

MMR RemoteREV

Users Guide

v1.0





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Introduction

The MMR RemoteRev is a module that will enable you to remotely 'blip' the throttle using your cell phone



The system is simple to install, requiring minimal connections and configuration. The system utilizes a 'plug and play' harness that requires no splicing of any factory wires. The system is connected to the throttle, and OBDII port using the supplied harness.

Quick Start

To quickly install the MMR RemoteREV module, follow the steps below. For additional details, see the installation and configuration sections of this guide.

- 1) Disconnect the negative battery cable
- 2) Install the RemoteRev harness, connect each of the RemoteREV harness connectors to the throttle and OBDII port.
- 3) Connect the factory harness connector into the RemoteREV harness
- 4) Locate the RemoteREV device to a suitable installation area where the button can be accessed and the LED can be easily observed.
- 5) Be sure that the area around the pedals is clear from any obstruction from the RemoteREV harness. Zip tie the harness out of the way when necessary
- 6) Reconnect the negative battery cable
- 7) Install the RemoteRev app from the Google Play Store or the Apple App Store
- 8) Turn on the ignition (but do not start the car).
- 9) Launch the RemoveRev app on your phone.
- 11) Select the 'Settings' option at the bottom of the screen
- 12) Press and hold the on/off button on the RemoteRev device, once the status LED begins to flash, release the on/off button. The status led should now be blinking indicating the that the RemoteRev is in pairing mode.
- 13) Select the 'Select Device' option at the top of the screen.
- 14) Select the 'OK' option to confirm that the RemoteRev is in pairing mode
- 15) The RemoteRev device should now be listed, select it. After a few seconds, a pairing request prompt will appear asking you to 'pair' the device, select the 'pair' option. **If this pairing request does not appear, the RemoteRev is NOT paired to your phone.**
- 16) Select the 'Calibrate Throttle' option and follow the displayed instructions in order to calibrate the throttle.
- 17) Select the 'Home' option at the bottom of the screen.
- 18) Your MMR RemoteREV is now installed and calibrated. Fine tuning of the 'Rev' can be done at any point by going back into the settings screen and adjusting the settings values.

Installation

The MMR RemoteREV system includes a plug and play harness that is compatible with all 2011 – 2023 Mustangs.

To install the harness, first disconnect the negative battery cable. Once the battery has been disconnected, route the harness so that each of the connectors is located close to the throttle pedal and OBDII port).

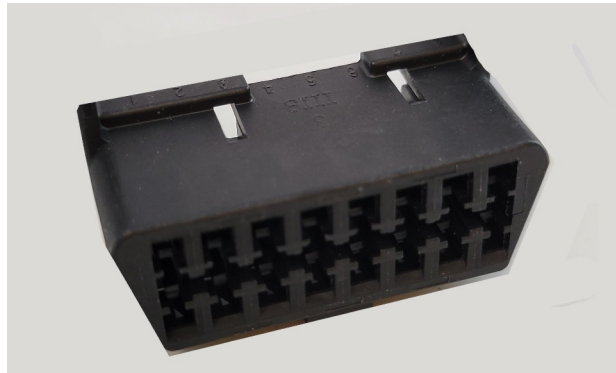


The plug and play harness has two connectors for the throttle, one that connects to the throttle pedal sensor, and the other connects to the factory harness connector for the pedal.



Throttle Pedal Connector, 2015 Mustang

Next locate the OBDII port, the location of this port varies from year to year of the vehicle, the port is typically located somewhere in the drivers side footwell. Pictured below is the OBDII port you will be plugging the RemoteREV harness into:



OBDII Port



OBDII Port Location, 2015 Mustang

Once the harness has been routed to each of the connectors, disconnect the factory harness connector from the throttle pedal sensor, and plug it into the plug and play harness and it's mating connector into the factory pedal connector. Simply plug the OBDII connector into the OBDII port. (Note, if you already have a device plugged into the OBDII port, you may need to purchase an OBD port splitter in order to share the port between your existing OBD device and the RemoteREV harness)

Finally, route the RemoteREV module and harness to a location that you can access the button and can see the status LED. For optimal remote/bluetooth range, avoid enclosing the module in metal structures.

Once the harness has been routed, it should be secured so that it does not interfere with access to any of the pedals. MMR recommends using zip ties to fasten the harness to the factory harness and away from the pedals and footwell.

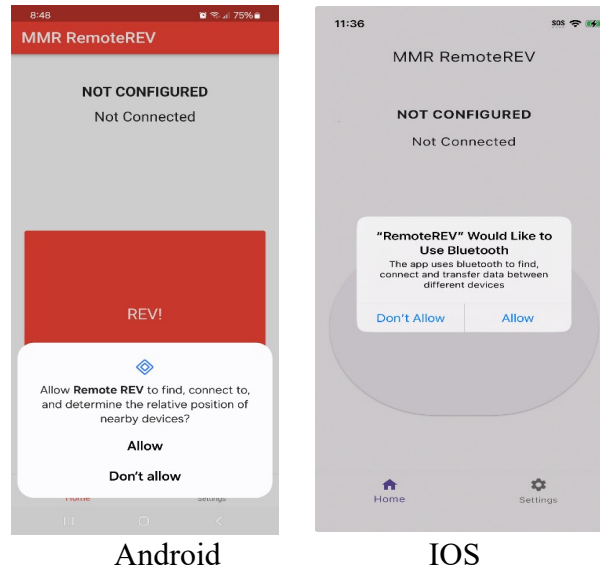
Reconnect the negative battery cable, the RemoteREV will briefly blink the status led when power is first applied or the ignition is cycled.

Pairing

Once the module has been installed into your car, you'll need to 'pair' it to your Android or iOS smartphone.

First, go to the Google Play Store or Apple App Store and install the RemoteRev app.

After installing the app, launch it. You will likely be prompted to grant bluetooth access, which you should allow.



Start by powering up the module, set the car to ACC or RUN mode, **do not start the engine**.

By default, the app is not paired to the device and the app will show that it's not configured/connected. Select the 'Settings' option at the bottom of the screen.

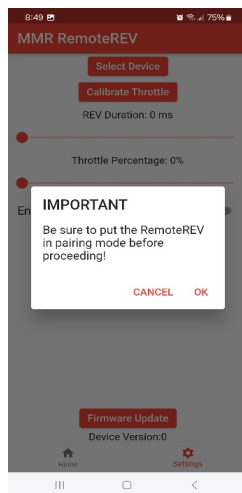
NOTE: Be sure to follow the pairing sequence below exactly, attempting to pair the RemoteRev using alternate methods will likely result in a non-paired device.

Press and hold the on/off button on the RemoteRev device, once the status LED begins to flash, release the on/off button.

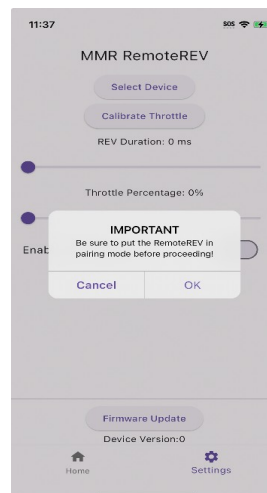


The status led should now be blinking indicating the that the RemoteRev is in pairing mode. If the status led is not blinking after you release the on/off button, the RemoteRev is **not** in pairing mode. The RemoteRev will stay in pairing mode for approx 30 seconds before disabling pairing.

Choose the 'Select Device' option at the top of the screen, you will be prompted to confirm that the RemoteRev is in pairing mode. Select the OK option (or you can cancel at this point if the device is still not in pairing mode).

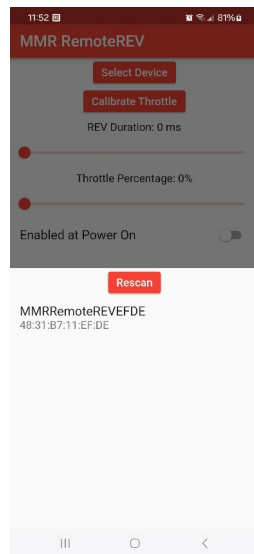


Android

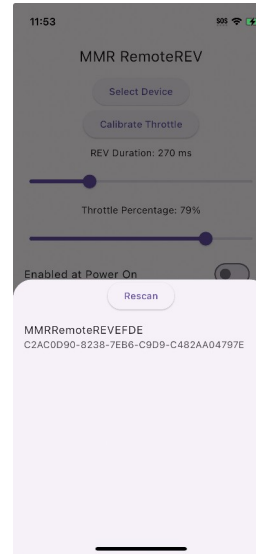


IOS

A list of available RemoteRev devices will now be displayed at the bottom of the screen, select your device.

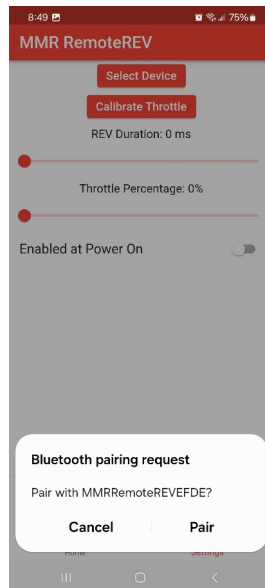


Android

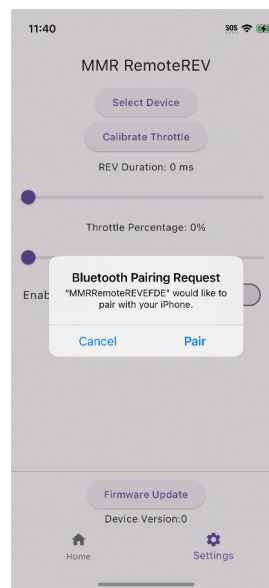


IOS

After a few seconds, a pairing request prompt will appear asking you to ‘pair’ the device. Select the ‘pair’ option. **If this pairing request does not appear, the RemoteRev will NOT be correctly paired to your phone. See the troubleshooting section for tips on resolving pairing problems.**



Android



IOS

After the device has been successfully paired, the next step will be throttle calibration.

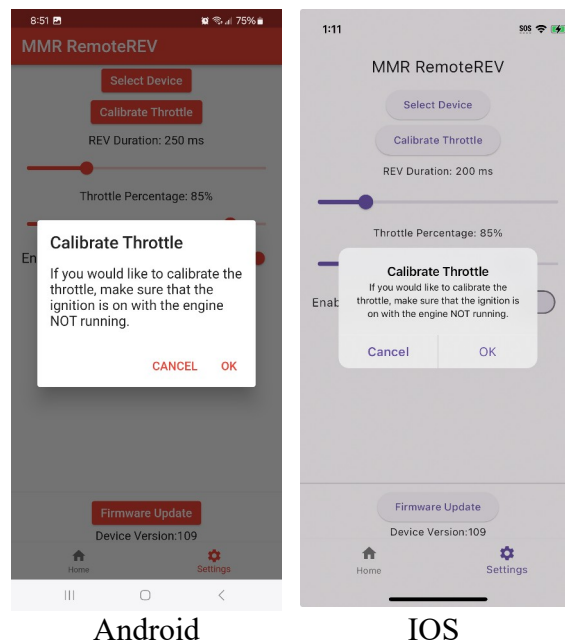
Note that the RemoteREV can only be paired to a single phone at a time. If you pair the RemoteREV to another phone, it will no longer function on the previously paired device and will need to be re-paired to that phone in order to work correctly.

Throttle Calibration

Once the electrical connections have been made, and you've paired the RemoteRev to your smartphone, you'll need to calibrate the system to your throttle pedal. Until throttle calibration has been completed, the device cannot be enabled (and the status "THROTTLE NOT CALIBRATED" will be displayed on the home screen)

Start by powering up the module, set the car to ACC or RUN mode, **do not start the engine**. Upon initial power up, the status led will turn on briefly, then turn off.

To calibrate the throttle, run the app (it should show 'Connected' on the home screen), and select the 'Settings' option. In the settings screen, select the 'Calibrate Throttle' option, and follow the instructions to complete the calibration procedure.



Once throttle calibration has completed, a prompt will be displayed that reads "Throttle Calibration Complete"

Once the throttle calibration has been completed, you can fine tune the remaining settings to your liking.

Settings

RemoteRev operational settings are available on the settings screen. These settings are inaccessible until the RemoteRev has been successfully connected and paired.

REV Duration

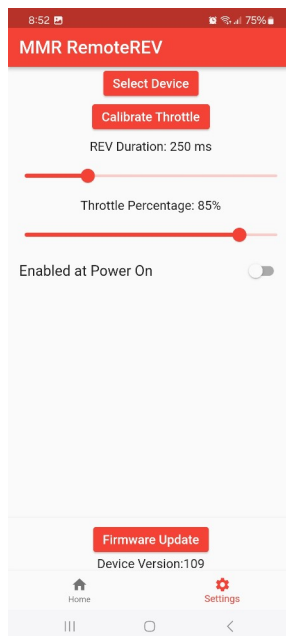
This is the amount of time (in milliseconds) that the throttle will be ‘pressed’ when the ‘REV’ button is selected in the smartphone app. Typical values range from 150-300. Caution should be used when changing this setting as too long a duration could cause the engine to overrev. It is recommended that small, incremental changes are made when adjusting this value. (1millisecond = 1/1000 of a second)

Throttle Percentage

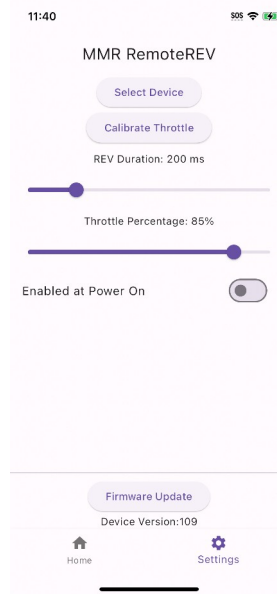
This is the amount of throttle that will be applied when the ‘REV’ button is selected in the smartphone app. Typical Values are 20-85%. Exceeding 85% throttle *may* trigger check engine lights and cause the throttle to become unresponsive. In the case that check engine lights are triggered, or throttle problems occur, pull the negative lead on the battery for 5 minutes and replace it, this typically clears the check engine/throttle problem.

Enabled at Power On

Selecting this option will cause the RemoteREV to be enabled when the module is powered on, this will allow the throttle to be remotely blipped without having to first press the ‘ON/OFF’ button on the module. By default, the module is disabled on power up and must be manually enabled in order to remotely blip the throttle.



Android



IOS

Remote Rev Operation

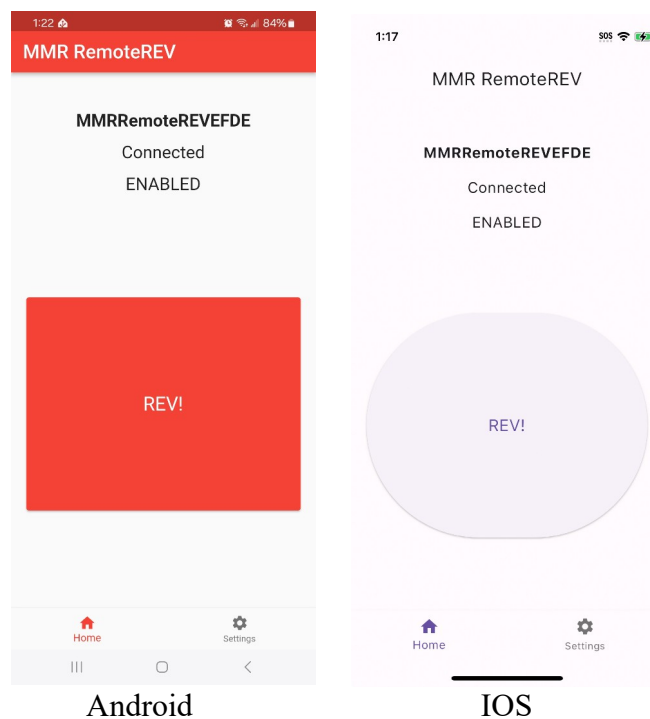
Once the RemoteRev has been paired to your smartphone and you've completed adjusting the settings to your preference, you're ready to begin "Remote Revving" your vehicle.

To start, the vehicle must be on and running. Once the vehicle is running, you must enable the remote rev feature by pressing the on/off button on the front of the RemoteRev device. When the status LED is illuminated, the Remote Rev feature is enabled. The remote rev can be disabled by once again pressing the on/off button, at which point the status LED will no longer be illuminated.

As a safety feature, the RemoteRev will also be automatically disabled if any throttle activity is detected by the module. The remote rev can be re-enabled by pressing the on/off button.

For users that have a remote start option installed on their vehicle, the remote rev features a configuration option which allows it to be 'enabled' on power up, so the user is not required to press the on/off button to enable the device. This way the vehicle can be remotely started and revved without having to 'enable' the device with the button. Check the "Enabled at Power On" setting on the settings page for more details.

Once the vehicle is running, and you've launched the RemoteRev app, selecting the 'REV' button will cause the throttle to be blipped.



Firmware Updates

The system provides the capability of OTA (over the air) firmware updates. The MMR website should be checked for firmware updates, and if available, the firmware file can be saved onto your smartphone.

In the case that new firmware is released, you can use the following steps to update your device:

Save the firmware file (.bin) from the MMR website onto your smartphone. (Note that flashing an incorrect file can permanently damage your device!)

In order to update the firmware for the RemoteRev, you must first be connected and paired to the device. The current version of your RemoteRev is displayed at the bottom of the settings screen when the device is connected. Be sure that your smartphone has plenty of battery available as the firmware update process can take 10-15 minutes to complete.

Once a firmware file has been saved to your phone, select the 'Firmware Update' button and then locate/select the firmware file. Firmware updates can take anywhere from 10-15 minutes to complete, and the process should not be interrupted once started. An indicator will be displayed on the screen while the update occurs showing the update progress. Once the update has completed, it is recommended that the RemoteRev be turned off (turn off the ignition) and turned back on. You will likely need to reconnect to the device after the firmware update has completed.

Technical Information

Wiring Harness Wire Colors

Wire Color	Function
Red	+12v
Black	Ground
Blue	Throttle-VREF (5v)
Yellow	Throttle-APPS1 (0-5v)
Green	Throttle-APPS2 (0-5v)

Troubleshooting

Following are solution to some common issues you may encounter with your device:

Symptom

The RemoteRev module does not appear to be powered up.

Solution

Check that the system is powered up and awake by observing the status LED. When the vehicle is first powered on, the status LED should illuminate momentarily. If the status LED does not briefly illuminate when the vehicle is powered up, check the harness connections to the throttle and OBDII port.

Symptom

The RemoteREV says that it's 'Connected (NOT PAIRED)'

Solution

This means that the RemoteRev was put into pairing mode, at which point it clears the previously paired device. This means that the device must be re-paired in order to connect to it again. Please follow the solution below for "Unable to pair the module with smartphone"

Symptom

Unable to pair the module with smartphone

Solution

First, verify that the RemoteRev is powered up (see above).

Next, make sure that there are no 'paired' RemoteRev devices in your bluetooth settings. Go into your phones bluetooth settings screen, if you see an MMRRremoteRev device listed, select it, and 'unpair' or 'forget' the device. On Android devices, select the gear icon next to the device and select the 'unpair' option. On IOS devices, if the MMRRremoteRev is listed under the Bluetooth Settings My Devices section (even if it says not connected) it must be removed (select the blue 'i', and then select 'Forget This Device')

Once the device has been unpaired, it's also best to reset the app data. For Android, perform the following steps: Go into your phones settings screen, go to the 'Apps' option, select "RemoteRev", select 'Storage' and select the 'clear data' option. For IOS it is recommended to simply remove and re-install the MMR Remote Rev app at this point.

Once the app data has been reset (or the app has been re-installed) launch the RemoteRev app, and follow the pairing instructions provided in the 'Pairing' section of this users guide.

Symptom

The 'blip' functionality is not working.

Solution

- 1) Ensure that the throttle has been calibrated, if the throttle has not been calibrated, the system will be disabled.
- 2) Make sure that module is enabled. The ignition should be on and the button should be pressed to enable the system. If the status LED is off, the device is currently disabled, to enable the system, press the button and the status LED should turn on. NOTE: The module will automatically disable itself if it detects throttle activity.

Technical Support

To obtain technical support for your device, please contact:

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8AM – 5PM PST

Email: info@modularmotorsportsracing.com

Website: <http://www.modularmotorsportsracing.com>