Confirm the deletion. The file will be removed immediately.
40. Repeat for any other files you are replacing.

Step 6 — Upload Your Custom File

41. In the Setup Portal, navigate to 192.168.4.1/upload.
42. Set the upload destination to /alerts/.
43. Choose your renamed WAV file.
44. Tap Upload. The file will be written to the /alerts/ folder on the device.
45. Navigate back to 192.168.4.1/list and confirm your file appears with the correct name and a non-zero file size.
46. Repeat for any additional files you are replacing.

⚠ Important: Check the remaining free space shown at 192.168.4.1/list after each upload. If storage runs low the device may not function correctly.

Step 7 — Test Your Sound

You can preview any alert sound without waiting for a real price move.

47. In the Setup Portal, navigate to 192.168.4.1/test.
48. Find the alert tier you replaced (e.g. Small gain).
49. Click the Preview link next to it.
50. The device will immediately play one of the three variations for that tier and trigger the matching LED effect. Press Preview multiple times if needed — the device picks randomly so you may need a few tries to hear your new file.
51. Adjust volume using the Volume button on the back of the device if needed.

Tip: If your custom sound does not play, check that the file name matches exactly (including the _02 exception for big_gain_fire), the format is WAV PCM 16-bit mono 22050 Hz, and the file appears correctly at 192.168.4.1/list.

14. Troubleshooting

Display shows "WiFi Failed"

- Confirm your WiFi SSID and password are entered correctly in the Setup Portal.
- Ensure your router is broadcasting a 2.4 GHz network. The CardPulse Tracker does not support 5 GHz WiFi.
- Move the device closer to your router and try again.

Display shows "PRICE ERROR"

- Confirm your JustTCG API key is entered correctly with no extra spaces.
- Confirm all TCGplayer IDs are numeric only (e.g. 219042), not URLs.
- Check your JustTCG account dashboard to confirm you have not exceeded your daily or monthly API request limit.
- Try a manual refresh using the TOP button long press.

No Sound

- Press the Volume button on the back to cycle through volume levels. Mute is one of the levels.
- Confirm Night Mode is not active (a moon icon appears on the display during Night Mode).
- Check the Setup Portal file manager at 192.168.4.1/list to confirm alert WAV files are present.

LEDs Not Working

- Press the Brightness button on the back to cycle brightness. The lowest level is dim but visible.
- Confirm the device is fully powered via USB-C.
- Ensure the underglow strip has a common ground with the base unit.

Night Mode Not Activating

- Confirm Night Mode is enabled in the Setup Portal and your time zone is set correctly.
- Night Mode requires a successful NTP time sync at startup. Check that the device connected to WiFi on boot.

Card Not Changing in Multi-Card Mode

- Cards advance when the rotation returns to the Price screen, not on every button press.

- Press the TOP button to advance through screens until you return to Price — the card will change at that point.

Device Keeps Rebooting

- This usually indicates corrupted firmware. Enter BOOT mode (hold BOOT, unplug, replug, release BOOT) and reflash the firmware.

15. Technical Specifications

| Specification | Detail |
|------------------|---|
| Microcontroller | ESP32-S3, dual-core 240 MHz |
| Display | 1.9" colour LCD, 170 x 320 pixels |
| Connectivity | WiFi 802.11 b/g/n (2.4 GHz only) |
| Audio | I2S digital amplifier (MAX98357A), mono speaker |
| LED Strip | 1x WS2812B RGB underglow strip, 12 LEDs (underside of base unit) |
| Power | USB-C, 5V DC, 1A minimum |
| Base Unit Dims | 115mm W x 50mm D x 40mm H (plus corner leg height) |
| Card Holder | Not included |
| Cards Tracked | 1 to 8 cards simultaneously |
| Storage | FFat partition for audio files (internal flash) |
| Data Source | JustTCG API v1 (justtcg.com) |
| API Efficiency | All watched cards fetched in a single batch request per interval |
| Supported Games | Pokémon, Pokémon Japan, Magic: The Gathering, Yu-Gi-Oh!, One Piece Card Game, Digimon, Disney Lorcana, Dragon Ball Super: Fusion World, Gundam Card Game, Star Wars: Unlimited, Grand Archive TCG, Union Arena, Flesh and Blood TCG, Hololive Official Card Game, Riftbound, and more |
| Firmware Version | 5.6.0 |