AI Diagnostics

User Guide

AI-driven troubleshooting sessions that walk you through diagnosing access control issues step by step — from power to signal to configuration.

Quick Reference

Command: /diagnose or button on device cards
Access: Requires active subscription or trial
Context: Uses device wiring specs and documentation
Format: Multi-turn threaded conversation

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1. Getting Started

The AI Diagnostics feature provides interactive, AI-driven troubleshooting sessions that guide you through diagnosing access control issues step by step. The AI uses a diagnostic-specific approach: systematic elimination from the most likely cause to the least likely.

There are two ways to start a diagnostic session:

- Tap Diagnose Issue on any device card, or
- Type /diagnose in the chat

The AI draws on device wiring specifications, installation notes, common issues, and manufacturer documentation to provide targeted, context-aware diagnostics specific to the device you are working on.

> Tip: For the best results, describe the symptom in plain language. The more detail you provide up front, the faster the AI can narrow down the cause.

2. Starting from a Device Card

When viewing any device card, you'll see a " Diagnose Issue" button. Tapping it starts a diagnostic session with the device already selected — no need to type the device name.

The flow:

- Tap Diagnose Issue on the device card
- The bot asks: "What symptom are you seeing?"
- Describe the problem in plain language
- The AI begins its diagnostic with full device context

Example symptom descriptions:

- "Reader not reading cards"
- "LED flashing red"
- "Door won't lock"
- "Buzzer sounds but strike doesn't release"
- "Intermittent communication loss"

> Tip: Starting from a device card is the fastest path — the AI already knows the exact device model and loads all relevant wiring data, known issues, and documentation.

3. Starting from the Command

If you're not already viewing a device card, you can start a diagnostic session with the /diagnose command.

The flow:

- Type /diagnose in the chat
- The bot asks: "What device are you working on?"
- Type the device name — the bot fuzzy-matches it from the database
- Once matched, the bot asks for the symptom
- Describe the problem and the diagnostic session begins

The fuzzy matching is forgiving — you don't need the exact model name. For example, typing "LP4502" will match "Mercury LP4502", and "signo 20" will match "HID Signo 20".

> Note: If the bot can't find a match, it will suggest similar devices. Tap one to select it, or try a different name.

4. How the AI Diagnoses

The AI follows a strict diagnostic methodology designed to find the root cause efficiently without wasting time on unlikely scenarios.

Diagnostic principles:

One question per turn	The AI asks exactly one question at a time. Each question is designed to eliminate a specific failure mode.
Most likely first	Diagnosis follows a strict order: power issues first, then signal/wiring, then configuration, and finally hardware failure.
No premature replacement	The AI never suggests replacing hardware until wiring and configuration causes have been eliminated through testing.
Specific test points	Questions reference exact terminal labels, voltages, and measurements from the device's documentation (e.g., "Measure voltage between TB1-1 and TB1-2").
Actionable fix steps	When the cause is identified, the AI provides exact fix steps with terminal labels, wire colors, and expected values.
Confirmation check	Every AI response ends with "Did that resolve it?" to keep the session moving toward resolution.

Example diagnostic flow:

- Symptom: "Reader not reading cards"
- Turn 1: AI asks about power LED status on the reader
- Turn 2: AI asks you to measure voltage at the reader terminals
- Turn 3: AI asks about wiring between reader and controller
- Turn 4: AI identifies the cause and provides fix steps

> Tip: The AI searches manufacturer documentation on every turn, so even follow-up questions are backed by the latest relevant context from spec sheets and install guides.

5. During a Session

A diagnostic session is a multi-turn conversation. Answer the AI's questions and it progressively narrows down the issue.

Key session behaviors:

Conversation memory	The AI remembers everything discussed in the current session. You don't need to repeat earlier answers.
Fresh docs each turn	Each turn includes a fresh search of manufacturer documentation for relevant context — the AI always has up-to-date information.
Session timeout	Sessions auto-expire after 30 minutes of inactivity. You'll need to start a new session if you come back later.
AI rate limit	You have 50 AI turns per day. Warnings appear at 10 remaining and 3 remaining.
Feedback buttons	After each AI response, you can tap or to rate the answer. This helps improve future responses.

> Note: If you mention a different device during a session, the thread clears and starts fresh with the new device's context. This is by design — each device needs its own diagnostic context.

6. Ending a Session

You can end a diagnostic session in several ways:

- Tap the □ End Session button that appears after every AI response
- Type /cancel to immediately end the session
- Wait for the 30-minute timeout — the session clears automatically

When a session ends, the conversation is saved for admin review and all session state is cleared. You can start a new diagnostic session at any time — either for the same device or a different one.

> Tip: If the AI resolved your issue, end the session cleanly with the End Session button. This saves the full conversation so your team lead can review successful diagnostics.

7. Quick Reference

Action	How
Start from device card	View device > tap ■ Diagnose Issue
Start from command	Type /diagnose > enter device name > describe symptom
Describe symptom	Type in plain language (e.g., "LED flashing red")
Answer AI questions	Reply with your observations or measurements
Rate a response	Tap ■ or ■ after any AI reply
End session	Tap ■ End Session or type /cancel
Check AI usage	50 turns per day; warnings at 10 and 3 remaining
Session timeout	Auto-expires after 30 minutes of inactivity