

ControlPRO™

Steering Wheel Control Interface



User Manual

CP2-BM23

- ▶ Rover
- ▶ Land Rover

For Vehicles with Resistive steering wheel controls
and BMW round pin connector



Introduction

The Autoleads ControlPro CP2-BM23 is a universal steering control interface that is set using a pre-defined dipswitch configuration and supplied with a wiring harness for Ford vehicles, which allows retention of steering wheel controls, and retained accessory power whenever replacing a factory radio. Use of this interface also allows you to program two radio functions to each steering wheel control button by using short press/long press dual command functionality. The CP2 is compatible with vehicles that use data or analog steering wheel controls.

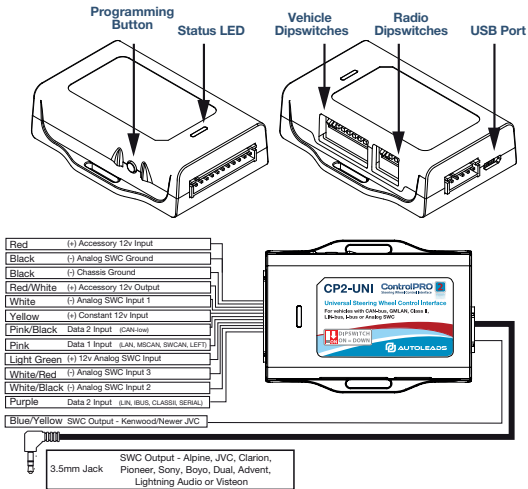
Key Features

- ▶ Compatible in vehicles equipped with LAN, LIN, CAN, Class II, Analog or Serial Data Steering wheel controls
- ▶ Easily configurable using either a PC or manually
- ▶ Retains memory even if power is lost
- ▶ Ability to assign two radio functions to one steering wheel button
- ▶ Updatable via the Autoleads PC Application.
- ▶ Create and save custom vehicle configuration files for later use.
- ▶ Highly visible tri-colour LED to keep the user informed of the modules status.
- ▶ Equipped with a manual learning function for compatibility with unlisted vehicles equipped with analog steering wheel controls.

Interface & Wiring Overview

For compatible vehicles, please refer to the next section of this manual or visit www.autoleads.co.uk/controlpro to download the PC application or phone app that provides further vehicle specific wiring and vehicle dipswitch configurations

Interface & Wiring Overview (continued)



Installation

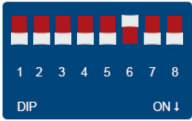

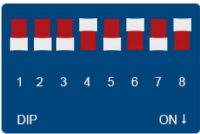

Please visit www.autoleads.co.uk/controlpro to download the PC application or phone app that provides vehicle specific wiring and vehicle dipswitch configurations

Configuration & Programming





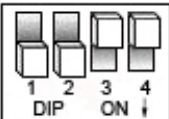
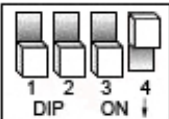
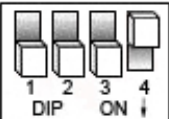

Vehicle Dipswitch Setting

The dipswitches on the side of the interface must be manually set to the proper vehicle and radio configuration by the user. Set the dipswitches and then connect it to the vehicle/radio for it to function.

Both vehicle and radio dipswitch settings must be set before the module is connected to the vehicle.

Vehicle	Dipswitch Configuration
<p>Land Rover Discovery Round Pin Connector (98-04) Land Rover Freelander Round Pin Connector (01-03)</p>	
<p>VOL Push = Volume + VOL Pull = Volume - Arrow Push = Seek + / Track + / FFW Down Pull = Seek - / Track - / RRW MODE = Source</p>	
<p>MG ZR Round Pin Connector (01-05) MG ZS Round Pin Connector (01-05) MG ZT Round Pin Connector (01-05) Rover 45 Round Pin Connector (99-01) Rover 75 Round Pin Connector (99-05)</p> <p>Note – SWC Input 1 (white) and SWC Ground (black) must be connected directly to the OEM Steering control wires</p>	
<p>VOL Push = Volume + VOL Pull = Volume - Arrow Push = Seek + / Track + / FFW Down Pull = Seek - / Track - / RRW MODE = Source</p>	

Radio Dipswitch Settings

Radio Dipswitch Settings	
 <p>1 2 3 4 DIP ON ↓</p>	 <p>1 2 3 4 DIP ON ↓</p>
Alpine	Clarion/Nakamichi
 <p>1 2 3 4 DIP ON ↓</p>	 <p>1 2 3 4 DIP ON ↓</p>
Fusion	JVC
 <p>1 2 3 4 DIP ON ↓</p>	 <p>1 2 3 4 DIP ON ↓</p>
Kenwood	Other
 <p>1 2 3 4 DIP ON ↓</p>	 <p>1 2 3 4 DIP ON ↓</p>
Pioneer	Sony

Manual Configuration Mode

If you wish to re-assign button functions or use short press/long press dual command functionality, please follow the PC application or manual re-assignment procedure.

1. Please Visit www.autoleads.co.uk/controlpro to download the Autoleads ControlPro application. Launch the application and find your vehicle/radio combination.
2. Set the vehicle dipswitches according to the application.
3. Set the radio dipswitches according to the radio dipswitch chart above.
4. Connect the interface according to the installation instructions and test functionality.



PC Application Mode

With this method, the CP2 can be connected to a PC in which the application assigns the vehicle and steering wheel button functionality. **To configure using a PC, the dipswitches on the side of the interface must all be set to the down/on position.** When using this method, it is not required to manually set the dipswitch positions when programming via the PC App mode.

1. Visit www.autoleads.co.uk/controlpro to download the Autoleads ControlPro PC application.
2. Connect the CP2 module to the PC via the USB port. When using a PC to configure, it is not required to power the CP2 module via the 11 pin connector.

PLEASE NOTE:

3. It may be necessary to update your Microsoft .NET Framework. If you require this update your PC will automatically notify you. If you do not get a notification, then you do not require the update.
4. Launch the application and follow the on screen prompts.

Manual Programming Mode

With this method the steering wheel button values must be manually programmed into the CP2 by using either the PC application or the programming button located on the module. The vehicle dipswitches on the side of the interface must all be set to the up (off) position.

PLEASE NOTE: This mode is only compatible in vehicles with both analog steering controls and a 12v Accessory wire. Vehicles with CAN-Bus buttons cannot be manually programmed.

The radio dipswitches must be set to the correct radio configuration.

1. Visit www.autoleads.co.uk/controlpro to download the Autoleads ControlPro PC application.
2. Launch the application and find the installation instructions for your vehicle
3. Set the radio dipswitches according to the chart below.
4. Connect the interface according to the installation instructions.
5. You can now either connect the CP2 to your PC and use the application to program the steering control values or follow the programming instructions in the next step.

Manually Mapping the Steering Wheel Buttons

PLEASE NOTE

This section only applies to button programming in manual programming mode. If you are using the CP2 in manual configuration mode (specific vehicle dipswitch settings) and wish to re-assign button functions, please follow the “Steering Wheel Button Re-Assignment” section

Please read each of the following steps to familiarise yourself with the process before beginning.

The interface must be programmed in the specific order shown in the chart below

1. Turn the key to the ignition position. The LED on the CP2 module will illuminate red.
2. Press and hold the programming button on the side of the CP2 interface until the LED illuminates green. Release the programming button.

Within 7 seconds, press the button that is to be learned on the steering wheel. At this point you have two options

a. For short press functionality: Hold the button on the steering wheel until the LED changes from green to red. Release the button.

b. For long press functionality: Continue to hold the button until the LED flashes between red and amber once. Release the button.

4. If you need to program more buttons, repeat step 3 for each additional audio function on the steering wheel.
5. If you come across a function in the chart that your steering wheel does not have, or you do not want to program, press and release the program button on the side of the CP2 interface to skip that function. The LED will turn off then back on when the skip has been done successfully.
6. Once programming is completed, wait seven seconds. The LED will flash green 3 times indicating the end of programming.
7. Test the interface for proper functionality. Whenever a SWC button is pressed the LED on the interface should blink green. If any function does not work, repeat the programming steps.

Please reference the Radio Function Mapping Order on the next page.

Radio Function Mapping Order

	Alpine	JVC	Kenwood	Clarion/ Nakamichi	Other*	Sony	Pioneer	Fusion
1	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +
2	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -
3	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute
4	Preset +	Source	Source	Source	Preset +	Preset +	Preset +	Source
5	Preset -	Track +	Play	Search +	Preset -	Preset -	Preset -	Track +
6	Source	Track -	Track +	Search -	Source	Source	Source	Track -
7	Track +	Band/Disc +	Track -	Band	Track +	Track +	Track +	Audio
8	Track -	Preset/Disc -	Disc/FM +	Send/End	Track -	Track -	Track -	Power
9	Power	Select	Disc/AM -	Send	Band	Band	Band	
10	Enter/Play	Attenuation	Answer	End		Reject Call/Source (Bluetooth radios only)	Phone Menu	
11	Band/Program	Phone Receive	Voice Dial	Voice		Answer/End Call	Answer Call	
12	Receive	Phone Reject	On Hook				End Call	
13	End	Voice Dial	Off Hook				Voice Activation	
14		Power	Mute					

*Other = Advent, Boyo, Dual, Lightning Audio, Rockford Fosgate, & Visteon

SWC Button Re-Assignment Procedure

PLEASE NOTE

This section only applies to button re-assignment within a configuration. If you are using the CP2 in manual programming mode (all vehicle dipswitches up) please refer to the “Manually Mapping the Steering Wheel Buttons” section.

If you wish to re-assign the Steering wheel control functions or utilise short press long press dual command functionality you will need to follow the steps outlined in this section.

Please read each of the following steps to familiarise yourself with the process before beginning. The interface must be programmed in the specific order shown in the chart on the next page.

1. Turn the key to the ignition position.

The LED will illuminate red.

2. Press and hold the programming button on the side of the interface until the LED illuminates green Release the programming button.

3. Within 7 seconds, press the button that is to be learned on the steering wheel. At this point you have two options:

a. For short press functionality: Hold the button on the steering wheel until the LED changes from green to red. Release the button.

b. For long press functionality: Continue to hold the button until the LED flashes be-tween red and amber once. Release the button.

4. If you need to program more buttons, repeat step 3 for each additional audio function on the steering wheel.

5. If you come across a function in the chart that your steering wheel does not have, or you do not want to program, press and release the program button on the side of the interface to skip that function. The LED will turn off then back on when the skip has been done successfully

6. Once programming is completed, wait seven seconds. The LED will flash green 3 times indicating the end of programming.

7. Test the interface for proper functionality. Whenever a SWC button is pressed the LED on the interface should blink green. If any function does not work, repeat the programming steps

The steering wheel controls can always be restored to default settings by pressing and releasing the program button on the side of the interface once and waiting 7 seconds for the descending chime and the LED to flash 4 times. **This reset can only be done while the CP2 module is connected to the vehicle.**

SWC Button Re-Assignment Procedure

	Alpine	JVC	Kenwood	Clarion/ Nakamichi	Other*	Sony	Pioneer	Fusion
1	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +	Volume +
2	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -	Volume -
3	Mute	Mute	Mute	Mute	Mute	Mute	Mute	Mute
4	Preset +	Source	Source	Source	Preset +	Preset +	Preset +	Source
5	Preset -	Track +	Play	Search +	Preset -	Preset -	Preset -	Track +
6	Source	Track -	Track +	Search -	Source	Source	Source	Track -
7	Track +	Band/Disc +	Track -	Band	Track +	Track +	Track +	Audio
8	Track -	Preset/Disc -	Disc/FM +	Send/End	Track -	Track -	Track -	Power
9	Power	Select	Disc/AM -	Send	Band	Band	Band	
10	Enter/Play	Attenuation	Answer	End		Reject Call/Source (Bluetooth radios only)	Phone Menu	
11	Band/Program	Phone Receive	Voice Dial	Voice		Answer/End Call	Answer Call	
12	Receive	Phone Reject	On Hook				End Call	
13	End	Voice Dial	Off Hook				Voice Activation	
14		Power	Mute					

*Other = Advent, Boyo, Dual, Lightning Audio, Rockford Fosgate, & Visteon

Testing & Troubleshooting

1. Turn the ignition on. The red LED on the interface will turn on & the +12v accessory output wire will turn on.
2. Verify that all steering wheel controls are functioning correctly. The green LED on the CP2 module will flash each time it sees a steering wheel button pressed.
3. Turn off the vehicle & remove the key. In vehicles equipped with retained accessory power (RAP) the accessory output and the red LED will remain active & keep the radio on for 10 minutes unless the driver side door is opened. In vehicles that do not support RAP the LED and accessory output will shut off when the key is switched or removed from the ignition.

The CP2 can be updated with new firmware as it becomes available using the PC application. When using the application to update, please follow the procedures outlined in the PC application to update your interface.

LED Legend/Key

LED Legend			
Color	During Normal Operation	During Manual Programming Mode	During Optional Programming
Solid Red	Accessory on	Waiting on short press button release	Waiting on short press button release
Solid Green	N/A	Waiting on button to be pressed	Waiting on button to be pressed
Solid Amber	Update required Please call tech support	N/A	N/A
Flashing Green	Button is being pressed	N/A	N/A
Flashing Amber every 5 seconds	Module is connected to the PC via USB	N/A	N/A
Flashing Red/Amber	Error - Dipswitch setting on vehicle switches set to unknown config	Long Press Button detected	Long Press Button detected



Frequently Asked Questions

Q. Where can I find the wiring info to connect the SWI-CP2 to my vehicle?

The wiring info can be found within our Android, Apple or PC application. Download at www.autoleads.co.uk/controlpro

Q. Where can I find info on setting the dipswitches on the side of the module?

The dipswitch settings can be found within our Android, Apple or PC application.

Download at www.autoleads.co.uk/controlpro

Q. The module's LED is flashing a pattern that is not consistent with normal operation.

Please reference the LED and chime legend for your specific case.

Q. What can I connect to the Red/White (Accessory Output) wire on the module?

The interface's accessory output (Red/White) is only rated at 1 Amp. If you require more current capacity an external relay must be used.

Q. Is there a way to perform a master reset to the module?

The interface can be reset, when not connected via USB, by pressing and holding the programming button on the side of the interface for seven seconds until the LED turns amber. This reset can only be done while the CP2 module is connected to the vehicle.

Q. I have connected all of the wires and set the dipswitches as instructed. I am having an issue where some or all of the buttons are not functioning correctly or at all.

Verify that all of the ground wires (Radio, CP2, and Steering wheel circuit) are connected at the same place. In some vehicles the factory ground may not be a sufficient ground for all of these wires. In this case please make all ground connections to chassis ground.



Frequently Asked Questions

Q. I'm using the application and I don't see my radio listed (Advent, Boyo, Dual, Lightning Audio, Rockford Fosgate or Visteon?)

When installing any of these brands you will need to select Pioneer as your radio







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www.autoleads.co.uk

Autoleads is a Power brand of AAMP Global.