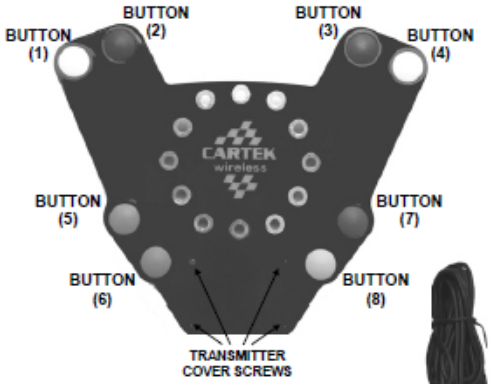
CARTEK
AUTOMOTIVE ELECTRONICS

WIRELESS STEERING WHEEL CONTROLS



Specification

Size (Relay Control Unit):	***L = 93mm, W = 50mm.***
Weight (Relay Control Unit):	***140g.***
Operational voltage:	***9v - 15v.***
Relay contacts	***10A***
Transmitter battery	***MN21 12v*** *(A23 / K23A)*
Receiver cable length	***3 Metres***

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INTRODUCTION

The Wireless Steering Wheel Controls from Cartek offers a simple way to bring electrical functions to the driver's fingertips. The system consists of 4 main components:

Steering Wheel Pushbutton Panel
Transmitter Module (mounted on pushbutton panel)
Receiver
Relay Control Unit

The system has 8 pushbutton switches which are wirelessly linked to 8 relays within the Relay Control Unit. These relays are microprocessor controlled and individually configurable to provide a choice of functions including momentary, latching and flashing modes.

STEERING WHEEL PUSHBUTTON PANEL

The Steering Wheel Pushbutton Panel can be mounted to most racing and aftermarket steering wheels.

TRANSMITTER

The infrared Transmitter module is mounted to rear of the Steering Wheel Pushbutton Panel and is battery powered. The Transmitter only consumes electrical power when a pushbutton is pressed and therefore does not need to be turned off when not in use.

When a pushbutton is pressed an LED on Transmitter will show the status of the internal battery. If the LED shows Green then the battery is in good condition, if the LED shows Red then the battery needs to be replaced.

To replace the battery remove the 4 small screws on the front of the pushbutton panel and remove the transmitter case. Carefully replace the battery with a new 12v MN21 type observing polarity. Replace the transmitter cover then check the battery status LED shows Green when any pushbutton is pressed.

RECEIVER

The Receiver module should be mounted below the steering column so that it has an uninterrupted line-of-sight to the Transmitter module. When mounted correctly the driver should be able use their pushbutton functions at more than 90° angle clockwise and 90° angle counterclockwise.

RELAY CONTROL UNIT

The Receiver is connected to the Relay Control Unit by a 3.5mm 'Jack' plug. This should be connected and disconnected only when power to the Relay Control Unit is OFF. Power is supplied to the Relay Control Unit via the 2 pin plug at the rear of the unit, care must be taken to observe the correct polarity.

Each of the 8 channels has a relay with the switching contacts connected to the corresponding connector pins also on the rear of the unit. LEDs on the front of the unit will display the state of the corresponding relay, ON will indicate the relay contacts are closed, OFF will indicate open.

There are also two buttons on the front panel which are used to configure the channel functions.

NOTE: The Relay Control Unit is not sealed and should be mounted in an area where it may come into contact with water or other liquids.

RESET

The Relay Control Unit can be fully reset by pressing both buttons on the front panel whilst turning the power ON. When all LEDs begin flashing then the buttons can be released. A full reset will result in all channels being configured to momentary action with steering wheel pushbutton 1 being assigned to channel 1, pushbutton 2 to channel 2, etc.

CHANNEL MODE CONFIGURATION

Each channel can be individually configured to perform any 1 of 5 different functions:

Mode 1: Momentary action
Mode 2: Latching (without memory)
Mode 3: Latching (with memory)
Mode 4: Flashing (slow speed, minimum 5 second duration)
Mode 5: Flashing (fast speed, minimum 3 flashes)

To begin the mode configuration procedure press and hold the MODE button while turning the power to the Relay Control Unit ON then release the button. Channel 1 LED will now begin to flash to indicate what function has been allocated to that channel, i.e. 1 flash then pause means Mode 1, 2 flashes means Mode 2 etc.

To change the function press the SET button. Each time the SET button is pressed the Mode number for that channel will increment. When the required function has been selected then press the MODE button again and the next channel can be configured. Each time a channel mode is changed it is automatically stored into memory. The mode configuration procedure can be ended at any time by turning the power OFF.

CHANNEL POSITION CONFIGURATION

After a full reset, Steering Wheel Pushbutton 1 will be assigned to Channel 1, Pushbutton 2 will be assigned to Channel 2 etc. To alter which pushbutton is allocated to which channel press and hold the SET button while turning the Relay Control Unit ON then release the button. Channel 1 LED will now begin to flash. Whilst this LED is flashing press the required Steering Wheel Pushbutton. On pressing the preferred Pushbutton, Channel 1 LED will stop flashing and Channel 2 LED will now begin to flash. Channel 2 pushbutton can now be allocated. NOTE - When following the channel position configuration all 8 channels must each be allocated to one pushbutton.

Each time a channel position is changed it is automatically stored into memory. The channel position configuration procedure can be ended at any time by turning the power OFF.

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