BT DieselWorks AutoSync – Installation guide

Firmware v2.20 and up only (Dec. 2019+ and newer AutoSync's will already have 2.20 or higher from the factory)

Requires 'IO4' (4" screen) or 'IO5/IO6' (8" screen) radios. Does not work on 'IO3'

2014-2018 Silverado/Sierra 1500

2015-2019 Silverado/Sierra 2500-3500

2015-2020 Tahoe/Yukon/Suburban/Escalade/Denali

Thank you for purchasing the BT DieselWorks AutoSync. The AutoSync is a patent-pending revolutionary new easy-to-install module that adds many enhanced functional and comfort features to your GM K2xx truck or SUV. Please be sure to also follow the **quick-start guide** on the 'AutoSync installation guides' page on our website. **It is important to register your AutoSync and pair it to your WiFi network as soon as possible to receive the latest firmware updates and new feature additions.**

NOTE: These instructions cover AutoSync's with firmware v2.20 and up only! To check your firmware version, access the AutoSync menu, go to page-4, and press "AutoSync info".

I know these instructions are long/boring, but *PLEASE* try to at least glance over every page first. 95% of tech support email/questions we get are simply due to misunderstanding/not reading the instructions. ☺

NOTE: 2017+ vehicles have several feature limitations and also require one additional minor wiring change under the dash at the Serial Data Gateway module connector. Please see the additional 2017+ supplement document instructions on our website on how to perform this wiring change/pin swap.

NOTE: Some menu items are shown/hidden depending on whether the vehicle is in the "key on engine off" mode, or "key on engine running". If a menu button that you are looking for seems "missing", confirm that the vehicle is in the proper mode (engine running/not-running) first!

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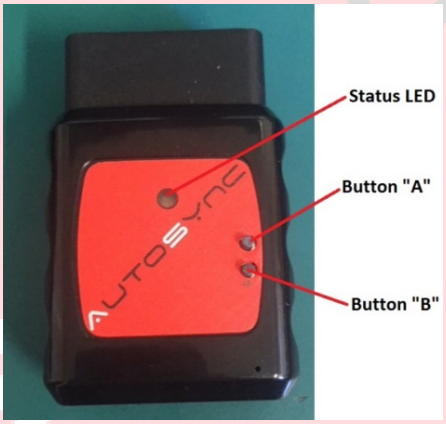
On the AutoSync, there two momentary push-buttons on the top of the module marked “A” and “B”, a row of DIP switches (normally not used, covered by sticker), and a status LED. The AutoSync must remain plugged in at all times for features to work. You can use AutoSync with an OBD port splitter (to use simultaneously with another scan tool, Edge Insight, EZ Lynk, etc)**, however compatibility is NOT guaranteed unless you use the BT DieselWorks OBD splitter, available at our website.** AutoSync will not drain your battery when left plugged in with the vehicle off, and it will not cause any harm if you unplug/plug-in AutoSync while the vehicle is running.



Inline DIP switches (if present): ALL MUST BE SET TO “OFF”

You should NOT have to adjust any AutoSync DIP switches, they should already be correct from the factory

Installing the AutoSync is as simple as plugging it into your truck’s OBD port, located under the dash. Be sure the ignition is OFF when installing the AutoSync. The AutoSync will NOT void any powertrain or bumper-to-bumper warranties, and is completely undetectable by the dealer. As soon as the AutoSync is unplugged, all traces/footprints are removed. The LED shows AutoSync system status at a glance: **RED**- AutoSync is powered up, but vehicle CAN bus activity is NOT being detected. **BLUE**- AutoSync is powered up, and vehicle CAN bus activity is being detected. **GREEN**- AutoSync is powered up, CAN bus is active, and engine is running. **If the LED does not turn on when plugged in, check the “DLC/DSM” fuse.**

NOTE: AutoSync data display is default set to US/SAE units, if you wish to see data in metric units, simply use the factory **Driver Info Center (DIC)** controls to set the vehicles units to “metric”. The AutoSync will detect this change directly from the vehicles Body Control Module and automatically reconfigure itself to metric units.

To activate/display the AutoSync main menu with the key on, engine **NOT** running, press the cruise control **"CANCEL"** button on the steering wheel.

To activate/display the AutoSync main menu with the engine running, press the **rear defrost** button 4 times in a row (4 times within ~4 seconds). To step "back" a menu page at any time, press the **"< BACK"** button on the radio controls, OR press the "🡐" icon at the top left of the screen. To exit the AutoSync menu at any time, press the **"home"** button on the radio controls, OR press the **"Exit"** icon at the top right of the screen.

If at any time the menu does not "draw" correctly or appears to freeze, simply press the "back" button to manually refresh the menu. Sometimes if the truck is "really busy", the menus might take an extra second or so to "draw"…if that happens, just be patient and give it a second to breathe between clicking the icons/buttons. ☺

The AutoSync main menu will appear, as shown below, with the back/exit/home buttons circled:

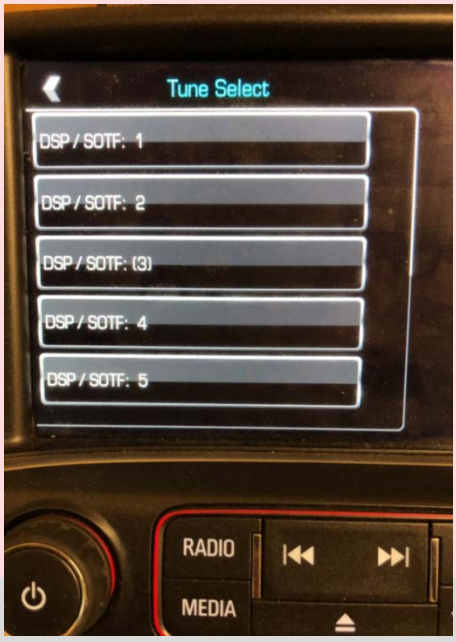
ECM Tune Switching (diesel)

Active Fuel Management disable (gas)

Diesel vehicles: This ECM tune switching menu is found on AutoSync main menu, page 1. This menu allows you to control EFILive DSP or EZ Lynk SOTF tune level. Simply tap whichever tune you want to switch to, and the DSP/SOTF mode will immediately be changed. The currently selected tune will be highlighted with a **"( )"** around the number, as shown in the picture below.

NOTE: requires additional AutoSync DSP/SOTF tune control wiring kit, sold separately. See page 17 of this instruction manual for the AutoSync DSP/SOTF wire kit installation guide.

Gas vehicles: The icon that shows "ECM Tune Switching" in the picture below only shows on diesel vehicles. When AutoSync is plugged into a gas vehicle, this icon will be replaced with "AFM: Enabled/Disabled". To disable the Active Fuel Management mode on your gas vehicle, set this to "DISABLED". This setting will be remembered permanently, you do NOT have to set AFM to disable every time you drive the vehicle.



Strobe Lights

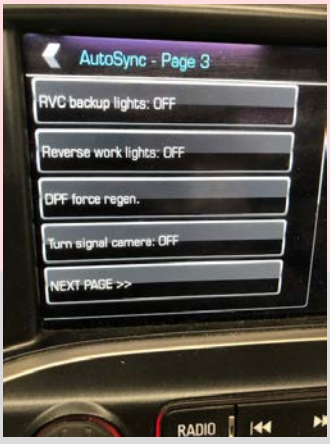
Work Lights

Reverse work lights/spot lights

Strobe Lights – Found on page 1 of the AutoSync main menu. This activates exterior strobe light mode. This will rapidly flash all exterior lighting (headlights, front turn signals, rear turn signals, CHMSL, reverse lights, fog lights) in an alternating pattern. CHECK LOCAL LAWS regarding use of this feature! In most areas, using vehicle lighting in this manner on public roadways is considered 'impersonating a police officer'. **2017+ vehicles, this feature only works with key on, engine off. We are currently working on an update to allow engine-running strobes on 2017+.**

Work Lights – Found on page 1 of the AutoSync main menu. This activates exterior work light mode. Work light mode manually turns on all cargo/bed lighting, as well as reverse lights. This feature is useful for illuminating the rear of the vehicle at night, hooking up trailers at night, checking on cargo, etc. This feature will also work while driving, unlike the factory cargo light button that will only work when in park! **2017+ vehicles, this currently only works key on, engine off. We are currently working on a fix for 2017+.**

Reverse Work Lights – Found on page 3 of the AutoSync main menu, **ONLY visible with key on, engine NOT RUNNING.** This menu item is hidden with engine running. Setting this feature to ON will make the cargo lights and tow-mirror spot lights (if equipped) come on automatically whenever you shift into reverse. This is helpful to automatically provide additional illumination while backing up, without having to manually press the cargo light switch. **This setting is saved permanently, even if the AutoSync is unplugged. 2017+ vehicles, this currently only works key on, engine off.**



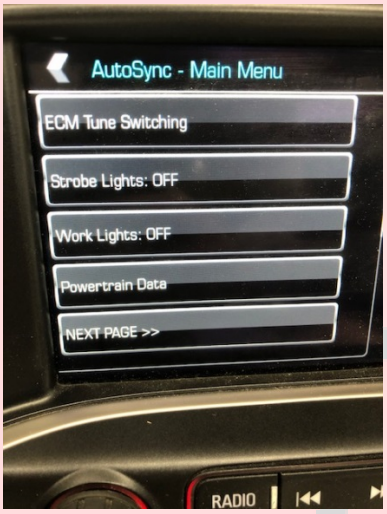
Viewing Live Engine Data

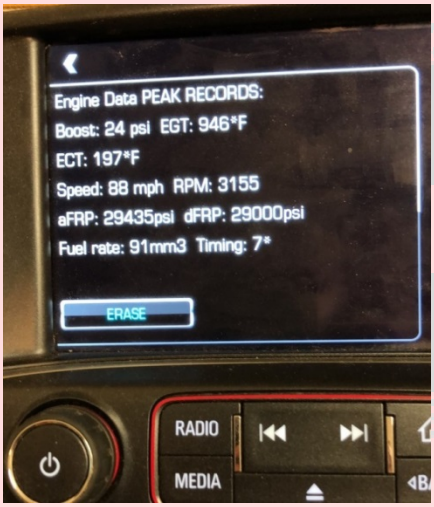
The "Powertrain Data" feature is found on page 1 of AutoSync main menu

The powertrain data page displays live engine/transmission data, as shown below.

Diesel PIDs include boost, EGT, coolant temp (ECT), oil pressure, current gear, torque converter clutch (TCC) locked/unlocked, DSP/SOTF tune, turbocharger vane position, actual fuel rail pressure (aFRP), desired fuel rail pressure (dFRP), main injection fuel rate, main injection timing.

Gasoline PIDs include spark advance, knock retard, MAF, MAP, engine load, coolant temp (ECT), oil pressure, current gear, torque converter clutch (TCC) locked/unlocked.





NOTE: the "EGT" reading is derived from the factory "EGT-1" sensor, located in the factory downpipe at the outlet of the turbocharger (LML) or "EGR-1" in the manifold (L5P). **If this sensor is unplugged or removed due to an aftermarket downpipe, EGT will not display correctly and will default to "1832*F".** If your truck is 'deleted', you can extend the factory sensor wiring and re-locate the factory EGT-1 sensor to the exhaust manifold for a more accurate "pre-turbo" reading.

(continued on page 8 below)

<u>There are two additional icons/buttons on the bottom of the Powertrain Data screen.</u>

The **"RECORDS"** icon will display a page that shows the peak recorded values for each PID. These PID peak records are stored permanently even if the AutoSync is unplugged. To clear/reset the PID peak records, press the "ERASE" icon on the bottom of the "engine data records" page.

The **"Minimize"** icon will shrink the live engine data display to a small bar along the bottom of the screen. This is helpful for keeping essential data at a glance, while still being able to view the navigation map, radio controls, etc.

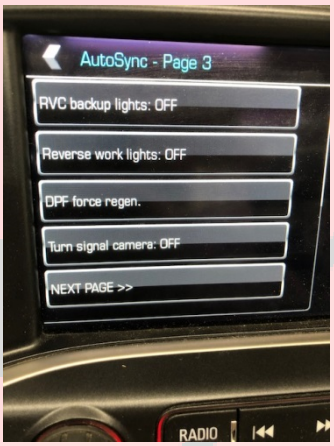
Due to the smaller size of the "minimized" view, only two PIDs are able to be displayed at once in this mode. **To cycle through the pages of minimized data display, press the drivers door lock button.** To switch back to the engine data full page, press the **"Show Maneuver"** icon.

Another great feature of the "minimized" mode, is that this minimized data is also mirrored on the **Driver Info Center (DIC)** display in the instrument cluster, for easy/quick viewing without having to look over at the radio/navigation screen. To view the engine data in the DIC, use the steering wheel DIC controls to switch to the **"NAVIGATION"** page in the DIC, as shown below (non-Denali shown, Denali instrument cluster is similar/works the same way). **NOTE: DIC data display is only available when the "minimized" engine data view is active.** To fully hide the minimized data view on the radio/nav screen, while still keeping the DIC data display active, press the **"Dismiss"** icon on the radio/nav screen, shown above. Press **"Show Maneuver"** to return to the full engine data page (this will simultaneously cancel the DIC engine data display, as explained above).

If the minimized view on the radio/nav screen has been "dismissed" or accidentally cleared, simply press the rear defrost button 4 times to re-enter the AutoSync main menu.

Viewing backup camera while moving

Turn-signal-activated backup camera



View Rear Camera – This is found on page 2 of the AutoSync main menu. Press this icon to momentarily switch to the backup camera display. The backup camera will display for roughly 5 seconds, and then automatically return back to the AutoSync menu. **Requires camera wiring mod on 2017+ vehicles.**

Turn signal camera – This is found on page setting is to enable/disable the AutoSync feature that automatically activates the backup camera for several seconds whenever a turn signal is activated (helpful for checking blind spots). **Requires camera wiring mod on 2017+ vehicles.**

VERY IMPORTANT NOTE: There is a menu item on page 3 called "**RVC Backup Lights"**. This item is only available/visible with key on engine OFF. The way the backup camera is wired from the factory, the AutoSync must command the reverse lights on for a half second to power on the camera.

If you find this reverse light flash "quirk" objectionable, you can re-wire the backup camera to be powered on all the time, eliminating the need for the AutoSync to flash the reverse lights. This involves cutting/splicing a wire at the tailgate wiring harness. If you do NOT want to do any rewiring and do not mind the fact that the reverse lights will flash for half a second if you manually turn the camera on while driving, set the "RVC Backup Lights" button to ON. If you want to do the camera re-wire and eliminate the reverse light flash, set the "RVC Backup Lights" to OFF.

NOTE: If you have the "RVC Backup Lights" set to OFF without having done the wiring modification, the radio screen will be blank and/or say "service rear vision system" if you use the AutoSync to manually turn the backup camera on while driving. CHECK THIS SETTING FIRST BEFORE EMAILING ME SAYING "HEY, THE BACKUP CAMERA OR TURN SIGNAL CAMERA FUNCTION DOESN'T WORK!"

High Idle Mode

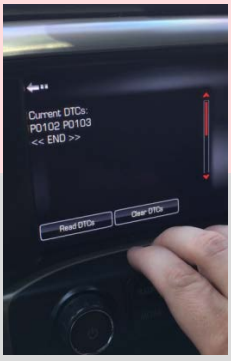
Read/Clear engine codes (DTCs)

SecurIdle (theft-deterrent shifter lock, 2015-2016 only)

High idle mode is found on page 2 of AutoSync main menu. When turned on, this will raise the engine to ~1200rpm. Excellent for warming up the engine in the cold, improving air conditioning performance while parked in extreme hot weather, or jump starting other vehicles. NOTE: Vehicle must be stopped, transmission in park, and foot off brake pedal. If brake pedal is applied while high idle is active, high idle will automatically turn off. **NOTE: high idle may take ~15 seconds to fully "kick in" and reach 1200rpm, this is normal.**

Current DTCs – This function is found on page 2 of the AutoSync main menu. This will read and display any current or pending powertrain Diagnostic Trouble Codes. NOTE: DTC reading is automatically initiated as soon as you press the "Current DTCs" menu icon. **Do NOT immediately press the "read DTCs" button.** WAIT several seconds for DTCs to show up, and the screen to show "<<END>>". If the DTCs or "<<END>>" does not show up within ~5 seconds, press the "Read DTCs" icon to re-initialize the DTC request process. To clear all current DTCs, press the "Clear DTCs" button.

SecurIdle – This feature **(only visible/accessible on the AutoSync main menu page 2 with key on, engine off)**, allows you to lock the shifter in "park", even when the brake pedal is depressed. This is useful if you want to leave your truck running but not allow anyone to easily drive it away. When this menu button is set to "ON", whenever the truck is locked using the remote keyfob while running (a quick-release keychain for your remote keyfob is recommended), SecurIdle is activated. If SecurIdle is activated and someone breaks into the truck, when they step on the brake pedal to try to shift out of park, the stereo will beep continuously and the shifter will remain locked. SecurIdle is automatically disarmed when the truck is unlocked with the remote keyfob. NOTE: Unplugging the AutoSync will disable SecurIdle within ~5 seconds.



Torque converter lockup controller

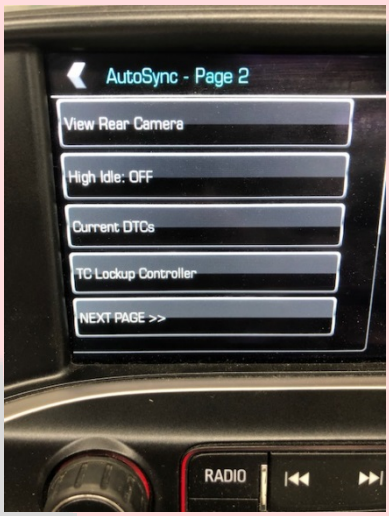
TC Lockup Controller (optional extra-cost feature, only available with diesel/Allison transmission) – This is found on page 2 of the AutoSync main menu. This menu option is only visible/accessible with engine running.

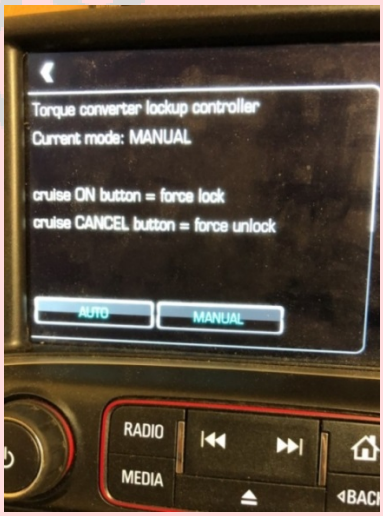
The lockup controller has two modes: automatic and manual. Automatic mode will automatically immediately force lock the torque converter whenever the accelerator pedal is greater than 95%, vehicle speed is above 30mph, and engine speed is over 1900rpm. Manual mode allows the user to have full manual control of the torque converter lockup, as long as the vehicle speed is above 25mph and the brake pedal is NOT applied. When in manual mode, press the cruise control ON/OFF button to force-lock the converter. Press the cruise control CANCEL button to force-unlock the converter**. For safety, if the brake pedal is applied, or if there is a stability-control intervention, the torque converter lockup controller is immediately suspended and the torque converter control returns to factory state.**

To select auto or manual mode, simply press the "AUTO" or "MANUAL" icon buttons on the bottom of the screen. The lockup controller setting is **NOT** remembered across key-cycles.

NOTE: generally the only acceptable time to use the **manual** torque converter lockup mode is during sled-pulling where true complete force lock/unlock capability is required, it is not recommended to be used constantly during daily driving…this isn't an old Cummins 4-speed!

The automatic lockup controller mode can be used any time, on the street or track.



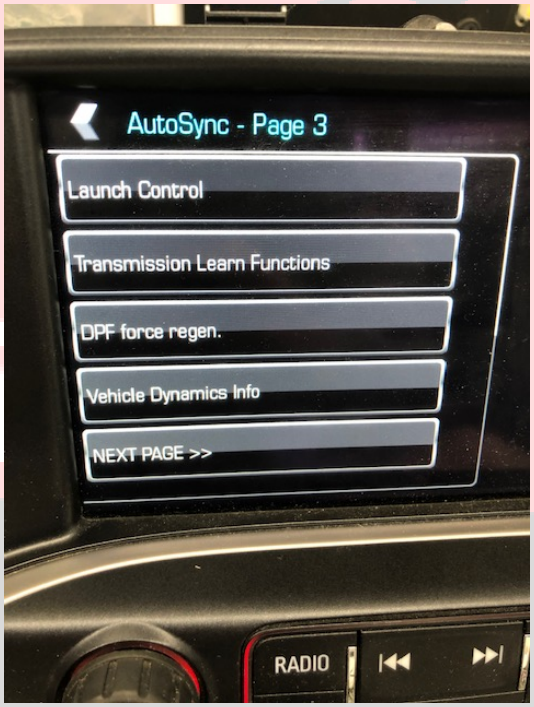


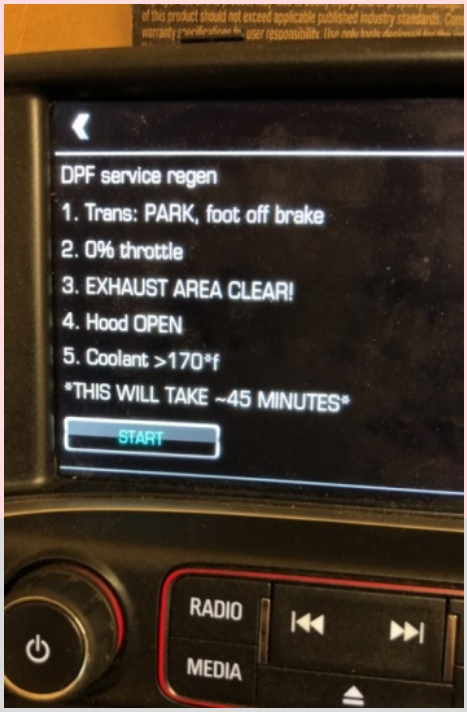
Diesel particulate filter manual regeneration function

DPF force regen. – Manual/service/mobile Diesel Particulate Filter regeneration-cleaning procedure for diesel vehicles. Use this if your truck is stuck in limp mode due to a clogged DPF, or the truck is otherwise refusing to complete a normal DPF regen on its own. **NOTE: If the truck is running in park, when you click the "DPF force regen" button on Main-Menu-Page-3, the AutoSync will command a "service/stationary DPF regen". If the truck is NOT in park, the AutoSync will command a "mobile/driving" DPF regen.** Follow the on-screen instructions, and press start.

NOTE: If performing a stationary/parked regen, be sure the truck has at least ½ tank of fuel, the hood is open, the truck is outside, and the exhaust area is COMPLETELY CLEAR. During the DPF service regen, the exhaust exiting the tailpipe will be extremely hot and could start a fire if the truck is parked on grass or the exhaust is pointed at combustible materials!

DPF "parked" service regen can sometimes take up to 45 minutes to complete, so plan accordingly before initiating a DPF service regen! Mobile/driving regen may take up to a half hour of highway driving.





Launch control

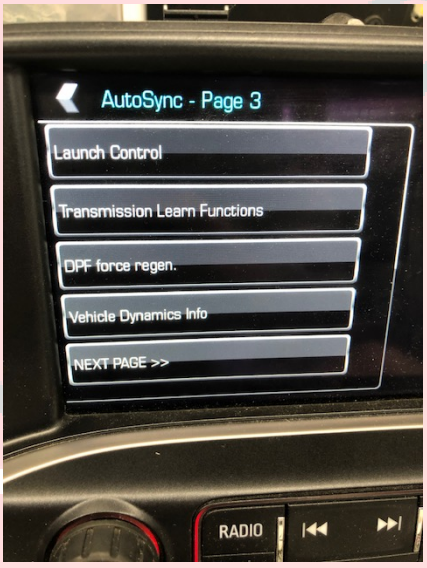
Launch control (optional feature) – This feature can be found on page 3 of the AutoSync main menu. This menu option is only visible with the engine running.

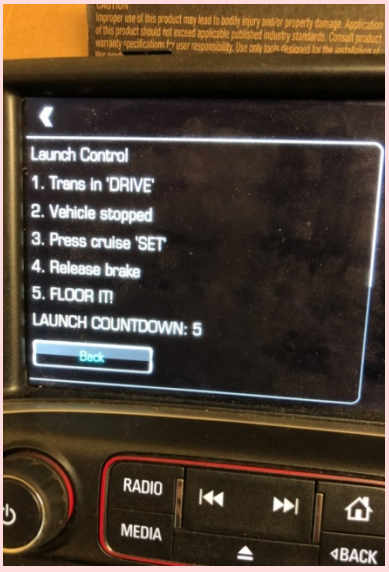
This exclusive feature uses the ABS module to act as a 'smart' line-lock/automatic launch control feature. The vehicle should be in 4-wheel-drive, and have the brake pedal firmly applied before activating. Follow the on-screen instructions, and when you are ready to activate it, press the cruise control "SET" button.

You will hear the ABS motor run for ~2 seconds and feel some vibration in the brake pedal and you may see an ABS warning light; this is normal.

When the ABS motor stops running, the launch control braking is fully charged. An on-screen countdown (5, 4, 3, 2, 1) will display, and you can release the brake pedal and bring the engine RPM's up to ~2200rpm. When the countdown hits 0, the ABS module will immediately dump brake pressure and launch the truck.

You can also manually release brake pressure and force-launch the truck at any time during the countdown by pressing the cruise control "RESUME" button.





NOTE: It is strongly advisable to NOT use launch control repeatedly, and you should allow several minutes' cool-down time for the ABS pump motor and ABS solenoids between launch control events. Repeatedly/continuously using launch control MAY cause premature wear on the ABS pump motor and solenoid valves.

Transmission learn functions (Diesel/Allison transmission only)

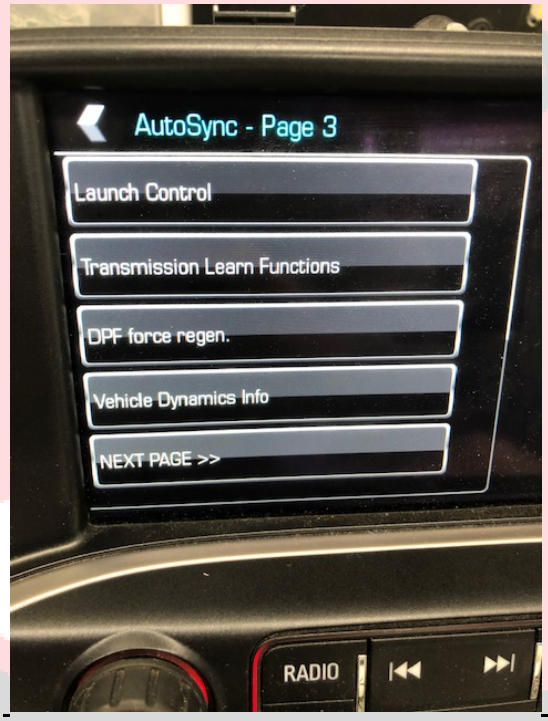
Transmission Learn Functions – This function is found on AutoSync main menu page 3. Allison transmission TAPS reset and Allison transmission fast learn procedure functions. TAPS reset clears the adaptive shifting values, and fast learn performs a complete clutch fill and release timing/volume learn procedure.

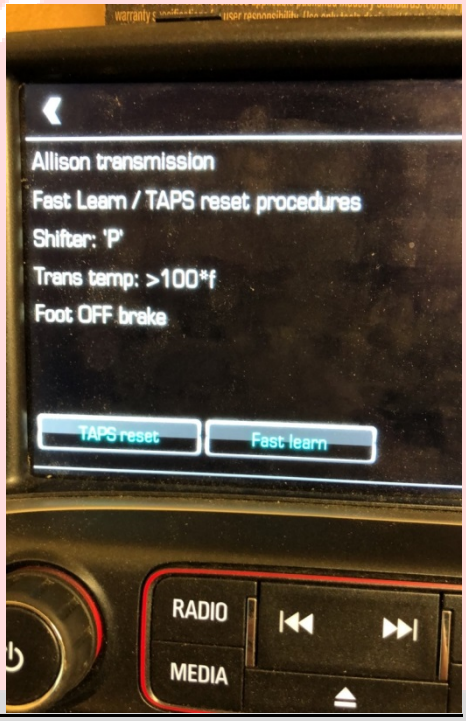
TAPS reset can be used if the transmission is shifting harshly after drastically changing ECM tuning, or otherwise increasing the engine power level.

Fast learn should ONLY be used once upon initial installation of a new or rebuilt transmission. Fast learn is a three-stage dynamic process that will take several minutes and require the driver to shift the transmission between forward/reverse while the TCM applies clutches and measures fill/apply times.

When fast learn is initiated, the radio screen will show further instructions on how to complete the Fast Learn process (shift to drive, shift to reverse, etc).

Do NOT use TAPS reset or Fast Learn without first consulting your tuner or transmission builder!

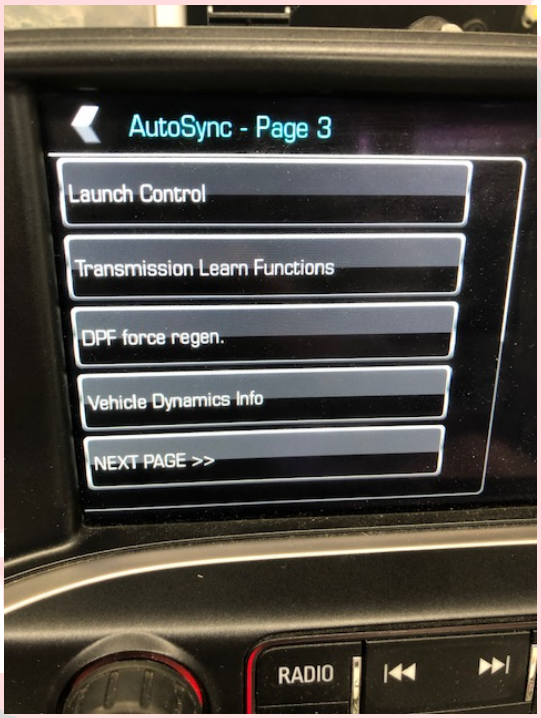


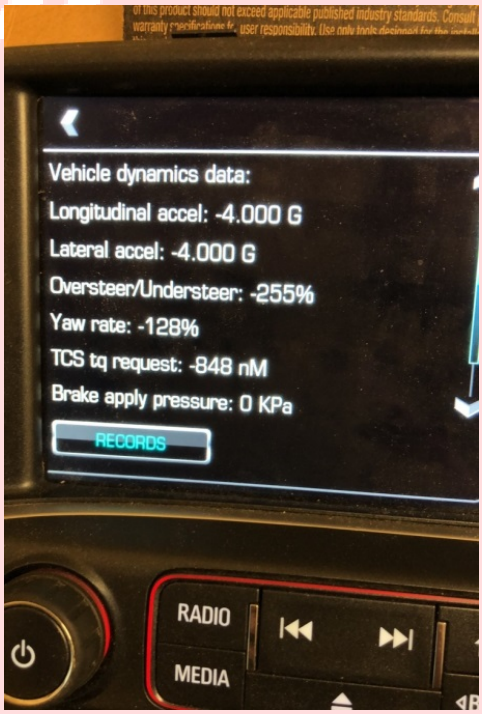


Vehicle Dynamics Info

Vehicle Dynamics Info – This page is found on AutoSync main menu page 3. It displays live chassis-dynamics data from the stability control and traction control systems. Vehicle dynamics PIDs include: **Longitudinal acceleration** (forward/backward Y-axis G-force), **Lateral acceleration** (side-to-side X-axis G-force). **Oversteer/understeer** (if the vehicle is steady on its driver-intended path, if there is adverse yaw creating an oversteer-fishtailing event, or an understeer-'plowing' event). **Yaw rate** (yaw/Z-axis rotation rate). **TCS torque request** (engine torque as requested by the traction control system, during wheel-slip, you will see this PID showing that TCS is requesting torque reduction). **Brake apply pressure** (how much brake fluid pressure is being applied to the brake calipers, whether it be by the driver pressing the brake pedal, or the ABS module applying brake pressure during a TCS/ESC event).

In similar fashion to the engine data display page, the vehicle dynamics page also records peak records that can be recalled by pressing the **"RECORDS"** icon, and cleared by pressing the **"RESET"** icon on the vehicle dynamics records page.





TPMS reprogramming / disable

TPMS programming – This function is found within the "Module Setup" menu, which is accessed by pressing "Module Setup" on AutoSync main menu page 4. This function is for resetting the TPMS warning threshold pressure, or to disable the TPMS completely and suppress all warning messages/error lights. The "Current setting" is what parameters the BCM is currently programmed with. The "Desired setting" is what will be programmed into the BCM when you press "Program".

To disable TPMS, keep scrolling "up" with the '+' button on the transmission shift lever until the screen shows "TPMS setting: DISABLED". When the TPMS is disabled, the "current setting" will show 147psi.

Once you have the desired setting set, press the "Program" button. The AutoSync will reprogram the BCM, and then clear the display within 10 seconds. Once the display has cleared, cycle the key OFF.

NOTE: The tire "Load range" parameter is just for reference. It is scaled automatically by the AutoSync to keep the BCM happy with your desired pressure setting. It does NOT matter if the load range shown on the screen does not match your actual tire load range.

NOTE: when the AutoSync is set to disable TPMS, the truck will still chime and display a temporary "TPMS DISABLED" message on the radio/navigation screen after startup. This is simply to warn the driver that TPMS has been disabled by AutoSync. **Do NOT press "Show Maneuver" or "Dismiss", this on-screen TPMS warning message will automatically self-clear within 5 seconds.**

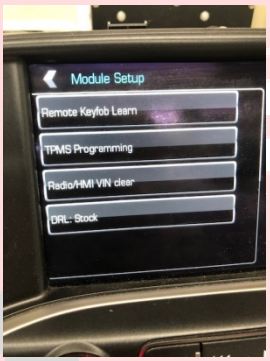
Remote keyfob learn

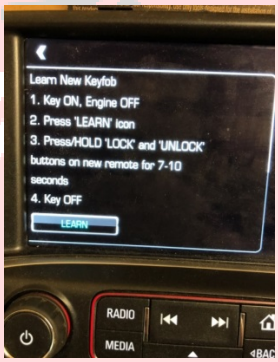
Module Programming (BCM, HMI, Radio)

Remote Keyfob Learn – This function is found within the “Module Setup” menu, which is accessed by pressing “Module Setup” on AutoSync main menu page 4. This function used for learning additional remote keyfobs to the vehicle. New keyfobs can be easily purchased online, and then learned using the AutoSync. No need to visit the dealer! Each vehicle can learn a total of 8 keyfobs. Press the “LEARN” icon and follow the on-screen instructions.

NOTE: this procedure will NOT invalidate/clear/unlearn previous existing keyfobs, it will simply add the new remote to the existing list of programmed remotes.

NOTE: This procedure will only learn new fobs on vehicles with “keyed” ignition, it will not learn new fobs on vehicles with “keyless push-to-start”.





Module Programming – This menu option is to enter module reprogramming mode, to flash custom third-party tuning into the BCM, HMI module, and radio. **Custom BCM tuning can unlock additional features such as speed limiter disable, remote-start timer extend, disable LED turn signal hyperflash, and MUCH more!**

Contact BT DieselWorks or White Auto & Media (www.whiteautoandmedia.com) to purchase tuning.

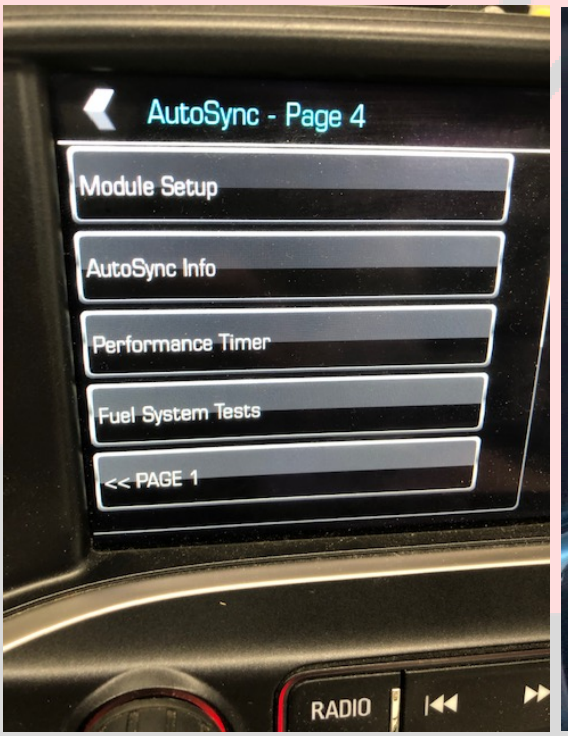
Fuel System Tests (diesel only)

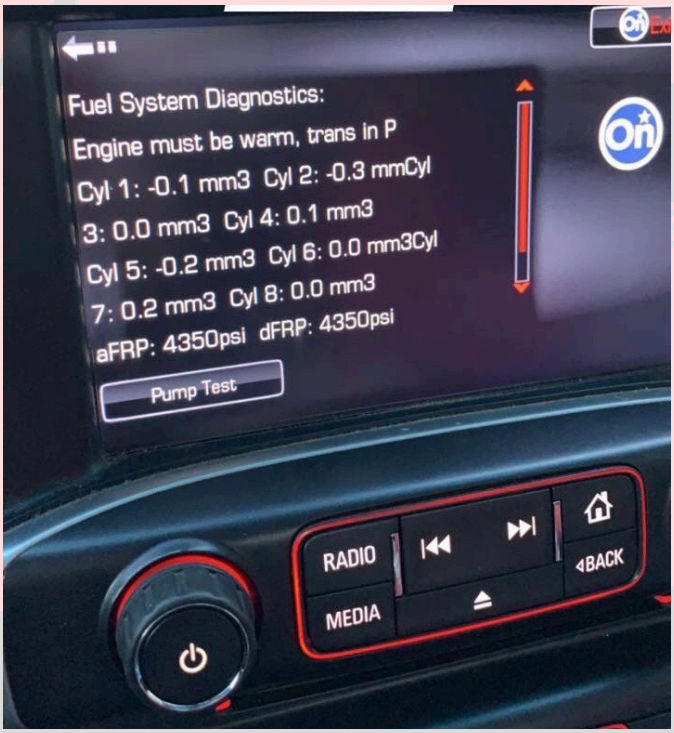
Fuel System Tests– This feature is found on AutoSync main menu, page 4. This menu is only accessible/visible with the engine running, and with the transmission in Park. The menu item is hidden with engine off, and locked out when transmission is in drive.

This menu allows you to check the injector balance rates on your diesel, and also run performance tests on the high-pressure fuel injection pump. Within the Fuel System Tests page, you will see the page displaying injector balance rates. Generally acceptable values are +/-4.00 mm3 in Park, engine warm.

Injection pump test– This function runs a pressure test on the high pressure fuel injection pump, to make sure that the pump is healthy and able to properly generate and maintain maximum rail pressure. Vehicle must be in Park, engine warmed up, foot off brake pedal. Press “pump test” to start test. Test will take approximately 10 seconds, during which the AutoSync will command the pump to increase and hold max rail pressure for the duration of the test. The engine will sound rough during this test. When the test is complete, the screen will display the maximum differential (delta) between desired and actual rail pressure. If the injection pump is weak, or there are other fuel system problems, there will be a large differential between desired and actual pressures, and then result will show FAIL.

Contact your local diesel shop for further diagnosis





Performance timer

Performance Timer – This feature is found on AutoSync main menu, page 4.

This function allows the user to measure the vehicles 0-60mph time. Follow the on-screen instructions to use the feature. If the vehicle is moving, the status will show **"NOT READY".** When the vehicle is completely stopped and the timer is ready to begin, the status will show **"READY".** As soon as the vehicle starts moving, the timer will begin counting and the status will show **"RUNNING"**. When the vehicle hits 60mph, the status will show **"COMPLETE",** and the 0-60mph time will be displayed on the screen. The AutoSync will automatically store the fastest time, and this time will be saved even if the AutoSync is unplugged. If a faster 0-60mph time is accomplished, the AutoSync will automatically update the saved "Best time". To clear the "best time" records and reset the value to the default max time (65.54 seconds, computer nerds will get this, ha), press the **"Clear Records"** icon.

NOTE: This test will only be accurate if your tire size is set correctly! If you have larger-than-stock tires and your ECM tune/speedometer has not been corrected for the larger size tires, this 0-60mph time will be inaccurate. Using GPS, verify that your speedometer is correct to ensure accurate results.

Daytime running lights settings (2015-2016 only)

Fog lights with high beam settings (2015-2016 only)

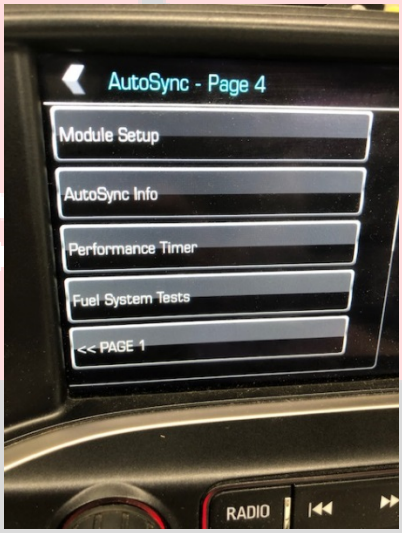
DRL setting – This function is found within the "Module Setup" menu, which is accessed by pressing "Module Setup" on AutoSync main menu page 4. This "DRL Setting" menu item is only visible/accessible with key on, engine off, trans in Park. It will be hidden with the engine running. This feature allows you to modify the Daytime Running Light settings/configuration on your truck. There are 5 options to scroll through. Stock, Fog lights, fog lights w/LED, disabled, disabled w/LED. The "w/LED" descriptor denotes whether your truck has factory separate LED DRL's, or just uses the low beam headlights as DRL's.

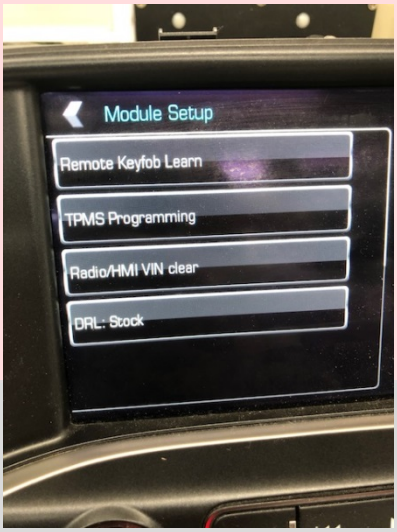
For example: All GMC pickups (except base models) have the separate LED DRL's, 2016-2018 half ton Chevrolet pickups have LED DRL's, and all fully loaded Tahoe/Suburban/Yukon/Escalade SUV's have LED DRL's. All 2014-2015 Chevrolet pickup trucks do not have LED DRL's, and 2015-2019 Chevrolet HD pickups do not have LED DRL's. Select "w/LED" if your truck has factory LED DRL's.

However there may be some exceptions where you would want to use a different setting than described above. For example if you have a GMC with factory LED DRL's and you want to have the fog lights AND the factory LED's both be on during DRL operation, select the "fog lights" option, NOT the "fog lights w/LED" option.

If there is a problem with the truck's factory **Ambient Light Sensor** (the little bubble on the center dash near the windshield that senses how light/dark it is), the menu button will say "ALS Invalid!". When there is a problem with the truck's ALS, the AutoSync will disable its DRL features as a safety precaution. **NOTE: your truck's ALS wiring and all other BCM wiring MUST BE STOCK!!!! DO NOT WIRE IN ANY RESISTORS OR "ALL 6 ON HIGH" DIODES OR CUT ANY WIRES GOING TO THE ALS!**

Fog lights with high beams – This feature is always activated automatically, there is no on/off setting.





Remote keyfob window control

Video-in-motion override

Window control – This function allows you to open and close the side windows via remote keyfob. **First, be sure that the "remote window operation" is set to "ON" in the factory radio/nav settings.** From the factory radio home screen, press the settings icon, then "vehicle", then "remote lock, unlock, start", then "remote window operation", set to ON.

-To open all of the windows while the truck is off, hold the "UNLOCK" button on the remote keyfob.

-To close all of the windows while the truck is off, hold the "LOCK" button on the remote keyfob.

NOTE: sunroof open/close and rear sliding window open/close is NOT supported by remote control

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Video override – AutoSync can disable the factory video lockout features that prevent use while the vehicle is not in Park. To activate this, be sure the vehicle is in Drive, and press-hold the cruise control ON/OFF button for approximately 4 seconds. You will hear a chime and a "Video In motion active!" message will pop up on the screen for several seconds and then self-clear. The video lockout will then be disabled. You must re-initiate this override function every time the vehicle is restarted or shifted back into park. Unfortunately, navigation destination entry function is not able to be overridden by AutoSync. ***THIS FUNCTION IS ILLEGAL TO USE ON PUBLIC ROADWAYS. DISTRACTED DRIVING CAN BE DEADLY TO YOURSELF AND INNOCENT BYSTANDERS!!!!***

Radio / HMI VIN clear – AutoSync has the ability to clear and reset the VIN lock on both radios and HMI modules. This is useful if you are swapping/replacing HMI modules or radios. The dealer cannot clear the VIN on these modules, this is an AutoSync-exclusive!

When a new radio or HMI module is installed, the radio screen will be black with a "theftlock" message. To unlock the radio and HMI module, start with the key on engine off, AutoSync plugged in. Press the accelerator pedal to the floor and hold it. While still holding the accelerator pedal, press and hold the brake pedal. While holding the brake and accelerator pedal, press and hold the cruise control set/coast button. Within a second or two, the radio screen will show "NO VIN". When the radio screen shows "NO VIN", release the pedals and cruise control button. The radio will then reset and the normal home screen will return. Cycle the key OFF for 30 seconds, then cycle the key back on, and the radio/HMI module will now have your trucks VIN stored.

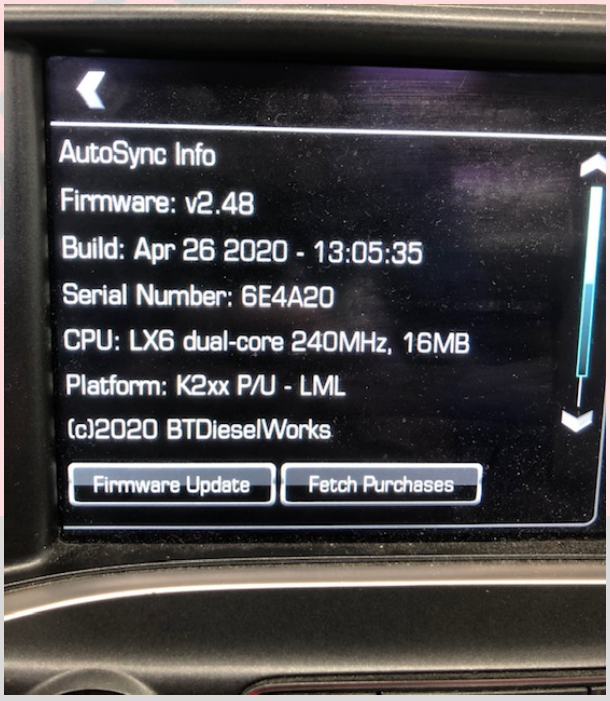
EFILive DSP-5 / EZ Lynk SOTF switching installation (2015-2016 LML only, L5P switchable tuning is currently in development) – AutoSync enables an alternative to engine tune switching that is much cleaner and more attractive than the traditional rotary "knob". The "DSP/SOTF signal" wire is a required additional accessory (sold separately) in order for the AutoSync to utilize this feature.

-Unbolt the OBD port from the dash bracket, and remove the top row blue plastic retainer clip using a small screwdriver or pick. Insert the AutoSync DSP/SOTF wire into pin position 8 (top row, furthest right…confirm with the small pin location numbers printed on the OBD port connector itself).

-Cut the "SIGNAL" wire going to your existing rotary DSP/SOTF knob switch. Usually this wire color is purple or yellow, and goes to Pin 11 on the gray ECM "C3" connector. Splice the AutoSync DSP/SOTF wire to the DSP/SOTF signal wire that you just cut. The ground (usually black) wire going to the old rotary switch can be cut/taped off/removed. **BE SURE TO TRIPLE CHECK WHICH WIRES YOU ARE WORKING WITH. SPLICING THE AUTOSYNC DSP/SOTF WIRE TO THE "GROUND" WIRE OF THE OLD ROTARY KNOB SWITCH OR OTHERWISE INSTALLING INCORRECTLY WILL DESTROY THE AUTOSYNC AND VOID ALL WARRANTIES!**

AutoSync Info – Displays current AutoSync firmware version, unit serial number, and other internal system hardware/software/ID info. **"Firmware Update"** icon is to initiate the "Over The Air" software update function. AutoSync has the ability to wirelessly connect to the internet via WiFi and automatically download/install software updates. **"Fetch Purchases"** is only available if you have also purchased additional BCM tuning from BT DieselWorks or White Auto & Media Services separately.

Please see Page 23 for further instructions on AutoSync automatic firmware updates.



AutoSync automatic firmware update

Occasionally we add new features to the AutoSync or fix minor bugs/glitches that might occur. Previously, this meant mailing your AutoSync back to us to be updated, however we are proud to now introduce automatic firmware updates that can be easily performed by the customer via WiFi in only a few seconds! New future feature additions, updates, and bug fixes will always be free of course. All that is needed is a WiFi connection to the internet, and a smartphone.

First, you must create an account on the BT DieselWorks AutoSync firmware update server. Go to http://update.btdieselworks.com/signup/. Once you have created an account, click on your name in the upper right corner of the web page, and go to "Profile". In the "short bio" field, enter your vehicle's year/type, your AutoSync's Serial # (this is found in the AutoSync Info display (AutoSync menu Page 4 → AutoSync Info), and the BT DieselWorks order number for your AutoSync purchase. Once you have signed up, your account will be verified and AutoSync unit authorized within 1 business day, and then you can perform firmware updates by following the instructions below.

NOTE: Be sure that your truck is parked within range of your WiFi router, or inside a garage with WiFi access. Leave all of the vehicles doors OPEN to ensure that the AutoSync can pick up a good WiFi signal. If the update procedure fails, or "hangs" more than 3-4 times, the WiFi signal is probably too weak, and you must use the "offboard" procedure explained on page 25.

NOTE: If your truck has an active OnStar 4G internet WiFi hotspot plan active, the AutoSync can automatically connect to your trucks WiFi hotspot to handle the firmware update. The firmware update is extremely small in size (just doing a web search on Google is more data-hungry than an AutoSync update). This is the most convenient way to do AutoSync updates, no need to use your phone to enter WiFi network info manually!

If your truck currently has an active WiFi hotspot internet plan, remove the black sticker on the back of the AutoSync, and carefully flip DIP switch 2 "on" using a paperclip or small screwdriver. This will tell the AutoSync to automatically connect to your trucks own WiFi hotspot.

- Ignition is ON, engine OFF. Access the AutoSync menu (press the cruise CANCEL button) and scroll to PAGE-4. Press "AutoSync Info".

- NOTE: The following steps must happen within ~60 seconds, otherwise the AutoSync will time out, exit the setup menu, and you will have to start over again.

- NOTE: If your truck has an active WiFi hotspot internet plan, skip steps 2-5!

1. Press the “FIRMWARE UPDATE” button on the bottom of the radio screen, and then follow the on-screen instructions.

2. Using your phone, search for available WiFi networks. Within a few seconds, the WiFi network “AutoSync” should appear.

3. Connect to the AutoSync WiFi network. Once your phone is connected, the AutoSync configuration menu will appear on your phone.

4. Click “Configure WiFi”. The AutoSync will now search your available WiFi networks, and the signal strength of each WiFi network. If your WiFi network does not appear, wait a few seconds and click “Refesh”. If your WiFi network still does not appear within ~10 seconds, check that your WiFi router is working, and the AutoSync is within range of your router.

5. Click on your home WiFi network (do not type in your network name manually), type in your WiFi router password (note: passwords are case-sensitive), and click “save”. The AutoSync will now attempt to connect to your WiFi network. If the connection is successful, your phone will exit the AutoSync configuration menu, and the radio screen will show “WiFi connection Success. AutoSync will now connect to the internet to check for new firmware”. If the AutoSync does not connect within 10 seconds, double check that your WiFi password is correct, and try again.

6. Once the AutoSync has connected successfully, within a few seconds, the radio screen will show “Downloading new firmware! DO NOT DISTURB AUTOSYNC”. The AutoSync is now downloading the updated firmware from the internet and reprogramming itself. When the firmware download has completed (it should take less than 30 seconds), the radio screen will show “Firmware Update Success – When menu clears, unplug AutoSync for 5 seconds, then plug back in”. The AutoSync menu on the radio screen will then clear. You might see an ABS light or “Service Stabilitrak” message when the AutoSync reboots, this is normal. Turn the ignition OFF and open the door to turn off the radio, etc. Unplug the AutoSync for 5 seconds, then plug back in. You can go back into the AutoSync info page to confirm that the firmware version has been updated/changed. If the radio screen shows “Update Failed! Error: xxxxxxx”, exit the AutoSync menu, turn the ignition OFF, unplug the AutoSync for 10 seconds, plug it back in, and try the update procedure again. If it still fails after multiple attempts, this is most likely due to a bad internet/WiFi connection.

7. If update procedure seems to be hanging for more than several minutes, (stuck on “Firmware download – do not disturb” message), turn the ignition OFF, unplug the AutoSync for 10 seconds, and try update procedure again. If the firmware update screen is “stuck” on the radio and you cant clear it…unplug the AutoSync, plug it back in, and press the cruise “CANCEL” button to re-initialize the AutoSync menu.

Alternate “offboard” update method if you cannot move your truck within range of your WiFi router

1. Be sure you are sitting near your WiFi router. Locate any regular phone charger or power supply with a **mini-USB** connector, be sure it is capable of supplying at least 1-amp or 1000mA. **Note:** if you have also purchased additional BCM tuning separately, this “offboard update procedure” will also download your BCM tuning in addition to the latest AutoSync firmware.

2. Press and hold the “A” button on the AutoSync. (the button closest to the OBD connector)

3. While still holding the “A” button, plug the AutoSync into USB power. The LED will turn **GREEN** indicating that the AutoSync is on offboard programming mode.

4. When the LED turns **GREEN**, release the “A” button. Note: If you have already entered your home network’s WiFi credentials at a previous time, the LED will only turn **GREEN** for a second, and then turn **PINKISH/PURPLE**, indicating it has already connected and is downloading the new firmware. If the LED just stays **GREEN**, follow steps 5-6 below.

5. Using your phone, search for available WiFi networks. Within a few seconds, the network “AutoSync-OFFBOARD” should appear.

6. Connect to the AutoSync-OFFBOARD WiFi network. Once your phone is connected, the AutoSync configuration menu will appear on your phone.

7. Follow steps 4-5 above on page 24.

8. Once the AutoSync has successfully connected to your home WiFi network, the LED will turn **PINKISH/PURPLE** color, indicating it has connected and is currently downloading new firmware. Note that the LED might turn off/go blank during the update procedure. **The procedure will not take longer than ~7 minutes. If the firmware update does not complete within 7 minutes, unplug the AutoSync and try the procedure again.**

9. When the firmware update has completed successfully, the LED will rapidly flash **GREEN** for a few seconds, then turn OFF. Wait several seconds for the AutoSync to reboot and verify the update. Once the LED starts flashing **BLUE**, the update is complete, you may now unplug AutoSync and plug it back into your truck.

10. If the LED flashes **BLUE**, right away after connecting to your WiFi network, that indicates AutoSync is currently already up to date with the latest firmware installed.

11. If the LED flashes **RED**, that means the firmware update has failed. Double check your WiFi settings, check that your internet connection and WiFi router are working correctly, unplug the AutoSync and try again.