# How Remote Tuning Works

Customer guide for Gen 2 LT1, LS and other supported GM vehicles. The process is similar across platforms; the programming and datalogging tools differ.

**IMPORTANT — DO NOT LICENSE YOUR HP TUNERS PCM OR TUNE FILE UNTIL YOU CONTACT LT1 TUNER.**

HP Tuners customers should first read and save their original file, send it with the completed Tune Data Sheet, and wait for instructions. Early licensing can cause additional costs if EGR/wideband input configuration or OS preparation is necessary.

## Part 1 — The remote-tuning process

**1. Complete the Tune Data Sheet** — Describe engine, cam, heads, injectors, fuel, transmission, PCM, wiring and other modifications.

**2. Send the original calibration** — HP Tuners users may read and save an original calibration before licensing. Other PCM families have different procedures.

**3. LT1 TUNER reviews your setup** — We review the file and data sheet and advise on any required preliminary changes and licensing.

**4. License and flash when instructed** — Customers provide compatible equipment and pay separate credits, licenses and unlock costs.

**5. Submit requested logs** — Start with warm idle and light cruise. Do not make boosted or WOT pulls until requested and the vehicle is ready.

**6. Repeat with revisions as needed** — Provide actual logs, tune revision filename and symptom notes. Revisions continue as required with customer participation and a mechanically sound vehicle.

## Wideband requirement

A wideband O2 sensor is required for vehicles with aftermarket camshafts, cylinder heads or power adders; other cases are evaluated individually. LT1 TUNER prefers the AEM 30-0300 X-Series.

**Customer responsibilities:** Provide working hardware/software, proper vehicle wiring, usable data and a mechanically sound vehicle. Calibration fees do not cover mechanical repair or equipment, software, licensing and unlock costs.

Download LT1 TUNER Tune Data Sheet (PDF) | Pricing

# Part 2 — PCM-specific requirements

## 1992–1993 LT1 — chip-based ECM

Compatible chip programmer, adapter, chip and datalogging equipment. Moates hardware may be difficult to source. Wideband typically uses A/C pressure or EGR inputs.

## 1994–1995 LT1 — ALDL

Laptop and ALDL cable, EEHack and FlashHack. Wideband options include A/C Pressure or unused D27 when configured appropriately.

## 1996–1997 LT1 — LT-Flash

Preferred option for original PCM read/write/datalogging, including dedicated 0–5V cable input. Basic mail-order is reserved for stock or bolt-on applications. LT-Flash.

## 0411 (4x) / P01 conversion

Customer performs application-specific repinning and hardware installation. Earlier engines may require added crank-position components. Operating system and compatibility are selected for the particular combination.

## 24x TorqueHead / EFI Connections — P01/P59

Both use HP Tuners, but follow the appropriate manufacturer installation and wiring procedure. Supply base file and Tune Data Sheet.

## Factory LS and newer GM controllers

Use HP Tuners when supported; exact controller may require additional hardware, unlocks or credits. Contact LT1 TUNER before buying or licensing.

## 0411 wiring caution

**Community-sourced repinning references have NOT been independently verified by LT1 TUNER. Verify all circuits, terminals, connectors and wire colors against factory service information before moving any wires. LT1 TUNER internal calibration checklists are not part of public guides.**

# Wideband inputs & logging

| Platform / software | Typical input option |
|---|---|
| 1992–1993 LT1 | A/C Pressure or EGR |
| 1994–1995 EEHack | A/C Pressure or unused D27 |
| 1996–1997 LT-Flash | Dedicated 0–5V input on LT-Flash cable |
| P01/P59 and HP Tuners | Pro Link with compatible interface, or supported EGR/A/C input |
| Other HP Tuners-supported GM | Pro Link or an applicable PCM analog input |

AEM 30-0300 is preferred. Wiring and software options are application-specific. For HP Tuners EGR/A/C Pressure logging, record the raw 0–5V voltage as directed so LT1 TUNER can interpret it correctly.

## What to include with each log

- The actual saved log file (not just pictures).
- Vehicle identification and exact tune revision / calibration filename.
- Warm idle, cruise or other conditions captured and relevant symptoms.
- Confirmation that wideband and essential channels are working.
- No WOT or boost pulls until LT1 TUNER specifically requests them.

## Links

Tune Data Sheet

Technical page

Pricing

Messenger — Steve Devillier