ISK

pivot

ILLUMI-STARTER

USER'S GUIDE

Thank you for purchasing our PIVOT ISK.
Please read these instructions carefully before installing or using this device.
Pivot Corporation shall in no way be held liable or responsible for any damage, theft or other trouble caused by the misuse or improper installation of this product.

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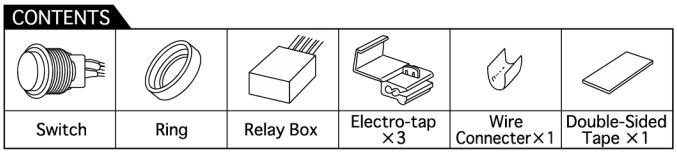


Switch	Ring	Relay Box	Electro-tap ×3	Wire Connecter×1	Double-Sided Tape ×1

・Female Wire Crimps with Cover ×1 ・Brightness-Adjusting Resistor ×2 ・User's guide

FEATURES

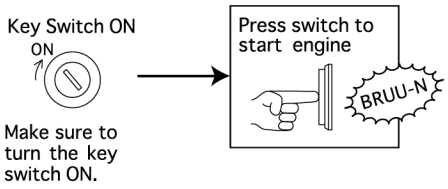
■Change your starter switch to a push button type like those used in racecars.

SWITCH Just open a ϕ22mm hole for easy installation.

EASY-TO INSTALL Easy-to-install harness for turbo timers complete with couplers connected. (possible to wire directly)
※High-capacity 30A relay for starter.

ILLUMINATION Lamp emits highly luminous LED.
By wiring to IGN, you can turn the illumination on by switching the key ON. By wiring to the Illumination, you can turn the illumination on by switching on the parking lights. (Choose one and wire for that choice.)

BASIC USAGE



※Can be used in conjunction with starting by key.
(Wiring method available that allows you to start only by the installed switch.
For details, see [CONNECTING THE WIRES].)

SWITCH INSTALLATION

●Even if you do not have the correct tools to open a ϕ22 hole for the switch installation, open one by following the directions below.

⚠ CAUTION
Be sure to use proper care with all tools so as not to cause injury or fire.

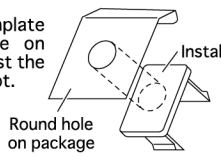
(THINGS TO PREPARE)

Electric Drill (with approximately a ϕ5 bit) | Soldering Iron (If no drill is available) | Nippers | Sanding Rod | Marker (Something to write on plastic.) | Round Hole on Package (A ϕ22 template)

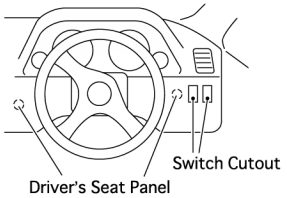
PROCEDURE 1 Decide the Place for Installation.

Make sure you can open a ϕ22 hole where you wish to install.

Place the template or round hole on package against the installation spot.

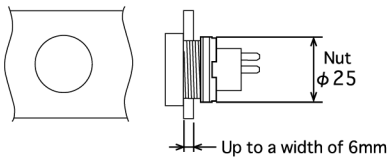


<Example of Place for Installation>



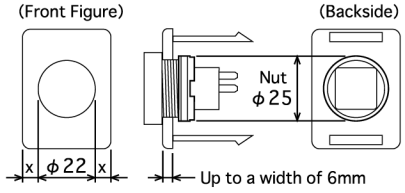
⚠ Confirm the following before starting installation.

IN CASE OF DRIVER'S SEAT PANEL



●On the backside make sure it is possible to tighten a nut (outer diameter of ϕ25).
●It is impossible to remove the panel, make sure there are no wires on the backside in the area.

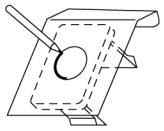
IN CASE OF SWITCH CUTOUT



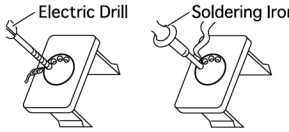
●On the backside make sure it is possible to tighten a nut (outer diameter of ϕ25).
●Make sure that installation will not cause shape changes or damage.
EX : Such as the area marked X in the Front Figure becoming narrow.

PROCEDURE 2 Opening a Hole.

①Place the round hole on package (or template) against the installation spot and with the marker trace a ϕ22 circle.

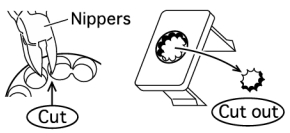


②Open holes on inside of the circle with electric drill or soldering iron.



Open the holes as close as possible to each other.

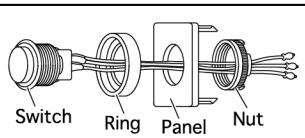
③With the nippers connect the holes to cut a hole out of the middle section.



④Use the sanding rod to take off the remaining parts to enable the inser-tion of the switch.

PROCEDURE 3 Installing the Switch.

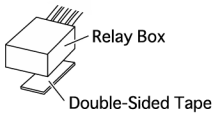
①Pass the switch through the ring.
②Insert the switch through the hole.
③Fasten the nut on the backside.



RELAY BOX INSTALLATION

■Affix the relay box with double-sided tape in an out-of-the-way place.

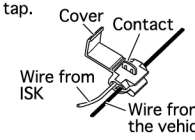
※Make sure to remove all dirt and oil before affixing.



HOW TO USE THE ELECTRO-TAP

※ If possible please solder and insulate properly possible.

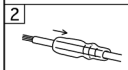
① Set wires in channnels of electro-tap.



② With pliers, firmly press down on contact.

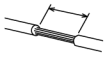
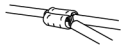
③ Lock the cover.

HOW TO CONNECT FEMALE WIRE CRIMPS

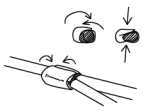
1 Peel off about 8mm of vinyl covering from the tip of the wire and twist center of wire to make thicker.	4  Crush the center tabs of the crimp down to hold the center of the wire.
2  Pull the wire through the cover.	5  Crush down the outer tab of the crimp over the vinyl covering.
3  Place the wire onto the crimp.	Securely connect the male and female crimps, making sure to twist the male cover firmly into the female cover. 

HOW TO USE THE WIRE CONNECTORS

※ If soldering is possible, please do so.

1  Peel off about 10mm of the vinyl cover at connection point.	3  Twist the uncovered wires.
2  Peel off about 10mm of the vinyl cover at the end of the wire to be connected.	4  Close tightly with wire connector.

※Use a crushing tool to press the wire connector. If you do not have such a ※tool, use pliers or such to fold and crush the connector together for a secure contact.
Loose connections can cause wires to come apart, so please make sure the connection is secure.



Be sure to insulate and secure with vinyl electrical tape.

TROUBLESHOOTING

Trouble	Possible Causes		Check Point	
The starter does not turn over when the key is switched ON. ⇓ Check to see if there is a sound in the relay box when you push the switch button.	There is a sound.	Improper ⊕B wiring connection.	If directly connected	●Check the RED wire connections or conditions. ●Check to make sure of a proper connection to the ⊕B.
			If connected with a 3-pin coupler	●Check the wire connections or conditions. ●Make sure you are using the proper harness for your car model.
		Improper ST wiring connection.	●Check the WHITE wire connections or conditions. ●Check to make sure of a proper connection to the ST. (If you have only processed the switch) ●Check the WHITE wire is connected to the car harness side. ●If there are 2 ST wires, make sure they have been processed properly.	
	There is no sound.	Improper IGN wiring connection.	If directly connected	●Check the YELLOW wire connections or conditions. ●Check to make sure of a proper connection to the IGN.
			If connected with a 3-pin coupler	●Check the wire connections or conditions. ●Make sure you are using the proper harness for your car model.
		Improper wiring between relay box and switch.	Make sure that the BLACK wire coming out of the relay box (with female connector) is connected securely to the male connector of the BLACK wire coming from the switch.	
		Improper GND wiring connection.	●Check the contact of the BLACK wire (GND wire). ●Make sure there is a connection to place that is earthed.	

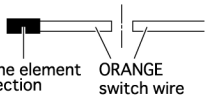
The starter turns over by pushing the switch when the key is on ACC (engine will not start).	The YELLOW wire is connected to the ACC.	If directly connected	Check the place where the YELLOW wire is connected.
		If connected with a 3-pin coupler	Make sure you are using the proper harness for your car model. (The wire connected to the YELLOW wire of the 3-pin coupler goes to the ACC.)

The switch illumination does not come on.	Improper connection of ORANGE switch wire.	●Check the wire connections or conditions. ●Check to make sure of a proper connection. (With the key ON = Power goes to the ignition, With the parking lights ON = to the illumination)
	Improper GND wiring connection.	●Check the contact of the BLACK wire (GND wire). ●Make sure there is a connection to a place that is earthed.

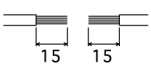
⚠ IF THE ILLUMINATION IS TOO BRIGHT AT NIGHT

※Connect a brightness-adjusting resistor to the middle of the ORANGE switch wire and adjust the brightness.

① Cut the ORANGE switch wire between the element section and the car harness side.



② Peel off the vinyl cover about 15mm from the cut ends.



③ Connect the Resistor to both sides securely.

④ Be sure to insulate and secure with vinyl electrical tape.

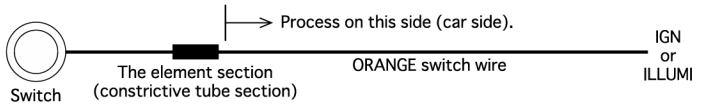
※If it is still bright after connecting 1 resistor, add another resistor directly next to the first one.

※If there is improper contact, the illumination will not light up, so please make sure to connect properly.

⚠ Cautions about the ORANGE switch wire

When cutting or lengthening the ORANGE switch wire, always process the wire on the car side of the element section (constrictive tube section) making sure not to remove the element section.

(If you connect to ⊕12V without the element section, the LED in the illumination will be damaged.)



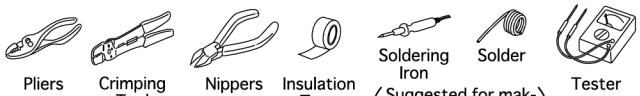
PIVOT CORPORATION 87-3 OKADA SHIMO-OKADA MATSUMOTO-SHI NAGANO 390-0313 TEL0263-46-5901

CONNECTING THE WIRES

⚠ WARNING The improper installation of this product (wiring errors, contact failure, improper insulation) may cause damage to your car including engine failure. Please take great care to install this product safely and properly.

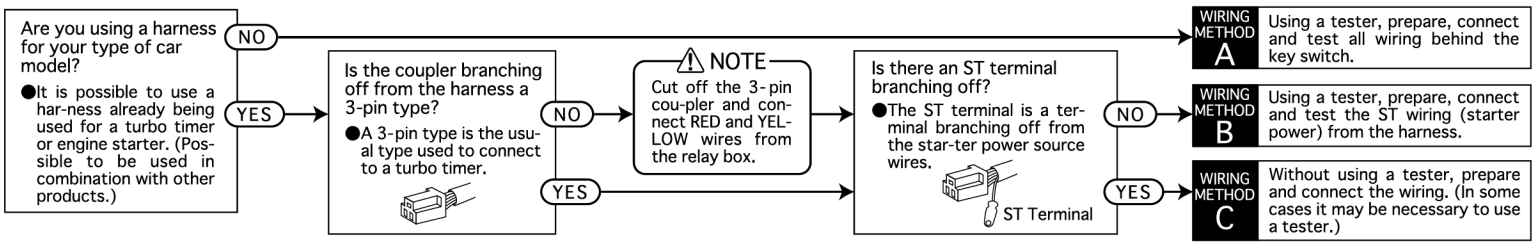
⚠ CAUTION
1. Make sure to disconnect the battery's ⊖terminal when doing any wiring. (Reconnect to check wiring.)
2. Make sure to properly insulate all connections.
3. Make sure to lay wires so as not to cause a short or a break in the wire.

(THINGS TO PREPARE)



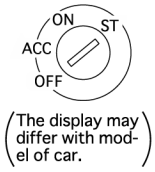
CONNECTION METHOD CHART

※Check which type of connection method you should use.



CHECK THE WIRING WITH A TESTER

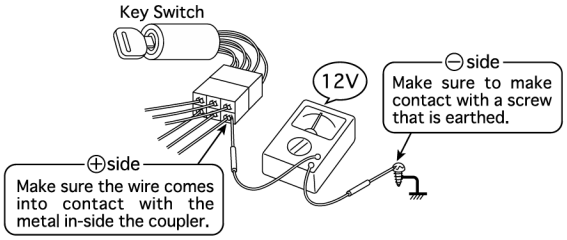
※Check the wiring connected to the back of the key switch, and search for key switch position where there is an electric flow of 12V.



(The display may differ with model of car.)

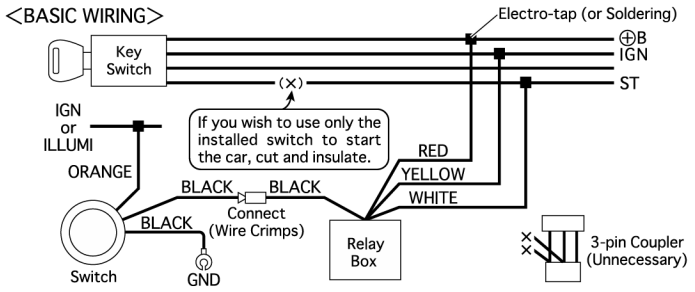
Key Switch Position	Power Types	Notes when Checking	Wire Color
OFF	⊕B(Normal Power)	There is one.	RED
ACC	ACC(Accessory Power)	(Not used with this product.)	—
ON(IG)	IGN(Ignition Power)	Some car models have wires (IG1、IG2)	YELLOW
ST(START)	ST(Starter Power)	Some car models have wires (ST1、ST2)	WHITE

⚠ NOTE Make sure to check the wiring connected to the back of the key switch. Especially the preparation and connection methods differ depending on whether there is 1 ST (starter power) wire or 2 wires. (For details, see each [WIRING METHOD].)



WIRING METHOD A — DIRECT WIRING METHOD (No special harness)

<BASIC WIRING>

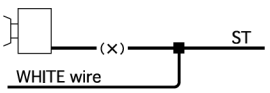


1 CONNECT WHITE WIRE(ST)

※The connection methods differ depending on whether there are 1 or 2 ST (starter power) wires.

If there is 1 ST wire

Key Switch Side ←→ Car Harness Side

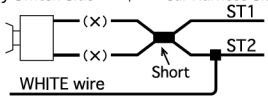


●Connect WHITE wire to the ST.

(If you wish to use only the installed switch to start the car.)
●Cut the ST wire on the key switch side of the spot where the WHITE wire was connected. (Marked × in above figure)
※Make sure to properly insulate the tip of the cut wires.

If there are 2 ST wires

Key Switch Side ←→ Car Harness Side



① Short the 2 ST wires.
② Make sure to insulate wire from the key switch side.

(If you wish to use only the installed switch to start the car.)
●Cut the 2 ST wires on the key switch side of the spot where they are shorted. (Marked × in above figure)
※Make sure to properly insulate the tip of the cut wires.

2 OTHER WIRING

<RED Wire(⊕B)、YELLOW wire(IGN)>
①Cut off the 3-pin coupler.
②Make sure to insulate wires by electro-tap (or soldering).
※If from the tester you find 2 IGN wires, connect the YELLOW wire to one of them.

<BLACK wire (with female connector)>
•Connect the wire to the BLACK switch wire (with male connecter).

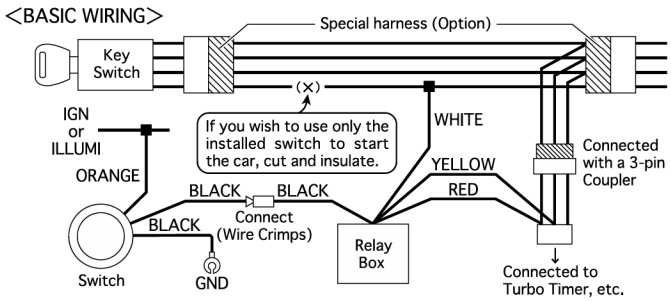
<BLACK wire (GND)>
•Connect the wire with the screw on the car body.

<ORANGE switch wire>
(•If you wish the illumination to come on when the key is turned ON = to the IGN
•If you wish the illumination to come on when the parking lights are turned ON = to Illumination
⇒Choose and connect with a wire connector.)

⚠ If the illumination is too bright at night, connect a brightness-adjusting resistor to the middle of the ORANGE switch wire and adjust the brightness. (See the topics under [Troubleshooting].)

WIRING METHOD B — WIRING METHOD USED WITH SPECIAL HARNESS (The harness does not have ST terminal branching off)

<BASIC WIRING>

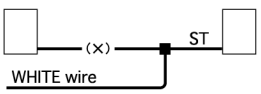


1 CONNECT WHITE WIRE(ST)

※The connection methods differ depending on whether there are 1 or 2 ST (starter power) wires.
※Check the wires that aren't connected to the 3-pin coupler by tester.

If there is 1 ST wire

Key Switch Side ←→ Car Harness Side

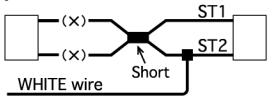


●Connect WHITE wire to the ST.

(If you wish to use only the installed switch to start the car.)
●Cut the ST wire on the key switch side of the spot where the WHITE wire was connected. (Marked × in above figure)
※Make sure to properly insulate the tip of the cut wires.

If there are 2 ST wires

Key Switch Side ←→ Car Harness Side

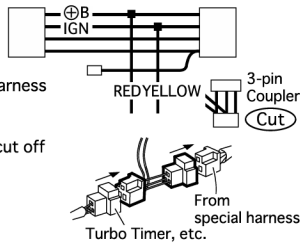


① Short the 2 ST wire.
② Make sure to insulate wire from the key switch side.

(If you wish to use only the installed switch to start the car.)
●Cut the 2 ST wires on the key switch side of the spot where they are shorted. (Marked × in above figure)
※Make sure to properly insulate the tip of the cut wires.

2 OTHER WIRING

<RED Wire(⊕B)、YELLOW wire(IGN)>
•Connect to the 3-pin coupler of the harness.
※If a Turbo Timer is connected.
Connect the 3-pin coupler between the special harness and the Turbo Timer.
※If other than a 3-pin coupler.
Make sure that all connection places are correct, cut off the 3-pin coupler and properly connect each wire.



<BLACK wire (with female connector)>
•Connect the wire to the BLACK switch wire (with male connecter).

<BLACK wire (GND)>
•Connect the wire with the screw on the car body.

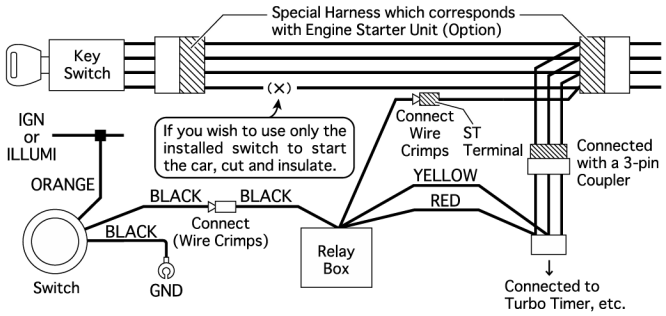
<ORANGE switch wire>
(•If you wish the illumination to come on when the key is turned ON = to the IGN
•If you wish the illumination to come on when the parking lights are turned ON = to Illumination
⇒Choose and connect with a wire connector.)

⚠ If the illumination is too bright at night, connect a brightness-adjusting resistor to the middle of the ORANGE switch wire and adjust the brightness. (See the topics under [Troubleshooting].)

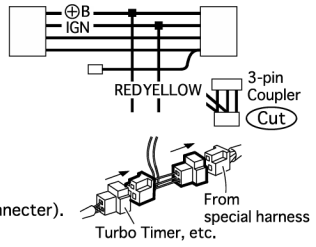
WIRING METHOD **C**

WIRING METHOD USED BY SPECIAL HARNESS WHICH CORRESPONDS WITH ENGINE STARTER UNIT
(The harness has an ST terminal branching off)

<BASIC WIRING>



WIRING OTHER THAN WHITE WIRE



<RED Wire(⊕B)、YELLOW wire(IGN)>
- Connect to the 3-pin coupler of the harness.

※If a Turbo Timer is connected.
Connect the 3-pin coupler between the special harness and the Turbo Timer.

※If other than a 3-pin coupler.
Make sure that all connection places are correct, cut off the 3-pin coupler and properly connect each wire.

<BLACK wire (with female connector)>
- Connect the wire to the BLACK switch wire (with male connecter).

<BLACK wire (GND)>
- Connect the wire with the screw on the car body.

<ORANGE switch wire>
- If you wish the illumination to come on when the key is turned ON = to the IGN
- If you wish the illumination to come on when the parking lights are turned ON = to Illumination

⇒Choose and connect with a wire connector.

⚠ If the illumination is too bright at night, connect a brightness-adjusting resistor to the middle of the ORANGE switch wire and adjust the brightness.
(See the topics under [Troubleshooting].)

CONNECT WHITE WIRE

※Connect the WHITE wire to the ST terminal coming from the harness using a crimp connector.

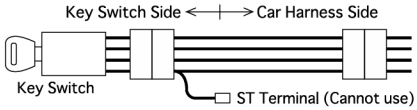
If you wish to use only the installed switch to start the car, the processing and wiring method will differ depending on the type of your car's harness. Please follow the directions below.

1 CHECK WHITE WIRE

※When you install the special harness in your car, check to see if the ST terminal is branching off from the key switch side or the from the harness side.

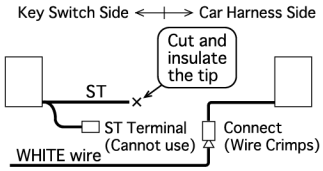
●The ST terminal is branching off from the key switch side.

⚠ Cannot use an ST terminal



2 PREPARE AND CONNECT WHITE WIRE

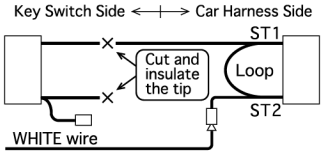
<BASIC WIRING>



① Cut the wire of the special harness connected to the ST terminal. (=ST wire)
② Install a female connector to the ST wire from the car harness side and connect the WHITE wire.
③ Make sure to insulate wire from the key switch side.

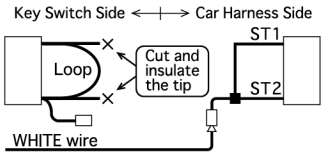
●If the harness connected to the ST terminal has a loop wiring it to another wire. (=2 ST wires)

<If there is a loop on the car harness side>



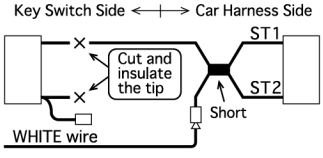
① Cut both wires connected by the loop.
② Install a female connector to the ST wire from the car harness side and connect the WHITE wire.
③ Make sure to properly insulate the remaining tip of the cut wires.

<If there is a loop on the key switch side>



① Cut both wires connected by the loop.
② Install a female connector to the ST wire from the car harness side and connect the WHITE wire.
③ Connect the other ST wire to the ST wire you just connected to WHITE wire.
④ Make sure to insulate wires from the key switch side.

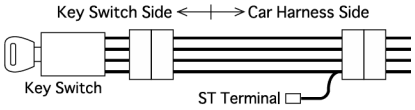
<The wires are shorted on the harness side>



① Cut the 2 wires on the key switch side of the spot where they are shorted.
② Connect the WHITE wire to the car harness side.
③ Make sure to properly insulate the remaining tip of the cut wires.

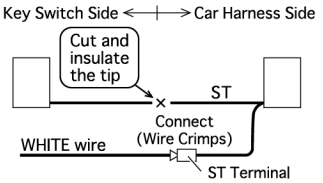
●The ST terminal is branching off from the car harness side.

⚠ Can use an ST terminal



2 PREPARE AND CONNECT WHITE WIRE

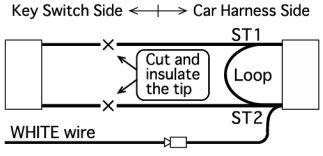
<BASIC WIRING>



① Cut the wire of the special harness connected to the ST terminal. (=ST wire)
② Connect the WHITE wire to the ST terminal.
③ Make sure to properly insulate the remaining tip of the cut wires.

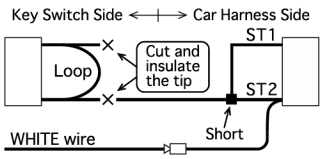
●If the harness connected to the ST terminal has a loop wiring it to another wire. (=2 ST wires)

<If there is a loop on the car harness side>



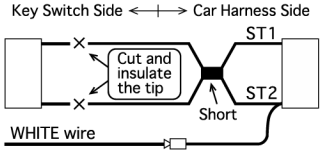
① Cut both wires connected by the loop.
② Connect the WHITE wire to the ST terminal.
③ Make sure to properly insulate the remaining tip of the cut wires.

<If there is a loop on the key switch side>



① Cut both wires connected by the loop.
② Connect the WHITE wire to the ST terminal.
③ Short the 2 wires on the harness side.
④ Make sure to insulate wires from the key switch side.

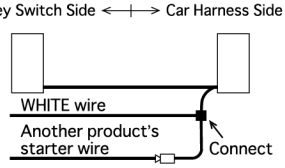
<The wires are shorted on the harness side>



① Cut the 2 wires on the key switch side of the spot where they are shorted.
② Connect the WHITE wire to the ST terminal.
③ Make sure to properly insulate the remaining tip of the cut wires.

●If another product is using the ST terminal

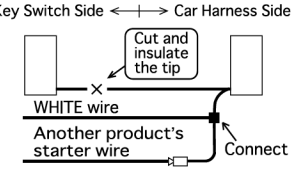
⇒Connect the WHITE wire to the ST terminal or to the starter wire of another company's product by using an electro-tap or other suitable connector.



⚠ If installed for starting by switch only.

Make sure to connect the WHITE wire and/or any other company's starter wire to
the car harness side.

If the WHITE wire and/or any other company's starter wire are connected to the key switch side, you will not be able to start your car.



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