



PID Widget - Defect & Bug Report Log

Project: PID Timetable Widget

Status: All Listed Defects are RESOLVED

Date: December 02, 2025



Critical Defects (High Priority)



BUG-003: Missing City Lines in GPS Mode (The "Trailing P" Issue)

- **Severity:** Critical
- **Affected Version:** v3.0 - v3.1
- **Component:** GPS / API Fetcher
- **Description:**

When the widget switched from hardcoded IDs to GPS detection, it successfully found stops but only displayed Suburban Buses (Series 300+). City Buses (Series 100-200) and Trams were completely missing from the list, even when standing right next to them.
- **Root Cause:**

The Golemio API behaves differently for "Node IDs" vs "Stop IDs".

 - GPS returns the Node ID (e.g., U123Z1).
 - For City lines, the API specifically requires the **Platform Suffix** (e.g., U123Z1P) to return the correct departure board data. Without the P, it defaults to a general node view that often excludes specific city lines.
- **Resolution (Fix):**

Modified getFinalStopIdList logic to automatically append a "P" to every Stop ID found via GPS before sending the request to the API.

 - *Code Change:* if (!baseId.endsWith('P')) idSet.add(baseId + 'P');



BUG-002: Widget "Freeze" in Background

- **Severity:** High
- **Affected Version:** v2.3
- **Component:** iOS Widget Lifecycle
- **Description:**

The widget would stop updating the time (e.g., stuck on "10 min") if the user didn't open the main app for a few hours. The iOS system killed the background process because it deemed the widget "inactive."
- **Root Cause:**

Scriptable widgets require an active element that changes frequently to encourage iOS to grant background refresh cycles. Static text is not enough.
- **Resolution (Fix):**

Implemented the "Invisible Timer Hack".

- Added a native Date stack to the widget with opacity: 0.
- Because the Date object counts down seconds natively in the OS, iOS keeps the widget "alive" without ruining the visual design.

BUG-004: Duplicate "Ghost" Departures at Hubs

- **Severity:**  Medium
- **Affected Version:** v3.2
- **Component:** Data Processing
- **Description:**
At large transport hubs (like Chodov), the user is often within range of both "Platform A" and "Platform B".
 - *Result:* The widget listed the **same bus twice** (e.g., Bus 136 departing at 14:00 from A, and 14:00 from B).
- **Root Cause:**
The GPS radius caught multiple physical posts for the same stop name. The API returned valid data for both, creating redundancy.
- **Resolution (Fix):**
Implemented Trip ID De-duplication.
 - The code now creates a Map keyed by the unique trip.id.
 - If a duplicate trip is found, it compares the distance and keeps **only the closest one**.

Usability Defects (Medium Priority)

BUG-005: "Uncatchable" Connections Displayed

- **Severity:**  Medium
- **Affected Version:** v4.0
- **Component:** UX Logic
- **Description:**
The widget displayed "0 min" or "1 min" departures even if the stop was 400 meters away. Users would run for a bus, only to realize the walk takes 5 minutes.
- **Resolution (Fix):**
Introduced the Automated Walking Filter (v4.3).
 - Formula: Distance / 1.3 m/s = Walking Time.
 - Logic: If TimeUntilDeparture < WalkingTime, the bus is hidden from the list.

BUG-001: Historical Data ("Ghost Buses")

- **Severity:**  Medium
- **Affected Version:** v1.2
- **Component:** API Endpoint
- **Description:**
The widget occasionally showed buses that had actually departed 1-2 minutes ago.
- **Root Cause:**

The original version used the /vehiclepositions (GPS) endpoint, which sometimes lags or retains old positions.

- **Resolution (Fix):**
Switched to the official /departureboards endpoint (v1.7), which aligns with the official station monitors and filters out departed vehicles automatically.



Minor Issues (Low Priority)



BUG-006: Platform Confusion

- **Severity:** ● Low
- **Affected Version:** v5.0
- **Description:** Users at multi-platform terminals didn't know which specific stand to go to, as all buses were mixed in one list.
- **Resolution (Fix):** v5.3.4 introduced **Grouped Platform Headers** (e.g., "Stand A", "Stand B") to clearly separate departures.