



# Steering Wheel Control Interface for select Toyota vehicles



Left to Right:

- |   |  |
|---|--|
| i. Additional Flying Wires                | v. Yellow 360 Camera RCA                         |
| ii. Vehicle Specific Connector (28 Pin)   | vi. Red & White Aux RCA                          |
| iii. Vehicle Specific Connector (30 Pin)  | vii. Interface Box                               |
| iiii. Vehicle Specific Connector (10 Pin) | viii. OEM USB Retention Connector (not pictured) |
| v. ISO Power/Speaker Connector            |  |

Designed and  
Engineered  
in the UK. 

## APPLICATION

Note: Application data is subject to change at any time

**Toyota RAV4**

**2019 - 2020**

For amplified vehicles, does not support fade. This product can be used for both left & right hand drive vehicles.  
The images in this instruction are representative of left hand drive vehicles.

## FEATURES

- Retains Factory Steering Wheel Control Functionality
- Retains Factory Phone Button Functionality
- Retains Amplified System
- Retains 360 Panoramic Camera
- Provides Outputs for Park Brake, Speed Pulse & Reverse Gear
- Software Updatable (contact supplier for more information)

### DISCLAIMER

The information provided in this document is subject to change without notice due to manufacturer changes and/or improvements to the product/s. This instruction manual is based on documented data and research. The manufacturer of this product cannot be held responsible for any changes made to the vehicle by the manufacturer or damages that may occur through the installation of this product in accordance with the steps outlined herein.

# PRODUCT INFORMATION

CTSTY020.2

The CTSTY020.2 is a CAN Bus steering wheel control interface for select Toyota vehicles. This interface aids in the retention of crucial steering wheel controls as well as access and control of the Toyota's 360 Panoramic Camera functions.

*Please note: the 360 camera language must be set to the appropriate format before modification. The interface and new head unit will default to English if not set up beforehand.*

## WIRING KEY

### IN ISO CONNECTOR

Purple	Right Rear Speaker +	Yellow	Permanent 12V
Purple/Black	Right Rear Speaker -	Black	Ground
Green	Left Rear Speaker +	Red	Ignition 12V
Green/Black	Left Rear Speaker -	Orange	Illumination
Grey	Right Front Speaker +		
Grey/Black	Right Front Speaker -		
White	Left Front Speaker +		
White/Black	Left Front Speaker -		

### ADDITIONAL CONNECTIONS

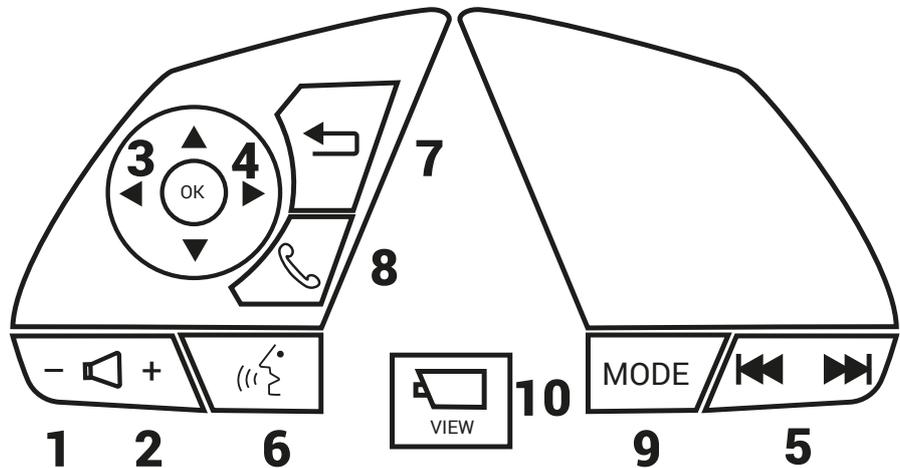
Pink	Speed Pulse	Red/White RCA	AUX Audio
Green	Park Brake	Yellow RCA	360 Camera
Purple	Reverse		

## STEERING WHEEL CONTROL FUNCTIONALITY

*The following diagram, though based on careful research, is an example only. Individual steering wheel control configurations may differ.*

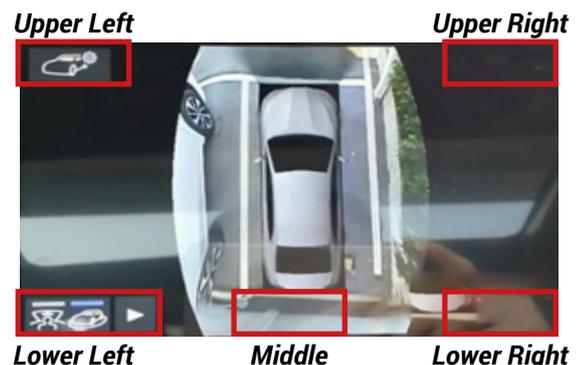
### Original Function

1. Volume Up
2. Volume Down
3. Arrow Left
4. Arrow Right
5. Track Up & Down
6. Speech
7. Back
8. Pick Up
9. Mode
10. 360 View



### New Function

1. Volume Up (**Toggle Lower Left Menu Preset\***)
2. Volume Down (**Toggle Upper Left Menu Preset\***)
3. ◀ Arrow (**Toggle Middle Menu Preset\***)
4. ▶ Arrow (**Toggle Lower Right Menu Preset\***)
5. Track Up & Down
6. Speech
7. Back
8. Pick Up (**Toggle Upper Right Menu Preset\***)
9. Enter & Exit 360 Panoramic State (**Re-assign Buttons (Hold)\***)
10. Toggle 360 View



*\* These actions only work when camera view is active & when the buttons have been re-assigned (9.) Menu functionality is dependant on original vehicle spec. The infographic shown above is a representative guide only. Refer to owners manual for full list of options.*

# PRIOR TO INSTALLATION

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Read the manual prior to installation. Technical knowledge is necessary for installation. The place of installation must be free of moisture and away from heat sources. Please ensure that the correct tools are used during the installation to avoid damage to the vehicle or product. **Connects2 can not be held responsible for the installation of this product.**

## INSTALLATION GUIDE

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See wiring diagram on Pg.4 for more information

Before installing the interface, the factory stereo must be removed and disconnected. To do this, please consult the vehicle owner's manual/handbook or contact a fitting professional.

A stereo connection (patch) lead is also required for the installation of this interface (supplied separately). Please ensure that you have the correct lead before proceeding. For universal patch leads, prepare the wiring loops in accordance with the instruction manual supplied with the product before installation.

1. Connect the 12 Pin connector from the stereo connection (patch) lead to the interface box.
2. Connect the opposite end of the stereo connection (patch) lead to the steering wheel control input on the back of the aftermarket stereo.

*NOTE: This may be a 3.5mm jack connector or a wired input depending on the brand of aftermarket stereo being fitted. Please consult the aftermarket stereo installation manual for further information on where to make the connection*

**IMPORTANT: THIS STEP MUST BE COMPLETED BEFORE CONNECTING POWER TO THE INTERFACE. FAILURE TO DO SO MAY RESULT IN A LACK OF FUNCTIONALITY AND THE NEED TO REINSTALL THE PRODUCT.**

3. Connect the 20 Pin connector from the supplied wiring loom to the interface box.
4. Connect the power/speaker ISO connector to the power/speaker ISO connector at the rear of the aftermarket stereo.

*NOTE: For aftermarket stereos which do not have an ISO connector, please see "Wiring Key" on Pg.2 for information on which wires to connect. Some interfaces may also have additional 'flying' wires which can be connected to the vehicle to support various features ie. parking brake trigger, reverse gear and speed pulse. Details of these can be found under 'Additional Connections'.*

5. Connect the additional wiring, AUX connectors & Yellow RCA connection to the aftermarket stereo's wiring harness where required.
6. Connect the vehicle specific power connectors on the supplied harness to the OEM connector from the vehicle.
7. Test stereo and steering wheel control functionality for correct operation before reassembling the dashboard. If the steering wheel control functions are unresponsive, please uninstall the interface and wiring and reinstall carefully in accordance with the above steps.

*For further help, please contact and fill out a support ticket with the full details of your issue at:  
[support.connects2.com/tickets/technical](https://support.connects2.com/tickets/technical)*

## 360 CAMERA FUNCTIONALITY

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Access of the 360 Camera:

**When in Park** - a short press of the 360 View Button (10.) will showcase the 'dynamic 360 view' (Figure 1).

In this view, utilise the button presets to alter the various viewing angles\*. Another short press of the 360 View Button (10.) will exit to the main menu.

**When in reverse** - upon engaging reverse gear, the 'rear view & panoramic view' will populate on the display (Figure 2). A short press of the 360 View Button (10.) will switch this view to 'rear view' (Figure 3). Disengagement of the reverse gear will exit the 360 camera mode.

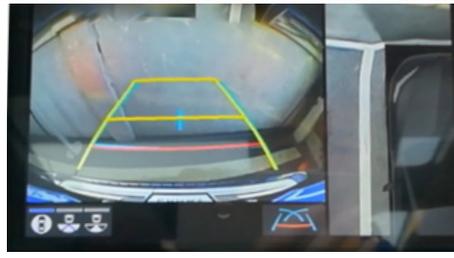
**When in Drive:** Shifting from Reverse to Drive, the camera will switch to 'front & panoramic view' (Figure 4). A short press of the 360 View Button (10.) will switch the display to the 'front left / front right view' (Figure 5). A following short press of the 360 View Button will exit to the main menu.

*Functionality of the camera is dependent on access to 're-assigned buttons'. This is achievable after holding **Mode** for approx 8 seconds. Layout of the menu systems will differ dependent on left & right hand vehicles.*

# 360 CAMERA FUNCTIONALITY



(Figure 1)



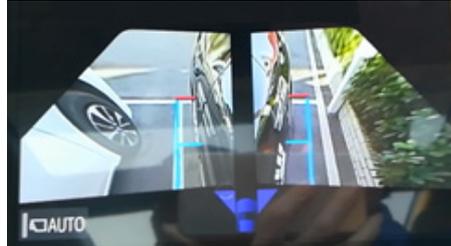
(Figure 2)



(Figure 3)



(Figure 4)



(Figure 5)

## 360 Camera Button Settings:

Long press the Mode button (9.) for more than 8 seconds will 're-assign' the steering wheel controls, this meaning you can utilise the controls for various functions whilst "Panoramic View" is enabled. Herein, you are able to toggle the look of various features such as the colour/layout of parking lines & 360 layout.

## 'AUTO' Functionality:

In addition to screen switching by operating the camera switch (10.), automatic display mode is available (see figure 4/5). In this mode, the screen is switched automatically in response to vehicle speed. The monitor will automatically display images in the following situation: 1) When the shift lever is shifted to "N" or "D" position. 2) When the vehicle speed is reduced to approximately 10mph (18km/h).

**If no operation is performed after roughly 15-20 secs, the camera mode will close itself.**

## Language settings:

The language is completely controlled by the original vehicle system. If a desired language is needed, this needs to be done prior to installation of the new head unit as this interface does not support language setting functionality. The interface will default the language to English if not already set.

# WIRING DIAGRAM

