

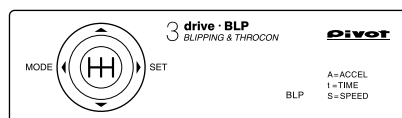
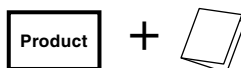
USER'S MANUAL (Product Number : BLP)

Throttle Controller with Built-in MT Auto-Blipping Function

3 drive · BLP BLIPPING & THROCON

Thank you for purchasing PIVOT product.
Please read this manual carefully and keep it for future reference.

- If this product is given to another user, make sure to include this User's Manual.



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After installation, make sure to carry out “Initial Settings”.

After having installed this product, make sure to make settings for your car's special characteristics by carrying out the “Initial Settings” on Page 7. If the “Initial Settings” are not carried out, a **Check Engine Light** may go on. Also, the unit will remain in **NORMAL Mode** even if the Mode is switched.

Worried about Installation?

If you are worried about carrying out wiring or other installation procedures please consult your dealer.

Only use 3-drive Specialized Harness.

Using another type of harness will cause troubles and failure; use only the 3-drive specialized harness.

Only use with Manufacturer's Original ECU.

Do not install this product if the ECU is not the original one or when a sub-ECU is being used.

Set to NORMAL Mode upon Removal of Product.

When uninstalling the product, make sure to return it to **nor** (NORMAL) Mode before carrying out any work. Reconnecting this product in a different mode may cause the Check Engine Light to come on.

Modifying this Product is Forbidden.

Under no circumstances should modifications or changes be made to this product. Doing so may cause damage not only to the product, but to the car and the operation of the car in which it is installed.

Before
Using

Features

Connecting
The Wires

Installing
The Product

Initial
Settings

Speed Pulse
Settings

How to
Operate

Trouble-
Shooting

Features

Throttle Controller with Built-in MT Auto-Blipping Function

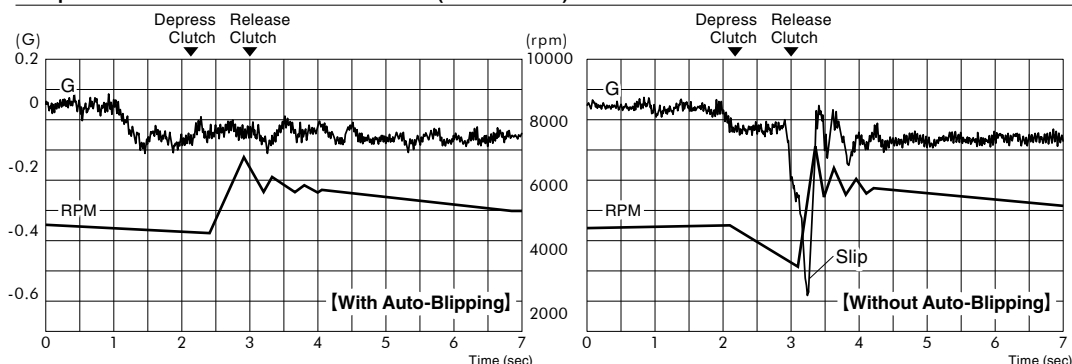
BLIPPING

Auto-Blipping Auto-Blipping removes the need for the conventional "heel and toe" technique used to raise rpm with the accelerator while braking at the same time in an attempt to prevent slipping and turbulent motion caused by rapid downshifts when sports driving in manual transmission model cars. This allows the driver to concentrate more on braking which in turn results in a more accurate and smoother deceleration. Operation is safe as the Auto-Blipping function does not operate when accelerating without braking or when a set speed has not been reached. (Patent pending)

Adjust to Most Suitable Blipping When using blipping to raise the engine's rpm's, it is possible to fine tune the settings for degree of acceleration, time length of operation and the speed at which blipping starts; making the perfect match for your car model and driving conditions.

Easy Operation After starting the engine, simply press the Auto-Blipping switch to ON and Auto-Blipping will engage after having reached the set speed when the clutch is depressed while stepping on the brake

Comparison of Deceleration G's at Downshift (from 3rd-2nd)



THROTTLE CONTROLLER

Throttle Controller for Best Response to Match Driving Style and Conditions

The controller has three modes to match your driving style and conditions whether driving for sport, driving slippery roads or driving with gas efficiency in mind: NORMAL Mode for regular response, SPORTS Mode with 7 steps for a quicker response, and ECO Mode with 3 steps for a slower response. The choice is yours.

Comparison of Fuel Consumption

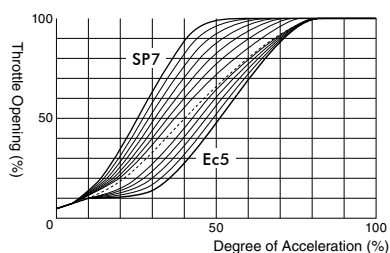
NORMAL	107cc
SP7	157cc
Ec5	58cc

SP7: MAX. SPORTS Mode / Ec5: MAX. ECO Mode
HONDA STEP WGN (RG1) / Running distance: 0-400 m
Degree of acceleration: 30%

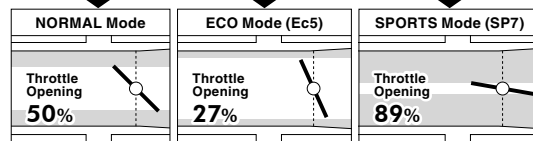
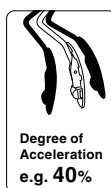
Comparison of Acceleration Time

NORMAL	23 Sec
SP7	19 Sec
Ec5	29 Sec

Examples of Changes in Throttle Opening

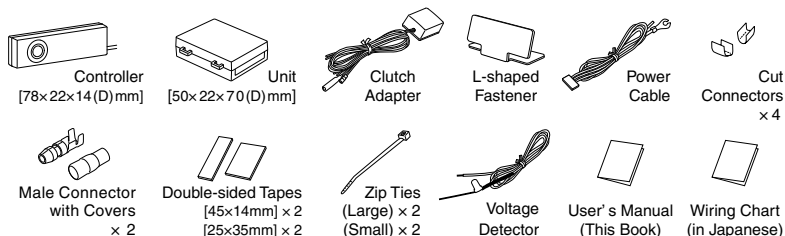


SP7: MAX. SPORTS Mode Ec5: MAX. ECO Mode NORMAL
SUZUKI Swift (ZC31S)

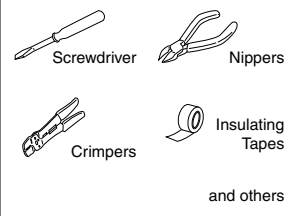


*In some car models with a Valvematic engine, control is carried out by the intake valve rather than the throttle valve.

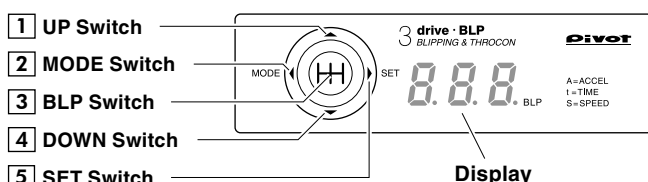
Please check the contents of the package



Tools and Materials to prepare for Installation



Part Names



Turning off the Display

This product is interlocked with the ECU (engine computer) power. Depending on the model of car, the display may remain on for up to 15 minutes even after the engine has been turned off; this is normal.

No.	Function
1	Switch to Raise Settings
2	Switch between Throttle Controller Modes
3	Switch to turn ON / OFF the Auto-Blipping function
4	Switch to Lower Settings
5	Switch to adjust the Auto-Blipping settings

Display Items

Display	Details
SP1~SP7	SPORTS Mode (Higher number = Higher response)
Ec1~Ec5	ECO Mode (Higher number = Lower response)
nor	NORMAL (Normal Performance)
R00	Degree of Acceleration
blp	Auto-Blipping Mode: ON (On setting)
off	Auto-Blipping Mode: OFF (On setting)
000.	Auto-Blipping Mode: ON (In operation)
R00 (R blinking)	Degree of Acceleration of Auto-Blipping
t00 (t blinking)	Time length of operation of Auto-Blipping
S00 (S blinking)	Minimum Speed of Auto-Blipping start

Display	Details
cAr	Initial Settings Mode
L00	Position when accelerator is not pressed down.
H00	Position when accelerator is fully pressed down.
Set	Settings Completed
PLS	Speed Pulse Setting Mode
P-0	Speed Pulse Number

WARNING

Improper use or disregard of these warnings may result in the injury or death of people.

●When making initial settings make sure to stop the engine and place in Neutral. It is dangerous to carry out these settings while the engine is running.

●Do not work in areas where there is excessive exhaust. Due to vehicle exhaust emission poisoning or fire may result in a damage to humans.

●Do not crush the cable. Please be careful that the cable does not get crushed by the seat rail or car door steel plate, nor cut by any sharp steel plate as this may cause a poor connection or an electric short leading to fire or other danger.

●While driving DO NOT operate switches or pay prolonged attention to the display; it is extremely dangerous.

●Make sure that all wiring and fastening down of the product does not interfere with driving nor be done in such a way as to cause poor connections.

CAUTION

Improper use or disregard of these warnings may cause injury to persons, damage the product and/or other things.

●PIVOT Corporation accepts no responsibility, in any manner whatsoever, for damage and/or trouble to your vehicle or product, nor for any accidents that are the result of the misuse of this product.

●Please confirm that the type of vehicle you wish to install into is listed in the "list of Specialized Harnesses by Car Model for 3-drive • BLP".

●When installing this product, we recommend that if technical knowledge becomes necessary please consult a qualified mechanic.

●If the device is improperly installed or settings have been improperly made a Check Engine Light may go on.

●Do not use electrotrap.

●Wiring should be carried out using the attached "cut connector" or by soldering, make sure to securely insulate all wiring parts with insulation tape, and confirm that no wires are sticking out.

●Please wipe with a soft dry cloth (a lens cloth).

●Please do not use alcohol or benzene.

This may cause damage to the painted surface or cracks in the plastic.

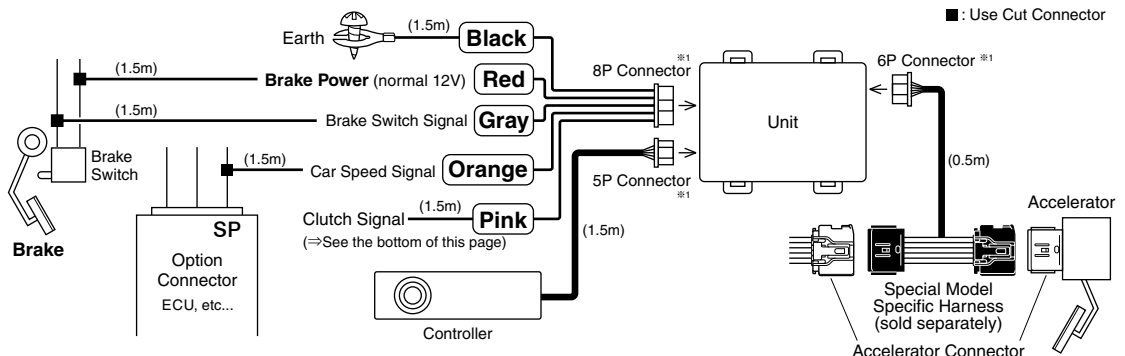
●Do not, in any manner, process, take apart, or make changes to this product.

procedure 1

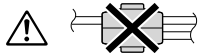
Connecting The Wires

Basic Wiring

When installing make sure to use the correct Specialized Harness for your car model.



※1 After inserting the connector, pull lightly to make sure that it is securely locked.



● When connecting to the car side wires, do not only use “electrotap” as this may result in a poor electrical connection. Please use the supplied “cut connectors” or solder the wires together and make sure to use insulation tape to securely insulate the wire connection.

- The Brake Switch Connectors will differ depending upon the car model, grade and year, so please sure to check the design in the “Wiring Chart”.
- Remove the battery cables from the minus terminals before carrying out the wiring.

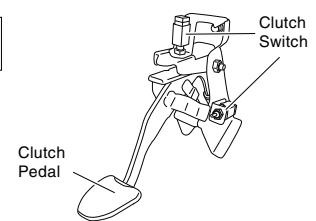
Clutch Signal (Use included Clutch Adapter)

Connecting the Clutch Adapter

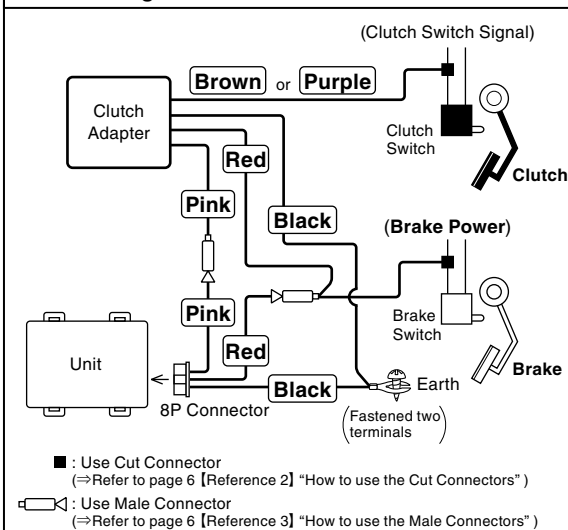
- Red** To Brake Power (normal 12V)
- Black** To Earth
- Pink** To **Pink** code of 8P Connector
- Brown** or **Purple** To Clutch Signal
- Green** Spare wiring (usually not used)

- Connect the wires of Clutch switch signal to the corresponding wires found in the “Wiring Chart”.
- The car which has 2 clutch switch connectors, choose one which works with depressing the clutch pedal.
- Cut off the insulation of the tip of the codes, among of Brown and Purple and Green code which you need to connect, then bundle the extra code.

Wiring Chart



Basic Wiring



Note: For some car models like 86/BRZ with push button start system, connect directly (Pink) code from 8P Connector of the unit side to Clutch Switch Signal without using Clutch Adapter.

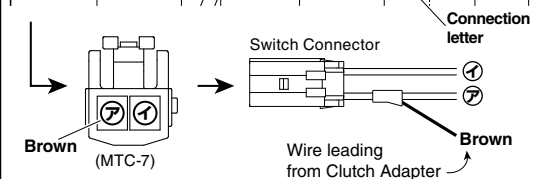
How to Connect

1. Check the wiring of Clutch Switch Signal, necessity of Clutch Adapter and the corresponding wire colors in the included “Wiring Chart”.
2. Connect the wires using included Cut connectors. (⇒ Refer to page 6 [Reference 2] “How to use the Cut Connectors”)

⚠ Note that the colors listed in the chart under “Clutch Adapter Wire Color” are not the colors of the wires on the car side.

e.g. TOYOTA Vitz (H17.2 ~)

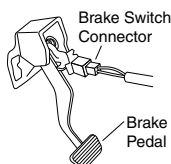
メーカー	車名	クラッチスイッチコネクタ形状	クラッチアダプター	クラッチ関係	
				接続記号	クラッチアダプターのコード色
TOYOTA	ヴィッツ	H1	MTC-7	○	茶 紫 ピンク



Brake Switch (Brake Power and Brake Switch Signal)

Red To Brake Power (normal 12V)

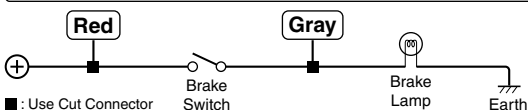
Gray To Brake Switch Signal



● There may be two or four(or more) wires coming from the brake switch connector. Check the wiring position in the "Wiring Chart" and after testing the voltage, carry out the wiring.

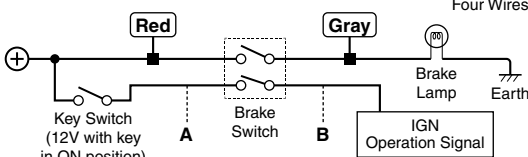
● After having completed the wiring confirm that the brake lamp is working properly.

For a Two-Wire Connector



For a Four(or more)-Wire Connector

When there are four(or more) wires, (do not wire to positions A and B as shown below. (See below for how to check the voltage for each wiring position))



How to Test (⇒Refer to page 6, [How to use the Voltage Detector] .)

1. Turn the key to OFF or LOCK. Please put gear into N (Neutral).
2. Check the terminal for each of the connections as designated in the separate sheet "Wiring Chart".

The Wire color of the product	Not Press Down on Brake Pedal	Press Down on Brake Pedal	
Red	☀ (12V)	☀ (12V)	Brake Power
Gray	○ (0V)	☀ (12V)	Brake Switch Signal

☀: Voltage Tester Lamp ON ○: OFF

※If there are four(or more) wires, do not wire the remaining (OFF 0V).

Earth

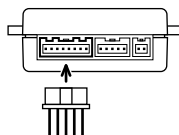
Black with earth terminal Fasten to a screw of a metal part which is earthed.



※Painted screws and screws connected to plastic parts are not earthed; make sure to connect only to a place which is earthed.

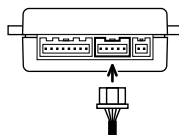
Power Cable

8P Connector Connect to the side of the unit.



Controller

5P Connector Connect to the side of the unit.



After inserting the connector, pull lightly to make sure that it is securely locked.

Select a Wiring Method

Select from either "Connect Directly" or "Connect using Brake Harness" and carry out directions as stated.

① After having tested voltage at the positions to be wired, connect as directed.

② In case of the car model which is blank of Wire Numbers or Brake Harness Connection Color of "Wiring Chart", please make sure to carry out a voltage test and connect as directed.

Connect Directly

Connect the Red and Gray wires to the corresponding wire numbers found in the "Wiring Chart" using Cut connector which is included.

(⇒Refer to page 6 [Reference 2] "How to use the Cut Connectors")

⚠ Note that the colors listed in the chart under "Brake Harness Connection Color" are not the colors of the wires on the car side.

e.g. TOYOTA 86 (H24.4 ~)

車名	年式	ブレーキハーネス品番	直接接続 接続番号	ブレーキハーネス 接続色
86	H24.4 ~	BR-7	② ①	赤 灰 赤 灰 黄 青

Connection Numbers

Gray Red

(BR-7)

Switch Connector

Wire leading from product

② ①

Gray

Connect Using Brake Harness (sold separately)

Connect the Red and Gray wires to the corresponding wire colors found in the "Wiring Chart".

(⇒For more details, please refer to the brake harness manual.)

e.g.) TOYOTA 86 (H24.4 ~)

車名	年式	ブレーキハーネス品番	直接接続 接続番号	ブレーキハーネス 接続色
86	H24.5 ~	BR-7	2 1	赤 灰 赤 灰 黄 青

Connection Colors

Car Speed Signal

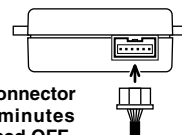
Orange Confirm the positions on the "Wiring Chart" and then connect.

(⇒Refer to page 6 [Reference 2] "How to use the Cut Connectors")

※Connect only to the cables on the car side as directed. (Do not wire the speed signal to the CAN-BUS adaptor.)

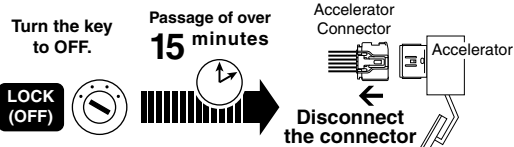
Special Model Specific Harness (sold separately)

6P Connector Connect to the side of the unit.



⚠ Only disconnect the accelerator connector after having waited at least 15 minutes from the time that the key was turned OFF.

Depending on the type of vehicle, if the connector is disconnected before the ECU power is switched OFF the Check Engine Light may go on. (If the Light comes on ⇒Refer to page 12, "How to Turn Off the Check Engine Light")



※For details about connecting the Specialized Harness, please refer to the user's manual that came with that harness.

Before Using

Features

Connecting The Wires

Installing The Product

Initial Settings

Speed Pulse Settings

How to Operate

Trouble-Shooting

[Reference 1] How to use the Voltage Detector (supplied with product)

1 Loosen an earthed screw, insert and fasten the wire tip (coiled wire).

※ As an earthing screw, only use a screw that is fastened to a metal part. Painted screws and screws connected to plastic parts become insulated and cannot carry electricity.

2 Connect the tip of the LED to the place you wish to test voltage.

Lamp on : 12V
Lamp off : 0V

Metal part
Wire tip

Plastic part
Painted screw

Earth (Screw, etc...) Voltage Detector (supplied with product)

LED lamp

In some car models, voltage detector which is supplied with product doesn't work because of the current capacity shortage. Please use analog multimeter and others in this case.

[Reference 2] How to use the Cut Connectors

1 10 mm
Peel off of the vinyl cover at connection.

2 10 mm
Peel off of the vinyl cover at the end of the product's wire.

3
Wrap around both wire coils.

4
Close tightly with cut connector.

5
Insulate with vinyl tape.

When crimping, please use crimpers or use pliers to bend and then solder together.

[Reference 3] How to use the Male Connectors

1 Male sleeve Wire
Pull the cable through the male sleeve.

2 10 mm
Remove about 10 mm of the cable casing.

3
Turn back the tip of the wires.

4 Male Connector
Connect the male connector to the end of the cable.

5 Crimp these places
Crimp down with crimpers to make sure that the inner wires are firmly connected to the inner part of the connector and that the cable section is connected to the outer part of the connector.

6
Affix the male sleeve to the places as mentioned above.

NOTE: After connecting the male and female connectors, make sure to firmly twist the male sleeve inside the female sleeve.

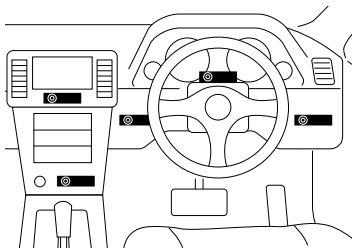
procedure 2**Installing The Product**

Please be sure to bundle away all wires with tape, etc...

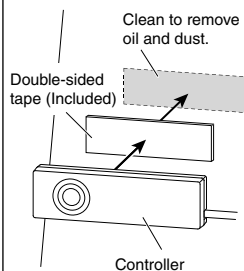
While in use if wires become free they may interfere with driving and cause accidents. Also, wires which are smashed or crushed may result in a short and can be extremely dangerous.

Installing The Controller

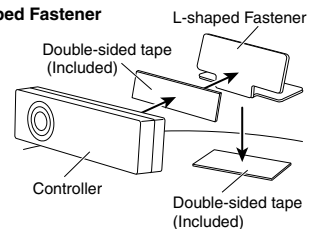
(Example of Installation)



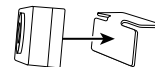
Install the Controller to a position which is easy to see.

● Fastening to a Flat Place**● Using the L-shaped Fastener**

By using the L-shaped Fastener that comes with this product, it is possible to install the unit on the dashboard even if it is curved or on an angle.



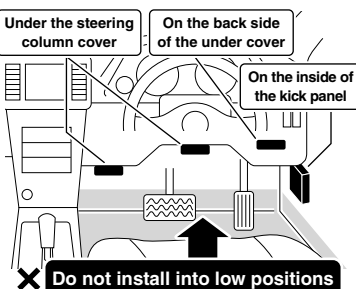
Note: It is possible to install the L-shaped Fastener in the reverse direction.



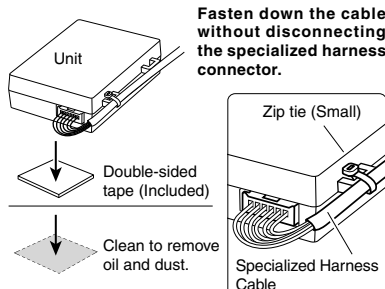
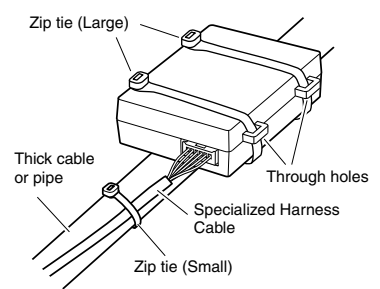
Adjustable angle for easier viewing

Installing The Unit

(Example of Installation)



As shown in the diagram below, fasten the unit into positions not usually affected by water.

● Fastening to a Flat Place**● When Fastening to a Cable or Pipe**

procedure 3

Initial Settings (Degree of Acceleration Setting)

Make sure to carry out these settings.

When installing for the first time



Initial Settings

When installing into a different car



Initial Settings

- This operation sets the car's accelerator characteristics into the controller unit.
- If the "Initial Settings" are not carried out, the unit will remain in NORMAL Mode even if the Mode is switched.
- If this settings have been improperly made a Check Engine Light may go on.

Before making the "Initial Settings"



1. Make settings only after having completed all wiring (connector installation).
2. Make settings with the **key in the ON position (engine not running)** and the gear in **N (Neutral)**.

[Making the Settings]

■ : Controller Display Area, () contains additional explanation

1

Key ON.

(Engine not running)

- **nor** will appear.

nor
(NORMAL Mode)



Without press the clutch pedal, press down twice

- ⚠ If **nor** does not appear, press the MODE switch until **nor** appears.

2

Press the UP switch for 10 seconds or longer to change the display to 0.



Press until "0" appears

car ⇒ **-5-** **-4-** ... **-0-**

(Count down from 5 to 0 after the **car** blink.)

3

When 0 appears release the UP switch.

-0-



Release

4

Accelerator pedal is not pressed down.

(Release the accelerator to 0%)

(e.g.) **L15**

(Voltage Display: e.g., 1.5V. The values shown in the display will vary depending on the type of car.)



0%

5

With the accelerator at 0%, press the BLP switch.

- **Set** will appear.

Set



Press

Set to 0%

6

Pedal is completely pressed down.

(Press in on the accelerator to 100%)

(e.g.) **H45**

(Voltage Display: e.g., 4.5V. The values shown in the display will vary depending on the type of car.)



100%

7

With the accelerator at 100%, press the BLP switch.

- **Set** will appear.

Set

- ⚠ If **Err** is displayed

If after the **Err** is shown the display returns to as shown in 4 (L15 or so on), it means that the degree of acceleration settings have not been confirmed properly. Re-do the settings from step 4.



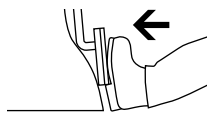
Press

Set to 100%

8

Press down on the accelerator pedal until 100 appears.

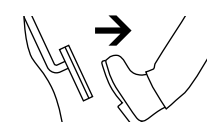
Set ⇒ **nor** ⇒ **100**



9

Once the display changes to 100 release the accelerator.

100 ⇒ **nor**



10

Setting Completed

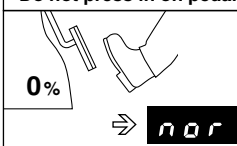
If the device is re-installed into a different vehicle, make sure to carry out these settings again.

After having finished settings and the battery or wires have been disconnected it is not necessary to carry out "Initial Settings".

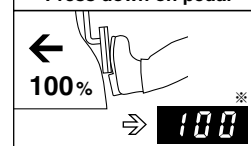
Check the Settings

(If the display is incorrect start again from step 2 above.)

Do not press in on pedal



Press down on pedal



*Depending on characteristics of the accelerator or on how the accelerator is stepped on the display may read **R95** (95%).

Before Using

Features

Connecting The Wires

Installing The Product

Initial Settings

Make sure to carry out this operation.

Speed Pulse Settings









How to Operate

Trouble-Shooting


procedure 4

Speed Pulse Settings

For details about Pulse settings, see the "Wiring Chart".

- 1 Key ON.**
 (Engine not running)
 ● **nor** will appear.
 (NORMAL Mode)
 or 
 Without press the clutch, press down twice
 If **nor** does not appear, press the MODE switch until **nor** appears.
 - 2 Press the DOWN switch for 3 seconds.**
 ● **PLS** will appear.
 Press the switch for 3 seconds
 - 3 Release the DOWN switch.**
 ● The pulse number will appear.
 Release
 - 4 Press the UP / DOWN switches to select the desired pulse setting.**
 Press
P-2 ↔ **P-4** ↔ **P-8** ↔ **P16**
 (Factory Setting)
 - 5 If no operation is carried out for 3 seconds, the display will begin blinking.**

 - 6 If no operation is carried out for 5 seconds, the display will change from blinking to NORMAL Mode.**
nor Setting Completed
-  Make sure to set the car's speed pulse settings correctly. If the pulse settings are incorrect, the Auto-Blipping will not work with the setting speed.

Operating the Auto-Blipping

-  ● Since Auto-Blipping is a useful function for sports driving, please set to OFF in the city.
 ● If it is slightly accelerated when releasing the clutch pedal, please adjust Auto-Blipping setting values lower because the values might be too high.

BLIPPING is the action to increase Engine Rotation which decreased by braking. When using blipping to raise the Engine Rotation, it is possible to fine tune the settings for degree of acceleration, time length of operation and the speed at which blipping starts.

Adjusting Auto-Blipping









Although amount of increase in engine rotation on Auto-Blipping is different by car performance and driving conditions, basically it could be the most suitable settings that cause less acceleration and deceleration when releasing the clutch pedal in addition to downshift smoothly.

In operation of Auto-Blipping with 3rd gear and about 3000rpm, basically Engine Rotation will increase about 1000rpm.

[Value of settings]	Range of settings	Adjustment unit	Initial value	Basic value of settings
Degree of acceleration	30 ~ 50 %	10 %	30 %	40 ~ 50 %
Time length of operation	0.2 ~ 0.6 sec	0.1 sec	0.2 sec	0.3 ~ 0.5 sec
The minimum speed of blipping start	30 ~ 60 km/h	10 km/h	30 km/h	50 km/h


Adjust

Please increase gradually from the minimum adjustment.


- 1 Engine Start.**
 START
- 2 Press the SET switch to select the desired setting mode. (Blinking)**
 Degree of acceleration (30 ~ 50 %)
 Time length of operation (0.2 ~ 0.6 sec)
 The speed at which blipping starts (30 ~ 60 km/h)
 Press



- 3 Press the UP / DOWN switches to select the desired setting.**
 Values Up
 Values Down
- 4 Back to normal display with no operation for 3 seconds or pressing the BLP switch.**
 or 
 3 seconds
Setting Completed


Set

When the engine starts, Auto-Blipping is OFF. Need to turn ON when it is used.


1 Engine Start.
 **START**

2 Mode Display

3 Change with each pressing of the BLP switch.
 **Press**




Auto-Blipping
ON




Auto-Blipping
OFF

4 Back to normal display with no operation for 3 seconds.

Note: You can check the ON / OFF, by checking the dot lighting or not on normal display.



Dot light on
ON




Dot light off
OFF

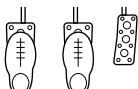
Activate

Depress the Clutch while stepping on the brake, blipping works automatically.


1 Start Running.
(Setting speed or above.)




2 Depress the clutch while stepping on the brake.



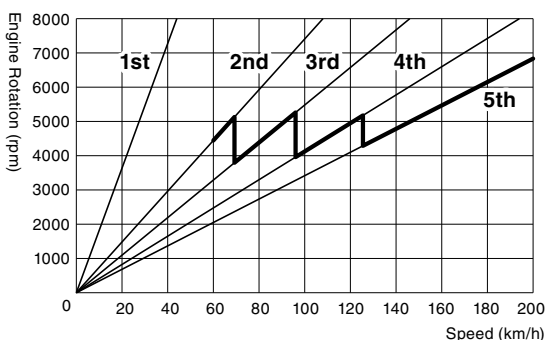
3 Auto-Blipping function operate.
(The rpms increase.)



4 Release the clutch.
(Downshift completed.)



[Reference 1] Speed and rpm of each gear (SUZUKI SWIFT ZC31S)



Settings of the car with standard "Acceleration switching function".

※"Acceleration switching function" is about a standard function which switches acceleration like SUBARU SI drive and HONDA 3-mode drive system.

Since the amount of increase in engine rotation changes depending on the car setting mode, please adjust blipping settings according to the setting mode.

e.g. HONDA CR-Z 3-mode drive system

Setting mode of car side	Amount of increase in engine rotation
NORMAL	1000rpm
SPORT	1800rpm
ECON	400rpm

[Reference 2] Example of settings

Car model	Degree of acceleration	Time
Vitz	30%	0.3 sec
86・BRZ	40%	0.3 sec
CR-Z	40%	0.3 sec
Civic(FD2)	40%	0.4 sec

Car model	Degree of acceleration	Time
IMPREZA(GRB)	40%	0.3 sec
ROADSTER(NCEC)	30%	0.3 sec
SWIFT(ZC31S)	30%	0.4 sec
COLT	30%	0.4 sec

Auto-Blipping Test

After having carried out all of the necessary wiring and making settings in "Initial Settings" and "Speed Pulse Settings" please carry out a Auto-Blipping test.



Please carry out the test drive in a safe spacious area away from pedestrians and traffic.
Please make sure to carefully read this manual and understand how to operate the unit before taking a test run.

1

Engine Start.
 **START**

2

Press the SET switch to make each setting.
(Test setting values: A30, 10.2, S30)
⇒ See page 8 to 9 for details.



3

Press the BLP switch.
(Make sure the dot blinks.)



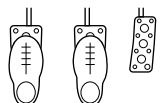
4

Start the Test Run.
(40 km/h, not lower than 3rd gear)



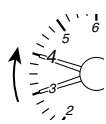
5

Depress the clutch pedal while stepping on the brake.
(When pressing the clutch, the speed must be not lower than 30 km/h.)



6

Auto-Blipping function operate.
(The rpms increase.)



If Auto-Blipping will not operate

Check the right if Auto-Blipping will not work at **[6]**.


- Poor settings of "Initial Settings" and "Speed Pulse Settings". (⇒ Page 7 to 8)
- Poor connection of **(Gray)** and **(Orange)**. (⇒ Page 4 to 5)
- Poor connection of Clutch adapter. (⇒ Page 4)
- Not reached at the set speed. (⇒ Page 8)
- Auto-Blipping setting value is too low. (⇒ Page 8 to 9)
- Not enough to press the Clutch pedal.


Operating the Throttle Controller


Switching Response Levels


Make settings for response in each Mode.


Switch the Mode

1 Engine Start.  **START**

2 The Mode will change with each pressing of the **MODE** switch.  **Press**


SPORTS Mode  **Higher Response**

NORMAL Mode  **Normal Conditions**

ECO Mode  **Lower Response**

※ For safety, when changing modes always go through **nor** (NORMAL) one time.

Adjust the Change Ratio for each Mode

 When making adjustments to the change ratios, begin at the lowest setting and slowly make changes while continually checking acceleration.

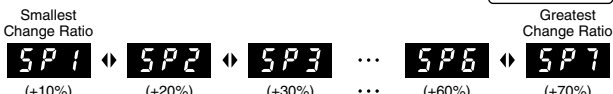
● Switch the Change Ratio for SPORTS Mode

SP0 is displayed, the ratio will change with each pressing of the **UP / DOWN** switch.



Greatest Change Ratio (SP7 side)

Lowest Change Ratio (SP1 side)



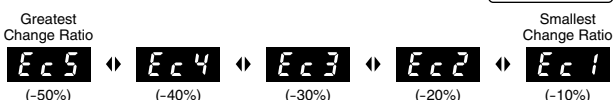
● Switch the Change Ratio for ECO Mode

Ec0 is displayed, the ratio will change with each pressing of the **UP / DOWN** switch.



Lowest Change Ratio (Ec1 side)

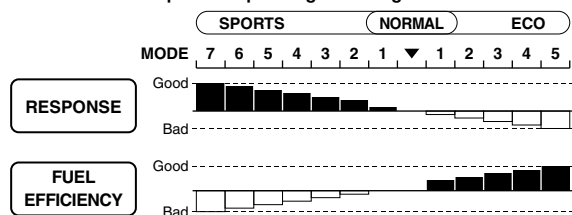
Greatest Change Ratio (Ec5 side)



Saving Settings

All settings are saved even after the engine has been turned off. However, if the engine is turned off in 5 seconds or less after the last setting operation was carried out, the settings will not be saved.

[Reference 1] Examples of changes in fuel consumption and response depending on change ratios



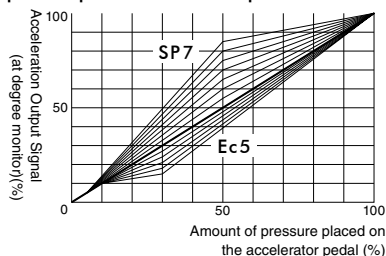
※ In ECO Mode, because response is less than the standard fuel efficiency can be improved. However, if rapid acceleration is purposefully carried out fuel efficiency will be reduced.

※ The changes in response will be greater as the vehicle's power is greater.

[Reference 2] Basic Control Features

The changes throughout each Mode will be controlled smoothly without perceptible steps.

Acceleration output signal based on amount of pressure placed on accelerator pedal

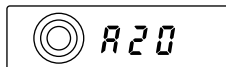


Degree of Acceleration Monitor

Displays the amount of pressure placed on the accelerator pedal. (output signal) [15 - 100%, 5% unit]

Degree of Acceleration Monitor shows the rate of acceleration output to the ECU where 0 represents the pedal not being pressed in and 100 equals when the pedal is fully pressed down.

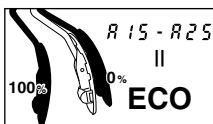
※ Depending on characteristics of the accelerator or on how the accelerator is stepped on the display may read up to 95%.



Degree of Acceleration (output) 20%

USE 1 Check acceleration during ECO driving

To ensure reduced fuel consumption during acceleration the degree of acceleration should be between 15% and 25%. To further improve results use ECO Mode when wishing to save fuel.



USE 2 Check acceleration during regular driving

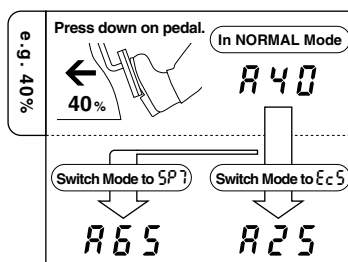
Please use to check the degree of acceleration for any type of driving, not just ECO Mode.

USE 3 Check control status

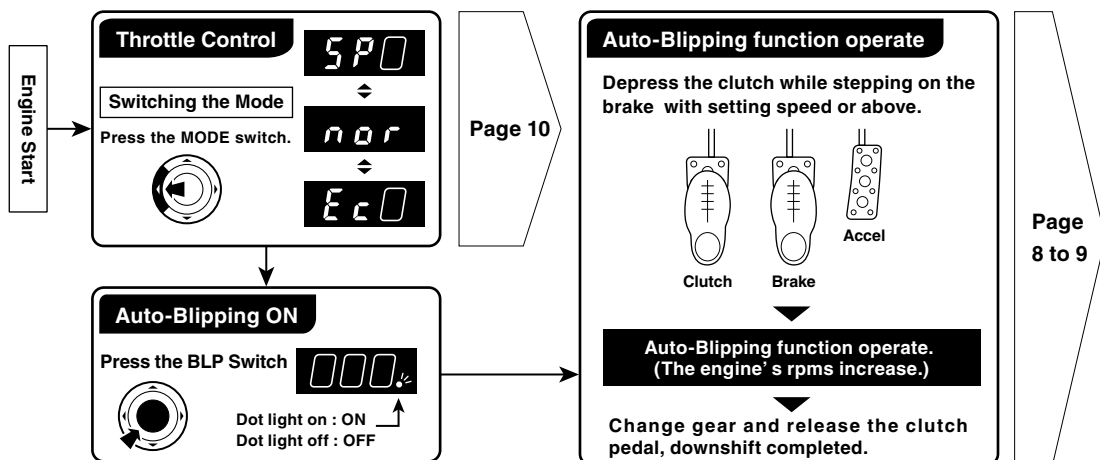
With the key in the ON position and under NORMAL Mode press in the pedal until it reaches 40% (R40), if the Mode is changed to SP7 the display should read 65% (R65) and if placed in Ec5 the display should change to 25% (R25).

[⇒ See the above Graph of "Basic Control Features"]

※ The actual display may differ slightly.






Basic Operation



Troubleshooting

Concerning Basic Operations and Car Problems

Trouble	Possible Causes	Possible Solutions
The key switch is set to ON but the display of the Main Unit will not light up. OR the display goes OFF while in use.	Brake fuse is burned out.	Please reconfirm whether wiring and connections are correct or not.
	The (Red) and (Black) wire may have been improperly wired or there is a poor connection.	
	Poor connection of (5P Connector) , (8P Connector) and (6P Connector) .	
	Poor connection of (Specialized Harness) . (Specialized Harness) being used is incorrect.	
With the key switched to ON, only the dot appears. 	The (Black) wire may have been improperly wired or there is a poor connection.	Please reconfirm whether wiring and connections are correct or not.
It will not go into "Initial Settings" or "Speed Pulse Settings".	The (Orange) wire may have been improperly wired or there is a poor connection.	Please reconfirm whether wiring and connections are correct or not.
	The car is being driven.	Carry out after stopping the car.
While making "Initial Settings" an Err appears in the display. 	The "Initial Settings" have not been properly carried out.	Make the "Initial Settings" (⇒Page 7 of this manual).
nor appears in the display and won't work.	The "Initial Settings" have not been properly carried out.	Make the "Initial Settings" (⇒Page 7 of this manual).
A Check Engine Light has gone on. 	The accelerator connector or (Specialized Harness) was disconnected with the key switch in the ON position or within 15 minutes after having turned the key to OFF.	Re-connect the disconnected connector and turn off the Light (⇒Page 12 of this manual).
	The "Initial Settings" have not been properly carried out.	Make the "Initial Settings" (⇒Page 7 of this manual) and turn off the Check Engine Light (⇒Page 12).
	The product was in a mode other than NORMAL Mode when removed from a car and installed into a different car.	After returning it to NORMAL Mode, carry out the "Initial Settings" (⇒Page 7 of this manual) and turn off the Check Engine Light (⇒Page 12).

Before
Using

Features

Connecting
The Wires

Installing
The Product

Initial
Settings

Speed Pulse
Settings

How to
Operate

Trouble-
Shooting

Concerning the Throttle Controller

Trouble	Possible Causes	Possible Solutions
Even if the Mode is changed, the changes cannot be felt.	The "Initial Settings" have not been properly carried out.	Make the "Initial Settings" (⇒Page 7 of this manual).
The Mode and/or the setting of change ratios can not be saved.	The key has been turned OFF immediately after having finished the setting of change ratios or changing the Mode.	After having made settings of change ratios or changing the Mode, wait for at least 5 seconds before turning the key OFF.
With the Key ON, Ec or SP in display and change to nor .	The "Initial Settings" have not been properly carried out.	Make the "Initial Settings" (⇒Page 7 of this manual).

Concerning Auto-Blipping

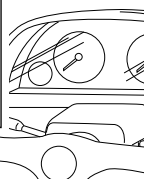
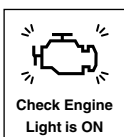
Trouble	Possible Causes	Possible Solutions
Auto-Blipping will not operate.	The Gray Pink and Orange wires may have been improperly wired or there is a poor connection.	Please reconfirm whether wiring and connections are correct or not (⇒Page 4 to 5 of this manual).
	The clutch adapter may have been improperly wired.	Please reconfirm whether wiring and connections are correct or not (⇒Page 4 of this manual).
	"Speed Pulse Settings" have not been properly carried out.	Make the "Speed Pulse Settings" (⇒Page 8 of this manual).
	The "Initial Settings" have not been properly carried out.	Make the "Initial Settings" (⇒Page 7 of this manual).
	"Auto-Blipping" have not been turned on.	Please reconfirm how to operate Auto-Blipping (⇒Page 8 to 9 of this manual).
	"Auto-Blipping Settings" have not been properly carried out.	Please reconfirm "Auto-Blipping Settings" (⇒Page 8 to 9 of this manual).
	The speed is lower than the setting value.	Please reconfirm "Auto-Blipping Settings" (⇒Page 8 to 9 of this manual).
	Clutch canceller is installed.	May need to remove it.
	Have not pressed brake pedal from starting engine before operating Auto-Blipping.	Press the brake pedal before operating Auto-Blipping.
	Not enough to press the Clutch pedal.	Depress the clutch pedal deeper.
	The brake lamp bulbs have been changed to LED lamp bulbs.	Replace with standard brake lamp bulbs.

Note

How to Turn Off the Check Engine Light

If the Check Engine Light comes on due to some operational mistake, please follow the directions below to turn it off.

- ① Under normal conditions, start and stop the engine several times.
- ② If that does not turn off the lamp, disconnect the cable from minus terminal of the battery for about 10 minutes.
- ③ If that does not turn off the lamp, please consult your local car dealer and have them turn it off.



※Our products have already been recognized as our Industrial Property or are in the process of receiving Industrial Property status.

※We plan in the near future to take all possible legal measures to protect against unfair competition from look-alike products using similar designs, regulating characteristics, circuitry and circuitry layout.

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