

MHD FLASHER N54 USER GUIDE



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Guide Creator: Twisted Tuning

DESCRIPTION:

MHD Flasher N54 is the first Android handheld application to bring ECU tuning and monitoring to the BMW N54 engine. The MHD Flasher reveals the immense margin of power BMW left on the table with the N54 while still retaining the sophistication of the original engine management program.

The MHD Flasher can be downloaded here:

<https://play.google.com/store/apps/details?id=com.mhd.flasher.n54>

*****This Product is for Competition/Racing/Off-Road Use Only*****

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Overview

→ Easy to install

Connect any compatible Android device to your car using a standard K+Dcan cable along with an OTG USB cable, install one of the pre-purchased MHD built-in maps and enjoy the power and performance benefits of the maps by Wedge Performance.

→ Keep an eye on the tuning

Monitor your engine behavior using a configurable gauge layout to keep an eye on any of the 50+ engine monitors like oil temp, boost pressure, actual load or individual cylinder ignition timing. Activate the logging mode to save up to 30 monitors to a standard CSV file for later analysis. Track issues by reading the error codes, and delete them once resolved.

→ Flash your ECU back to stock anytime, as often as you need to. No ECU backup is needed

→ Custom tuning support

As an alternative to built-in maps, several tuners can provide advanced custom mapping for those who have higher or special performance needs.

The MHD Flasher can be downloaded here:

<https://play.google.com/store/apps/details?id=com.mhd.flasher.n54>

Complete features description:

Flasher module

- Flash built-in maps (purchased separately), piggyback backend maps or custom user-tuned .BIN files.
- Backup up the stock ECU software, as fast as 5 seconds on most of the cars.
- Provides handy options like power limiter per gear, wastegate rattle fix or idle RPM setting.
- Read / delete engine trouble codes.
- Reset adaptation values (Lambda sensors, Intake mass flow, Throttle, Lambda regulation, Load control, Fuel high pressure system, Octane rating, Register Battery).
- 2 minutes map switching; initial install time: 18 minutes on KLINE cars (2007 & Early 2008), 38 minutes on DCAN cars (2008+).

Monitor module

- Extensive logging values list, up to 30 values at the same time.
- Save logging session to .CSV files
- Up to 8 configurable gauges

Optional Built-in maps packs

OTS Maps by Wedge Performance

- Stage 1 Maps: eight maps included: Stage 1 and Stage 1 + FMIC (upgraded FMIC recommended). Each with 4 octane variants (US Octane 91, 91, 93, 95 / RON 93-95-98-102). Average Power Levels: 340-385hp using a peak of 15 to 17 psi tapering to 10-12psi at redline.
- Stage 2 Maps: eight maps included: Stage 2 (high flow downpipes recommended), Stage 2 + FMIC (DPs + upgraded FMIC recommended). Each with 4 octane variants (US Octane 91, 91, 93, 95 / RON 93-95-98-102). Average Power Levels 370-430hp using a peak 16 to 18 psi tapering to 12-14psi at redline.
- E85 Mix Maps: for Ethanol blends of 25-60% targeting peak 18psi tapering to 14, 420-450hp. (DPs and upgraded FMIC recommended + upgraded Low Pressure Fuel Pump for E60 Map)

Supported vehicles:

- 2006-2010 135i, 335i and 535i
- 2011-2013 335is
- 2009-2016 Z4 35i/is
- 2011-2012 1M
- 2008-2010 X6 35i

*******This racing product is for competition closed course use only*******

Required hardware

- 1 device running Android 3.2 and up, USB OTG compatible.
- 1 K+Dcan cable. The only reliable and affordable provider in the US is:
<http://bimmersoftware.com/Cables>

- 1 USB OTG cable.

MHD Licensing and OTS Tune Pricing

Licenses are VIN Locked:

- Flasher module: \$99 (needed to write DME)
- Monitor module: \$69 (needed for Datalogging)
- OTS MHD map packs: \$49/ea. (requires Flasher module)
- M Boost Option (from 18 to 22 PSI) module: \$49. For custom tuning purpose. (requires the Flasher module)
- JB4 backend only flasher: \$79
- Backend Flasher upgrade \$20 to the full \$99 Flasher module.

Tested/Known Compatible Cables

(This is a list of known cables that work reliably with MHD. Please be aware that any of the Cheap EBAY/Amazon cables that are being sold have a 50/50 chance of working)

1. [Bimmer Software Cable](#)
2. UK: switchable Dcan cable from [cable-shack.co.uk](#)
3. Europe: [My-obd.de](#)
4. [Bimmergeeks Pro Cable](#): Up to 2x's Faster than other Cables on the Market
5. [Twisted Tuning Blaze Cable](#): Up to 2x's Faster than other Cables on the Market

MHD Flasher w/JB4 Stacking:

- MHD Flasher can work in conjunction with JB4 from BMS. Through joint efforts of both BMS and MHD Stacking tuning solutions are possible. If you are interested in Stacking, then take head to the information below.

1. Required Software:
 - a. [MHD Flasher](#)
 - b. [BMS JB4 Latest Firmware](#)
 - c. [BMS Latest Backend Flash](#)
 - d. [JB4 software](#) or [phone app](#)
2. Required Hardware:
 - a. BMS JB4 G5 ISO tuner w/USB cable
 - b. K & D CAN coding cable

- c. OTG micro USB to female USB adapter
- d. 12v Car Battery Charger (first Flash up to ~38 minutes)

Flashing with MHD:

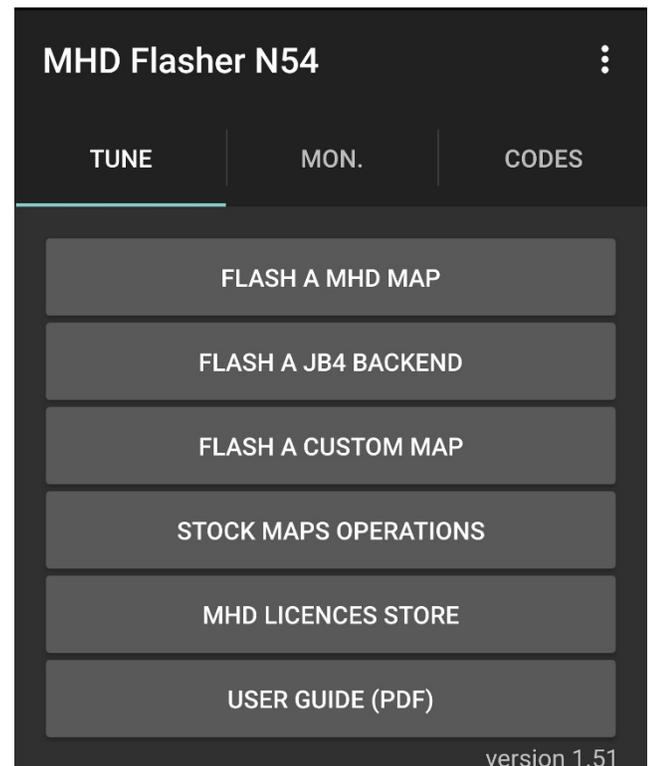
Initial Setup

1. Download and Install MHD Flasher on your respective Android device.
2. Connect D-Can cable to USB OTG cable.
3. Connect Mini-USB end of the OTG cable to the charging port of the Android device
4. Select the checkbox in the “permissions window” pop-up and hit OK
5. Unplug mini-usb from Android device charging port. (If MHD flasher happens to start, just exit MHD and move to step 6)
6. Plug mini-usb back into Android device. MHD Flasher should auto start within 5 Seconds

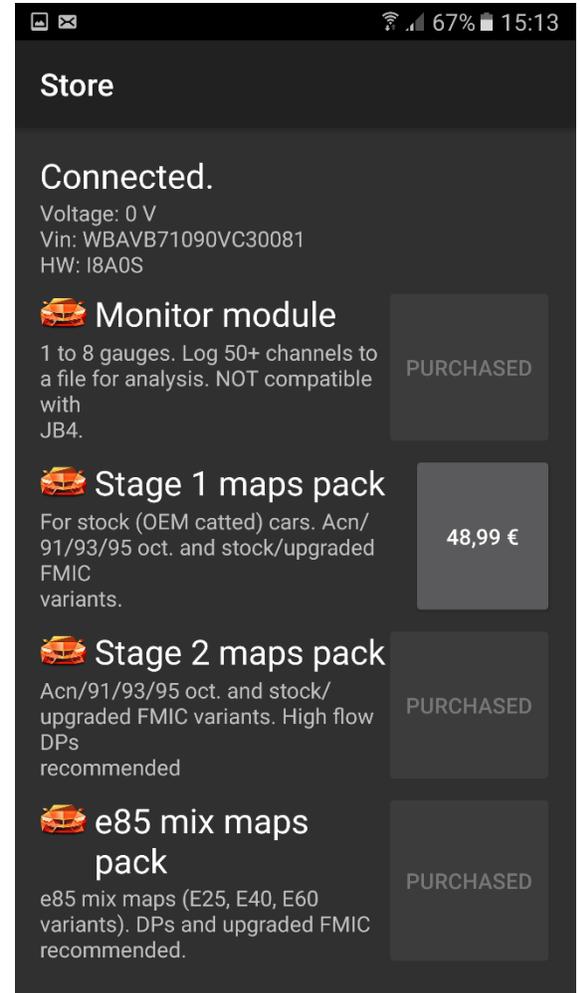
******MHD Flasher is now ready to be used. Go to MHD Store Section Below******

MHD Flasher Store

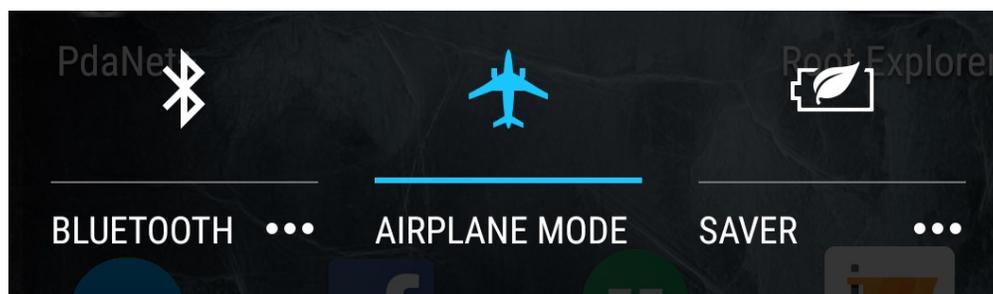
1. Ensure that the D-Can and OTG cable are connected to each other and connect cables to the vehicle OBD2 port.
2. Open MHD Flasher and select MHD Store.
You will be taken to the Following screen to select your purchases.
 - a. NOTE- prior to purchasing, please ensure your Google Play account details are in good standing and are setup appropriately. And you have the latest version of Google Play and Google Play Services.



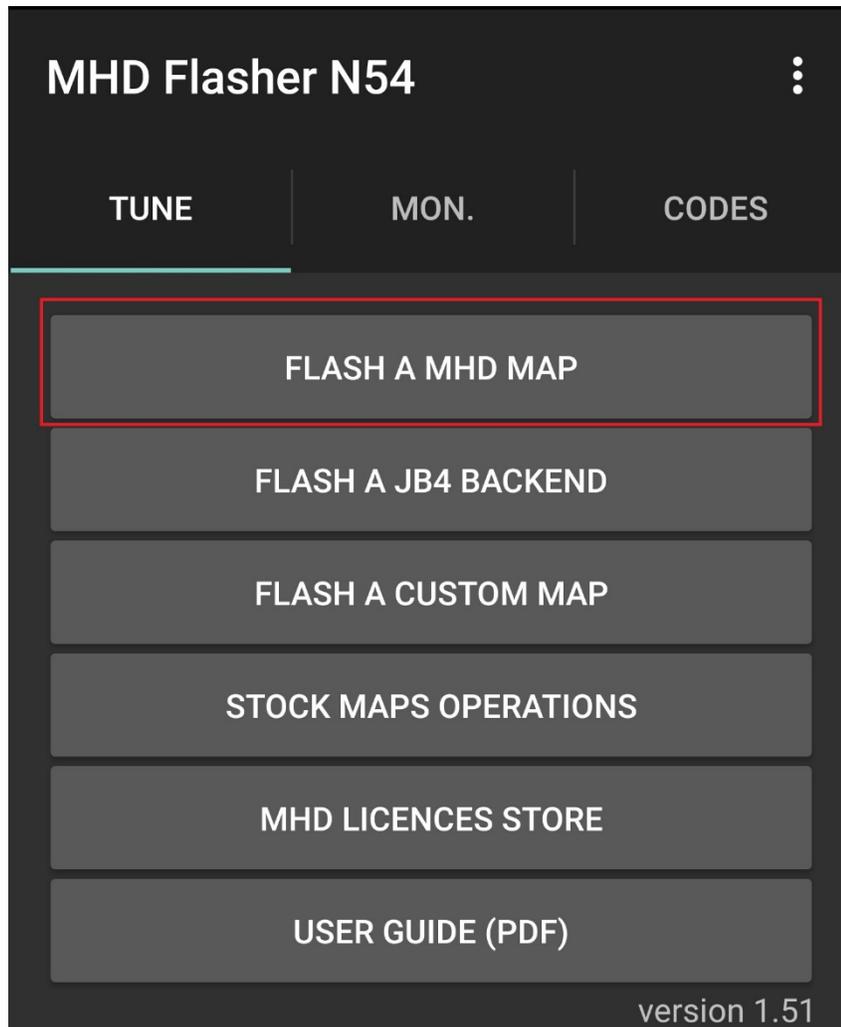
3. Select and Purchase the Modules and Tune Packages you wish to utilize
4. Once purchases are made, proceed to back out to MHD's main screen. PUT ANDROID DEVICE INTO AIRPLANE MODE.
 - a. NOTE- When doing any DME flashing or back-up functions ENSURE that the Android device is put into AIRPLANE mode. FAILURE TO DO SO MAY LEAD TO UNWANTED RESULTS.
5. Connect vehicle to charger to ensure Battery stays charged.
 - a. NOTE- Charger is NECESSARY for the initial flash process due to intial process taking anywhere from 18-40 minutes depending on the vehicle year/model in question.
 - b. NOTE- DO NOT conduct initial flash process without the use of a car/battery charger. DME/Vehicle can become immobile and unusable in the event of the DME voltage dropping.
 - c. NOTE- Map flashing after the initial MHD Flash process takes max 2 minutes and a charger is not necessary on a vehicle with a good battery, but is still RECOMMENDED.



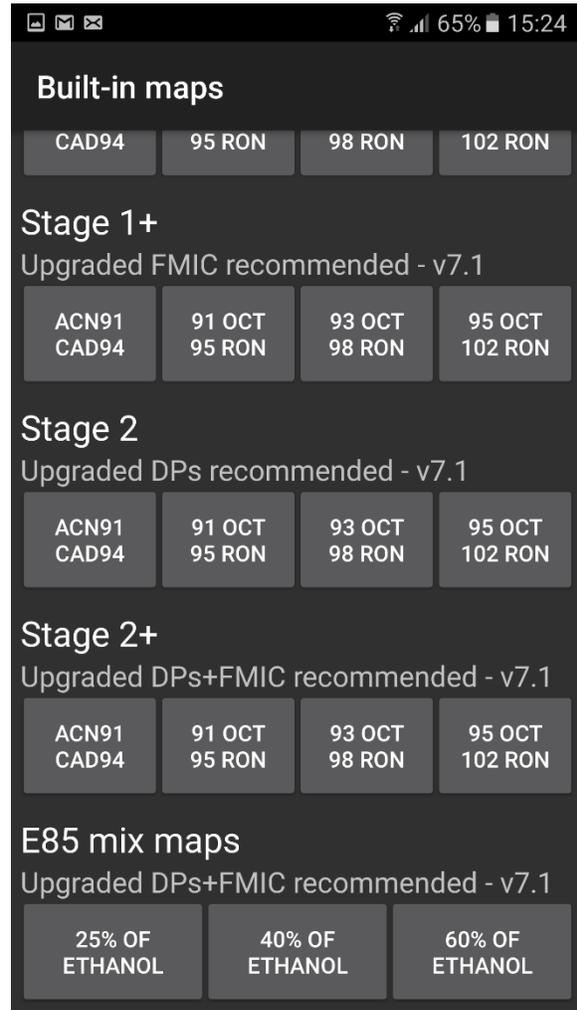
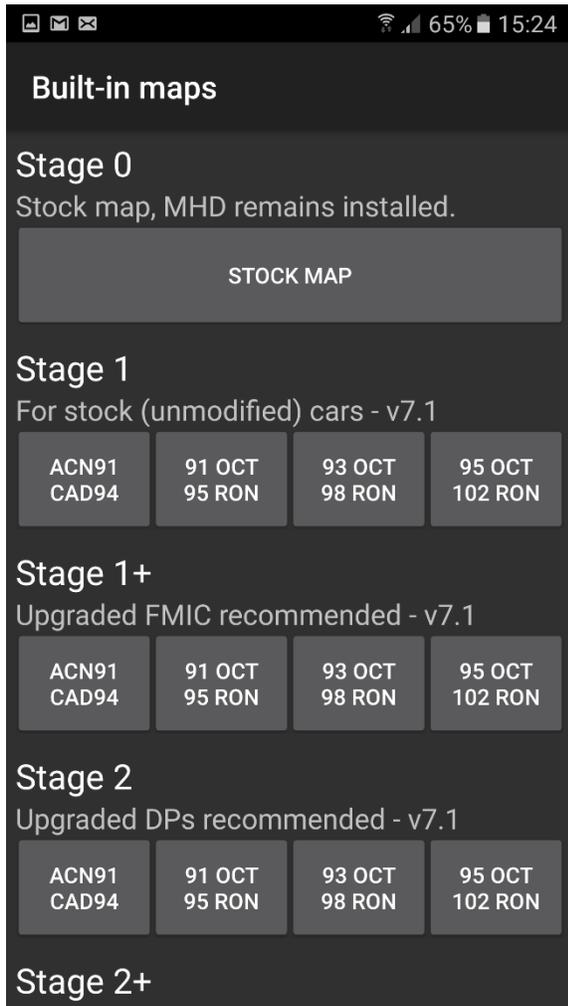
******AGAIN – ENSURE YOUR ANDROID DEVICE IS PUT INTO AIRPLANE MODE******



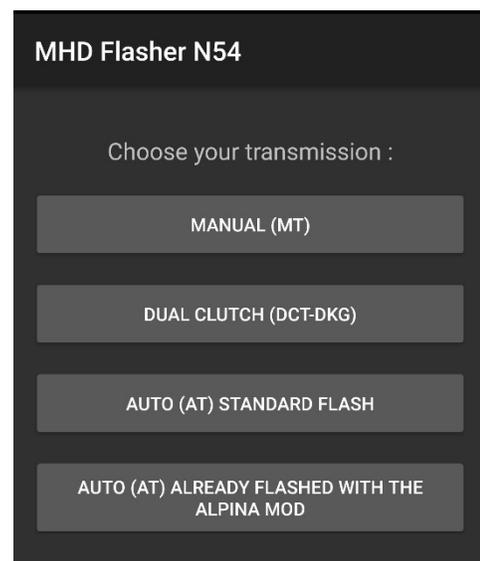
6. On the main MHD screen select “Flash a MHD MAP” to choose from one of the MAPS you purchased back in Step 3.



MHD MAP SELECTIONS



7. Ensure again, that the Android device is in airplane mode.
8. Now that you have selected your map of choice you will be brought to the following MHD Flash screen where you select your vehicles respective transmission.



9. After transmission selection you will be brought to the next MHD Flash screen. Here you may choose to flash the selected map as is. Or move to the MAP options selection (see below)
10. Double-check to ensure Ignition is in the Ignition on, but Engine Off state, as well as make sure all Cabin accessories and climate controls are turned off and the car charger is connected and on.
11. Select “MAP WRITE/FULL WRITE” (full write for initial flash, and map write for all else) and MHD will begin to flash the vehicle. During this time do not open the windows, do not open the doors, do not turn on anything else in the vehicle whereas to disrupt the flashing process.
 - a. During this flashing process you may hear a series of chimes, and the fuel pump running. You may also receive some error messages throughout the flashing process. Don’t be alarmed, this is normal.
12. Once MHD flashes the selected map, it will put the DME back into “Normal Operation” and clear codes. Once it does this it will ask you to turn off the ignition.
13. Turn off ignition completely, remove key FOB from slot and wait a minimum of 30 seconds before trying to start the car. The “Service Car” icon may remain illuminated for part of this time.

Flash

Map: v7.1 Stage 1 FMIC 95oct_102ron
HW: I8A0S

FULL WRITE (18-38 MINS.)

OPTIONS

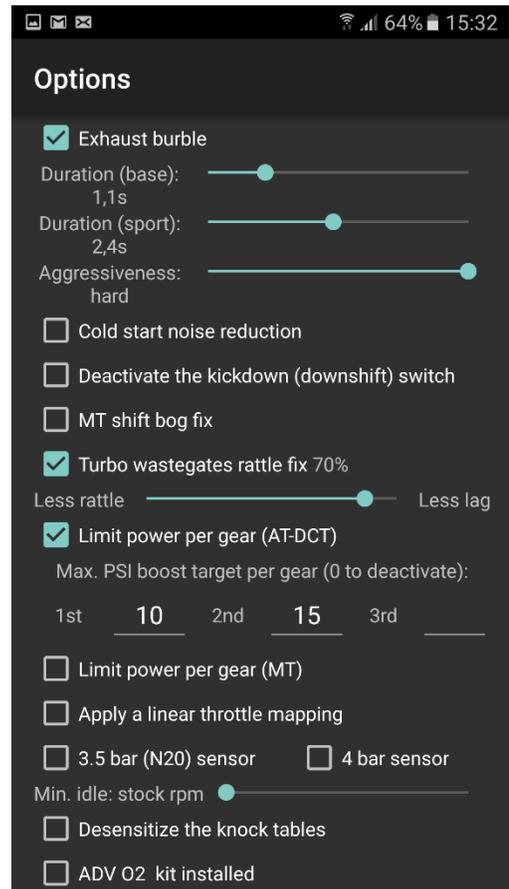
A BATTERY CHARGER IS
RECOMMENDED.

Make sure that ignition is turned on and that the Android device is in airplane mode. Turn off headlights and climate controls. Flashing without a charger may drain the battery and leave the vehicle inoperable.

CONGRATULATIONS YOU HAVE JUST FLASHED YOUR FIRST MHD FLASHER OTS TUNE

Flash options

1. Exhaust burble: delays the fuel cut off when decelerating to provoke exhaust burbling and crackling.
2. Cold Start noise reduction: suppresses raised idle rpm cold start phase.
3. Kick-down Deactivation: prevents the AT/DCT transmission from downshifting when pressing the accel pedal 100%.
4. MT shift bog fix: for Manual only. Improves the 1-2 second power limit some people experience when shifting fast.
5. Wastegate Rattle Fix: changes the position of the wastegate arms during idle / decel to mask the rattling noise.
6. Limit power by gear (AT-DCT): to prevent wheelspin, limit the boost target in the first gears.
7. Limit power by gear (MT): on manual trans only, to prevent wheel spin limit the engine load target in the first gears.
8. Linear Throttle Mapping: remaps the pedal to throttle mapping for a more linear torque request than stock (which gives around 80% of requested torque for 40% pedal input).
9. 3.5Bar (N2O) Map Sensor / 4Bar Map Sensor. Check one of these boxes if you have a 3.5 or 4 bar sensor installed. Do not check if you have a jb4 installed.
10. Min idle: allow to raise the min idle
11. ADV O2 installed: check this only if you installed the aftermarket Lambda sensors sold by Chris@CKI.

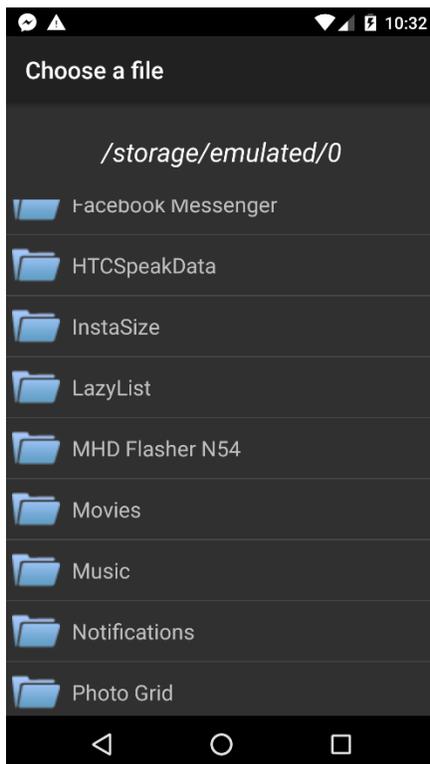
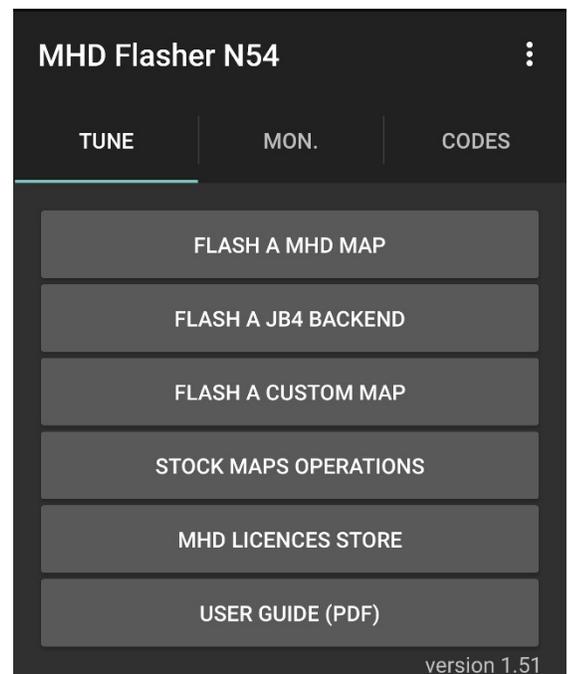


****NOTE-** AT/DCT Transmission owners, ENSURE you select the correct power limiting method denoted by (AT-DCT). Using the Manual Transmission Power limiting method will cause undesired Shifting issues.

Flashing custom tunes

Along with the ability to flash MHD's own OTS tunes that are available in the MHD store. MHD Flasher can also be used to flash custom tunes as well. Whether the tune file is made by you or any of the Protuners in the community.

1. Download the custom tune that you wish to flash to your Android device. (NOTE- you can save the Tune anywhere you wish on your phone, by default in the Downloads folder)
2. Open MHD Flasher and connect to your vehicle
3. Select "Flash a Custom Map" from the MHD Flasher main menu
4. Navigate to the said tune on your Android device and select it
5. You will now see the same screen you would see if you were flashing an OTS tune. If you wish to add some flash time options, go ahead and do so.



6. If no flash time options are needed/wanted, ensure your ignition is turned on and select "Map Write" to flash the tune.

NOTE- if this is the first flash of the custom map, MHD will perform a long write process just like when you did your first flash of an OTS map. So a charger is 100% recommended for this to keep your battery charged. FAILURE TO USE A BATTERY CHARGER CAN RESULT IN UNWANTED RESULTS AND DEEM YOUR VEHICLE UNDRIVABLE.

7. Follow MHD prompts to complete flash of custom map. When directed to turn ignition off. Do so, and remove the key completely for 30 seconds before starting the vehicle.

Datalogging with MHD

MHD Flasher also includes a comprehensive logging/monitoring feature. This feature can be used to gauge the condition of the vehicle, the quality of the tune being used and many other things. Included is “Manual Logging” where you start/stop the log yourself. And “Auto Logging” where MHD will start/stop the log on its own.

MHD’s monitoring module includes over 50 logable parameters, of which 30 can be logged at once. And total of 8 of those selected parameters can be viewed as gauges within the MHD application.

AVAILABLE PARAMETERS:

Accel Ped. Pos – percent position gas pedal is depressed

Actual Load – engine load (real-time)

Boost – Boost and Vacuum reading from MAP sensor

Boost Error D-Factor – amount of correction from Derivative (PID boost control system)

Boost Error P-Factor – amount of correction from Proportional (PID boost control system)

Boost Set Limit

Boost Setpoint

Boost Target – DME boost pressure target

Coolant Temp – engine coolant temperature (Degrees F/C)

Timing Correction Cylinders 1 through 6 – DME timing corrections for Knock events registered by the knock sensors

Fuel Low Pressure Sensor – Fuel pressure in PSI from low pressure fuel pump

Fuel Mode – (20 spool mode, 2 normal fueling mode, 6 Cat protection fueling mode, 10 warmup/open loop fuel mode)

Gear – current gear the vehicle is in

IAT – intake air temp

Lambda Bank 1 and 2 – current AFR of each respective bank as logged from factory wideband sensors

LTFT 1 and 2 – Long term fuel trims for each respective bank (learned average adjustment over time)

MAF – DME airflow calculation in G/S

MAF Req – DME requested airflow

MAF Req (wgdc) – DME calculation for boost control

Oil Temp – engine oil temp

Rail Pressure – fuel pressure fuel rail from High Pressure Fuel Pump

RPM – engine speed

STFT 1 and 2 – Short term fuel trims for each respective bank (real-time)

Throttle Position – position percentage of throttle plate opening

Timing Cylinder 1 through 6 – ignition timing for all six individual cylinders

Torque Actual – calculated torque output from DME

Torque Output Req – requested torque

Torque Limit Active – Limiter 1 DSC/TC, Limiter 4 Rev limiter

Torque Limit Mod

Vanos Exhaust Act/Req – Exhaust Vanos cam angle requested by the DME and Actual cam angle position

Vanos Intake Act/Req – Intake Vanos cam angle requested by the DME and Actual cam Angle position

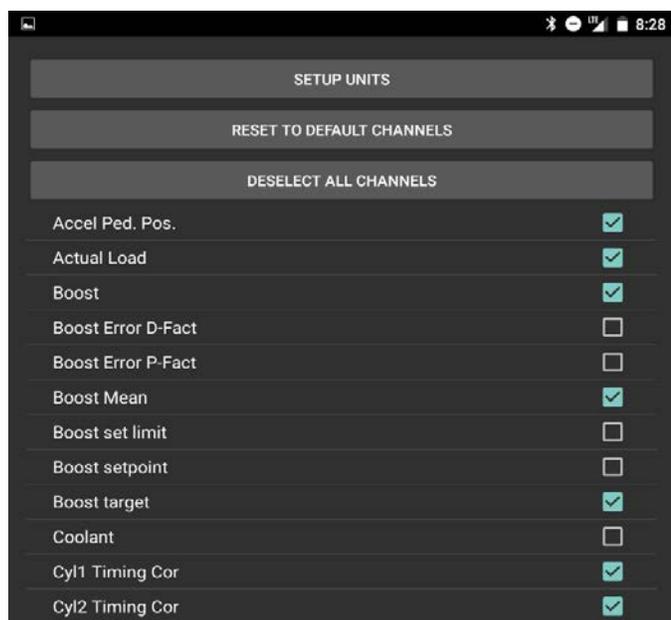
WGDC After PID – this is your WGDC percentage after all calculations of Base and PID are made

WGDC Bank 1 and 2 – this is your WGDC per bank before PID

WGDC Base Value – this is you WGDC base value in addition to other fixed data before PID is put into effect

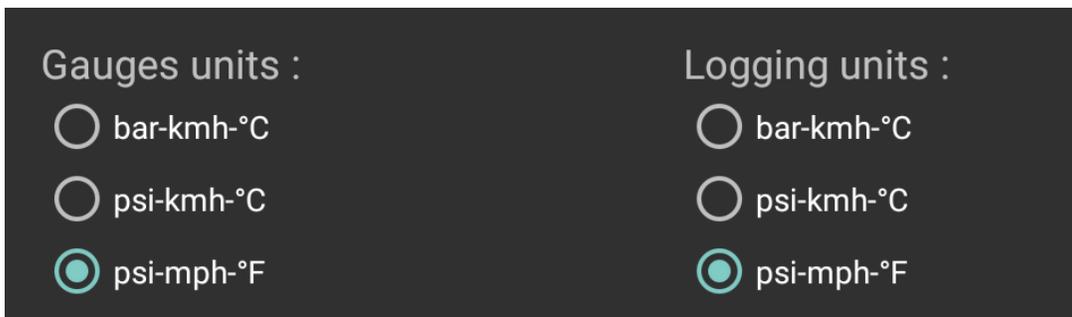
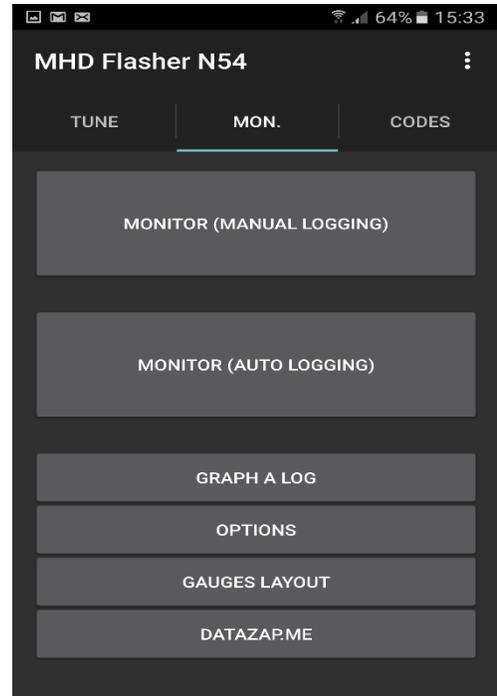
SELECTING PARAMETERS: By default MHD has some of the main parameters already selected for logging purposes. But you can go in and select or deselect any of the parameters you wish.

1. Select the monitor tab “MON” from the MHD main menu
2. If you want to verify or change which parameters you want to log, you will select “SETUP LOG PARAMETERS” and proceed to



make your selections. Logged parameters will be identified by a blue checkbox to the right of the parameter.

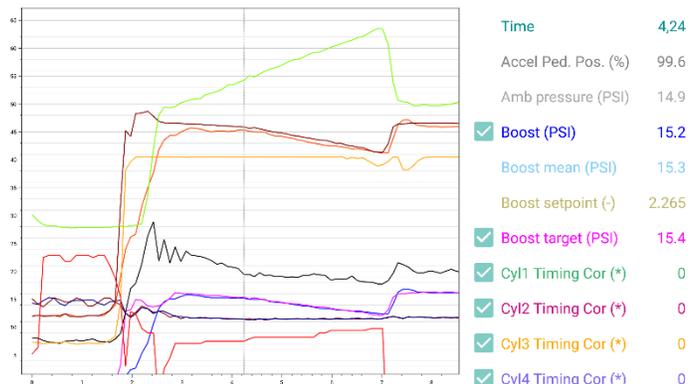
- From this Area of MHD you can also select how your units are displayed by selecting the "SETUP UNITS" button inside the Parameter setup window. Metric/Standard units are selectable.
- Once you have finished making any changes to your monitor tab press the back button to go back to the main monitoring screen.
- Select "Setup Gauges Layout" to setup how many you would like to have showing while monitoring.



NOTE: you can have up to 8 gauges or as little as one gauge showing at any given time. But they must be one of the parameters that you have selected when you had setup your logging parameters.

NOTE: the MHD Monitoring module has 3 different types of gauge view. They are BAR, SWEEP, and MECHANICAL

NOTE: You can also Graph your Log using the "Graph a Log" Feature



NOTE: Changing the Gauge Type is done once logging has begun and you're in the MHD logging screen by tapping on the respective gauge that you wish to modify. Once all changes have been made. You are now ready to start logging.

6. Go back to the main MHD logging menu and select "MONITOR (manual logging)"
7. To begin recording the log, select "Start Log" at the top.
8. To stop recording the log, select "Stop Log" at the top while recording

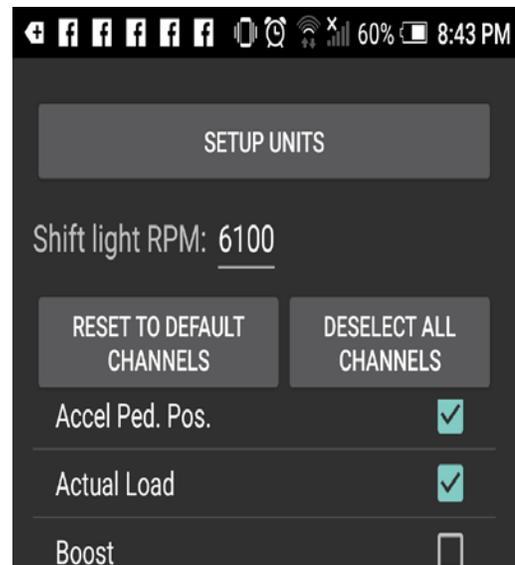
NOTE: If you do not wish to record the log and just want to view the gauges, simply do not select "Start Log".



Automatic Logging on Full Throttle: this feature is exactly as it sounds. MHD logger will automatically begin logging once the Acc. Pedal reaches over 50% depression and stop the log when the Acc Pedal has remained below 50% for more than 3 seconds.. MHD will also PREPEND the 1 full second prior to the recording start so you see the full data in the log. Simply select "Monitor (Auto Logging)" from the Monitor tab to utilize this feature.

MHD Flasher Shift Light: MHD Flasher also includes a shift light function built-in and RPM adjustable. This shift light feature is accessible via the datalog parameter selection screen.

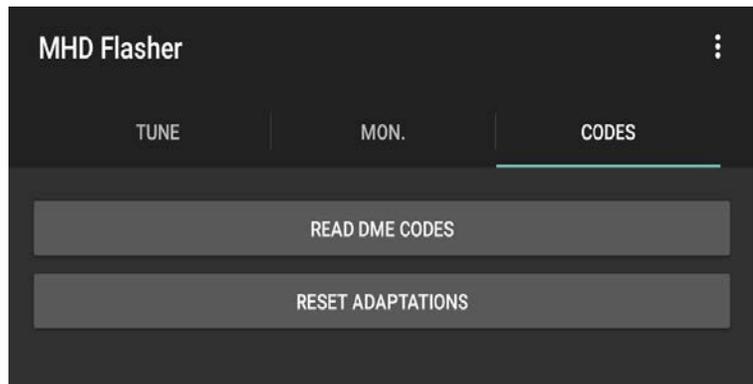
1. Navigate to datalog parameter selection screen
2. Tap the Shift light RPM value and change to desired RPM
3. Hit Back Button
4. Shift Light RPM is now set until you manually change the RPM.



DME Code Clearing and Adaptations Reset

MHD also includes a comprehensive DME code reading/clearing module which also has the ability to reset DME adaptations for free. All you need to do is install the app and have the before mentioned cables.

1. Select the “CODES” tab from the MHD Flasher main menu
2. Ensure that you are connected to your vehicle with the ignition on but engine off state.
3. Select “READ DME CODES” to query the DME for any Hard or Shadow codes



NOTE: MHD’s codes module has the ability to read and clear DME shadow codes as well. Something that not all OBD2 DTC scanning solutions can do.

4. Once you select the “READ DME CODES” function you will be brought to a screen with the results. This screen will also include your vehicle VIN, DME ROM ID, software ID, and current ROM file name that is Flashed on the DME, and emissions readiness monitor status.

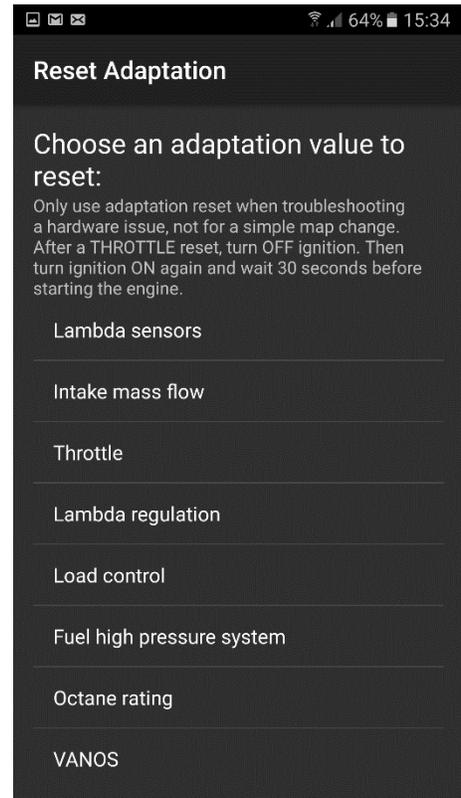
NOTE: If the DME has active or shadow codes, it will show under “DME CODES” above last file flashed. To clear codes, select “CLEAR DME CODES”



DME adaptations reset

Adaptations resets should only be used if you are having a particular issue and you are troubleshooting and you want to eliminate LEARNED behavior or values from the equation as a root cause of the issue you are having.

- What can be Reset?
 1. Lambda sensors
 2. Intake mass flow
 3. Throttle (Throttle inputs and correlation, after reset turn ignition off and then back on, wait for 30 seconds before starting the engine)
 4. Lambda regulation
 5. Load control
 6. Fuel high pressure system
 7. Octane rating
 8. VANOS
 9. Register Battery



NOTE: When resetting adaptations, ensure the vehicle engine remains off, but ignition is on.

MHD backend + JB4 Flashing Flowchart

(Thanks to Forum Member Chris aka LCVETTE)

Once you have all the required latest versions of hardware and software, you will need to update the firmware in the JB4. It is recommended to create folders for both JB4 firmware files and BMS Backend Flash files to keep them organized and be familiar with their location for future use. The MHD Flasher and JB4 phone app will prompt you to select a file version from these files. Knowing where they are makes things easier.

JB4 Firmware updating

1. Connect the JB4 USB cable to your OTG micro USB to USB adapter and to your phone.
2. Open the JB4 phone app on your phone/tablet device and enable a connection to the JB4.
3. Select: settings tab, then scroll down to the firmware tab and select it.
4. You should now see the N54tech forum inside the jb4 app. Select the N54 section, then in the "stickies" section, select the "N54 G5 ISO Firmware & Notes" thread.
5. Scroll down and find the latest firmware version listed at the bottom of the first post. READ THE NOTES! It shows the changes and any required internal jb4 setting changes you will need to perform. Select the file download link listed for the latest firmware version. This will begin the installation of the firmware through the jb4 phone app. Follow the guided steps in the app to complete the process.
6. OK. You are now running the latest firmware version.
7. If you will be flashing a BMS/MHD Backend Flash, you will now need to set the JB4 to MAP "0" before continuing.
8. Now go into the jb4 phone app and under the settings tab, read only tab, find the correct version of your car, IJEOS or I8AOS. Write this down for future use in selecting the correct Backend Flash you'll need in the upcoming steps.
9. Congrats you have completed the first task in preparing the JB4 to use a Backend Flash with the latest firmware installed! Future firmware updates will be installed in the same manner unless Terry changes it.

BMS/MHD Backend Flashing Flow Chart

1. Have your K&D CAN Cable, micro USB to USB adapter, phone/tablet device, and car battery charger out and ready for the next steps. NOTE- this flashing process can vary from 15-40 minutes depending on your DME Version.
2. Open hood and connect your battery charger to the car (follow BMW Procedure for this). I used the 12amp charger setting, as the fuel pump draws a good bit while flashing.
3. Turn on your car without starting, key in ignition, start button pressed without foot on clutch or brake. Now turn off all accessories such as the HVAC system and radio etc.
4. Plug the K&D CAN Cable into the obd2 port near the left kick panel near door opening. Connect the OTG micro USB to USB adapter to the K&D CAN Cable, and connect to your phone. Open the MHD Flasher APP on your phone/tablet device. It should begin recognizing the connection to the vehicle.
5. Once the connection has been established. Go to the store tab, this is where you will purchase the BMS Backend Flash license. Select the BMS Backend license for purchase, currently \$79. This can be paid with your Google play account. Once payment is made you are ready to begin flashing.
6. Verify you are in jb4 map "0".
7. In the MHD app select "Flash a JB4 Backend"
8. This will open your phones SD card directory. Find the file you downloaded previously from N54tech MHD Flash discussion first post on page 1, currently version 6/6. You should have already unzipped the file as directed during initial download. If you are not seeing the Backend Flash files in your folder, you probably did not unzip them. Go back and unzip and repeat the last steps.
9. You should be looking at a list of Flash files to choose from. Based on the requirements listed on the first post in the MHD Flash discussion thread, select the appropriate Flash level and DME compatibility type for your car. E.g. I8AOS PUMP FLASH etc.
10. Once selected the MHD app will go through a read process and then ask you to begin the Flash. If everything has been done as expressed above, you can click to continue. Once flashing it's recommended to let it complete without touching anything or opening doors or flipping switches. I setup everything so I was not inside the car so I wouldn't be trapped for possibly up to 40 minutes with nothing to do.

11. Once the Flash is completed follow the instructions it provides to finalize the procedure. Once done, power down the car, remove the key from ignition, remove the cables from the obd2 port, unplug the battery charger and remove the positive and negative charging leads from the car.
12. Power up the car without starting, enter the jb4 steering wheel controls, select 4/2 to enable Backend Flash compatibility. Set your jb4 to your appropriate map setting for your car. Start the car. Pending it runs, you're done.

Congrats! You're all done with installation! Now drive the car and use the logging function of the jb4 app connected to the jb4 via the USB and OTG adapter to capture some data for review. Post the data logs in the support section of the N54tech forum. You will get a clear idea of how everything is working and how you can advance into more aggressive maps, flashes or both to further Increase power. This will be based on how your car is doing with your current bolt on modifications as well as advice in what to add as your next bolt on mods to allow further tuning increases.

ADV Sensors

For ADV sensor specific Information and setting please view the following links:

- [ADV Sensor Release](#)
- [ADV Sensor Settings and Info](#)

FAQ

Q: Can I test the connection before making a purchase?

A: Yes, simply tap the MHD Store button. The ECU connection is checked before displaying available purchases.

Q: Does my Android device need to be permanently plugged to the OBD port?

A: No. Once a flash is performed you can unplug your device.

Q: Do I need to purchase a new license each time I flash a map?

A: No, you can reflash as many times as needed. MHD maps updates are free.

Q: Is a battery charger required?

A: It is highly recommended for long flashes (install, uninstall). A healthy battery will handle short flashes (map changes) fine but the use of a battery charger remains recommended.

Q: Can I flash a Cobb OTS or Cobb Custom tune to my vehicle using MHD Flasher

A: Short answer is NO, Cobb tunes are a completely different format than the BIN and MHD file extensions that are used in MHD. They are not compatible. However, if you have access to the values used in your Custom tune or OTS Cobb tune, you can copy over the values into Tunerpro to use with MHD.

Q: I want to flash using MHD but I don't see my ECU ROM ID listed as supported. Can I still flash and is it safe?

A: If by chance your DME was never updated by the dealer to the latest ROM versions (Which MHD uses) then you can still flash and be fine. MHD Flasher updates your DME to the most recent ROM version automatically. But, ensure you perform an ECU back-up prior to flashing.

Q: I'm about to flash my car with an OTS or custom tune. What should I do before flashing?

A: Recommended upgrades include replacing spark plugs and ignition coils if they are aged (10k miles for plugs, 30k miles for coils). If you bought the car used and it has decent mileage and don't know if they were changed or not, we recommend changing them for peace of mind.

Q: I don't have a FMIC installed on my car yet, is it safe to run one of the FMIC maps and is it safe.

A: Yes, you can run one of the FMIC OTS maps, but it is recommended that you datalog, and ensure the car is not knocking, and the IATS and fueling remain healthy. We advise against using Step up MAP on cars without the recommended parts if using for track days and sustained aggressive driving. **USE AT YOUR OWN RISK, MHD is not responsible for any damage done to your car using MAPs intended for modified vehicles without the recommended upgrades.**

Q: When trying to purchase licenses or OTS Maps from MHD Store I receive error messages from Google Play that will not allow me to complete my purchase. What can I do?

A: Rejection is most of the time it is due to the following:

1. Your Google account being new
2. Your payment method that was not so far used with Google (or since a long time)
3. Using your account to pay on several devices

That restriction from Google is cleared after some days (4). You can try first to complete your payment information on Google Wallet website (some fields may be missing, like the credit card 3-digit security code).

Here you can request a call from Google, other customers resolved this issue quickly with a call

<https://support.google.com/wallet/#contact=1&topic=3209987>

Q: MHD Flasher will not connect to my car, I have a known good cable and phone is in airplane mode. What is the issue?

A: Make sure that the Android device you are trying to use is 100% USB OTG ready. Not every Android device has this functionality. Use the free app "USB OTG checker", try to read files off a USB fat32 stick.

Q: Is MHD flasher compatible with my vehicle.

A: MHD Flasher N54 is only compatible with N54B30 equipped BMW models. It does not work with other vehicles at this time.