Z Automotive Programming Utiltity (ZPU) User Guide 2.0.7

ZPU is intended for configuring and updating the following Z Automotive products:

- **Tazer**
- **Tazer JL**
- **Tazer JL Lite**
- **BurnBox Hellcat**
- **BurnBox Ram**
- **BurnBox G1**
- **BurnBox G2**
- **TranZformer Gen1**
- **TranZformer Gen2**
- **OBZII Emergency Response Module**

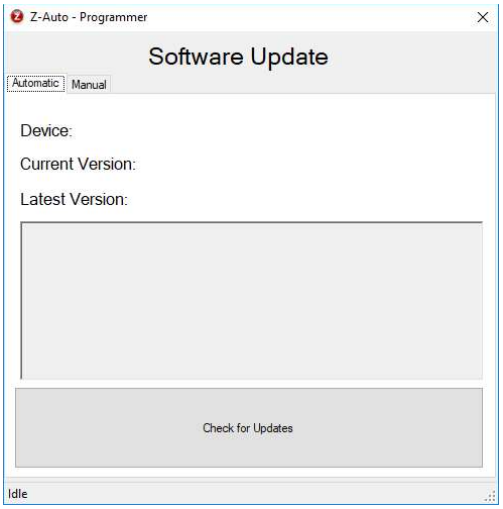
Installation:

To install, download ZPU from the Z Automotive website, in the Support section. Uninstall any older version of ZPU first. Once downloaded, run the installer, and allow the app to install. Click “Next”

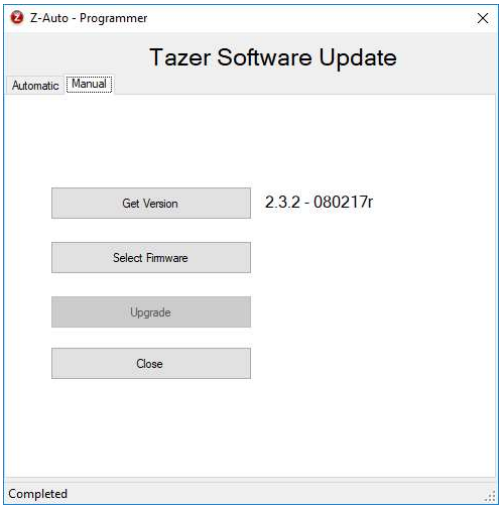
Accept the default and click Next. Allow the FTDI driver package to install too. Once installed, the ZPU icon will appear on your desktop and in the App list under “Z Automotive”

Firmware Update:

To enter the firmware update function, click the “Update Device” button on the ZPU main screen.



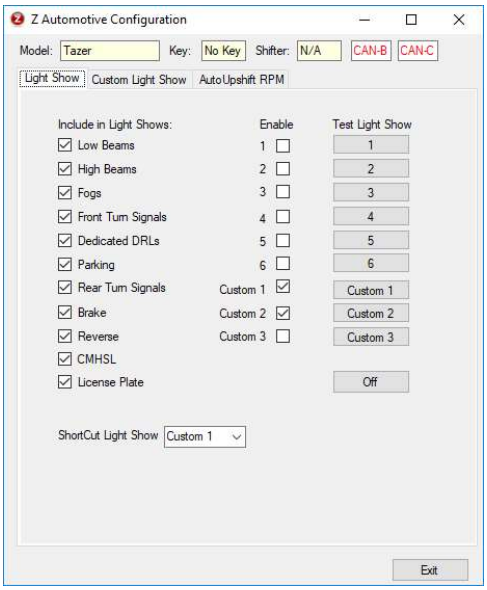
Automatic Update: This screen will check the connected device and fetch the latest update for it, and proceed to install it. Simply click “check for updates” and it will show you the detected device, current firmware in the device and the latest available version. Then you can click “Install New Firmware if you would like to proceed with the update.



Manual Update: Clicking the Manual tab will switch the updater to manual mode. This allows you to load in any firmware supported – which can be an older version from the Z Automotive website, an experimental beta version, or one emailed to you from customer support.

Click “Select firmware” to choose the file to load, then “Update” to load the new firmware in.

Configuring the Device



There are several tabs that will be available, depending on the detected device. These can be Light Show, Custom Light Show, AutoUpshift RPM, Shift Kit, Options or others.

Light Show

The Light Show tab allows you to change the configuration of the light show options.

Include in Light Shows: You can include or remove any of the supported lights from the light shows by checking/unchecking them here. For example you may wish to remove “High Beams” if you have projector headlamps to stop them from flapping the High Beam shutter while the shows are running. Or perhaps you need to set up the shows as rear-lights-only for police use.

Enable: Here you can choose which light shows to enable/disable. For example you may only use light shows 3 and Custom 1. Simple uncheck the rest and the only shows that will be accessible are those two.

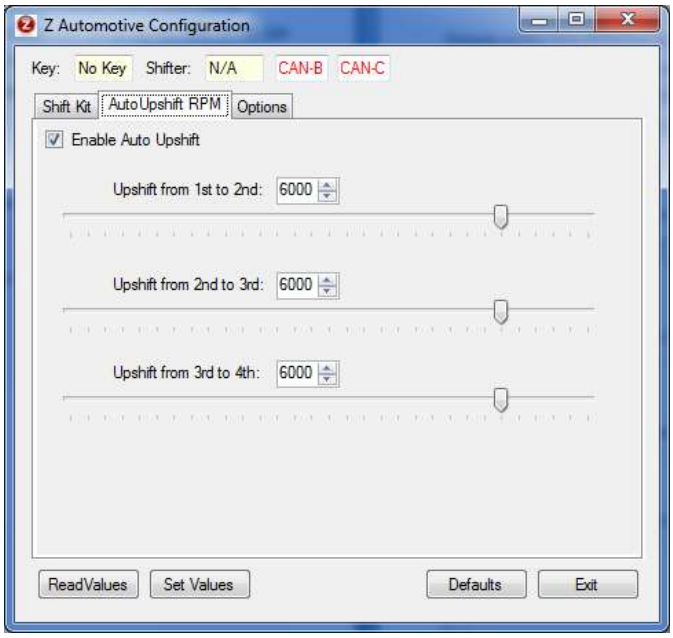
ShortCut Light Show: Here you can choose which show to start with when activating via keyfob, the quick-access method, or the EVIC menu.

Test Light Show: If you are using a laptop and are connected to the device and plugged into the vehicle, you can test the light shows live. Simply click the show to test.

Custom Light Show

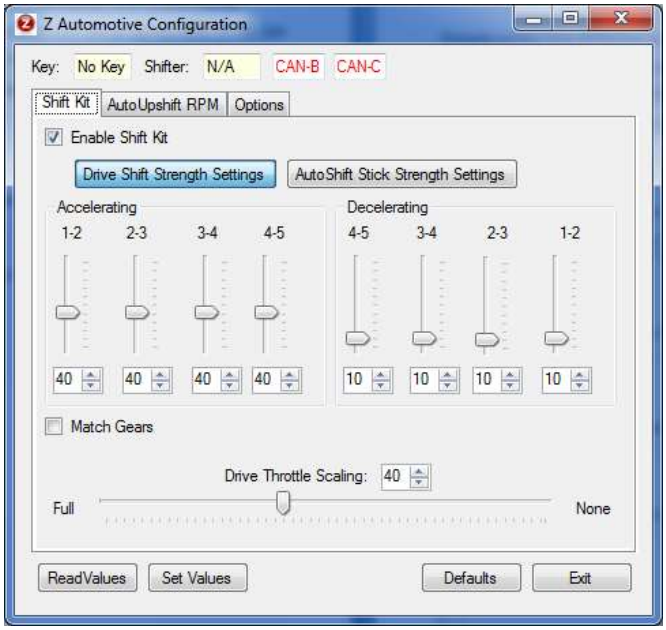
Custom light show configuration is covered in a separate document.

Auto Upshift RPM tab:



The Auto Upshift function of the TranZformer/Tazer works on the NAG1 5-speed transmission ONLY, and serves one purpose: To aid the racer by upshifting to the next gear at a precise engine RPM, usually greater than what can be set via other methods (such as a Diablo tuner), generally for heavily modified, high-revving motors. This function has no effect in Drive.

To use Auto Upshift, the TCM needs to be set so that it does NOT upshift on its own in AutoStick. This can usually be done using a Diablo Trinity/Predator, setting the TCM Quick Adjust Upshift mode to Mode 1 or Mode 2. Once the TCM is set to rev to the rev limiter without upshifting, the AutoUpshift feature can be used. In 2011+ Charger/300, this function can be used when the vehicle is in Sport Mode. Simply enter the RPM for each gear or use the sliders. Keep in mind that although the TranZformer/Tazer reads engine RPM every 20 milliseconds and sends the Upshift command to the TCM almost immediately, by the time the actual shift takes place the typical engine will continue to climb an additional 200-300RPM. You may need to try a lower RPM first, then make some runs, using the "PeakRPMs" EVIC feature, to find where it actually shifts to dial it in exactly where you want them. **Once the desired values are entered, press the "Set Values" button to save them in the TranZformer/Tazer.**



Shift Kit:

The configure screen will load with the proper selections for your device.

(For Tranzformer Gen 1 or Gen 2 only)

Shift Kit tab:

This tab includes every parameter available to change the shift speed and firmness and scaling that the TranZformer has to offer. There are two pages to this screen, one for Drive and one for AutoStick. Press the "Drive Shift Strength Settings" button so the screen is

enabled to set shift parameters and scaling for Drive. Press the "AutoShift Stick Strength Settings" to configure shift parameters and scaling for AutoStick mode.

There are sliders for each gear shift independently. The four sliders on the left configure shift strength for accelerating upshifts or downshifts (kickdown). A higher value results in a firmer shift. When utilizing the scaling feature, this is the strength that you dial in which will be attained at Wide Open Throttle (WOT).

The four sliders on the right are for decelerating shifts. These are not only downshifts when coasting, but forced downshifts as commanded via AutoStick at zero throttle, or Brake Assist downshifts during heavy braking, or even a coasting Upshift (as when coasting downhill at zero throttle. Typically these values are set very low to avoid harsh and annoying downshifts.

The "Match Gears" checkbox, when checked, will tie together the values for all accelerating shifts/decelerating shifts. This is helpful to set all shift strengths the same value if that is what you desire. Keeping it unchecked allows you to set values independently.

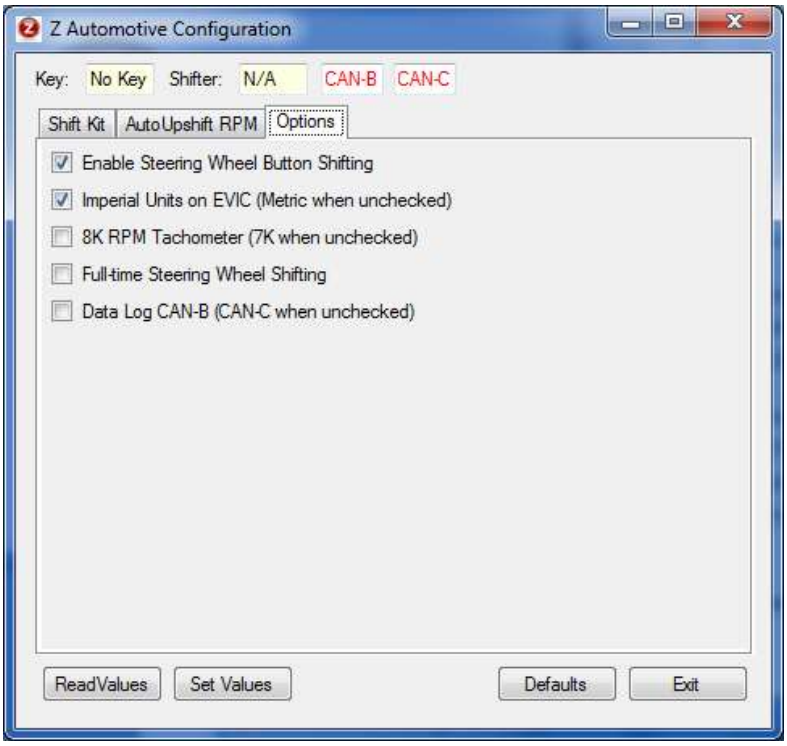
Scaling - With this feature, the TranZformer varies its output ("boost") based on throttle position. If Scaling is set to None (value of 99) then the shift boost applied to each shift is the value set by the accelerating and decelerating shift strength sliders. If the Scaling is set to Full (00) then boost is varied, from 0 at no throttle, to the set value at WOT. Any value set in between is a starting point, in percentage, of the boost value set, ramping up to the actual value set at WOT.

For example, if the 1-2 shift boost is set to 80, and scaling is set to 50, then at zero throttle, the boost value output to the transmission will be 50% of 80, or 40. At 50% throttle the boost value output will ramp up to 75% of 80 (as 50% throttle is halfway between 50% set scaling base percentage and 100%) or 60. At WOT the output boost will be the 80 that it was set to. It may be easier to visualize the Scaling value as a "start percentage" of the set shift boost, with the "end percentage" always being 100% of the set shift boost at WOT.

The "Enable Shift Kit" checkbox should be checked for the shift kit functions to operate. Unchecked the TranZformer will not boost shift firmness. Other features such as AutoUpshift and SWS will continue to operate if they are enabled. This can also be turned on/off in vehicle by pressing the ESP button twice.

Once the desired values are entered, press the "Set Values" button to save them in the TranZformer.
*all sliders also have a value box where you can alternatively directly enter the value.

Options:



This tab contains several checkboxes *(For Tranzformer Gen 1 or Gen 2 only)*:

Enable Steering Wheel Button Shifting: When checked, enables the ability to paddle shift using the steering wheel buttons. This can also be enabled or disabled by using the steering wheel buttons themselves; page up and volume up at the same time enables SWS, while page down and volume down will disable SWS.

Imperial Units on EVIC: If your car is using Imperial units (ie in the USA), this box should be checked. If using metric units, uncheck this box (requires firmware version 1.3.4 or higher).

8K RPM Tachometer: Check this box if you have a cluster that has an 8K tach (SRT's). This is for if/when you use the "on the fly" Autoupshift adjustment and are using the tach to display the reading.

Full-time SWS: Check this box if you want the steering wheel shifting function all the time – not just if you're in Autostick. Handy if you have an aftermarket radio , and never use the steering wheel volume buttons for anything else.

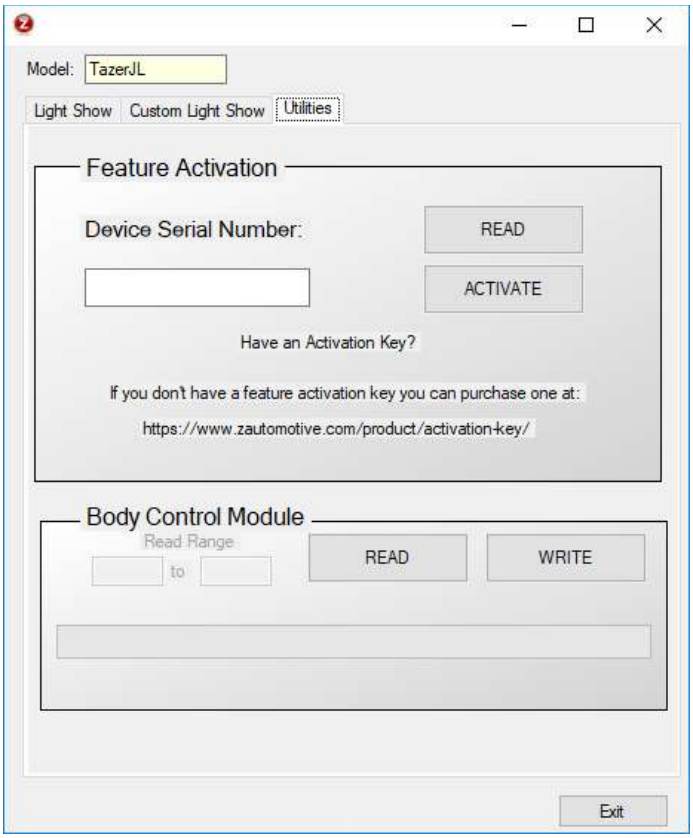
Data Log Can-B: Used for datalogging feature, to switch the logger from reading CAN-C bus to CAN-B bus. Has no effect on unit operation.

Once the desired values are entered, press the "Set Values" button to save them in the TranZformer.

Utilities:

The Utilities tab contains two sections; a Feature Activation section and a Body Control Module section.

The Feature activation function is to enable paid feature upgrades, through purchasing a key via the Z Automotive website. It's a 3 step process. First, connect the device to your computer and open ZPU's Utilities tab and click the "READ" button. Take note of the Device Serial Number, as you will need it when purchasing the upgrade. When you purchase the upgrade, you will receive an email with your activation key. Copy that key and enter it in the blank field and click "activate". If it's correct, "Activation successful" will appear under the key.



The Body Control Module tab is used by tech support to capture your vehicle's configuration and has the ability to write back changes sent from us. This is covered in a separate document which would be accompanied by the repair file sent via email.

Z Automotive cannot be held responsible misuse or consequential damages. If you are in doubt, email techsupport@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.

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