TAZER JL Lite

Z AUTOMOTIVE
Electronic Performance Modifications

Also compatible with Jeep Gladiator JT

User's Guide
For Firmware 11.3.7 - 040622

The **Tazer JL Lite** is an electronic plug-in device for the following vehicles:

2018-2022 Jeep Wrangler JL

2020-2022 Jeep Gladiator JT

Firmware Updates

New firmware is available periodically, always free and posted to the Z Automotive website. The Tazer may not ship with the latest firmware, so use ZPU (Z Automotive Programming Utility), also on the website, to install the firmware over USB.

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Feature List

Tazer JL Lite features can be broken into three categories:

- **Vehicle Settings** are accessed with the **engine OFF and the ignition in the "RUN" position**. These are changes made to the Jeep such as tire size, gear ratios or settings which accomodate other upgrades. **These changes will continue to operate after the Tazer JL Lite is unplugged.**
- **Live Functions** are accessed with the **engine ON**. These are operations the Tazer JL Lite performs live, **only while it is physically connected.**
- **"Non-Menu" Live Functions** **are not located in a menu.** They are **activated automatically or with a steering wheel button combination** with the **engine ON**. These are operations the Tazer JL Lite performs live, only while it is physically connected.

List of Vehicle Settings
(ENGINE OFF, IGNITION IN "RUN")

- Light Show – 6 preset and 3 make-your-own light shows that flash all the exterior lights – perfect for car shows/first responders/off-road visibility – controlled from key fob or steering wheel buttons – can be enabled in-motion for use in parades, off-road and for legal police/EMS applications **(contact support for more info)**
- read and clear DTCs system-wide or in specific modules
- change tire size
- change gear ratio **(max 4.11 on 4XE)**
- change Transfer Case LOW ratio
- enable/disable TPMS system
- set TPMS pressure warning limit, front and rear, between 25psi and 85psi
- one-touch return-to-stock – quick "Unmarry" function returns to stock

List of Live Functions
(ENGINE ON)

- activate Light Show
- define Winch Mode RPM **(excl. 4XE)**
- flash lights to indicate tire pressure while filling
- Dark Mode – turn off all exterior lighting and dash/radio/shifter lights while parked with the engine running
- activate and cycle through camera inputs
- display Vacuum/Boost Gauge
- activate 0-30 timer
- activate 0-60 timer

List of "Non-Menu" Live Functions
(NOT IN A MENU — AUTOMATIC OR ACTIVATED WITH BUTTON INPUTS ONLY)

- AutoStopStart Disable – Tazer JL Lite will **automatically remember** the last state of the auto stop/
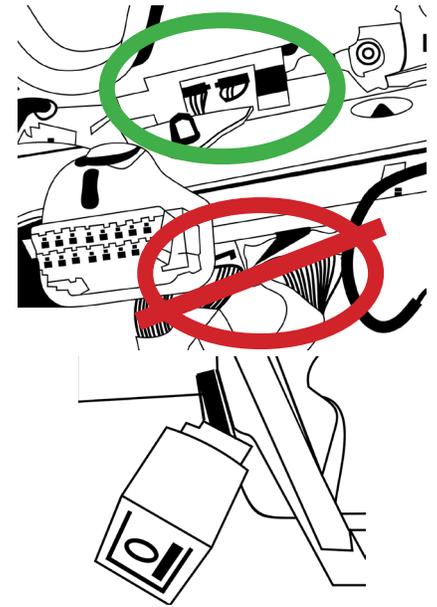
start system and set it for you the next time you start the vehicle

- disconnect sway bar in 2WD up to 30mph
- Cooldown Mode – turn on engine fans on-demand
- Winch Mode – raise idle RPM to user-selected value between 1250 and 2000 **(excl. 4XE)**
- Line Lock – lock the front brakes for an easy burnout
- Rock Crawl – lock all four brakes with a steering wheel button combo to hold the vehicle still, especially helpful when off-road **(excl. 4XE)**
- lock all four brakes in park to anchor Jeep (shortcut) **(excl. 4XE)**
- partial reboot

NOTE: This is just a list of available features. To learn more about how to activate them or what they do, continue to the dedicated section of the manual for each set of features.

Installation

- Unplug the two SGW connectors **circled in green** by pressing the tab with your index finger and gently pulling straight down on the wires.
- Plug those two connectors into the Tazer JL Lite.
- The driver knee panel may be removed for easier access to see the connectors
- The Tazer JL Lite can be left plugged in, as many of its features (Live Functions) only work when plugged in.
- An optional SGW Extension Cable is available from our website for easier removal.
- The Tazer JL Lite will go to sleep 30 seconds after the Jeep shuts down.
- **The Tazer JL Lite fits ALL Jeep JLs and JTs. If it looks like one of the plugs is too big, you're looking at the incorrect plugs (circled in red).**

Menu Navigation

- For all functions involving the dash (EVIC) display, the EVIC screen first needs to be in a state where it's showing the AUDIO screen. Navigate to this screen using the steering wheel arrow buttons.
- Once the display is in this state, use the button commands below to operate your Tazer JL Lite.

Function	Button Input
OPEN MENU/SCROLL MENU	◁ **(HOLD) + CRUISE CANC**
SELECT/CHANGE OPTION **or** SAVE VALUE (TIRE SIZE, TPMS THRESHOLD, ETC.)	◁ **(HOLD) + CRUISE ON/OFF**
ADJUST VALUE (TIRE SIZE, TPMS THRESHOLD, ETC.)	◁ **(HOLD) + CRUISE +/-**

CRITICAL

IF YOU MAKE ANY CHANGES IN THE "VEHICLE SETTINGS" (ENGINE OFF) MENU OR UNMARRY, YOU MUST PERFORM A FULL REBOOT AND TWO SLEEP CYCLES. SEE BELOW.

- After making all of your changes, scroll to "full reboot?" and "select" it.
- After the countdown, perform two sleep cycles.
- The quickest way to do this is to turn the ignition off, close the driver's door and wait about 60 seconds AFTER the dash goes dark, turn the ignition on (but not the engine). Do this twice.
- This step is critical after changing settings or settings might not save or you may find that the dash doesn't shut down, which can result in a dead battery.

FULL REBOOTS SHOULD BE PERFORMED ON LEVEL GROUND, WITH THE WHEELS STRAIGHT AND WITH YOUR FOOT OFF THE BRAKES.

Returning to Stock (Unmarry)

SELECT "UNMARRY" FROM THE "VEHICLE SETTINGS" MENU AND PERFORM THE STEPS ABOVE TO RETURN YOUR VEHICLE TO STOCK CONFIGURATION*

*Your Tazer stores the configuration present when it's Married. That will be what it returns to when you Unmarry, even if it wasn't stock.

You should Unmarry and remove your Tazer before dealer service or if you wish to use your Tazer in another vehicle.

Vehicle Settings

The **Vehicle Settings menu** is accessed with the **ignition in "Run" (not "ACC") and the engine NOT running.**
The menu items are listed in the order in which they will display.

- **Light Shows:** Activate pre-programmed and custom light shows, even when the engine isn't running.
- **Read DTCs:** View any error codes in the
  - Powertrain Control Module **(PCM)**
  - Body Control Module **(BCM)**
  - Transmission Control Module **(TCM)**
  - Anti-lock Brake System **(ABS)**
  - Drivetrain Control Module **(DTCM)**
  - Radio Frequency Hub **(RFH)**
  - Drive Assistance Module **(DASM)**
  - Occupant Restraint Controller **(ORC)**
  - ParkTronic System **(PTS)**

- **Clear DTCs:** Clear any error codes in those same systems
- **Marry/Unmarry:** To advance to any of the vehicle settings, you will first need to "Marry" the Tazer JL Lite to the vehicle. When you select this option, the Tazer JL Lite will download your car's **current** (presumably stock) settings. This should take around 15 seconds. **Do not disturb this process.** Once complete, you will be able to advance to the **Settings** choices.
- **Submenus:** Once married, you can advance though several sub-menus. Select a submenu using the method described above.

Submenu Perf:
performance-based options

- **Set Tire Size:** Use this setting to change the calibration for tire size. Use the left arrow and cruise +/- buttons to raise or lower the value, then select it (left arrow and cruise on/off) to save the new setting.
- **Set Gear Ratio:** Use this setting to change the calibration for axle gear ratio. Use the left arrow and cruise +/- buttons to raise or lower the

value, then select it (left arrow and cruise on/off) to save the new setting. **(max 4.11 on 4XE)**
- **Set Transfer Case LOW ratio:** Use this setting to change the calibration for 4LOW gear ratio. Use the left arrow and cruise +/- buttons to raise or lower the value, then select it (left arrow and cruise on/off) to save the new setting.

Submenu Tire:
TPMS and tire size options

- **Set TPMS:** Turn the tire pressure monitoring system on or off.
- **Set Tire Pressures Front/Rear:** Change the TPMS warning pressures – use the left arrow

and cruise +/- buttons to raise or lower the pressure, then select it to save the new setting. (The Jeep's computer will only recognize a minimum of 25psi.)

Vehicle Settings Menu Cont.

- **Firmware Version Display:** Shows the current Tazer JL Lite firmware revision.
- **Serial Number Display:** Shows your Tazer JL Lite's serial number (only needed in specific tech support situations)
- **Unmarry Number:** Displays the current one-time use Unmarry Number.
- **Full Reboot:** Will reset vehicle modules and the Uconnect system twice. This takes 2.5 minutes to complete and should be performed after any Vehicle Settings are changed – Uconnect will reboot twice, the dash will reset, and when it's finished, the red security dot on the dash may turn on. Once complete, shut off the vehicle, open and close the driver door and wait for a minute to be sure the dash turns off. Open and close the door again to complete a second sleep cycle..

Live Menu

This section explains how to use the Tazer JL Lite's live functions – these are activated with the same button presses as the Vehicle Settings Menu, but **while the engine is RUNNING.*** These features **will only work if the Tazer JL Lite remains plugged in**.

* the **4XE** will also access the Live Menu with the ignition in Run and the tachyometer at 0

- **Light Show:** This is one method of activating the light shows. Selecting this will activate the first show, unless ZPU was used to change the startup show. There are 9 light shows – you can toggle through all 9, then back to OFF.
- **Winch RPM (excl. 4XE):** Use left arrow and cruise +/- buttons to adjust Winch Mode RPMs, 1300-2000RPM. Use left arrow and cruise on/off to save the new setting.
- **TireFill:** Set PSI and corresponding marker lights near each tire will
    - flash slowly if underfilled
    - flash quickly if overfilled
    - remain solid at correct pressurev
- **Dark Mode:** If enabled, turn off all exterior lights and dash, radio, and shifter lighting. Selecting again, advancing to next menu item, pressing "screen off," or driving over 5 mph will automatically cancel this mode.
- **Video:** If selected, will turn on backup camera input.
- **VAC or BOOST:** If selected, will display the Vacuum/Boost Gauge on the EVIC
- **0-30 Timer:** When the vehicle is stopped, this display will change to "start 30". As soon as the vehicle starts moving, the display will change to "go to 30" and the timer starts. When the vehicle reaches 30MPH, the time will be displayed.
- **0-60 Timer:** When the vehicle is stopped, this display will change to "start 60". As soon as the vehicle starts moving, the display will change to "go to 60" and the timer starts. When the vehicle reaches 60MPH, the time will be displayed.
- **Display Tazer JL Lite Firmware Revision:** Displays the Tazer JL Lite's current firmware version (ie "TZJL:11.3.X")

Non-Menu Live Functions

Some **live** functions of the Tazer JL Lite are **not accessed via a menu**, but rather work automatically or with **button presses**.

- **Light Shows:** The Tazer comes pre-configured with 6 light shows out of the box, plus 3 "make your own" light shows that you can configure with the ZPU utility. There are two ways to control the light shows on the Tazer:

  Keyfob: The light show can be turned on by pressing unlock-unlock-lock-unlock from the keyfob. This will start the first light show in the sequence (depending on which show it's configured to start with). Pressing unlock again will advance to the next enabled show. Pressing lock will turn off the light shows. You may lock the vehicle while the shows are on by pressing the button on the door handle or using the key.

  Dash Menu: You can start the show by setting the dash to "Audio" mode, then press the left arrow and tap cruise CANC button. "Lightshow?" will display on the dash. Hold left arrow and tap cruise on/off (center) button to turn on the first light show in the sequence. Again to advance to the next show. Exit the menu (left arrow and CANC) to turn off the show.

- **Start/Stop Kill:** Set the Start/Stop system as you wish, enabled/disabled, and the Tazer JL will set it that way then next time you start the vehicle.

- **Bed/Reverse Lights From Keyfob:**

  - Unlock x 3: Turn on Bed Lights
  - Unlock x 5: Turn on Bed Lights and Reverse Lights
  - Lock: Turn off Bed/Reverse Lights
  (will also turn off after 30 minutes)

- **License Plate Blanking:** The license plate lights will turn off when in reverse to remove glare on the camera at night.

- **Sway Bar in 2WD:** Press the Sway bar button while in 2WD and it will disconnect or re-connect as if it were in 4WD. It will automatically re-connect at 30MPH and disconnect when the Jeep comes back to a full stop. See "SwayKill" in Button Remap section for full sway bar control.

- **Cooldown Mode:** Press the right arrow and cruise cancel button at the same time to turn the engine fans on High. If the engine is off, the fans will turn off automatically if the battery voltage drops below 11V. Transmission temperature will read as 229F while this mode is being used with the engine running. (only works with the engine off on manual Jeeps)

- **Winch Mode (excl. 4XE):** With the engine running, press the left arrow and cruise RES buttons at the same time. The engine will rise to the RPM selected in the live menu (default 2000). There may be a few seconds delay before it changes. It will NOT raise if you touch the accelerator pedal, and will cancel if you do.

- **Anchor Mode (excl. 4XE):** Brake firmly and pull the hi-beam stalk. All 4 brakes will hold indefinitely until accelerator pressed. Works in conjunction with Winch and Cooldown modes.
- **Line Lock (excl. 4XE):** While in 2WD, press and hold the left arrow and cruise set(+) buttons. Continue to hold and pump the brakes twice, firmly. The Jeep will stay held using only the front brakes while you press on the accelerator to do a burnout. "LineLock" will be displayed in the cluster. Will automatically force RWD on 392.
- **Rock Crawl (excl. 4XE):** Press and hold the left arrow and cruise set(-) button, and pump the brakes twice. The Jeep will hold using all four brakes while you can work the pedals to apply torque, and release the buttons when you're ready to move. "RockCrawl" will be displayed in the cluster.

UPDATING/LIGHT SHOW CONFIGURATION

Updating your Tazer firmware is done with the Z Automotive Programming Utility, which **requires a computer or other device running Windows or MacOS Catalina or newer** and an available USB port. The ZPU User Guide at the link above explains how to install ZPU and how to perform firmware updates. **If you misplace or damage your USB cable, you can replace it with any common "USB Mini B" data/charging cable.**

Please see the accompanying "Light Show Configuration Guide" to configure your Tazer JI Lite's light show options in ZPU

UNMARRYING YOUR TAZER

To Unmarry your Tazer, select "Unmarry" from the Vehicle Settings Menu (not Live). Then perform a "Full Reboot" and two sleep cycles as described on page 6. All of your settings will revert to whatever they were when you originally Married your Tazer.

You should Unmarry and remove your Tazer before dealer service or if you wish to use your Tazer in another vehicle.

Electronic Performance Modifications

The Unmarry Key

NOTE: This feature is **only** for when your
Tazer is Married to **another vehicle.**

If you receive a Tazer second-hand, or lose access to your vehicle without unmarrying your Tazer and receive the **"Not VIN XXXX"** error:

1. Navigate to the "UnmryNo" item in the Tazer's EVIC menu, described on page 10.
2. Write this key down, and visit this URL to purchase our Unmarry Service, where you'll be prompted to enter that key: https://www.zautomotive.com/product/unmarry-key/
3. Return to the UM Key option in the EVIC menu and hit (Left Arrow + Cruise+/-) to begin entering the code provided with your purchase.
4. Press Left + Cruise On/Off to proceed to the next character.
5. Once you've entered the last (eighth) digit, your Tazer will report whether the unmarry has succeeded or failed.

Tazer JL Mini Upgrade

Your Tazer JL Lite can be upgraded to a Tazer JL Mini, which supports many more options for changing vehicle settings. Visit this link for the full list: https://www.zautomotive.com/zpu/instructions/TazerJLMiniUserGuide1134.pdf

1. Navigate to the "Serial Number" item in the Tazer's EVIC menu, described on page 6.
2. Visit this URL to purchase an upgrade activation key. You'll be prompted to enter the serial number: https://www.zautomotive.com/product/activation-key/
3. Return to the Serial Number option in the EVIC menu and hit (Left Arrow + Cruise+/-) to begin entering the code provided with your purchase.
4. Press Left + Cruise On/Off to proceed to the next character.
5. Once you've entered the last (eighth) digit, your Tazer will report whether the activation has succeeded or failed.

Common Troubleshooting Questions

Symptom	Cause	Solution
No menu in EVIC	EVIC display has to be in a state where it can display radio station name	Set EVIC so it's showing radio station name. This would be the the "Audio" menu on the instrument cluster
Changed a setting and it didn't take effect	Full Reboot and 2 sleep cycles were not performed	Follow the directions on page 4.
Changed gear ratio and "service AWD" is showing	Incorrect gear ratio chosen or Full Reboot and 2 sleep cycles were not performed	Follow the directions on page 4 and go for a short drive to fully initialize.
Manual transmission: changed tire size and have ESS error/backup camera stopped working	ESS re-learn procedure not completed.	Please see the ESS relearn procedure on the support page for Tazer JL.
Red security light on, ignition state won't change or vehicle won't start	Needs time to complete synchronization routine after configuration change	Wait a few minutes and then try changing ignition state, then perform one sleep cycle.