



TAZER MINI JEEP WRANGLER JL

Also compatible with
Jeep Gladiator JT

User's Guide

For Firmware [11.2.3-082820](#)

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

2018-2021 Jeep Wrangler JL

2021 Jeep Gladiator JT

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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.

Feature List

Tazer JL Mini features can be broken into two categories:

- **Vehicle Settings** 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 Mini is unplugged.**
- **Live Functions** are operations the Tazer JL Mini performs live, **only while it is physically connected.**

Vehicle Settings

- change tire size
- change gear ratio
- change Transfer Case LOW ratio
- enable/disable TPMS system
- set TPMS pressure warning limit, front and rear, between 25psi and 85psi
- enable/disable backup camera
- enable/disable Cargo Camera input **(8.4 UConnect only)**
- enable/disable CD (wired audio) input*
- enable/disable TravelLink/XM traffic and weather
- activate Offroad Pages after upgrading to 8.4" radio
- change daytime running lights (DRL) region (CA/USA)
- change DRL location
- enable/disable DRL Dropout function
- enable/disable factory fog lights
- enable/disable Fog Light Dropout (when fogs shut off while high beams are on)
- enable/disable factory halo lights (including BCM output for adding halos)
- enable/disable one-touch lane change
- change headlight type (Std/LED)
- change fog light type (Std/LED)
- change taillight type (Std/LED)/delete sensor circuit for running aftermarket lights
- change front turn signal type (std/LED)/delete sensor circuit for running aftermarket lights
- enable/disable Trailer Tow setting
- enable/disable Aux Buttons
- enable/disable Blind Spot Detection (if the hardware is added or removed)
- enable/disable/change ParkSense configuration
- disable electronic sway bar (if removed from the vehicle)
- disable front axle disconnect module for axle swaps
- disable front and rear lockers for axle swaps
- disable electronic steering pump for hydraulic steering conversions
- enable HVAC dual-zone switch

- assembly when upgrading from 5" radio
- enable HomeLink if HomeLink visor and harness are installed
- enable Proximity Entry if handles and harnesses are installed
- enable automatic headlights
- Change cluster splash screen – **JL:**

Live Functions

- AutoStopStart Disable – Tazer JL Mini will **automatically remember** the last state of the auto stop/start system and set it for you the next time you start the vehicle
- AutoTrackKill – Tazer JL Mini will **automatically remember** the last state of the traction control system and set it for you the next time you start the vehicle
- disconnect sway bar in 2WD up to 30mph or at any speed if mapped to a button
- use backup camera and added cargo/front/undercarriage camera/JT Trail camera or media player at any speed
- TurnCAM – activate backup camera when turn signals are used (**7" and 8.4" UConnect**)
- Dark Mode – turn off all exterior lighting and dash/radio/shifter lights while parked with the engine running
- 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

- Wrangler/Sahara/Rubicon **JT:** Sport/SportX/Rubicon
- enable/disable PANIC button on remote
- one-touch return-to-stock – quick “Unmarry” function returns to stock.

- from key fob or steering wheel buttons – can be enabled in-motion for use in parades, off-road and for legal police/EMS applications
- Axle Locker Control (**Rubicon**) – engage lockers in 2WD and 4Hi on demand.
- TC Kill – turn off traction control, stability control and ABS
- Hood Alarm – monitors hood activity when the vehicle theft alarm is armed and will sound the alarm and flash a light show if opened
- Cooldown Mode – turn on engine fans on-demand when the ignition is on and the engine is not running (**excluding Diesel**)
- 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
- Winch Mode – raise idle RPM to user-selected value between 1250 and 2000

RPM with a button press (**excluding Diesel**)

- Button Mapping – use cruise up, down and right buttons as quick-access to some of Tazer JL Mini’s functions **when cruise control is off**
- Display DTCs – display Diagnostic Trouble Codes to see why the Check Engine light may be on.
- Clear CELs – reset check engine light and

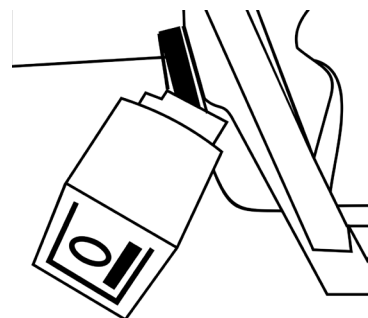
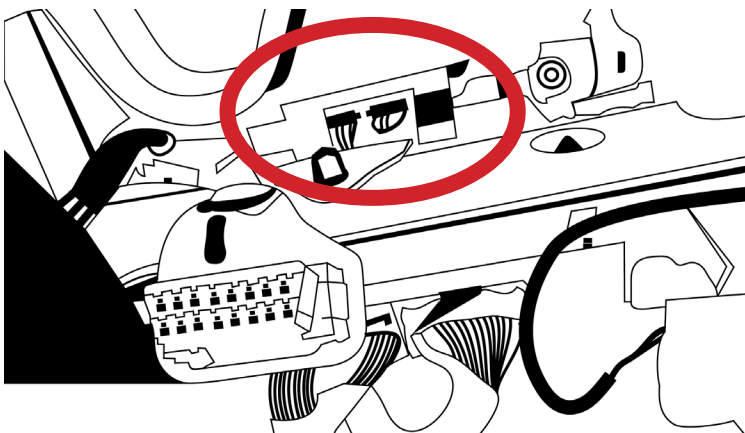
DTC codes

- 0 to 30 and 0 to 60 Timers – display 0-30 or 0-60 timers on EVIC
- display Boost/Vacuum readout on the EVIC
- Automatic blanking of license plate lights on Gladiators when in Reverse or when using Turncam, to remove glare on camera at night.

Installation

Installation is a matter of unplugging the SGW module above the OBD2 diagnostic connector and plugging the Tazer JL Mini in its place. Simply locate the SGW and unplug its two connectors by pressing the tab with your index finger and gently pulling straight down on the wires. Plug those two connectors into the Tazer JL Mini. The connectors may be covered by a panel.

- The Tazer JL Mini is intended to be left plugged in, as many of its features (Live Functions) only work when installed.
- The Tazer JL Mini should be Unmarried and removed before dealer service.
- The Tazer JL Mini will go to sleep 30 seconds after the Jeep shuts down.
- It does not need to be plugged in for any of the features in the Vehicle Settings to remain operational.



Vehicle Settings

This section explains how to use the Tazer JL Mini to change the vehicle settings for feature activation.

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. Use the left and up/down arrows to set the EVIC display like this. Once the display is in this state, press and hold the steering wheel LEFT ARROW, and tap the Cruise "CANCEL" button to enter the settings menu. Pressing LEFT ARROW and CANCEL will advance through the menu items. To change/select a setting, press and hold LEFT ARROW and tap the Cruise "ON/OFF" (center) button.
- Advance through the menu slowly.
- You can exit the menu quickly and safely by holding the left arrow and pressing the cruise RES button.
- If the text is overwritten by another message, press the left arrow and the display will revert back to the Audio display.

If you made any changes in the setup menu, be sure to scroll to "**full reboot?**" and "select" it. **This step is critical after changing settings**, or you may find that the dash doesn't shut down, which **can result in a dead battery**.

Some settings require two sleep/wake cycles. The quickest way to do this is to turn the ignition off, leave the car, close the driver's door and walk away with the key. Wait about 60 seconds AFTER the dash goes dark, then re-enter. Do this twice.

Exit the menu quickly and safely by **HOLDING** the **LEFT ARROW** and **TAPPING** the Cruise "**RES**" button.

The **setup menu** is accessed with the **ignition ON but 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.
- **Clear CELs:** Clear the check engine light and diagnostic codes stored in the PCM, TCM, ABS, and AWD modules.
- **Display DTCs:** Cycles through Diagnostic Trouble Codes
- **Marry/Unmarry:** **To advance to any of the vehicle settings, you will first need to "Marry" the Tazer JL Mini to the vehicle.** When you select this option, the Tazer JL Mini 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 through several sub-menus. Select a submenu using the method described above.

Select "UNMARRY" to return the vehicle to stock.

After unmarrying, advance to the "full reboot?" option and select it, allowing a full **2.5 minutes** for the Tazer JL Mini to reboot all systems – the Uconnect will reboot twice in this time, the dash will reset, and when it's finished, the red security dot on the dash will turn on and back off. **A few sleep cycles might be required for all changes to take effect.**

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.
- **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 car's computer will only recognize a minimum of 25psi.)

Submenu Radio:

radio-based options

- **Set Backup Camera:** If factory backup camera is deleted, this setting will disable it.
- **Set Cargo Cam:** This will enable the “cargo cam” selector on the “controls” screen. Useful for front cameras.
- **Set DVD_CD:** This setting adds the CD input on the UAQ radio, for use as an aux input, particularly useful if adding a media player or DVD player.
- **Set Travel Link:** This setting adds the ability to disable SiriusXM Travel Link, which turns off the weather pop-ups. Also disables SiriusXM Traffic information.
- **Offroad Pages:** Activate Offroad Pages after upgrading to an 8.4” radio. Requires a UConnect firmware from 2019 or later.

Submenu Lighting:

DRL and other lighting options

- **Set DRL Type:** Choose USA (on but selectable), Canada (on all the time), or off.
- **Set DRL Location:** Choose which lights to use as DRL's (results vary with vehicle model) – Dedicated DRL, Turns, Fogs, Hi beams or Low beams.
- **Set DRL Dropout:** This setting is enabled by default, making the DRL turn off when using a turn signal. Turning this OFF will keep the DRL on even when a turn signal is in use.
- **Set Fog Lights Enable:** If factory fog lights are added, this setting will enable them.
- **Set Fog Dropout:** This setting is enabled by default, making the Fogs turn off when using high beams. Turning this OFF will keep the fogs on even when high beams are in use.
- **One-touch:** Enable one-touch lane change
- **Set Halo Enable:** This setting is to disable or enable factory Halos.

- **Set LED Headlights:** This setting is to configure the vehicle for LED headlights.
- **Set LED Fogs:** This setting is to configure the vehicle for LED Fog lights.
- **Set LED Tails:** Configure the vehicle for LED taillights. If using aftermarket LED tails on a factory LED Jeep, switch this setting to NO then back to YES, this will clear the bulb out and hyperflash.
- **Taillight Type:** Reconfigure taillight type for overseas conversions
- **Set LED Front Turn:** This setting is

to configure the vehicle for LED front turn signals. If using aftermarket LED turns on a factory LED Jeep, switch this setting to NO then back to YES, this will clear the bulb out and hyperflash.

- **After configuration, perform a few 5 minute sleep cycles. Turn signals should be run for 20 seconds each before hyperflash and errors clear up.**
- **Set Trailer Tow:** Configure the vehicle for MOPAR trailer towing wiring kit

Submenu Off-Road:

DRL and other lighting options

- **Set Sway Bar:** If the Electronic Sway Bar has been removed, you can use this setting to delete the warnings. You can also use this feature to be able to drive with the sway bar disconnected at any speed or 4WD range. Simply shift to 4WD, press the button to disconnect the sway bar, and once it's disconnected, enter the Tazer JL Mini JL settings menu and set the Sway Bar off. It'll remain disconnected until you set it on again.
- **Set EPSteer:** This setting is used if you deleted the factory electronic steering pump for a hydraulic pump.
- **Set LOCKER:** This setting is used if you deleted the factory axle lockers. You can delete front only, or both. If the front locker is deleted then the front axle disconnect is deleted as well and needs to be disabled as well.
- **Set Front Axle Disconnect:** This setting will delete the factory Front Axle Disconnect for those that have done axle swaps. This setting should be used in conjunction with the Locker setting.
- **DTCM:** Declare the presence of a Drive Train Control Module (Rubicon Transfer Case)

Submenu Other:

DRL and other lighting options

- **Set AUX:** This setting is to configure the vehicle for AUX button package.
 - SportX
 - Rubicon
- **Set Blind Spot:** This setting is to configure the vehicle for blind spot detection package.
- **Set Belt ding:** This setting is to delete the seat belt reminder chime. The reminder icon will remain on the dash. Always wear your seatbelt!
- **Set ParkSense:** This setting is to change or disable ParkSense system. Choices are as follows:
 - 0: None
 - 1: Sahara
 - 2: Rubicon
- **Set Splash:** With this setting you can choose the cluster splash screen. For Wranglers:
 - Sport
 - Sahara
 - Rubicon
 For Gladiators:
 - Sport
- **Set DualZone:** With this setting you can allow the use of the single zone or dual zone center stack button assembly. Useful when upgrading from a 5" radio to 7 or 8.4, and swapping in the dual zone controls that come with volume knobs. **Note:** the system will still be single zone in this case, only the driver controls will change the temperature.
- **Set HomeLink:** Enable factory HomeLink visor and harness
- **Set Proximity Entry:** Enable factory proximity entry handles and harnesses
- **Set Auto Headlights:** Enable the factory automatic headlight assembly
- **Set Panic:** With this setting you can choose whether the PANIC button on the keyfobs will be enabled or not. This needs to remain enabled for the Tazer JL Mini JL hood alarm feature to function.
- **Firmware Version Display:** Shows the current Tazer JL Mini firmware revision.
- **Serial Number Display:** Shows your Tazer JL Mini's serial number for (only needed in specific tech support situations)
- **Unmarry Key:** Displays the current one-time use Unmarry Key. [See Page 13](#)
- **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 will turn on and back off. Once complete, shut off the vehicle, open and close the driver door and wait for a minute to be sure the dash turns off.

Live Menu Settings

This section explains how to use the Tazer JL Mini's live functions – these are activated with the same button presses as the Settings Menu, but **while the engine is RUNNING**. These features **will only work if the Tazer JL Mini remains plugged in**. Please note that AutoSport, Trac Kill, and StMode will be enabled after initial setup.

- **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.
- **Set In-Motion Nav:** If set ON, this adds the ability for address info to be entered into the navigation system while vehicle is moving. This is for the PASSENGER to use. It may be illegal for the driver to use the navigation system to enter information while the vehicle is in motion. It is recommended to leave this setting OFF, enabling it only when you need to use it, as it can cause an occasional radio reboot right after engine start-up. This will automatically be disabled if TurnCAM is enabled.
- **TurnCAM:** If enabled, will automatically turn on the backup camera if the turn signals are being used. When this is enabled, In-motion nav will be disabled.
- **Hood Alarm:** Turn hood alarm on/off. Requires that Set Panic is enabled
- **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.
- **Winch RPM:** Use left arrow and cruise +/- buttons to adjust Winch Mode RPMs, 1300-200RPM. Use left arrow and cruise on/off to save the new setting.
- **Display Tazer JL Mini Firmware Revision:** Displays the Tazer JL Mini's current firmware version: “TZ JL: x.x.x.” (ie “TZJL:11.2.X”) 10

Non-Menu Live Settings

Some **live** functions of the Tazer JL Mini 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.
- **Traction Kill:** Set the traction control system as you wish, enabled/disabled, and the Tazer JL will set it that way then next time you start the vehicle.
- **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.
- **Locker Control:** Press the REAR locker button in 2WD/4HI or the FRONT/REAR button in 4HI while under 10mph and lockers will engage. Press the Locker OFF button to disengage lockers. This is the same method to operate the lockers as if in 4LO. See LOCKERS in Button Remap section for full locker control
- **Cooldown Mode:** With the ignition

on but engine not running, press the right arrow and cruise cancel button at the same time to turn the engine fan on High. They will also turn off automatically if the battery voltage drops below 11V. (excluding Diesel)

- **Winch Mode:** 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. (excluding Diesel)
- **Hood Alarm:** Arm the factory Vehicle Theft Alarm. If the hood is opened while armed, the alarm will sound and the Tazer JL Light show will be invoked. To turn off, press the PANIC button on the keyfob to turn off the alarm, and the LOCK button to turn off the light show. Set Panic needs to remain enabled for this feature to function.
- **Line Lock:** 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.

- **Rock Crawl (patent pending):** 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.
- **Full traction control disable:** Press and hold the traction button for 5 seconds to fully disable TC and ABS. Shut off and re-start Jeep to re-enable.
- **Force Backup camera:** Double tap the “mute” button to switch to backup camera (8.4” and 7” only)
- **Button Remap:** This function allows the assignment of “hotkeys” for quick access to some of the Tazer’s functions. The cruise +/-/RES may be used for this function. While the dash is in Audio mode, press and hold the RIGHT arrow and press the button you’d like to remap. The choices are:
 - Any of the 8 light shows
 - backup cameras
 - Line Lock
 - Rock Crawl
 - TC Kill
 - Cooldown

Front/Rear/Front+Rear Lockers SwayKill

Keep in mind that not all functions pertain to all vehicles. These remap buttons will only program and operate while Cruise Control is OFF. When Cruise is on, they will operate as normal cruise control buttons. For TC Kill, a vehicle restart is required to bring the system back to normal. For Lockers, the normal Locker off button disengages the lockers.

- **Partial Reboot:** Press left arrow and cruise RES with the ignition set to RUN and engine is not running, and the Tazer will reset several systems including the PCM (engine adaptives), RF Hub, Instrument cluster, ABS, BCM.
- **License Plate Blanking:** The license plate lights on the **Gladiator JT** will turn off when in reverse or using TurnCam to remove glare on the camera at night.

Configuration

Configuration of the Tazer is accomplished by using the supplied USB cable connected to a PC or Mac, using the ZPU Programming Utility. The ZPU User Guide 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’s light show options.

The Unmarry Key

When you select “Unmarry” from the Tazer menu, all of your settings will revert to whatever they were when you originally Married your Tazer.

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 “UM Key” 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.

Common Troubleshooting Questions

Symptom	Cause	Solution
No menu in EVIC	EVIC display has to be in 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 JL Dash screen
Changed a setting and it didn't take effect	Needs a sleep/wake cycle and/or radio reboot	See the instructions above in the "Settings Menu" section, about sleep cycling and radio rebooting.
Changed gear ratio and "service AWD" is showing	Incorrect gear ratio chosen or setting didn't initialize	Vehicle needs a sleep cycle and short drive to fully initialize.
Manual transmission, changed tire size and have ESS error	ESS re-learn procedure not completed.	Please see the ESS relearn procedure on the support page for Tazer JL.
LED Turn signals are hyperflashing	Needs a few sleep/wake cycles and calibration	See the instructions above in the "Settings Menu" section, about sleep cycling and radio rebooting. Then run each turn signal for 20 seconds.
Red security light on, ignition state won't change or vehicle won't start	Needs a sleep/wake cycles because computer didn't finish synchronization routine	Wait a few minutes and then try changing ignition state, then perform one sleep cycle.

Z Automotive cannot be held responsible misuse or consequential damages.

If you are in doubt, email support@zautotech.com.

Please be aware that modifying your vehicle in any way can affect your vehicle's warranty, longevity, handling, etc.

Please use with caution, and AT YOUR OWN RISK.

USING THE LIGHT SHOW FEATURE ON PUBLIC ROADS: IMPERSONATING A POLICE OFFICER IS A FELONY. LIGHT SHOW IS INTENDED FOR CAR SHOW/TRACK/OFF ROAD USE ONLY.

Z Automotive is in no way affiliated with FCA.