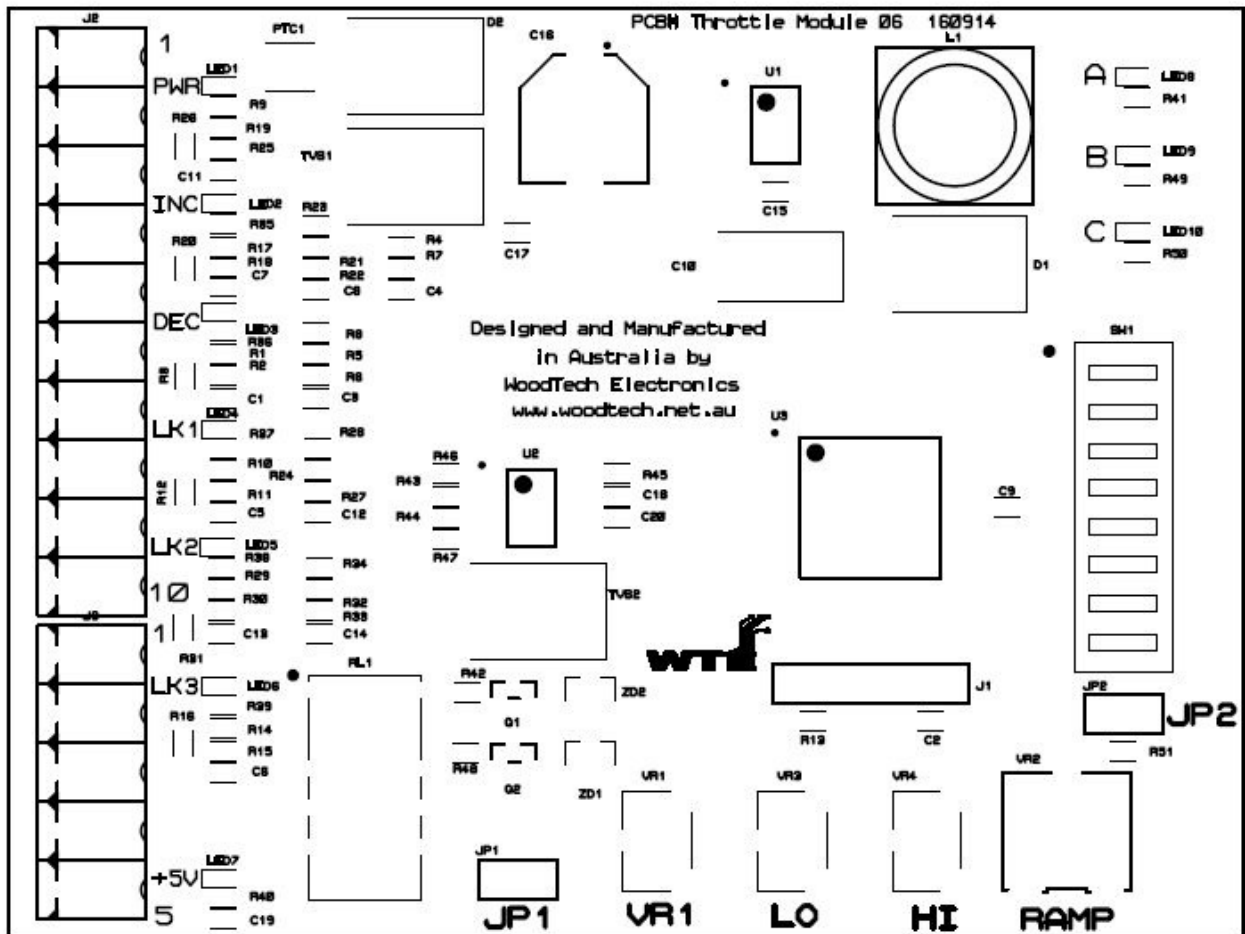
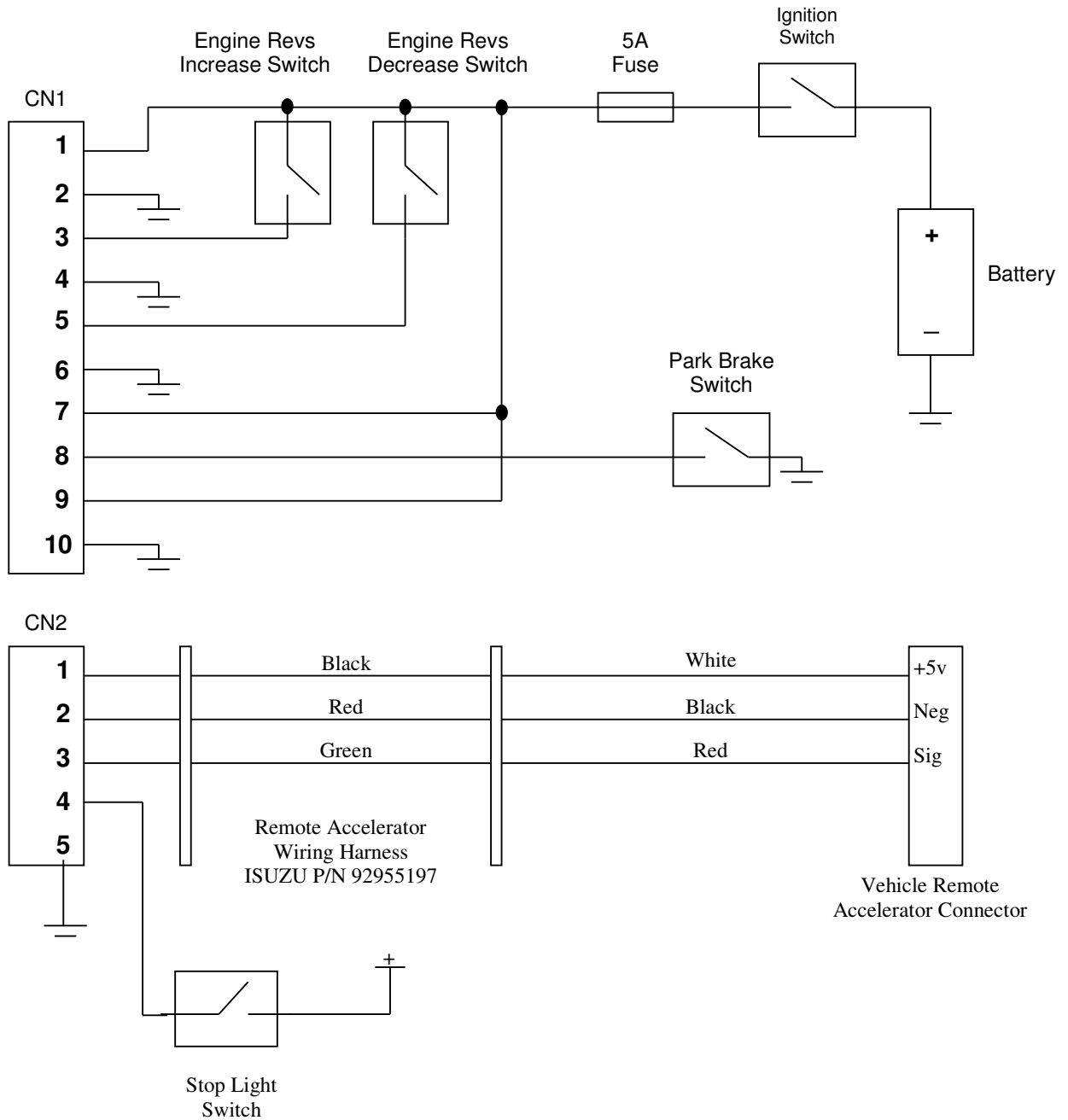


V5 Universal Throttle Module

28 MAR 17



Typical Installation – Manual Transmission



**IMPORTANT – PLEASE READ ALL INFORMATION BEFORE PROCEEDING
WITH INSTALLATION. IF IN DOUBT, ASK!**

Connections

CN1 – 10 Way

Number	Function
1	10-30VDC Input
2	Negative
3	Increase Revs – Positive Input
4	Increase Revs – Negative Input
5	Decrease Revs – Positive Input
6	Decrease Revs – Negative Input
7	Lockout 1 – Positive Input
8	Lockout 1 – Negative Input
9	Lockout 2 – Positive Input
10	Lockout 2 – Negative Input

CN2 – 5 Way

Number	Function
1	+5v – Remote Accelerator Connector
2	Neg – Remote Accelerator Connector
3	0-5VDC Output – Remote Accelerator Connector
4	Lockout 3 – Positive Input
5	Lockout 3 – Negative Input

Universal Inputs

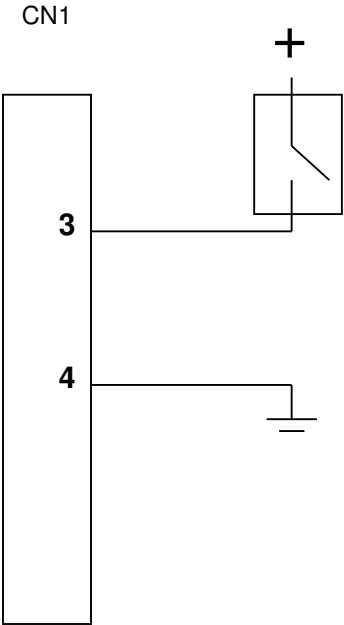
The Universal Throttle Module has 5 (five) universal inputs:

- Increase Revs
- Decrease Revs
- Lockout 1
- Lockout 2
- Lockout 3

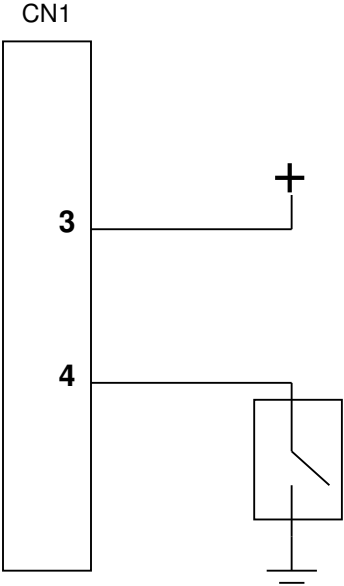
All inputs are monitored by on-board LEDs. The LED is lit when the input is active. Each input contains a pair of wires – a positive and a negative. Both wires must be connected for the input to function. By using this method, it does not matter whether your inputs are switching positive or negative signals – the universal inputs will accept it.

The following diagrams demonstrate positive and negative switching examples using the “Increase Revs” input.

Positive switching of “Increase Revs” input:



Negative switching of “Increase Revs” input:



Overview

The V5 Universal Throttle Module is designed and manufactured in Australia by WoodTech Electronics. It is easy to install into both 12 and 24 Volt vehicles. Utilising both positive and negative input switching, the module can be configured by the end user to suit almost any application.

The software within the V5 Universal Throttle Module contains multiple programs and parameters to suit various applications. The on board dipswitches allow the correct program and/or features be selected. It is important that the correct dipswitch settings are used for your application.

The number of dipswitches has increased from 4 to 8 in the V5 model to allow for added features in the future. Dipswitches 1 thru 4 work exactly the same way as they did with V4 and have the same functions. If you are replacing a V4 version with a V5 dipswitch 8 must also be on.

Features

- Designed and manufactured in Australia by WoodTech Electronics – Over 20 Years experience in Automotive Control Systems and Electronics.
- Wide supply voltage range: 10 – 30 Volts DC.
- Universal inputs can switch both positive or negative
- Multiple lockouts for Park Brake, Transmission in Neutral etc.
- Easily incorporated into existing E-stop (Emergency Stop) systems.
- Failsafe operation – Loss of supply or lockout activation results in immediate RTZ (Return-To-Zero) output status.
- Engine Speed adjustment potentiometer allows the installer to easily “fine tune” the operation. Output voltage can be adjusted from approx. 1.5 – 5.0 Volts to set maximum engine RPM.

Installation

Select a suitable location inside the cabin to mount the enclosure. Keep away from hot areas such as heaters and ensure there will be no fouling with moving parts (eg. wipers, control levers etc.)

Using the supplied wiring diagrams as a guide, make secure electrical connections and provide a good, clean earth. Always use a 5 Amp fuse in the positive supply. Use caution when making the connections going to the vehicles' remote accelerator connector. Double check the wiring at this point as you do not want to damage the expensive vehicle ECU.

For manual transmission vehicles, we strongly recommend at least one of the lockouts be connected to the Park Brake. If the selected lockouts are not active, the module will not work. For automatic transmissions, we recommend the second lockout be connected to the Neutral switch.

Note: The supplied wiring diagrams are correct at the time this document was written. The factory wiring colours do not match up between the remote throttle connector and the extension wiring harness. If in doubt, ask!

You will also need to install the parts in the Isuzu Remote Accelerator Kit. Please follow the instructions supplied with the kit.

Recommended Settings – Manual Transmission vehicles:

Lockout 1- connected to Park Brake

Lockout 2 – not connected

Dipswitch1 – ON, All others OFF

This setting selects only Lockout 1 to be active. Lockout 2 and Lockout 3 are not used in this configuration and therefore no connections need to be made to these inputs.

Recommended Settings – Automatic Transmission vehicles:

Lockout 1 – connected to Park Brake

Lockout 2 – connected to transmission neutral switch

Dipswitch1 and Dipswitch2 ON

This setting selects Lockout 1 and Lockout 2 to be active. Lockout 3 is not used in this configuration and therefore no connections need to be made to this input.

Connection to Stop Light circuit:

Lockout 3 may be connected to the vehicle stop light circuit. Upon activation of the vehicle foot brake, the module will immediately return the output voltage to the idle value.

WARNING:

Although it is possible to bypass the lockouts by leaving Dipswitch1 and Dipswitch2 switched off, ***THIS MAY COMPROMISE THE SAFETY OF THE SYSTEM. WE STRONGLY ADVISE INSTALLATION AS PER THE ABOVE RECOMMENDATIONS.***

Testing and Adjustment

Switch on ignition and ensure Park Brake is on (and transmission in neutral, if applicable). If vehicle is a manual transmission, the Power and Lockout 1 LEDs should be illuminated. If vehicle is an automatic transmission, the Power, Lockout 1 and Lockout2 LEDs should be illuminated.

Operating the “Revs Increase” or “Revs Decrease” switch should illuminate the corresponding LEDs. Also check the operation of the Park Brake lockout (and Neutral lockout, if applicable). Remember, if the lockouts are not activated (LEDs illuminated), the module will not work.

Start the engine and engage the PTO. Activate the Increase Revs switch and the engine revs should slowly increase. The maximum required engine RPM can be adjusted with the “HI” adjustment. Turning clockwise will increase the RPM. Activate the Decrease Revs switch and the engine rpm should return to idle.

The rate at which the engine revs ramp up and ramp down can be adjusted with the “RAMP” adjustment pot. Turning this pot clockwise makes the ramp time slower. Even when set to the fastest setting (fully anti clockwise), the vehicle ECU ultimately determines how quickly it will allow the engine to change rpm.

Most remote accelerator applications require a voltage of approx. between 0.4 – 1.0v before the engine will increase above idle. Because of this, there can appear to be some “dead time” from idle as you hold the Increase Revs button. The “LO” adjustment pot “tunes out” this dead time by setting a minimum voltage somewhere between 0 – 1.0 volts. Turning the “LO” pot clockwise increases this initial voltage.

If the setting of the “LO” pot is too low, there will be noticeable “dead time” when initially increasing the rpm above idle. If the setting of the “LO” pot is too high, the engine will not return fully to idle RPM. A little time spent getting this adjustment “just right” will improve the overall smoothness and operation of the system.