POLARIS
GPS & REAR VISION

Installation Manual

Android Head Units

Thank you for purchasing our product
We hope you love it as much as we do.

Please take the time to read these instructions before attempting installation.

If you need any help, we have experienced staff on hand to help you, so please don't hesitate to reach out via one of the options below.

📞 1300 55 55 14

💬 LiveChat via polarisgps.com.au

✉️ sales@polarisgps.com.au

Warranty Terms

The warranty for this product is 2 years from the date of purchase, however, the warranty will be void if:

• The unit is tampered with, damaged, or modified.
• If applicable, reverse camera cable damaged/modified and/or subjected to overvoltage
• If applicable, the Navigation SD card is damaged/modified
• Installation of 3rd party apps that may cause harm to the unit.

Warranty Terms
The Polaris Android Head Unit is covered for 2 years and includes:
• Defective Equipment • Defective Cables

Not Covered under warranty:
· Abuse
· Improper installation
· Alteration to Cables and Plugs
· Accidents
· Water damage
· Improper use
· Labour
· Postage and Handling

CONTENTS

This manual is best viewed on a phone/tablet/PC

Click on the page you wish to go to.

There are other clickable links within this document.

INSTALLATION NOTES

The installation of this unit requires technical skill and experience. If you do not have the level of skill necessary, please phone or email us so we can refer a recommended installer.

This unit is designed to be used in a vehicle with a 12-volt battery and a negative grounding. Before installing this unit to a recreational vehicle, bus, or truck, make sure the battery voltage is appropriate for this unit to be used.

To avoid short circuits in the electrical system, ensure that the negative battery cable is disconnected before installation.

Always secure all wirings with cable clamps or adhesive tape to prevent short circuits.

To avoid the possibility of shorting out the electrical circuit in the unit, never connect the battery wire directly to the vehicle battery.

Please make sure all wiring connections and speaker wires are well insulated.

When pulling the dash apart, please use quality trim tools to avoid damaging your dash.

Do not cut any plugs or make any alterations to any cables. Doing so will void your warranty. To read more about our warranty terms, see

RECOMMENDED TOOLS

Screwdriver

Drill + Drill bits
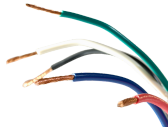
Socket Wrench Set

Soldering Iron + Solder

Blade / Cutter

Crimping tool

Voltage Test lamp
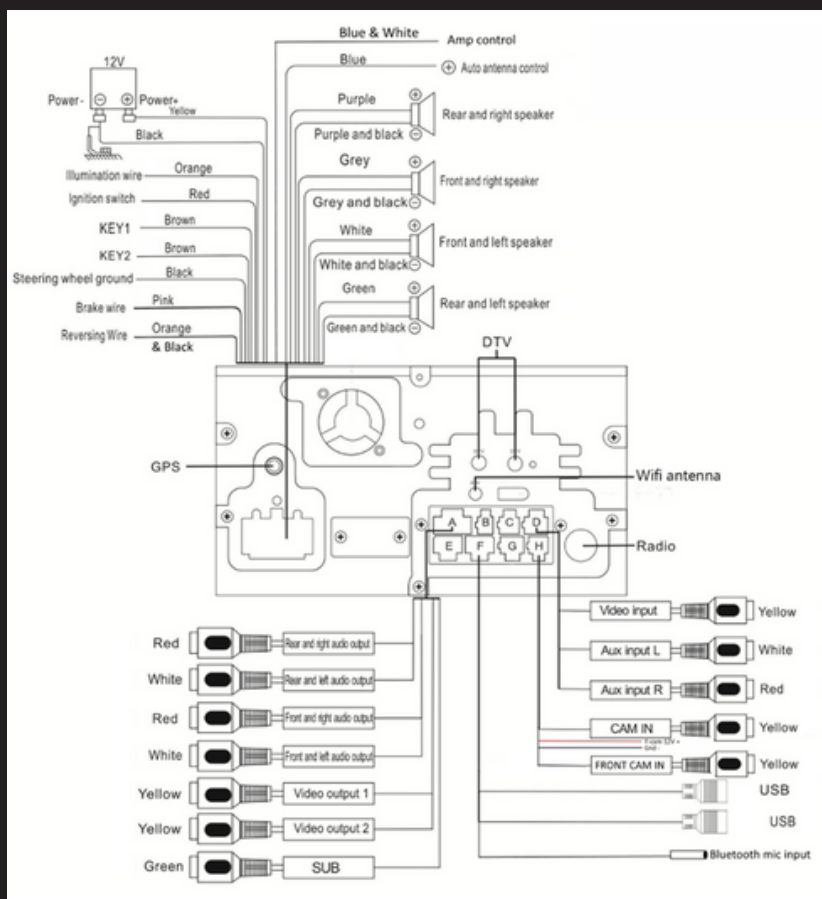
Spare Electrical Wire

Heatshrink

Quality trim tool

Electrical Tape

Instructions

WIRING DIAGRAM ALL HEAD UNITS

The wiring diagram is applicable to all Polaris Android in-dash head units.
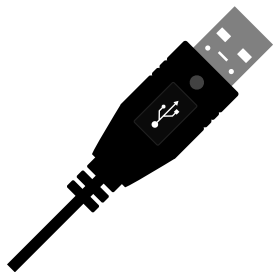
ACCESSORIES / PARTS
ALL HEAD UNITS

GPS Antenna
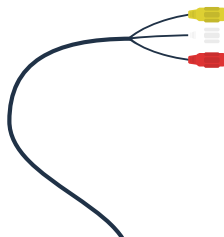Mount the antenna on top of the dash with the black part facing the sky.

Bluetooth Microphone
We recommend mounting on the pillar. Can remove foam if Bluetooth seems quiet.

USB Cables
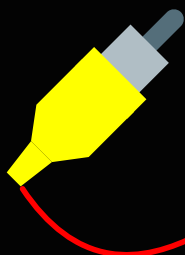We recommend mounting into vehicle glove box, unless the unit comes with a USB retention cable
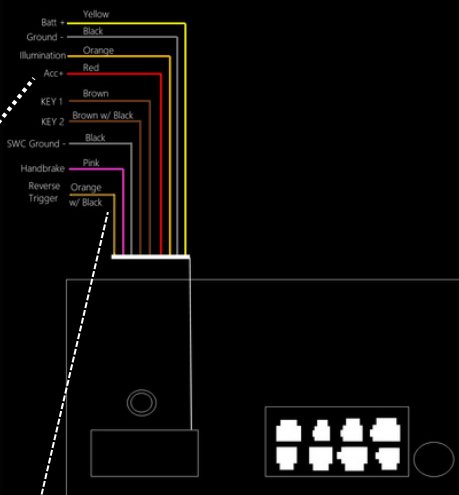
Reverse and Front Camera Input
Do not pick up power for any camera from this cable.

REVERSE CAMERA

Plug camera into CAM-IN

Batt +	Yellow
Ground -	Black
Illumination	Orange
Acc+	Red
KEY 1	Brown
KEY 2	Brown w/ Black
SWC Ground -	Black
Handbrake	Pink
Reverse Trigger	Orange w/ Black

Connect red power (from camera cable) to RED Acc +

Connect the Reverse trigger wire to the reverse input in the factory plug.

QUICK TIPS

If your vehicle doesn't have a reverse power input feed, you will need to run the reverse trigger wire (orange w/ black stripe) to **Reverse Light +**. It is best to do this while running your camera cable at the same time.

The reverse trigger wire is what 'tells' the unit that the car is in reverse. Failure in wiring reverse trigger will result in the camera only appearing manually via the cam app.

Powering the camera via Acc+ power, you are allowing for full-time vision. If you don't want this, then you can simply power the camera via Reverse light +

FRONT CAMERA / CARAVAN CAMERA

Plug camera into F-Cam
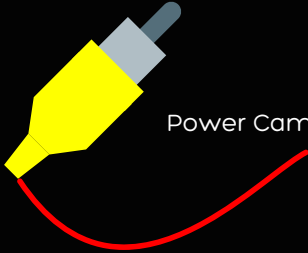
Power Camera to ACC+

View Camera via CAM App while driving

QUICK TIPS

DO NOT pick up power for the F-CAM input from the camera plug itself.

How to access caravan camera through F-CAM when in reverse gear

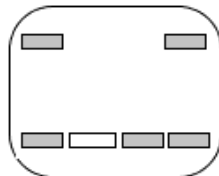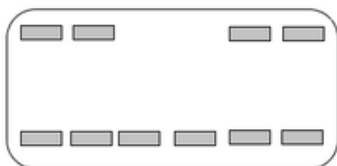When car is in reverse reverse camera will always appear by default

Press the return **touch panel** button to change to caravan camera

POLARIS 70 MAXX

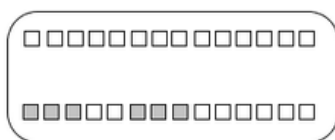
Main Power and Speakers

Steering Wheel Controls

Not used in 79 series

Radio Antenna Adaptor- not required see

POLARIS 70 MAXX

Individual Wires

Orange with black: Reverse Trigger
Pink: Handbrake
Blue with white: Amp Control

White and Red RCA: Retain AUX

70 MAXX NOTES

- You will be required to cut off 4 lugs in the dashboard when taking off your original fascia. Please see Figure A. They are not required and will not affect your original fascia going back in, should you ever wish to restore it to factory.

- The 79 series has its own Antenna Adaptor plugged in, please see page 14 for instructions on how to avoid poor radio reception.

- You will have to wire the reverse trigger if installing a camera See figure B for the Reverse Trigger Input.

- If we run out of stock on the wiring harness, we will substitute it with an Aerpro APP0141 Toyota wiring harness.

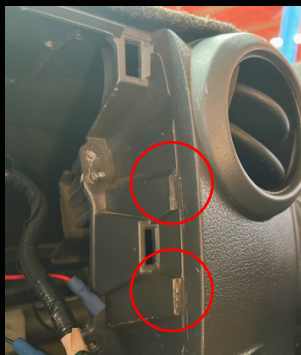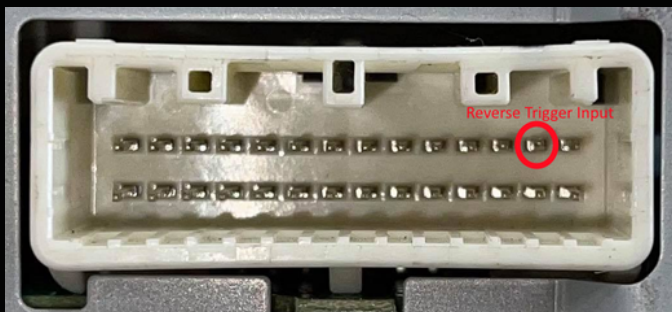BEFORE   AFTER

Figure A.

Figure B.

70 MAXX NOTES

- The 79 series already has a Radio Antenna Adaptor fitted from factory. The factory antenna adaptor is not required. Find the factory radio antenna adaptor and unplug it. You will find that once it is unplugged, it will have a standard 1 DIN radio connector which plugs straight into the back of the 70 Maxx. See Figures C and D.

Unplug factory radio antenna adaptor

Figure C.

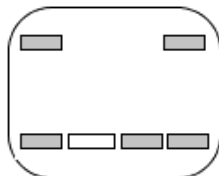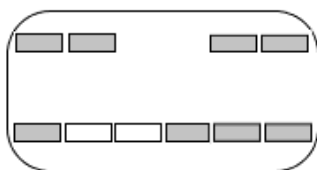Plug the factory 1 DIN radio antenna plug into the back of the 70 Maxx

Figure D.

If you plug the Polaris Radio Antenna Adaptor into the Factory Antenna Adaptor, the radio reception will be poor.
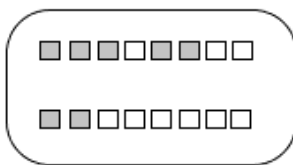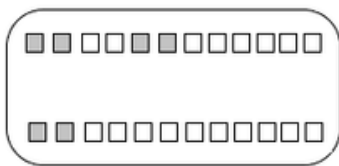
POLARIS 200 MAXX

Main Power and Speakers

Reverse Trigger, Handbrake, Steering Wheel Controls

POLARIS 200 MAXX

Factory Camera

QUICK TIPS

Generally the 6 pin plug will be used for
the factory Camera

Radio Antenna Adaptor

Plug into factory
Radio plug

plug into back of
head unit

Yellow RCA: Factory Camera

CAM IN → Plug H: CAM IN

RCA plugs
White / Red: AUX

Back to contents

POLARIS 200 MAXX

CANBUS Module

CANBUS module controls different features:

- Reverse trigger
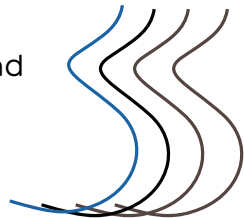- Steering wheel controls
- Display vehicle information

Individual Wires

Blue with white: Amp control
Black: Steering wheel control ground
Brown: Key 1
Brown with black: Key 2

Factory USB Retention Cable

Plug into back of
Factory USB

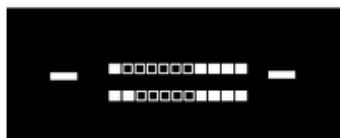Plug into one of
Polaris USB's from
Plug F

200 MAXX NOTES

- You do not need to wire in or program your steering wheel controls. The CANBUS module has your steering wheel controls already programmed

- If you are retaining your factory camera, don't forget to plug the corresponding RCA video plug into CAM-IN on plug H.
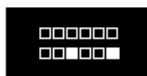
-

BT50LUXX

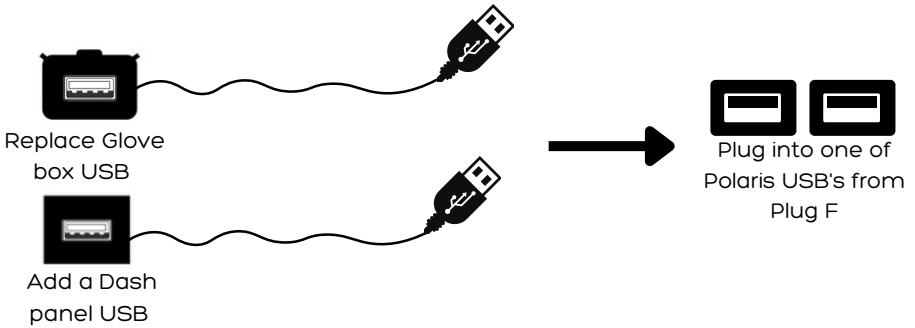Main power, Speakers, Steering Wheel Controls etc.

Plugs into where your small Factory screen was originally plugged into

BT50 LUXX

USB Retention cables

Replace Glove box USB

Add a Dash panel USB
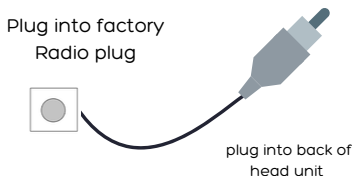
Plug into one of Polaris USB's from Plug F

CANBUS Module

Controls different features:

- Steering Wheel Controls
- Reverse Trigger
- Accessories power
- Also has a plug coming off module to retain Factory Reverse Sensor noise (if applicable)

Radio Antenna Adaptor

Plug into factory Radio plug

plug into back of head unit

BT50 LUXX

Hazard Switch / Door lock Wiring

Plugs into back of Polaris fascia panel behind hazard/door lock switches

Located on the main wiring harness

Not Required In Australian Models

Located on the main wiring harness

Individual Wires

Blue: Amp Control
Brown: Key 1
Brown with black: Key 2

BT50 LUXX/MAXX NOTES

- You do not need to wire in or program your steering wheel controls. The CANBUS module has your steering wheel controls already programmed.

- If the unit will not power up, please contact one of our technicians on 1300 555 514.

- If the unit will not turn off with the key out of the ignition, please contact one of our technicians on 1300 555 514.

- If the steering wheel controls do not work, please double-check the CANBUS module settings. You can find this in **Settings** › **Car Settings** › **Factory Settings** › **Passcode: 126** › **CANBUS** › **Canbox Settings** › **Make sure it is set on Number 24: Mazda BT50 (Simple).**

- Remove clips from the original fascia panel and attach to the BT50 Luxx fascia panel.

- You do not have to use the USB Retention cables, these are optional.

- If a part is not listed in the manual, it is not required.

POLARIS HILUX MAXX HARNESS: 2015-2020
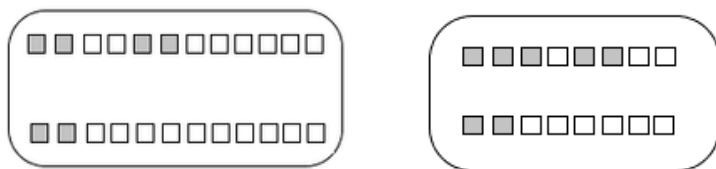

Main Power and Speakers
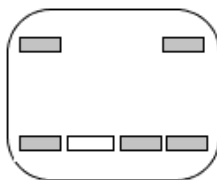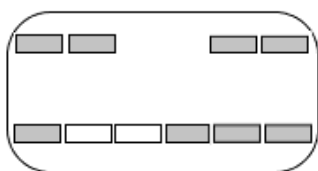
Steering Wheel Controls, Reverse trigger, Handbrake

POLARIS HILUX MAXX HARNESS: 2015-2020

Factory Camera

Generally the 6 pin plug will be used for the Factory Camera

Radio Antenna Adaptor

Plug into factory Radio plug

plug into back of head unit

Yellow RCA Factory Camera

CAM IN

Plug H: CAM IN

RCA plugs
White and
Red: Retain
AUX

POLARIS HILUX MAXX HARNESS: 2015-2020

CANBUS Module

CANBUS module controls different features:

- Steering Wheel Controls
- Reverse Trigger
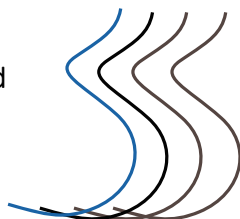- Displays various vehicle information

Individual Wires

Blue with white: Amp Control
Black: Steering Wheel Control ground
Brown: Key 1
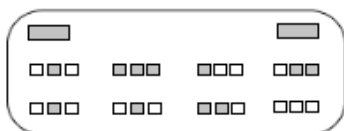Brown with black: Key 2

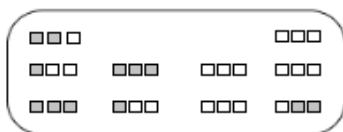## Factory USB Retention Cable

Plug into back of Factory USB

Plug into one of Polaris USB's from Plug F
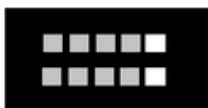
POLARIS HILUX MAXX HARNESS - POST 2020

Main Power, Steering Wheel Controls, etc.

Illumination, Ignition IN, Factory Reverse Camera

Speakers

Radio Antenna Adaptor

Plug into Factory Radio Antenna

Plug into back of head unit

POLARIS HILUX MAXX HARNESS - POST 2020

CANBUS Module

Controls different features:

- Steering Wheel Controls
- Reverse Trigger
- Displays various vehicle information
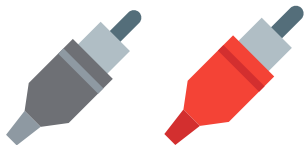

Yellow RCA : Factory Camera

CAM IN → Plug H: CAM IN

RCA plugs

White and Red: Retain AUX

Individual Wires

Orange with black: Reverse Trigger
Black: Steering Wheel Control ground
Brown: Key 1
Brown with black: Key 2

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HILUX MAXX NOTES

- If you are retaining your factory camera, don't forget to plug the corresponding RCA video plug into CAM-IN on plug H.

- Original installation instructions no longer correspond with our updated model. If you come across these online, please disregard them.

- You do not need to wire in or program your steering wheel controls. The CANBUS module has your steering wheel controls already programmed.

- Although the Hilux Maxx will not physically fit a 2012-2014 Hilux, this harness can be used in a 2012-2014 Toyota Hilux with our Toyota Luxx or Universal Maxx.

- If your Hilux is post-2020, you will require a different harness. If your Hilux came standard with Carplay / Android Auto then this is classed as post 2020. See page 26 for this harness.

- If you find that the reverse trigger stays active when the car is out of reverse gear, there is a black plug in the middle of the Reverse trigger wire. Find this plug and unplug it.
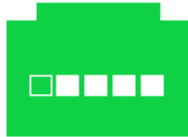
ISUZU MAXX

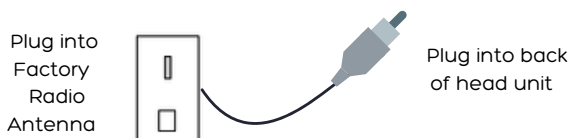## Main power, Speakers, Steering Wheel controls etc.
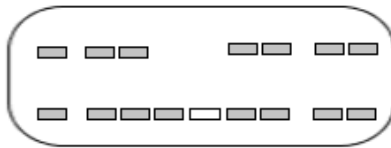
Factory Camera

Reverse Trigger

Radio Antenna Adaptor - some models do not require

Plug into Factory Radio Antenna

Plug into back of head unit

ISUZU MAXX

## Individual Wires

Pink: Handbrake
Blue with white: Amp Control

ISUZU MAXX NOTES

- You **will** need to program your steering wheel controls, See .

- This harness will fit most of the 2012 - 2020 Dmax and the 2013 - 2021 MU-X however, there is one model that requires an adaptor. Any model fitted with a Clarion Navigation Factory head unit (see Figure E), will require an adaptor as the vehicle harness differs from the rest of the models.

- If you do not require the Antenna Adaptor, make sure that the Antenna control wire has power to it on the car side. The best way to do this is to wire up the Amp ctrl wire to the Factory Antenna Ctrl wire (See Figure F)
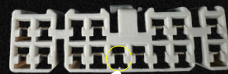
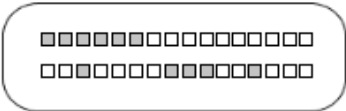Wire the Amp control wire to Radio Antenna Control
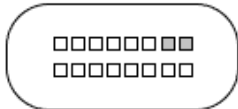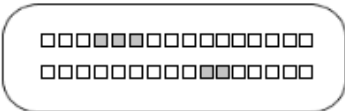
Figure E.

Figure F.

POLARIS NP300 MAXX

Main Power, Speakers

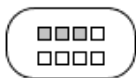## Steering Wheel Controls and Factory Camera

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Steering Wheel Controls (No Factory Camera)

POLARIS NP300MAXX

Retain AUX

Radio Antenna Adaptor

Plug into Factory Radio Antenna

Plug into back of head unit

CANBUS Module

Controls different features:

- Steering Wheel Controls
- Reverse Trigger
- Displays various vehicle information

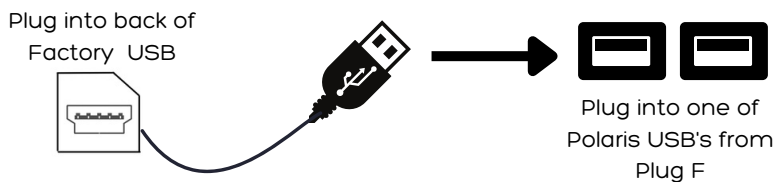## RCA plugs

White and Red: Retain AUX

POLARIS NP300 MAXX

Yellow RCA: Factory Camera

CAM IN → Plug H: CAM IN

Factory USB Retention Cable

Plug into back of Factory USB → Plug into one of Polaris USB's from Plug F

Individual Wires

Pink: Handbrake
Brown: Key 1
Brown with black: Key 2

NP300 MAXX NOTES

- If you are retaining your factory camera, don't forget to plug the corresponding RCA video plug into CAM-IN on plug H.

- You do not need to wire in or program your steering wheel controls. The CANBUS module has your steering wheel controls already programmed.

- If you wish to retain AUX, make sure to plug the corresponding Red and White RCA plugs into AUX L IN and AUX IN R on PLUG D

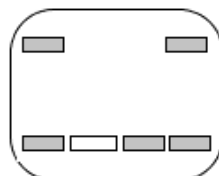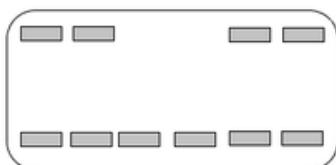- Use the metal clips from the back original head unit and attach them to the NP300 Maxx fascia (See figure G.).
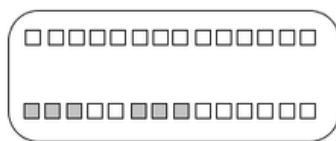
-

Figure G.

POLARIS UNIVERSAL TOYOTA HARNESS
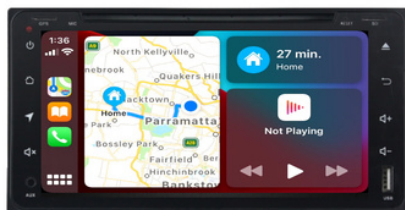
Main Power and Speakers

Steering Wheel Controls

Radio Antenna Adaptor

Plug into Factory Radio Antenna

Plug into back of head unit

Not required for 79 series

POLARIS UNIVERSAL TOYOTA HARNESS

Individual Wires

Orange with black: Reverse Trigger
Pink: Handbrake
Blue with white: Amp Control

White and Red RCA: Retain AUX

TOYOTA LUXX/HARNESS NOTES

- Toyota universal harness does not retain the Factory Camera. You will require a vehicle-specific Aerpro Cam Retention harness or upgrade to a Polaris Toyota CANBUS harness with camera plugs.

- There is no CANBUS module with this harness therefore, you **will** need to program your steering wheel controls. See Video on .

- You will need to pick up a reverse trigger for the camera. Reverse Input power can be found in your factory plug (see figure H.) For older Toyota models, you will need to run a wire to your Reverse light+. See for the reverse camera wiring diagram.

- The Toyota universal harness will suit a wide variety of Toyota vehicles. There may be some plugs that you will not need. There may also be factory plugs that may not need to be plugged into our wiring harness. It will vary depending on your vehicle.

79 Series

- Factory Brackets may need to be filed down for Toyota Luxx (See Figure I).

- The 79 series has its own Antenna Adaptor plugged in, please see for instructions on how to avoid poor radio reception.

Figure H.

File down section highlighted in Red
Figure I.

UNIVERSAL MAXX
UNIVERSAL LUXX

The Universal Maxx and Luxx come with a universal ISO wiring harness. There are a few options to turn the units into a plug_n_play setup:
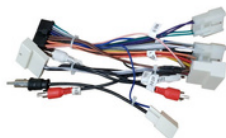

**Add a basic Aerpro Harness
to suit your vehicle**

This plug will only cover power and speakers.

This type of Aerpro harness suits vehicles with steering wheel controls.

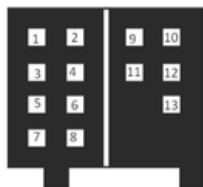You will also require an Aerpro **APUNIPL2** harness for steering wheel controls.

Purchase a Polaris Wiring loom if available for your vehicle

UNIVERSAL MAXX
UNIVERSAL LUXX

Iso Plug Colour Wire / Pin diagram

🟩	1.Speaker Left Rear (+)	🟪	8. Speaker Right Rear (-)
🟩	2. Speaker Left Rear (-)	🟥	9.12V+ to ignition (Acc power on)
⬜	3. Speaker Left Front (+)		
⬜	4. Speaker Left Front (-)	⬛	10. Ground (-)
⬜	5. Speaker Right Front (+)	🟦	11. Auto Antenna Control
⬜	6. Speaker Right Front (-)	🟧	12. Illumination
🟪	7. Speaker Right Rear (+)	🟨	13. 12V+ to battery

Individual Wires

🟫	Steering Wheel ctrl Key 1	🟧	Reverse trigger
🟫	Steering Wheel ctrl Key 2	🟪	Handbrake Wire
⬛	Steering Wheel Ctrl GND	🟦	Amp Control Wire

UNIVERSAL MAXX
UNIVERSAL LUXX

Aerpro CANBUS Module Wiring Diagram

Polaris ISO Plug

Aerpro CANBUS Wiring

Headphone Jack
not used
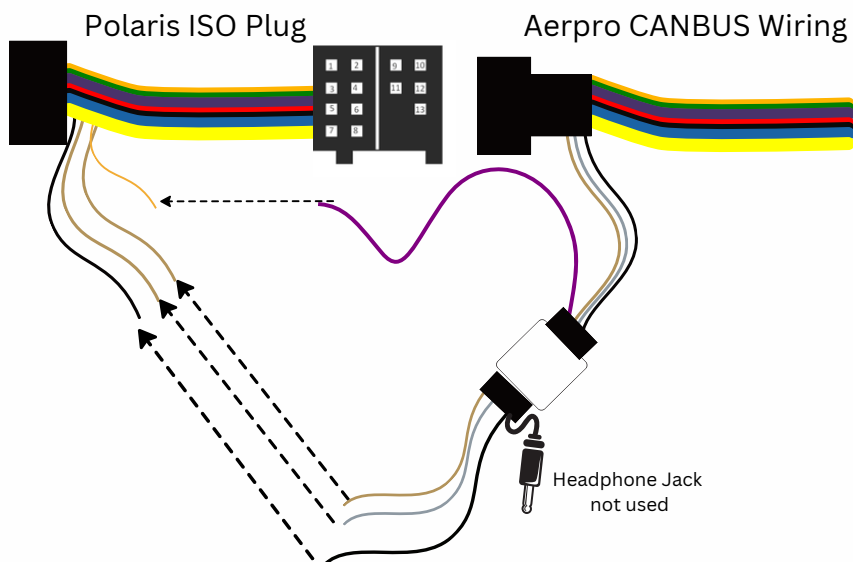
Polaris ISO Plug		Aerpro CANBUS Wiring
Key 1 (brown)	◄┄┄┄►	**Key 1 (Brown)**
Key 2 (brown/black)	◄┄┄┄►	**Key 2 (Grey)**
Ground (Black)	◄┄┄┄►	**Ground (Black)**
***Reverse-In (orange/black)**	◄┄┄┄►	***Reverse Gear (purple/white)**

*Reverse trigger is not always available on the Aerpro harness.

Aerpro Steering Wheel Control patch lead is required - APUNIPL2.

You will still need to program in your steering wheel controls via Wheelkey study, please see video

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UNIMAXX NOTES

- The Universal Maxx double DIN chassis will attach to most vehicles' Factory brackets.

- Some vehicles will require a fascia to fill the gap around the double DIN chassis. Please see <u>here</u> for a list of popular fascia/installation kits that we can order in or head over to <u>www.aerpro.com</u> to see which fascia/install kit suits your vehicle.

- Please avoid constant detaching and attaching of the screen as you may cause damage or reduce the life of the screen.

ATTACHING THE SCREEN

1. Plug the cable in from the double DIN chassis into the back of the screen mount (make sure it is plugged in correctly by lining up the locating pin).
2. Hold the screen and push the mount into the opening located on the double DIN chassis.
3. The mount should click in place. If you do not hear a click, then it has not attached correctly.

TOUCH SCREEN NONRESPONSIVE

Once you have attached the screen and powered the unit up, if you find that the touch screen is nonresponsive, this means that the screen has not been attached properly. To rectify this issue:

1. Turn the vehicle off.
2. Detach the screen and reattach it Carefully and double-check the pins.
3. Turn the vehicle back on.
4. Grab a small enough device to go into the reset hole
5. hold in until you see the lights flashing around the buttons and release.
6. The unit will perform a cold boot and the touch screen should be responsive.

UNILUXX NOTES

- The Universal Luxx double DIN chassis will attach to most vehicle's Factory brackets

- Some vehicles will require a fascia to fill the gap around the double DIN chassis. Please see here for a list of popular fascia/installation kits that we can order in or head over to www.aerpro.com to see which fascia/install kit suits your vehicle.

- The fascia may have to be slightly modified for the universal Luxx to fit.

VW MAXX

Main Power, Speakers, Steering Wheel controls AUX, AMP
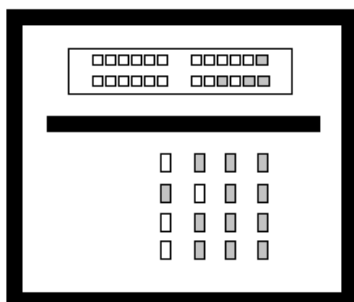
CANBUS Module

Controls different features:

- Steering Wheel Controls
- Displays vehicle Info on screen
- Displays sensors on screen (if applicable)

VW MAXX

Radio Antenna Adaptor

Plug into
Factory
Radio
Antenna

Plug into back
of head unit

Radio Antenna Adaptor

Plug into back of OEM
USB

Plug into one of
Polaris USB's from
Plug F
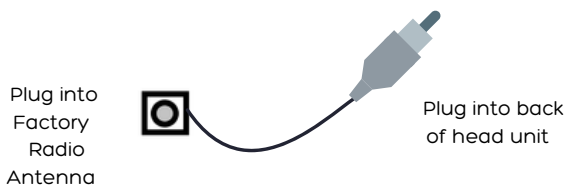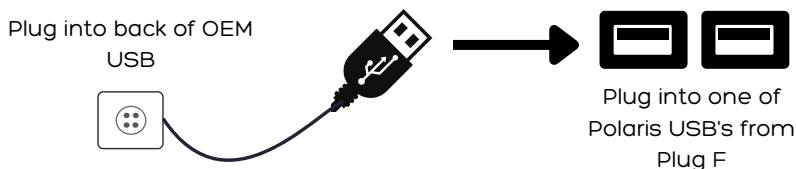
VW MAXX NOTES

- Radio Antenna may differ in VW models. They may have dual or single. For Dual please see Figure J.

- You do not need to wire in or program your steering wheel controls. The CANBUS module has your steering wheel controls already programmed

Figure J.

STEERING WHEEL CONTROLS

For any wiring harness without a CANBUS Module (Polaris wiring harness only), please see the video below on how to program your steering wheel controls.

HOW TO PERFORM A HARD RESET

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HELPFUL VIDEOS

Please see below some videos that may be helpful

How to pull apart a Dmax / MU-X Dash

How to pull apart a BT50 dash

How to pull apart a 79 series dash

Back to contents

TROUBLESHOOTING

My Reverse camera isn't appearing when I put the vehicle in reverse?

Unless you have a Polaris wiring harness (excludes Aerpro) with a CANBUS module, you will be required to wire up the Reverse trigger wire to reverse power. Please see the wiring diagram on <u>page 9</u>

The Radio Reception is poor

For **79 series,** please see <u>page 14</u>

For all other models: If you do not need to use an Antenna Adaptor and your vehicle has the standard Radio Antenna connection (1 DIN), make sure the Antenna Control wire on the car side has power to it. You can wire up the Amp control wire on the Polaris harness to whichever pin controls the Antenna Control wire on the car side.

I have a Polaris wiring harness with a CANBUS module and my steering wheel controls aren't automatically working.

Please make sure the head unit is set on the correct CANBUS setting: Settings › Car Settings › Factory Settings › Password: 126 › CANBUS › Canbox Settings:

1. Hilux Harness 2015 to early 2020: 2. TOYOTA/CAMRY/RAV4 (Simple)
2. Hilux Harness Post 2020: 2. TOYOTA/CAMRY/RAV4 (Simple)
3. 70 Maxx Harness: 2. TOYOTA/CAMRY/RAV4 (Simple)
4. 200 MAXX Harness: 2. TOYOTA/CAMRY/RAV4 (Simple)
5. NP300 Maxx Harness: 31. Nissan 2013 (Simple)
6. VW Maxx Harness: 13. VW-GOLF7 (Simple, Raise)
7. BT50 Luxx/Maxx: 24. Mazda/BT-50 (Simple)
8. Holden Colorado with mylink: 11. GM/BUICK/CHEVROLET/OPEL (Simple)

I have a Polaris wiring harness with a CANBUS module and my doors are appear on the wrong side (Left Hand Drive).

1. Settings › Car Settings › Factory Settings › Password: 126 › FUNC › Turn Rudder on
2. While you are still in the factory settings you can also go into CANBUS and change any settings in here if Rudder does not fix some of your vehicle information appearing correctly.
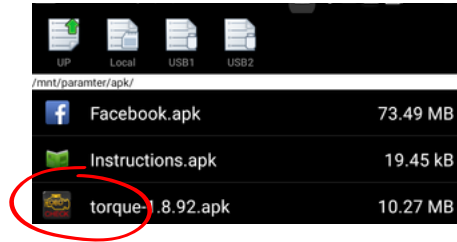
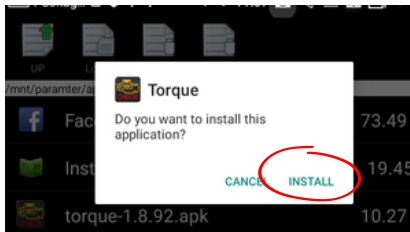# OBDII Setup

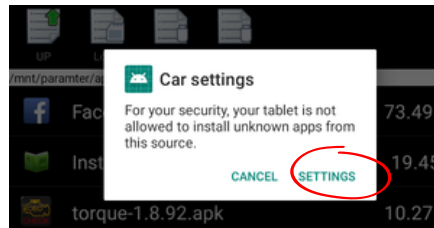## How to download the Torque app

1. Select the APK installer app
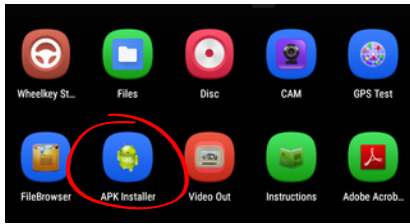
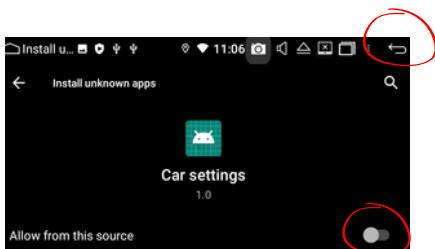### 2. Select Torque in local storage
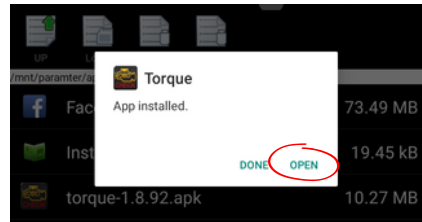

3. Install Torque app

4. Settings

5. Allow and then select the return arrow to go back
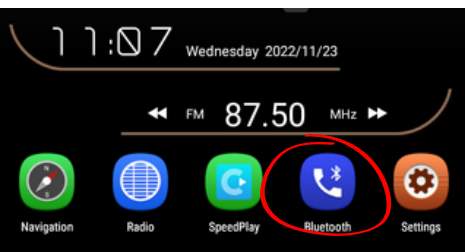

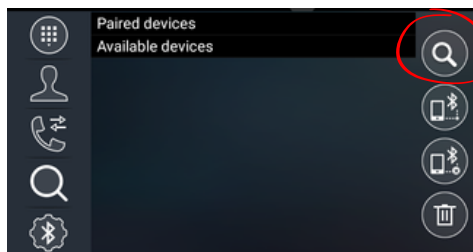### 6. Once installation is complete, select Done
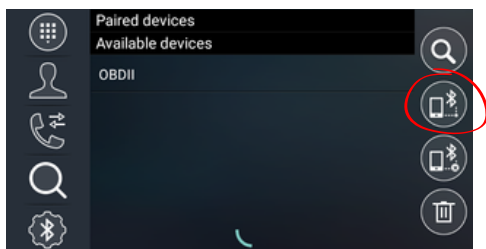
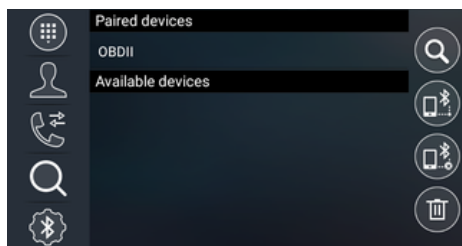# Pair OBDII to Android headunit

1. Select bluetooth on the main menu

2. Select the magnifying glass to search
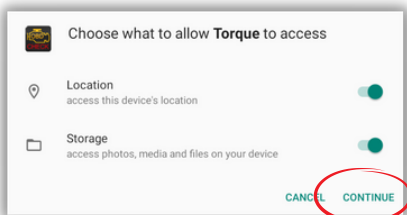

3. Select OBDII and then pair (circled icon)

4. When successfully paired, OBDII will move into the paired devices section

How to setup the Torque app

1. Open the Torque app and select continue

2. Select the Settings icon
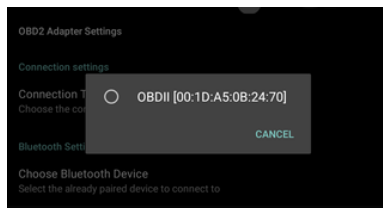

3. Select Settings
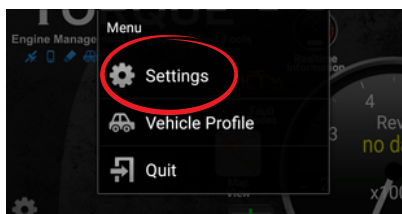
4. Select OBDII Adapter Settings
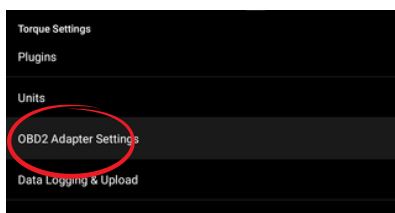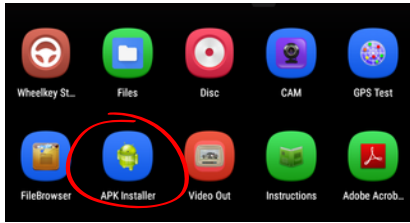

5. Choose Bluetooth Device
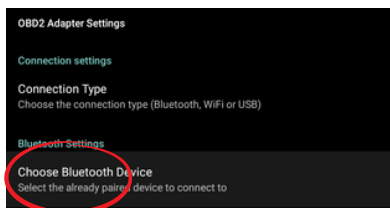
6. Select OBDII
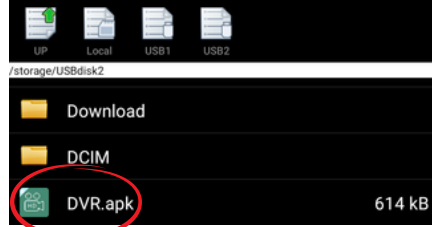

Press the return arrow and open Real Time Information
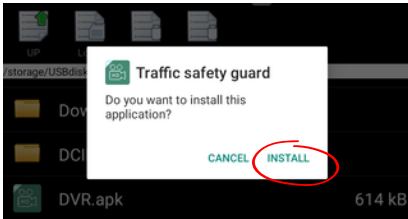
A53 Setup

How to download the DVR app

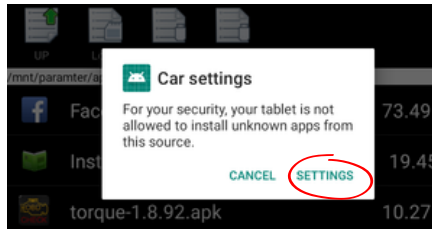### 1. Select the APK installer app
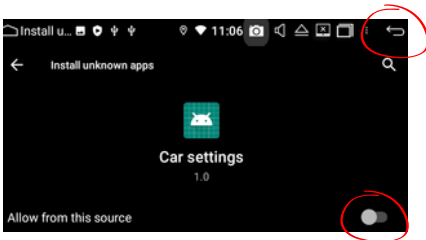

2. Select DVR in USB storage

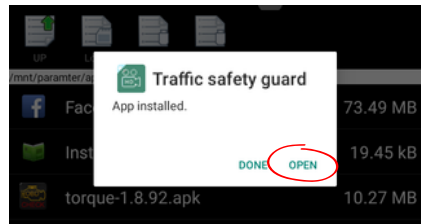### 3. Install Traffic Safety Guard app

4. Settings

5. Allow and then select the return arrow to go back

6. Once installation is complete, select Done

A53 App Functions

🎤 Record sound on video

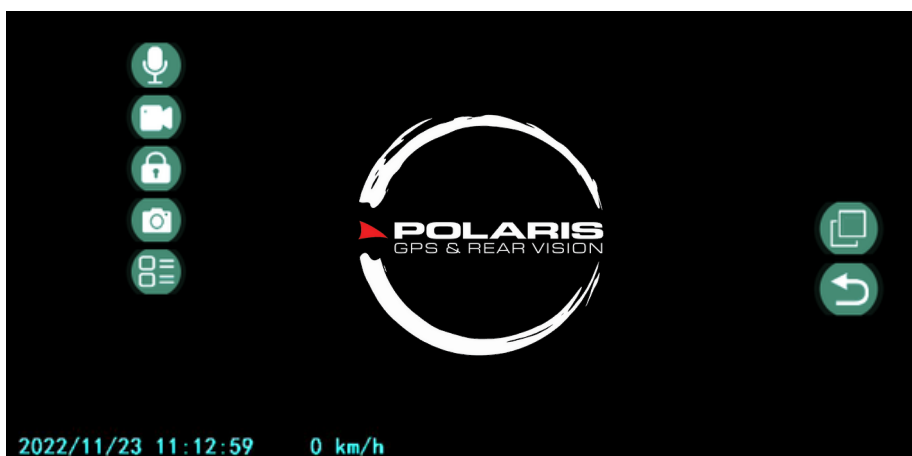📹 Start/Stop recording

🔒 Lock current footage

📷 Take a photo

▤ Menu - Media playback, video duration, SD format

🗗 Picture in picture mode

↩ Exit

2022/11/23 11:12:59   0 km/h

Date   Time   Speed