USER'S GUIDE (Revision Date : October,2005)

PIVOT

RAIZIN Spark Type V   VS-V

IGNITION
VOLT STABILIZER
**RAIZIN Spark**

Thank you for purchasing our PIVOT product. Please read these instructions carefully before installing or using this device.
● When installing this product, we recommend that if technical knowledge becomes necessary please consult a qualified mechanic.
● Please do not lose this user's guide, as you will held liable for the cost of reissuing it.

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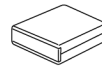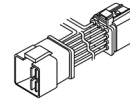
| RAIZIN Unit | Specialized Coupler | Hex Nut ×2 | Double-Sided Tape×3 | User's Guide |

Compatibility List

IMPREZA	H14.11〜	GDA/GDB/GGA	EJ20 TURBO
	H12.10〜	GDB/GGB	
	H12.8〜	GDA/GGA	
	H10.9〜	GC8/GF8（Ftype）	

FORESTER	H14.2〜	SG5	EJ20 TURBO
	H12.1〜	SF5（C,Dtype）	

LEGACY	H10.12〜	BE5	EJ20 TURBO
	H10.6〜	BH5	

⚠ **WARNING**
1. Please install safely and surely by following these instructions.
2. Please be sure to remove the ⊖ battery cable from the terminal before wiring.
3. A mistake in wiring may cause a short circuit and subsequent malfunction to the product or your car.

⚠ **CAUTION**
1. There are some model cars for which this product cannot be connected, has not been checked for wiring compatibility or for which due to the car's wiring there was a lack of results.
2. Please do not attempt to connect a similar product in the same way as our product, or install this product to a car for which the product is not compatible. Doing so may cause damage to your car's parts.

EFFECTS

VS-V due to its car model specialized ignition coil offers you the optimum improvement in performance.
● Torque and Response and Power   ● Improved Fuel Efficiency and Engine Kick Over
● Stabilized Idling   ● The hushed sound of an engine

FEATURES

Stabilized power at the source + Prevention of power loss due to wiring + Strengthened earth !

These bring you improved performance through the ideal ignition. Various types of load resistance and interference at the terminals, fuses, and wires in the electric circuitry on the way to the ignition coil caused ignition loss due to low voltage and pulse noise making performance nowhere near optimum. To help solve this, the Raizin Spark TypeV takes a new approach that helps to bring out 100% of your ignition's performance by stabilizing the ignition coil power at the source, making it possible to wire directly to the battery at the shortest distance, and strengthen the earth to completely prevent power loss due to wiring. It is the epoch-making device that not only stabilizes voltage to bring out the ideal ignition coil firing capabilities but also prevents power loss due wiring.

Coupler Connection for Easy-installation.

All you have to do is wire to the specified engine room coupler and connect to the battery terminals.

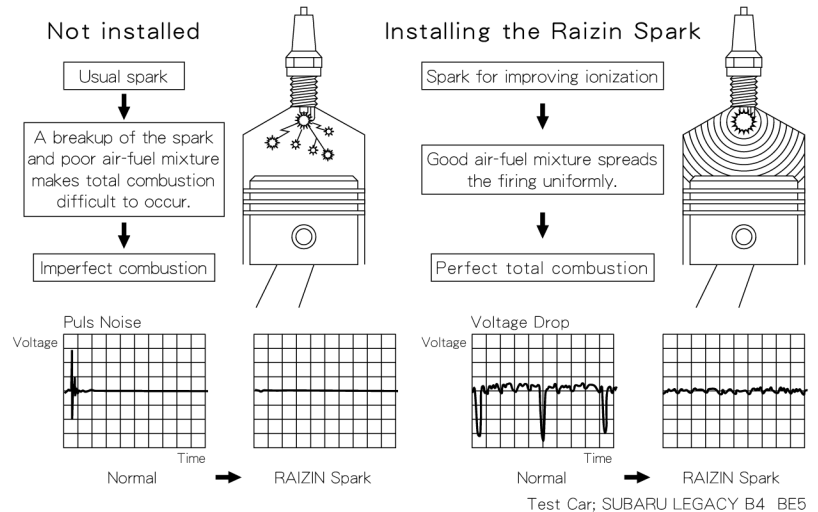### Uses High Frequency Wave Responsivity Circuitry and Dual Power Relays.

The optimum in performance is brought about by our superior circuitry for high frequency wave responsivity and our dual power relay system.

One-touch Removable Fuse.

Even in a case where a fuse burns out, our one-touch removable fuse makes sure there is no fuss or trouble.
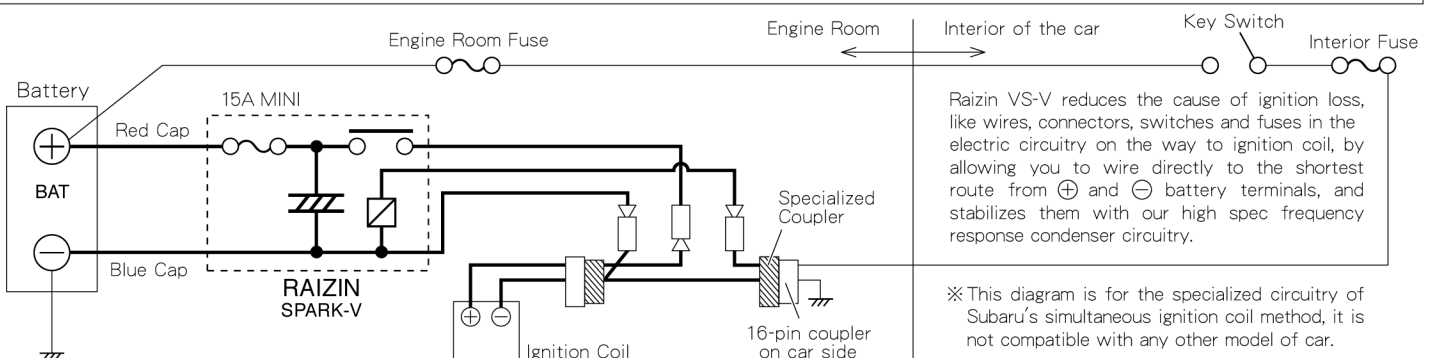
The excited ionization is improved to bring you the ideal combustion.

In order to enable ideal combustion for high power it is not only necessary that the spark be strong for the initial firing, the ignition and for the combustion stroke but also it is necessary to improve the excited ionization in order that the spark is uniformly ignited within the air-fuel mixture and does not disintegrate like a sparkler. Raizin Spark by connecting closer to the ignition coil power supply (preliminary side) with its specialized high frequency wave responsivity circuitry, controls the loss of voltage and the occurrence of pulse noise from the breaking of electrical current. As a result, the break in electrical current is faster, at firing (secondary side) the speed of the spark current rises, the high frequency electromagnetic waves are strengthened, and the excited ionization is improved to bring you the ideal combustion.

Not installed
Usual spark → A breakup of the spark and poor air-fuel mixture makes total combustion difficult to occur. → Imperfect combustion

Installing the Raizin Spark
Spark for improving ionization → Good air-fuel mixture spreads the firing uniformly. → Perfect total combustion

Puls Noise
Voltage / Time
Normal ➡ RAIZIN Spark

Voltage Drop
Voltage / Time
Normal ➡ RAIZIN Spark

Test Car; SUBARU LEGACY B4 BE5

BASIC WIRING and PRINCIPLE

Engine Room Fuse
Engine Room | Interior of the car
Key Switch
Interior Fuse

Battery
15A MINI
Red Cap
BAT
Blue Cap
RAIZIN SPARK-V
Ignition Coil
Specialized Coupler
16-pin coupler on car side

Raizin VS-V reduces the cause of ignition loss, like wires, connectors, switches and fuses in the electric circuitry on the way to ignition coil, by allowing you to wire directly to the shortest route from ⊕ and ⊖ battery terminals, and stabilizes them with our high spec frequency response condenser circuitry.

※ This diagram is for the specialized circuitry of Subaru's simultaneous ignition coil method, it is not compatible with any other model of car.
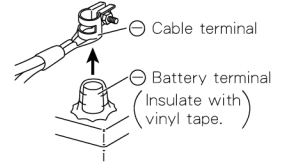
⚠ WARNING   For safety purposes, when working on your car always disconnect the ⊖ battery terminal.
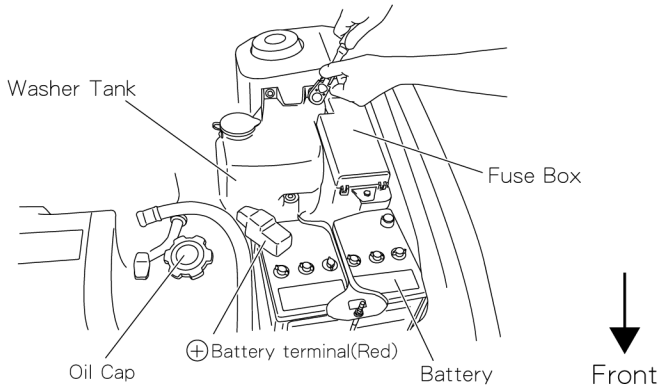
⚠ CAUTION   To prevent short circuits, after wiring, please insulate any extra wire and couplers with insulation tape.
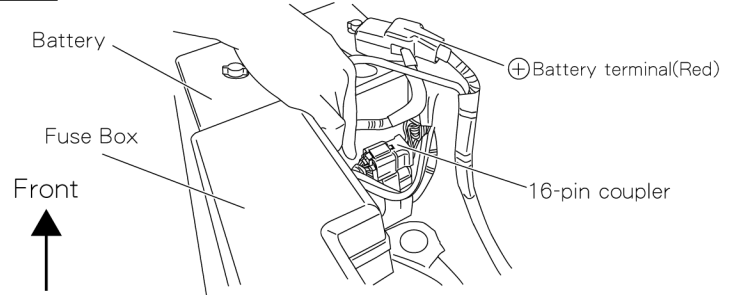
Installation Reparation
① Remove the ⊖ cable from the ⊖ battery terminal.
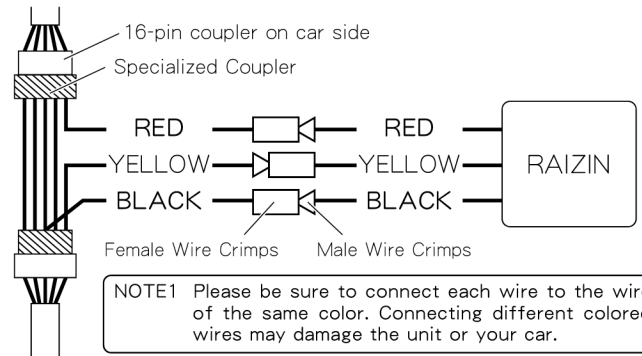② Insulate the ⊖ battery terminal with vinyl tape.

⊖ Cable terminal
⊖ Battery terminal (Insulate with vinyl tape.)

1 Remove the washer tank screws at the backside of the battery.

Washer Tank
Fuse Box
Oil Cap
⊕ Battery terminal (Red)
Battery
Front

2 Remove the couplers.

Washer Tank
Couplers for the washer tank
Battery

3 Pull out the washer tank and put it to the side.

Fuse Box
Battery

4 Pull apart the 16-pincoupler from the back of a battery.

Battery
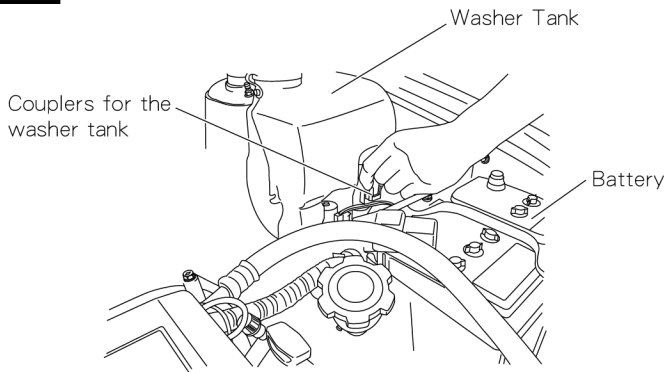Fuse Box
Front
⊕ Battery terminal (Red)
16-pin coupler

5 Connect the specialized coupler to the 16-pin coupler you pulled apart, and connect the wires coming from it to the wires of matching color from the unit.

16-pin coupler on car side
Specialized Coupler
RED ——— RED
YELLOW ——— YELLOW ——— RAIZIN
BLACK ——— BLACK
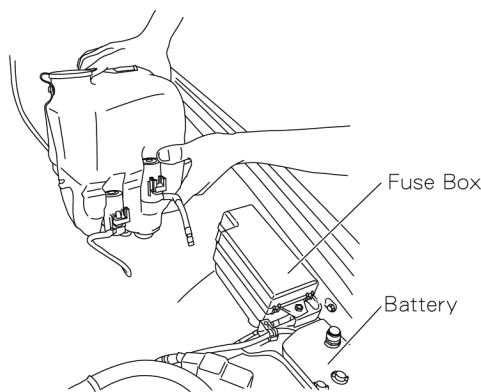Female Wire Crimps   Male Wire Crimps

NOTE1 Please be sure to connect each wire to the wire of the same color. Connecting different colored wires may damage the unit or your car.

NOTE2 Make each connection is inserted completely, and to prevent them from pulling apart, roll each up with insulation tape.
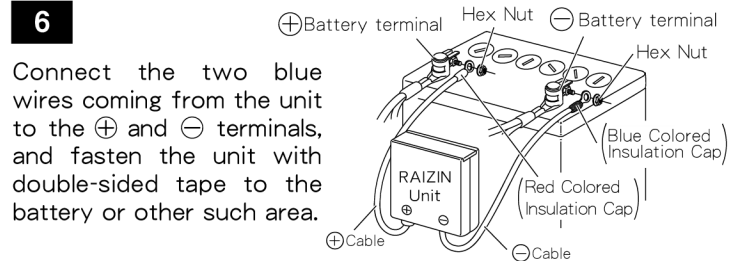
6 Connect the two blue wires coming from the unit to the ⊕ and ⊖ terminals, and fasten the unit with double-sided tape to the battery or other such area.

⊕ Battery terminal   Hex Nut   ⊖ Battery terminal
Hex Nut
Blue Colored Insulation Cap
RAIZIN Unit
Red Colored Insulation Cap
⊕ Cable   ⊖ Cable

7 Put all parts back in the reverse order.

CHECK OPERATION

If the device's LED comes on when the key is switched to ON, it is working properly.
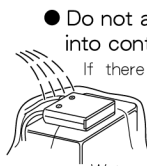
LED lamp goes on
Normal
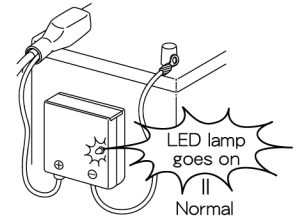
INSTALLING THE RAIZIN UNIT

※ Do not to install in areas subject to water.

Circuitry has waterproof coating. But do not to install in areas subject to water or spray with water.
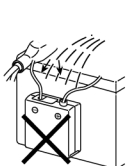
● If you install with the cables going out the top, water may enter the unit and cause damage. Make sure to **install with cables going out the bottom of the unit.**

● **Do not allow water to come into contact with the unit.**

If there is a chance of water coming into contact, please cover with waterproof sheeting.

Waterproof Sheeting, etc.

⚠ CAUTION

1. If you're installing on the side surface, the double-sided tape will take about two hours to become secure. During that time do not allow any vibration to the unit.

2. Reinstalling will cause the tape's adhesive strength to weaken, so please do not to it.

① Clean off all oil and dirt from the bottom of the main unit and affix the double-sided tape included in the kit.

② Clean off all oil and dirt from the installation place and fasten the main unit.

Clean to remove oil & dust.