

## Mimics

Manual v1.1

# USER MANUAL



\*Android Smartphone's requires a MHL/HDMI/SLIMPOR/ in order to display video to an external monitor.

\* iOS devices require a AV/HDMI/VGA or WIFI(Airplay) to display video externally.

\*\* Its highly recommended that you use original vid

\*\* If using the MimicsG4 in a vehicle, you car migh

\*\* The latest version of the MimicsG4 is compatible sticks/boxes won't work but some development units Smartphone's, please refer to the MimicsLT.

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## Release Notes:

v1.0	- Initial Release	Dec-07-2016
v1.1	- Updated manual for easier setup	Mar-04-2018
v1.2	- Minor edits	Mar-30-2018

## 1. Overview

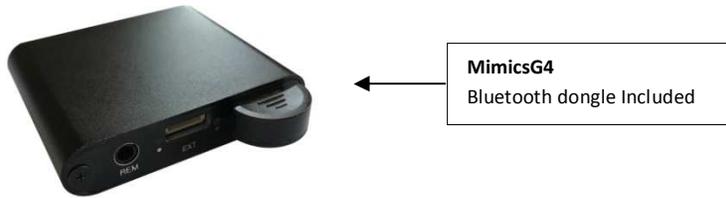
The MimicsG4 (4th generation) is a device that allows *multitouch* remote control of an Android/iOS device remotely via Bluetooth. No root access, custom ROMs or even developer mode enabled is required. Although it will still work on a non stock android device. However, iOS devices currently are required to be Jail broken (for our driver to be installed). When connected and configured, this system will allow you to access all your Android/iOS devices features and functions when connected to an external display such as an in-car display/monitor. The MimicsG4 supports resistive, I2C, UART and USB touchscreen protocols. The MimicsG4 uses a low bandwidth connection that allows simultaneous use with other Bluetooth connections such as hands free or A2DP. The MimicsG4 module is a fully embedded module that allows very fast startup times, high reliability and automotive grade hardware.

\* If you have an idea to embed our technology into your custom products, we can design/develop a custom solution based on your requirements. We also have licensing options available for volume customers. Please contact us @customgadz.com for further details.

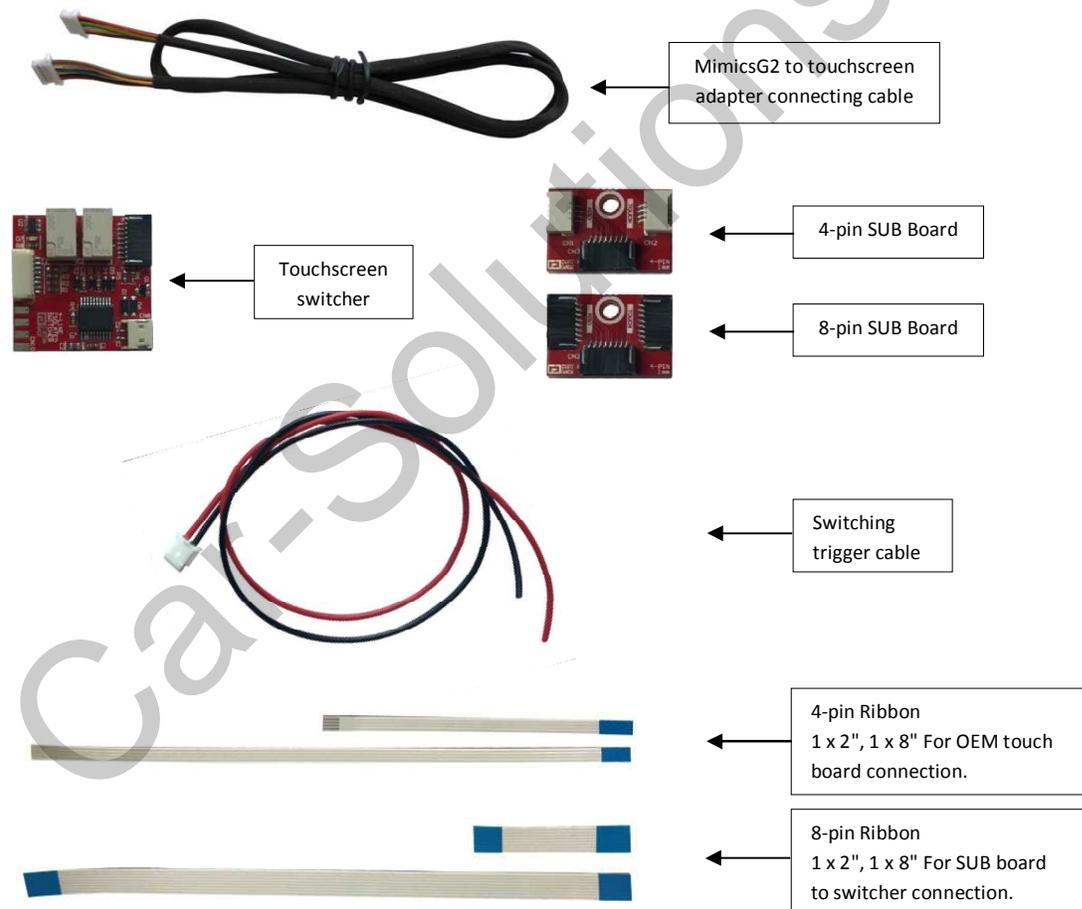
## 2. What's in the Box

The MimicsG4 is available as a standalone unit, and an optional touchscreen switcher kit is also available. For interfacing to a vehicle fitted with a factory touchscreen, the MimicsG4 switcher adapter currently only supports 4-wire and 8-wire resistive OEM touchscreens. The USB port can be used for connecting various USB touchscreens.

### MimicsG4 Basic kit components

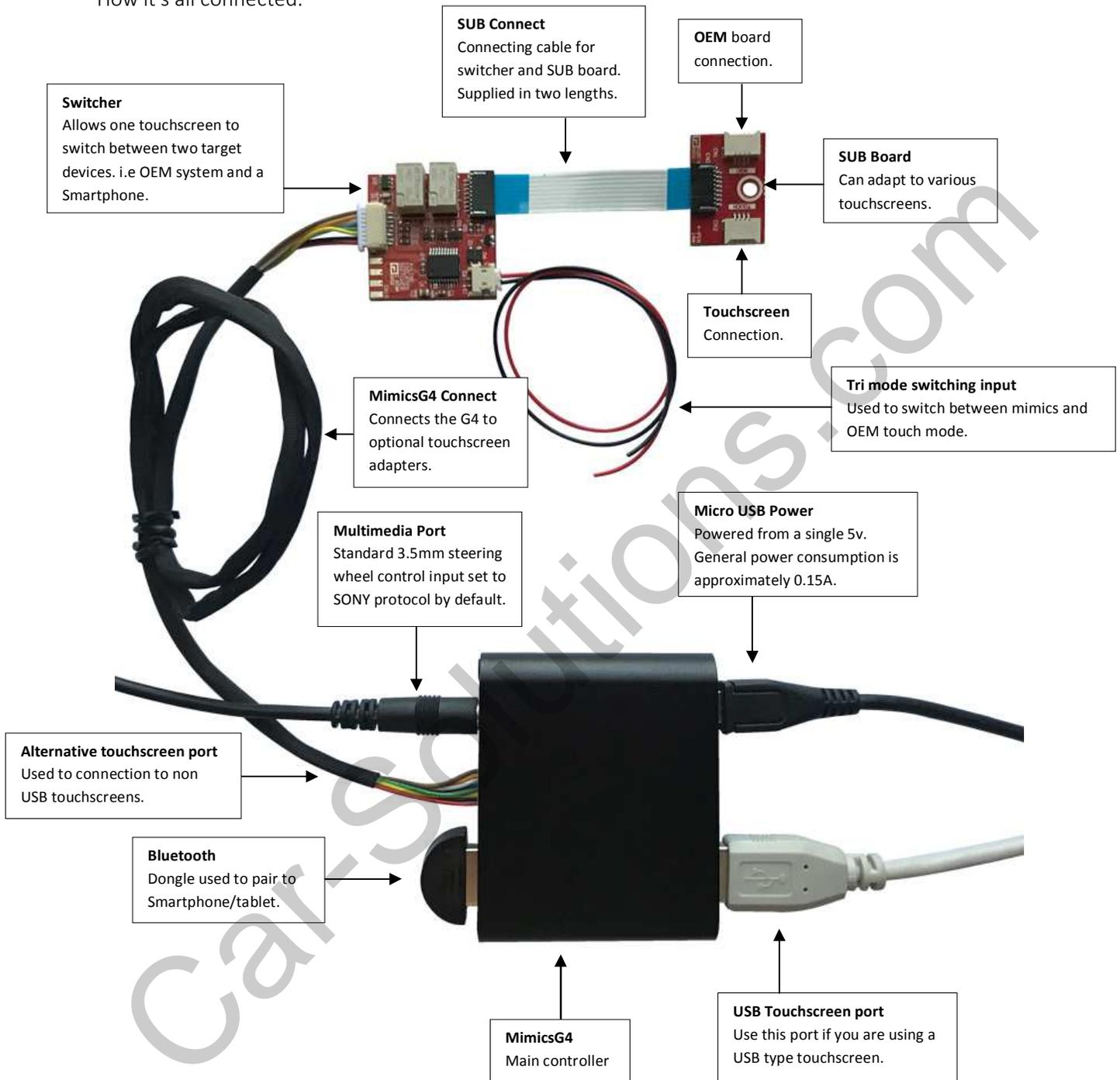


### MimicsG4 Optional Touchscreen switcher add-on



### 3. Connection Overview

How it's all connected.



\* Avoid using old, frayed or severely worn micro USB cables to power up the mimicsG4

## 4. Quick start guide

### UPDATE THE FIRMWARE

If you haven't already done so, you will need to make sure you have the latest firmware in your MimicsG4. See **Section 5** on how to do this.

*\* It's possible that a newly received MimicsG4 will not have the latest firmware installed! - so please update.*

### TOUCHSCREEN TEST MODE

The MimicsG4 can generally detect most USB touchscreens and some I2C touchscreens (adapter board required). If the Mimics can't detect your touchscreen then you won't be able to proceed with calibration. To assist in setup, we have implemented a mode called 'Touchscreen Test Mode' to check if your touchscreen is compatible.

To Initiate this mode, you simply turn off the mimics, plug in your desired touchscreen but *unplug the Bluetooth dongle*. Now Power up the Mimics.

You will see one of the following:

- The RED light starts blinking once per second - Good news, Mimics identified the touchscreen.
- The RED light stays off - Means that the touchscreen can NOT be detected, so please contact us if this is the case so we can assist further.

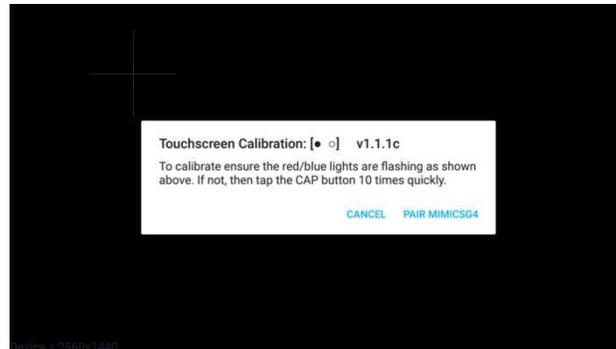
*\* After getting a blinking RED light, pressing the external touchscreen will keep the red light on while its pressed. This will be even a better indication of your touchscreen being compatible.*

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## CALIBRATING THE TOUCHSCREEN - FOR ANDROID SMARTPHONES

1. Ensure the touchscreen you are planning to setup has passed the "TOUCHSCREEN TEST MODE" and make sure you have the latest firmware installed. See **Section 5** on how to do this.
2. Mirror your Android device to the external display via cable/WIFI. You will need a cable, dongle or video interface box to do this.
3. Download the MimicsG4 app from the Play store if haven't already done so then open the app.

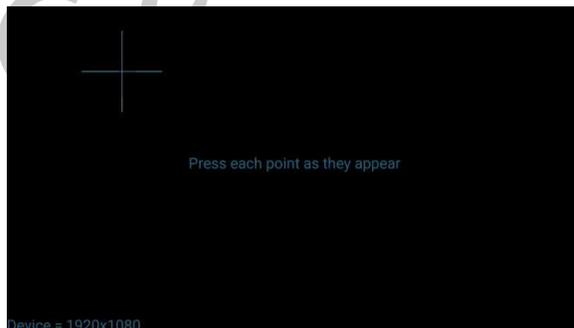
Ready to calibrate



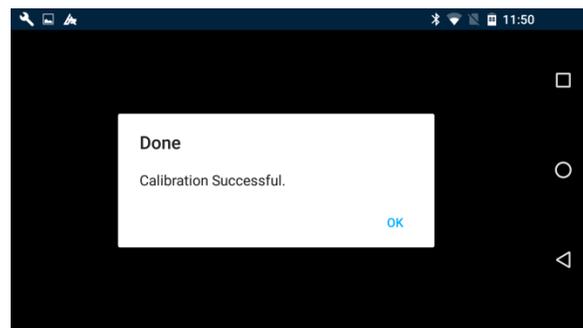
4. Make sure the Bluetooth dongle and touchscreen are plugged into the MimicsG4.
5. Power on the Mimics.
6. Press the CAP button repeatedly (the RED light will turn on at each press) until you see the BLUE light start flashing. The Mimics will now reboot.
7. The RED/BLUE lights will now be flashing left to right once per second. (Discovery mode).
8. Press "PAIR MIMICSG4" and the Bluetooth setting screen of your device will be launched. After a few moments you should see MimicsG4 appear in the list, if not you can press "scan", "search" or "Pair new device" depending on your android version to enable re scanning of Bluetooth devices. Click on 'MimicsG4' and after a short time you will notice the calibration screen launch as follows

1. *Calibrating*

\* *PRESS and HOLD the marker until it moves to the next position.*



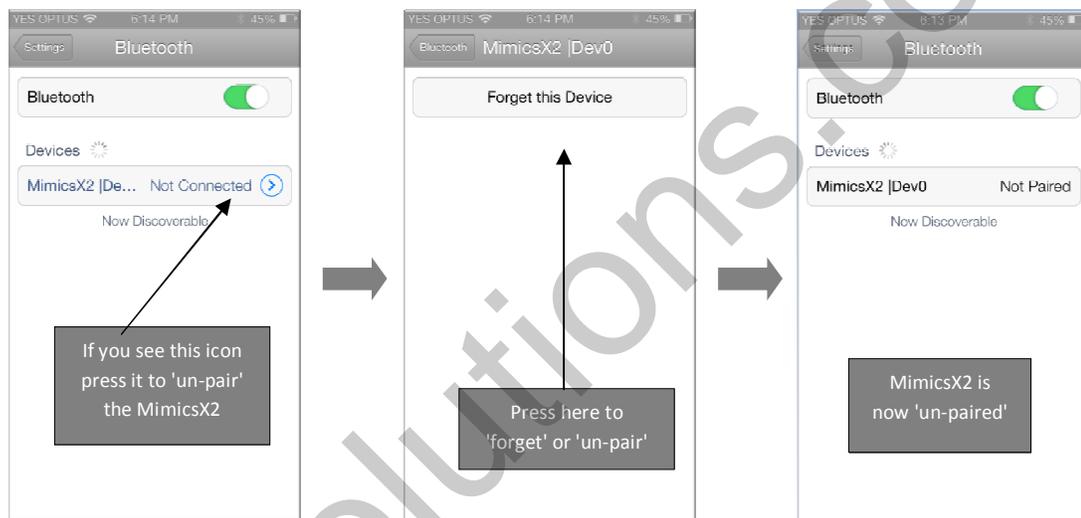
2. *Complete!*



Android Touchscreen calibration complete!

## CALIBRATING THE TOUCHSCREEN - FOR IOS DEVICES

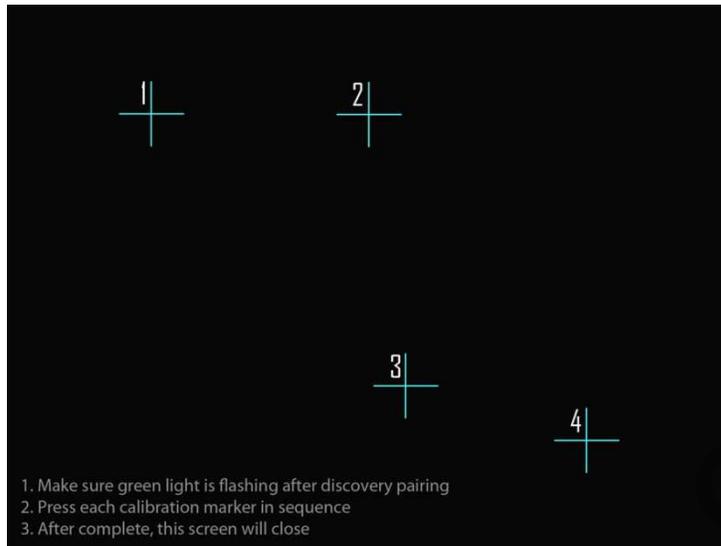
1. Ensure the touchscreen you are planning to setup has passed the "TOUCHSCREEN TEST MODE", and make sure you have the latest firmware installed. See section XX
2. Mirror your iOS device to the external display via cable/WIFI. You will need a cable, dongle or video interface box to do this.
3. Search and install the "MimicsX2 Driver" in Cydia on your Jail broken iOS device.
4. Reboot your iOS device by pressing and holding the power button.
5. Depending on the Jailbreak you might need to re-activate it after a reboot.
6. Open up the Bluetooth settings screen and make sure any previous connections the Mimics are removed!



7. Make sure the Bluetooth dongle and touchscreen are plugged into the MimicsG4.
8. Power on the Mimics.
9. Press the CAP button repeatedly (the RED light will turn on at each press) until you see the BLUE light start flashing. The Mimics will now reboot.
10. The RED/BLUE lights will now be flashing left to right once per second. (Bluetooth Discovery mode)
11. After a few moments you should see 'MimicsG4' appear in the Bluetooth list, so proceed to click on it. Mimics will now start to connect.
12. Once connected, the iOS device will return to the HOME screen.
13. Open the Mimics app previously downloaded from Cydia.
14. You will be presented with the following screen.

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iOS Calibration screen



15. Press each marker in the numbered sequence.
16. If successful the iOS device will automatically return back to the HOME screen, and calibration is done.

iOS Touchscreen calibration complete.

## PAIRING A NEW SMARTPHONE

If you have already calibrated your touchscreen but decided to change your Smartphone, you will need to do the following in order to use a new device (different device used when calibrating the touchscreen).

1. PRESS and HOLD the CAP button until you see the BLUE light start flashing, the mimics will now reboot. At this point you will see the RED/BLUE light flashing left to right once per second (i.e. Bluetooth discovery mode).
2. Now open the MimicsG4 app and press the "PAIR MIMICSG4" button and proceed with pairing the mimics like you did when calibrating the touchscreen.
3. After the device is connected you are ready to use your new device.

*\* If after you pair a new device and the calibration seems incorrect, please repeat the "CALIBRATING THE TOUCHSCREEN" step using your new device.*

*\* Its highly recommended that you use the MimicsG4 app when initiating a "CALIBRATING THE TOUCHSCREEN" or "PAIRING A NEW SMARTPHONE". Failure to do so can result in some app features not to work and might cause pairing issues.*

*\* After the initial pairing (first time discovery) the mimicsG4 will automatically reconnect to the Smartphone when the MimicsG4 is turned on. Bluetooth will need to be enabled on your device for this to automatically happen.*

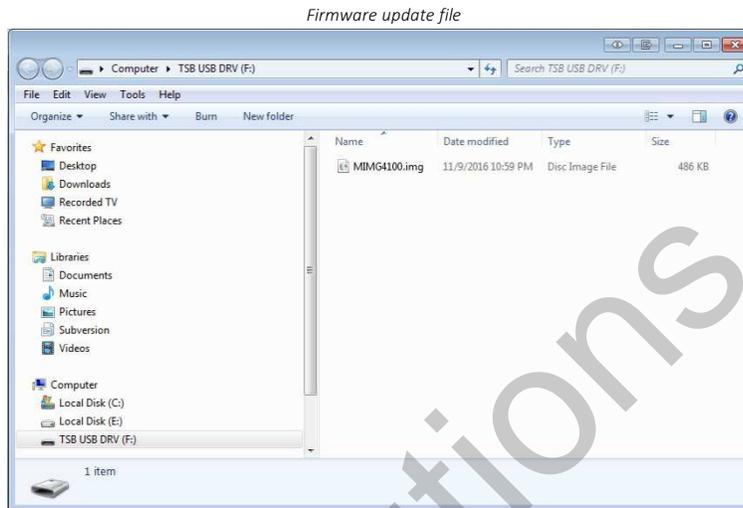
End of pairing Smartphone.

## 5. Updating The Firmware

Firmware updates allows easy and rapid turnaround low level changes to the core MimicsG4 operating system. Updates can include support for more devices, additional touchscreen support and bug fixes.

To upload new firmware.

- Download the latest firmware from the customGadz website. The file downloaded will be a .ZIP archive so you will need to extract the file first. The extracted file will be named "MIMG4100.img"
- Copy the file into the root directory of a USB flash disk as shown in diagram below.



- Turn off the MimicsG4 by either unplugging the Micro USB power cable or if you have installed this into a vehicle, simply turn the car off.
- Plug in the USB flash disk pre-loaded with the firmware file and power the MimicsG4 back on.
- You will notice the RED indicator light up and stay on, and then a few moments later the BLUE indicator will start flashing for ~15 seconds.

*\* If you don't see the correct light sequence when updating, make sure your flash disk is formatted to "FAT32" . If you have a really large flash disk you will need a special program to format in FAT32.*



## 6. Connecting to a vehicle WITHOUT a factory touchscreen installed.

In the case where you already have your device displayed and mirroring on your OEM screen, adding a touchscreen to your factory display will allow you to control your Smartphone via the touchscreen you are going to fit to give you a factory look finish!

What you will need:

1. MimicsG4
2. Touchscreen overlay to fit in between your OEM bezel and display. It's important that the "active area" (AA) of the external touchscreen at least covers the display area of your OEM screen.
3. Compatible USB adapter to convert touchscreen signals to USB.



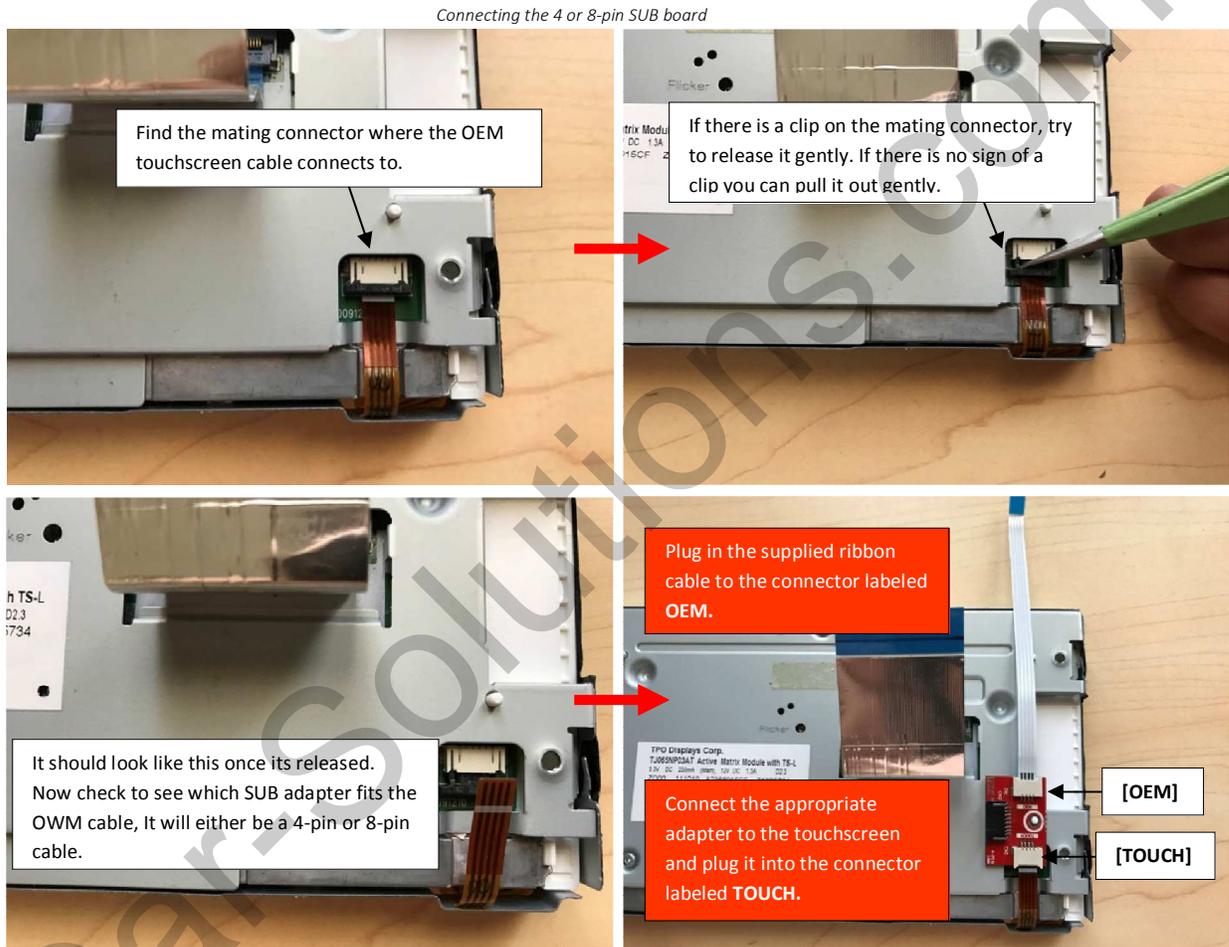
\* Touchscreens are generally quite thin so you shouldn't have much trouble fitting it in.

\* One face of the touchscreen is the touch sensitive area. Make sure it's facing towards you.

## 7. Connecting to a vehicle WITH a factory touchscreen installed.

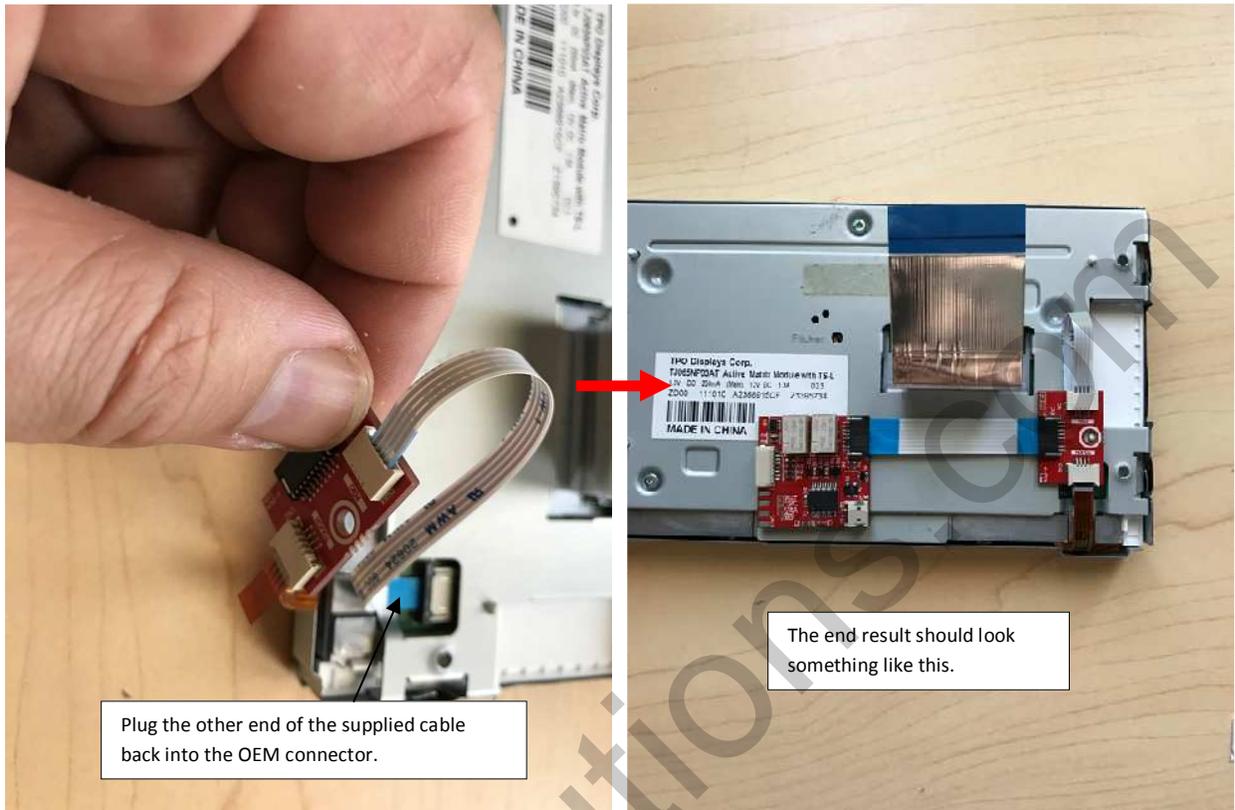
In the case where your vehicle already has an OEM touchscreen fitted in your dash, you can use the existing touchscreen to control your Smartphone. You can also switch the touchscreen to toggle between your OEM touch functions and controlling your Smartphone. What you will need:

1. MimicsG4
2. customGadz touchscreen switcher adapter. The switcher kit comes with two SUB adapters, one 8-pin and one 4-pin. You only need to use the one that matches your OEM touchscreen cable.



\* Make sure that the SUB board is held securely in place to avoid movement. There is a mounting hole provided or alternatively you can use double sided tape with a thickness of at least 1mm. Failure to do so can result in tearing the touchscreen ribbon cable!

Finishing up the setup.

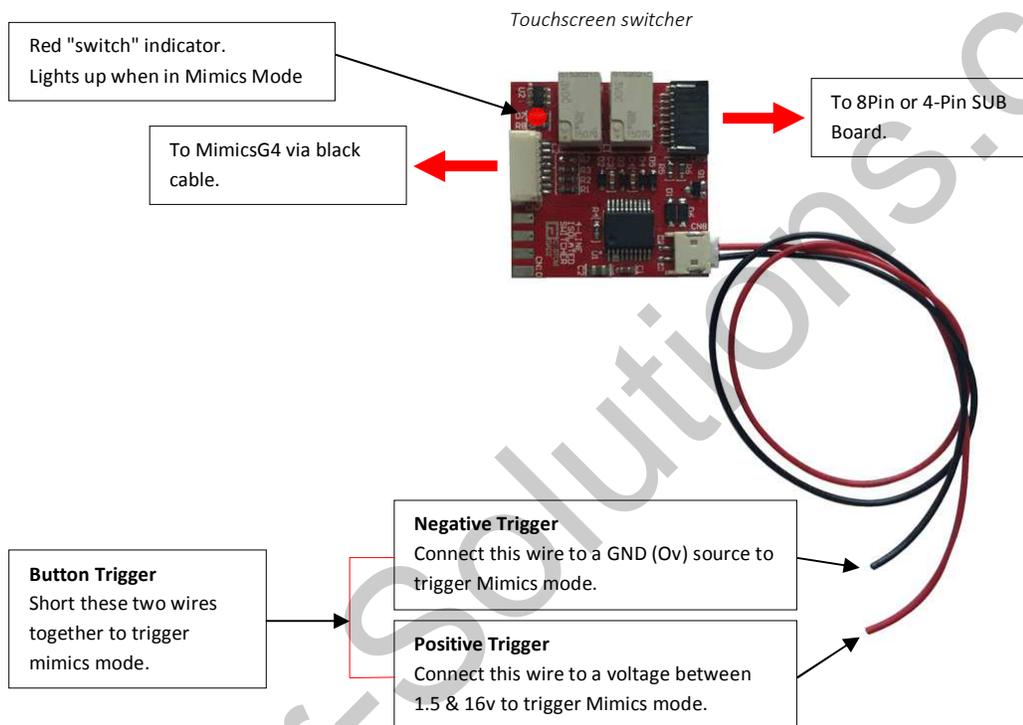


*\* Feel free to relocate the SUB board and switcher in a area where it's not going to obstruct anything when assembling the OEM screen back into the vehicle. The switcher kit also comes with longer length cables that can assist with the installation.*

## 8. Using the touchscreen switcher

The optional touchscreen tri-mode trigger inputs are used to force the OEM touchscreen to be used in MimicsG4 mode. i.e. controlling your Smartphone/Tablet. Our latest version of the switcher is now fully isolated for increased protection for your OEM system. The other benefit is that if you remove the MimicsG4 (say after selling your car) you can leave the switcher intact and the OEM touchscreen will still function as normal as it doesn't require any power to switch to the OEM state.

There are two inputs (Red and Black). The Red cable is a positive switching input and the Black is a negative switching input. Applying a voltage between 1.5 and 16v to the Red wire will activate a "switch". Connecting the black wire to 0v (GND) will also cause a switch. There is one more mode when you can touch (short) the Red and Black wires together to also activate a switch. This mode is great for testing and button control.



*\* It's possible to utilize any of the 3 switch modes to automatically "switch" to mimics mode. However, you will need to find a constant signal that is active only when the mimics mode video source is selected.*