Summit TECHNOLOGIES

TALON

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www.summittech.co.uk

INSTALLATION & USER GUIDE

VERSION 2.0

Introduction

Lee McCormack is a UK Motorsport Racer and Creative Director at Summit Technologies Limited.
Having spent many years of Club Racing at various UK Circuits, his passion to perform led him towards the Automotive Technology field.

"Competitive Motorsport is one of the most exciting past times you can truly enjoy at all levels. Taking part is reasonably cheap, but if you want be at the front things can quickly become very expensive. That's why I focussed our efforts on bringing the very best cutting edge technology to Motorsport Racers just like you and me, but without the ridiculous price tags that go with it.
Even I have been guilty of having rows and rows of switches controlling all manner of ancillaries in my race car. I wanted a way to consolidate all the switches, in a clear and logical way that was safer than fumbling for the right switch mid-race. It needed to be compact but functional, programmable and reliable with safety as it's highest priority. It also needed to be available to all competitors, not just those with massive racing budgets. So after many months of trials and design, I created the TALON. I truly believe that it will change the way you think about switches forever !"

The Talon is a revolutionary switch matrix, designed to be flexible for future changes, provide as much functionality as possible and be a safer, more reliable way of consolidating any 12 volt vehicle switches into a single unit.
By utilising internal solid state relays, it's able to perform it's own switching function and provide a regulated 12 volt 250 milliamp output on each of it's 15 available channels.
Each of those outputs can be wired into the vehicles own relays or switching circuits to enable the Talon to act as the central switch module for the entire vehicle.
The central architecture is based on our proven RAPTOR technology, borrowing a lot of the same heavy duty components to provide reliability and longevity to the system.

In the Box

Inside the box you will find;

1.Talon Control Panel

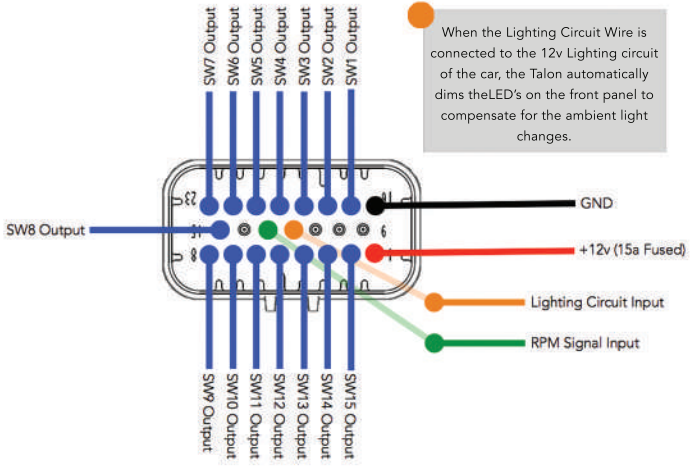
2. Wiring Loom

3. A Set of Switch Decals

4. This Instruction Manual

Wiring Diagram

Each of the Talon's 15 switches provides a 12 volt 250 milliamp live once a button is pressed. This is sufficient to provide power to switch heavy duty vehicle relays, such as Fuel Pumps, Starter Motors etc. Each of the wires on the Talon Power Connector are numbered in accordance to the diagram below, and to their corresponding switches. The 12v POWER Feed to the Talon requires 10 amps, and **MUST BE FUSED** with a 15 amp blade fuse.



Turning the Talon on and off

To ensure that the Talon cannot be accidentally shut down, we have built in protection on the Talon's Power Button.

Once power is applied to the Talon, the system will be in Standby Mode.

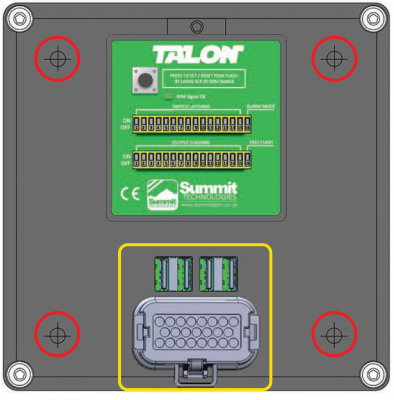
During Standby, the Talon will gently pulse it's POWER LED signalling that it is ready to be started.

To start the Talon, Press and HOLD the Power button for 2 Seconds. This will activate the Talon and run a lamp test. On completion, the Talon is fully operational.

To shut the Talon system down, just press and HOLD the power button for 2 seconds.
Please Note: This will return any switches to their OFF state.

Talon Mounting Options

The Talon has been designed specifically to use the VESA 100 Mounting Standard. This means that you can effectively use any compatible LCD or TV mount that uses the same standard.

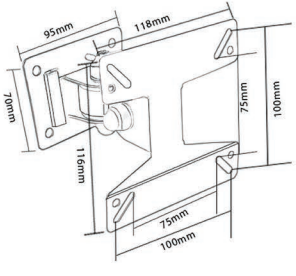


Please Note: We can supply a compatible mount for the Talon from our website at additional cost.

When mounting the Talon, **be sure to allow for both the main and USB connection** access. Each mounting hole in the rear of the Talon is an M5 thread and accepts any M5 threaded screw or stud.

MAXIMUM MOUNTING HOLE DEPTH IS 5MM. EXCEEDING THIS WILL DAMAGE THE TALON.

Talon Mounting Plate



Considering Switch Placement

The Talon has been specifically designed to manage logical groupings of switches with the use of colour coded areas on the front panel. There are 3 areas where decals can be applied to the switch faces;

Area 1
This area is your 'Everyday' switches, items like Indicators, Fans, Wipers and Lights. All LED's are Green in this area.

Area 2
This is your Power and Starting area should you wish to latch your Ignition and Start your car from the Unit. There are both Amber and Green LED's.

Area 3
This is your ancillary area. Items such as ECU Maps, Auxiliary switching etc. All LED's are Blue in this area.

Please note: The Red Switch will ALWAYS be the power switch for the unit.

Once you have considered your switch placement, it is reccomended to fit the switch decals. Each decal has been made from the same material as the membrane panel, with a 3M adhesive backing and a photoluminescent ink. This is so that every decal matches the Talon perfectly and glows nicely in the dark.

TIP: Use a craft knife or fine blade to pick up the corner of the decal from the sheet, and position it carefully on the switch face lowering one side at a time (Line up the decal with the left and bottom of the switch to ensure it's square before placing). Place lightly initially, incase of removal. Although the decals are removeable, the adhesive is very strong and removing them is only reccomended if they need to be changed. Additional Decal sheets are available from our website.

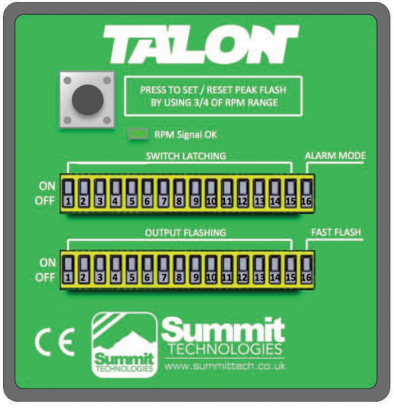
Apply the decals in a clean, dry environment. When you positioned the decal, press down lighly across the face of the switch to ensure a good bond for the adhesive.

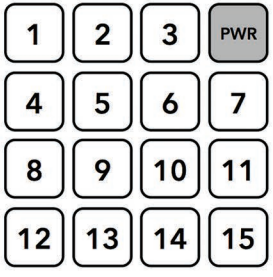
Once all of your decals have been applied, you can clean the surface of any marks with a lint free cloth. You can use a damp cloth, but **do not use any solvent cleaner** on the Talon.

Example of correct decal placement

Functions and Settings

Removing the rear access panel of the Talon exposes the switch and Shift Light settings;





Switch Latching (ROW 1 / DIP 1 to 15)
Each of the numbered DIP Switches on this row corresponds to one of the switches, numbered in the diagram above. To enable the switch as a MOMENTARY, ensure the DIP switch is set to OFF for that switch number. To enable the same switch to act as a LATCHING, ensure the DIP switch is set to ON for that switch number.

Alarm Mode (ROW 1 / DIP 16)
We have included a neat feature in the event that you do not want to use your Talon's shift lights. By setting this DIP switch to ON, the Talon will strobe it's shift light and sounder for ANY voltage that is applied down the shift light wire. This is useful for a low fuel alarm, Oil Pressure warnings and so on. While this setting is activated, the sequential shift light will not be enabled.

Output Flashing (ROW 2 / DIP 1 to 15)
Flashing can be enabled on either a Momentary or a Latching switch state. To enable the flashing option, move the corresponding numbered DIP switch to ON. This will then activate a flashing state on either a MOMENTARY or LATCHING switch state.

FAST FLASH
Setting this DIP switch to ON, will double the flash rate from 250 ms to 125 ms cycles (2 flashes per second to 4 flashes per second). When using the Talon's flashing output for your indicator or hazard lights, you need to use the 250ms setting to comply with UK IVA regulations.

Shift Light Setting
The Talon can take an ECU input directly from your ECU or Ignition Coil as follows;

Late Model Vehicles
The RPM connection is made to an ignition output. The majority of vehicles after 2005 use 'Coil on Plug' technology (Coil is in the spark plug connector). Connection is made at either the Coil on Plug or at the ECU. It does not matter if your vehicle has CAN Bus.

Mid 1990's to 2005 Vehicles
Many of these models have a deciated RPM signal going from the ECU to the Instrument Panel. With some vehicles, this wire may extend to the OBD diagnostic connector (i.e. Porsches). The Majority of aftermarket ECU's have an RPM output to the tacho. The Talon is compatible with both 5v and 12v square wave and pulse outputs.
Alternatively, connection can be made to the low voltage side of an iginition coil pack. This can be made at the coil or the ECU, which ever is more convenient.

The Talon sequential shift light will not be compatible with magneto, capacitor discharge or condenser type ignition systems, unless they have a dedicated 5v / 12v pulse or square wave RPM signal output.

Setting the RPM Display Range
With the Talon system powered up and the ECU input connected, the RPM Signal LED will be on. This means that the Talon has accepted the RPM signal being provided and setting of the maximum threshold can begin.

Rev the vehicle to 3/4 of your target maximum RPM. (NOTE: Your target maximum RPM may not be 3/4 of your engines RPM as you may want to set the shift sequence to flash at the ideal gear change RPM). Once the engine is at the correct RPM, press the button on the rear of the Talon. This will remember the signal coming in and automatically calculate the peak point of the shift light.
Rev the vehicle a few times to test the setting is correct. The setting will be programmed into the Talon's EPROM so that it will not be reset when the unit is turned off.

Resetting the Shift Point
To reset the shift point, just follow the same procedure. Each time the button is pressed, the Talon will calculate the target shift point from the signal it is receiving and save it down to the EPROM.

USB Charging Sockets

On the rear of the Talon, we have included 4 USB charging sockets. These sockets supply power to charge your devices once the Talon has been powered on.
Each USB socket povides a 5v 1amp supply, which is suitable for charging Smart Phones, In Car Video cameras, Satelite Navigation Systems, Radar Detectors etc. All USB sockets can be used at the same time. When the Talon is powered down, the USB sockets are deactivated.

5v 1000ma each