SSK

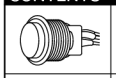
pivot

SECURITY-STARTER

USER'S GUIDE

Thank you for purchasing our PIVOT SSK.
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.

CONTENTS

					
Switch	Ring	Relay Box	Electro-tap ×3	Female Wire Crimps with Cover ×4	Double-Sided Tape ×2

・Brightness-Adjusting Resistor ×2 ・User's Guide

FEATURES

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

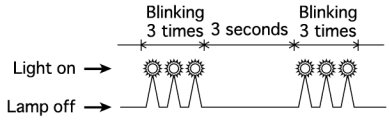
■Includes anti-theft function whereby a secret operation starts the engine.

THEFT PREVENTION	Car theft prevention function prevents the starter from working, if the secret number of times is not pressed. This helps prevent theft by direct battery connection or even by leaving keys in car. Also, even if the car is stolen, it will prevent the car from being started again.
NORMAL OPERATION	When not needed, it is easy to reset the crime prevention function to allow you to start the engine as usual.
SECRET NUMBER OF TIMES	Possible to make secret starter settings in two groups with up to six times each.
ILLUMINATION	Lamp emits highly luminous LED.
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)
CAN BE USED TOGETHER	Possible to use together with remote control starter and / or turbo timer. ※High-capacity 30A relay for starter.

⚠ This product is an anti-theft device designed to help stop simple theft as a result of leaving the keys in the car or theft by the use of a spare key. When you leave your car, please make sure to remove your key from the ignition and lock all doors. In the event that your car is stolen, Pivot Corporation shall accept no responsibility, nor be held legally liable in any way for the theft of your car.

THREATENING BLINK If engine is off, the illumination will blink.

<Example of blinking>



After the key has been switched off the lamp will continually blink 3 times, go off for 3 seconds, blink again 3 times, go off for 3 seconds…

<Incredible Low Cost, No Dead Battery Worries ! >

The warning lamp is designed to run on 1mA of current or about 20% of the power of your car stereo memory, so there is no need to worry about loss of battery power.

30 days of consecutive use of warning lamp = 2 minutes use of headlights

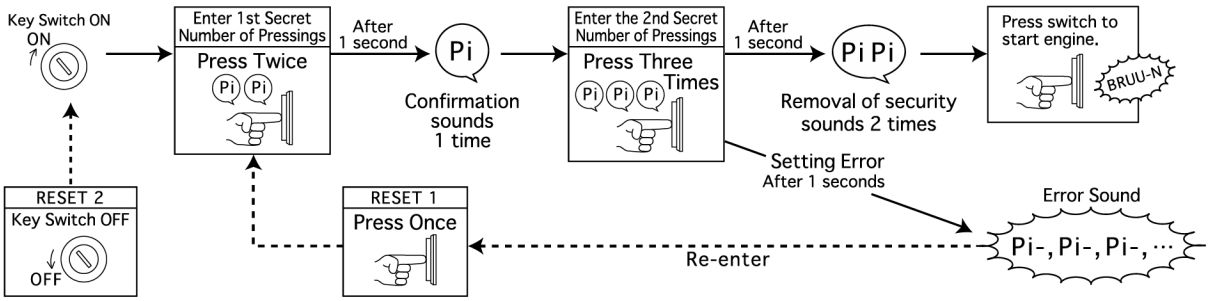
BASIC USAGE

⚠ CAUTION If the operation of the switch has not been successful there will be no sound and that pressing will not be counted, so make sure to press in fully on the button.

HOW TO START IN SECURITY MODE

Press the secret number of times and turn the starter.

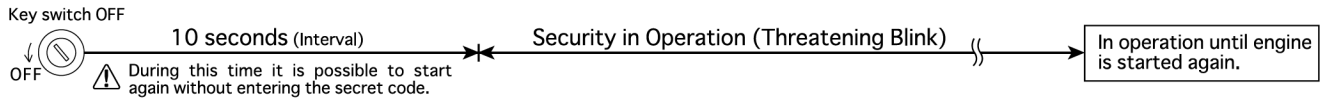
EXAMPLE OF USING If the secret code is 2 - 3.



If you make a mistake in the middle.

●After starting the engine and until it is turned OFF pressing the switch will turn the starter.

USING THE SECURITY MODE



⚠ During this time it is possible to start again without entering the secret code.

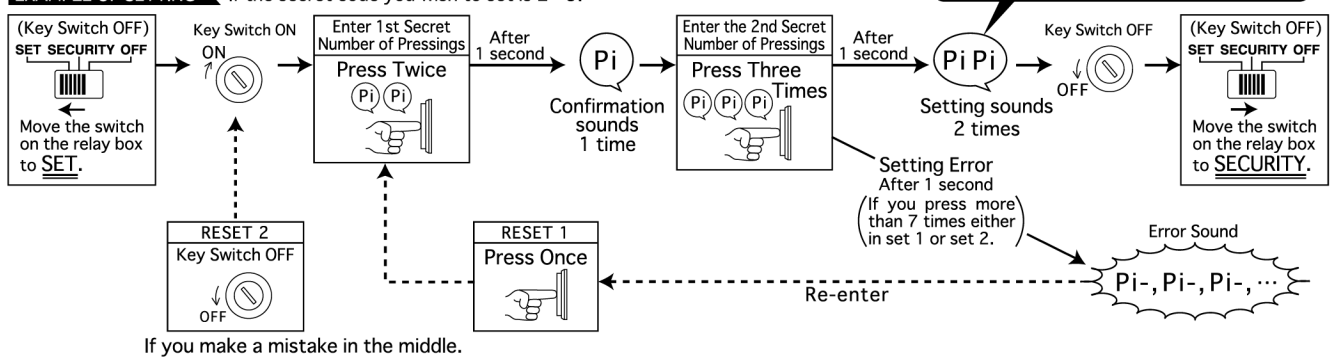
SETTING THE SECRET CODE

■The secret code consists of 2 sets of secret number of pressings from 1 to 6 pressings for a total of 36 combinations from which you can choose. (1-1,1-2,1-3,・・・,6-4,6-5,6-6)

■The default code is 1 - 1.

EXAMPLE OF SETTING If the secret code you wish to set is 2 - 3.

⚠ If you turn the key OFF before the setting sound is heard the settings will be lost.

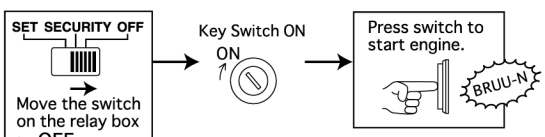


If you make a mistake in the middle.

⚠ When you move the switch on the relay box, make sure that the key is switched OFF.
If the key is ON, the moving of the switch will not be effective inside.

NORMAL STARTING MODE

By pressing the starter will turn over.



If you wish to change from normal starting mode to security mode, make sure the key is turned OFF.

●By moving the switch on the relay box to SECURITY, the secret number of pressings will be saved.

●If the key is ON, can be changed to the normal starting mode.

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.

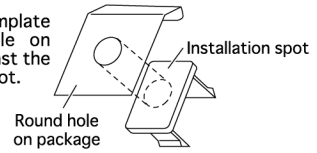
(THINGS TO PREPARE)

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)

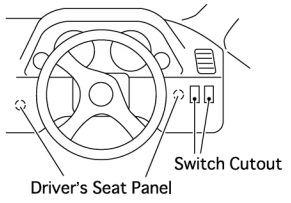
PROCEDURE 1 Decide the Place for Installation.

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.

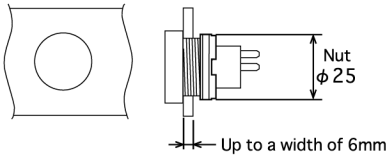


<Example of Place for Installation>



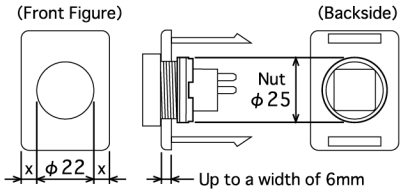
⚠ Confirm the following before starting installation.

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.

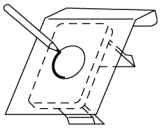
IN CASE OF SWITCH CUTOUT



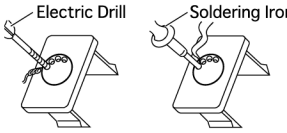
●On the backside make sure it is possible to tighten a nut (outer diameter of φ25).
●Make sure that installation will not cause shape changes or damage.
EX : Such as the area marked X in the Front Figure becoming narrow.

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.

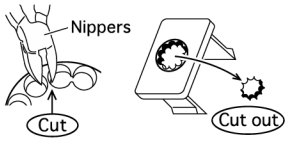


②Open holes on inside of the circle with electric drill or soldering iron.



Open the holes as close as possible to each other.

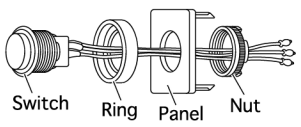
③With the nippers connect the holes to cut a hole out of the middle section.



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

PROCEDURE 3 Installing the Switch.

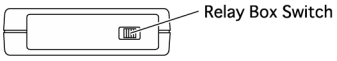
①Pass the switch through the ring.
②Insert the switch through the hole.
③Fasten the nut on the backside.



RELAY BOX INSTALLATION

※Affix with the double-sided tape included. (Make sure to remove all dirt and oil before affixing.)

■Decide the Relay Box installation spot depending on your needs.



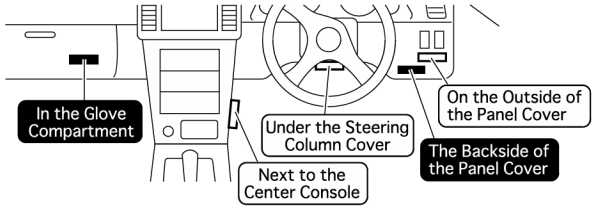
●If using for Security Purposes

⇒Install in a place where it is difficult to move the switch.
EX : the backside of the panel cover, in the glove compartment, etc.

●If also using under Normal Starting Conditions

⇒Install in a place where it is easy to move the switch.
EX: on the outside of the panel cover, next to the center console, under the steering column cover, etc.

<Example of Place for Installation>



TROUBLESHOOTING

● Conditions that may point to wiring problems

Trouble	Possible Causes	Check Point	
The key is OFF but the warning lamp doesn't blink.	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 connection of RED or WHITE switch wire.	Check the wire connections or conditions.	
The key is ON but the warning lamp continues to blink.	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.
The key is ON, but the illumination goes off.	Improper connection of GND.	Check the BLACK wire connections or conditions. Make sure there is a connection to place that is earthed.	

Trouble	Possible Causes	Check Point
The key turns the starter over.	Incomplete ST wiring.	Check to see if the ST wire has been cut or not at the car side.

Trouble	Possible Causes		
The relay box switch is OFF, but 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 ST wiring connection.	WHITE wire (with male connector)	●Check the connection on the car harness side. ●Check the wire connections or conditions.
		If there are 2 ST wires	Check the connections of the 2 ST wires at the car harness side.
	(There is no sound.) Improper connection of ORANGE switch wire.	Check the wire connections or conditions.	

Trouble	Possible Causes		
With the key at ACC, the illumination lights up. (With the key at ACC, it is possible to enter secret codes and turn over the starter.)	The YELLOW wire is connected to the ACC.	If directly connected	Check to make sure of a improper connection to the ACC.
		If connected with a 3-pin coupler	Make sure you are using the proper harness for your car model.

● Conditions that may point to operating problems

Trouble	Possible Causes	Check Point
With the key ON by pressing the switch the starter turns over.	The switch on the relay box is OFF.	Check the relay box switch. (Make sure that the key is in the OFF position when moving the switch from OFF to SECURITY.)
	When moving the switch the key was not in the OFF position.	
After entering the secret code and hearing the removal of security sound 2 times, upon pressing the switch the starter does not turn over.	The switch on the relay box is SET.	Check the relay box switch. (Make sure that the key is in the OFF position when moving the switch from OFF to SECURITY.)
	When moving the switch the key was not in the OFF position.	

Trouble	Possible Causes	Check Point
After entering the secret code and entering error occurs.	The switch was not pressed in hard enough.	Make sure to press in hard enough until a sound is heard.
	After entering the first set of the code, the second set was entered without waiting for the confirmation sound.	Wait to hear the confirmation sound before en-tering the second set of pressings.
	The number of pressings entered was incorrect.	Make sure to enter the correct number of pre-ssings. (If you forget the secret code setting) Follow directions as in [SETTING THE SECRET CODE] and remember it.

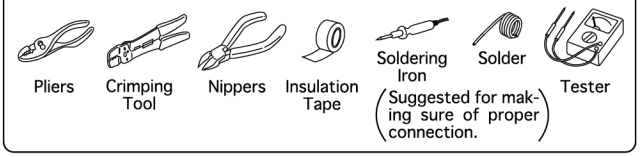
PIVOT CORPORATION 87-3 OKADA SHIMO-OKADA MATSUMOTO-SHI NAGANO 390-0313 TEL0263-46-5901

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.

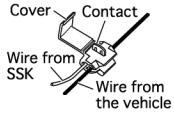
(THINGS TO PREPARE)



HOW TO USE THE ELECTRO-TAP

※ If possible, please solder and insulate properly.

① Set wires in channnels of electro-tap.



② With pliers, firmly press down on contact.

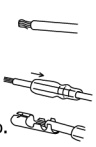
③ Lock the cover.

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.

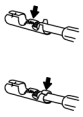
② Pull the wire through the cover.

③ Place the wire onto the crimp.



④ Crush the center tabs of the crimp down to hold the center of the wire.

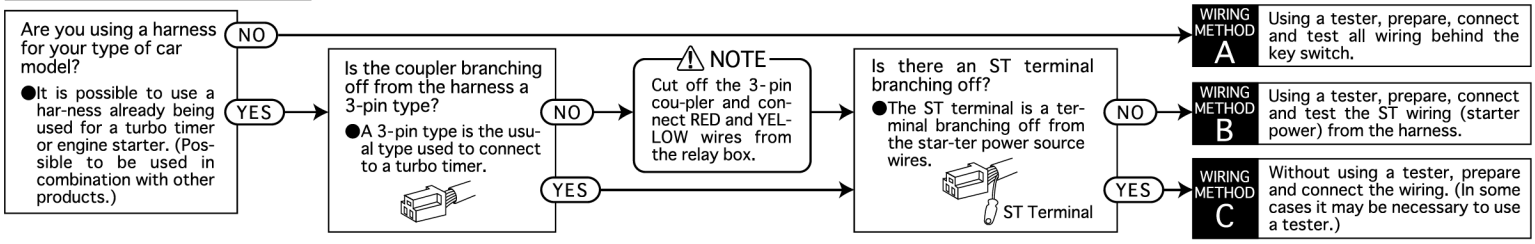
⑤ Crush down the outer tab of the crimp over the vinyl covering.



※Securely connect the male and female crimps, making sure to twist the male cover firmly into the female cover.

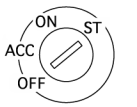
CONNECTION METHOD CHART

※Check which type of connection method you should use.



CHECK THE WIRING WITH A TESTER

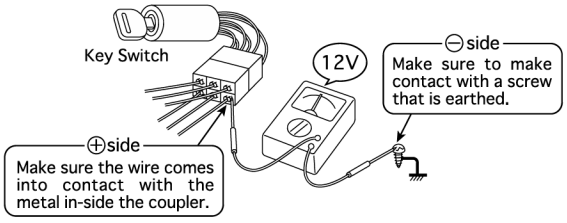
※Check the wiring connected to the back of the key switch, and search for key switch position where there is an electric flow of 12V.



(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

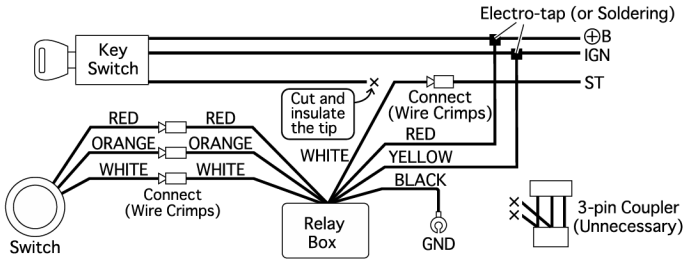
⚠ NOTE Make sure to check the wiring connected to the back of the key switch. Especially the preparation and connection methods differ depending on whether there is 1 ST (starter power) wire or 2 wires. (For details, see each [WIRING METHOD].)



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

<BASIC WIRING>

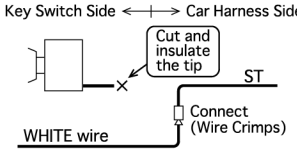
※This diagram does not show the other wires which do not connect with SSK.



1 CONNECT WHITE WIRE(ST)

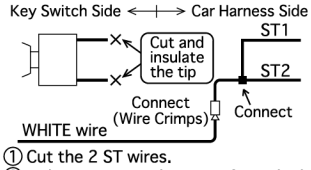
※The connection methods differ depending on whether there are 1 or 2 ST (starter power) wires.

If there is 1 ST wires



① Cut the ST wire.
② Make sure to insulate wire from the key switch side.
③ Install a female connector to the ST wire from the car harness side and connect the WHITE wire.

If there is 2 ST wires



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

2 OTHER WIRING

<RED Wire(⊕B)、YELLOW wire(IGN)>

1 Cut off the 3-pin coupler.
2 Make 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(GND)>

●Ground wire must be connected with the screw on the car body.

<RED・WHITE・ORANGE wire>

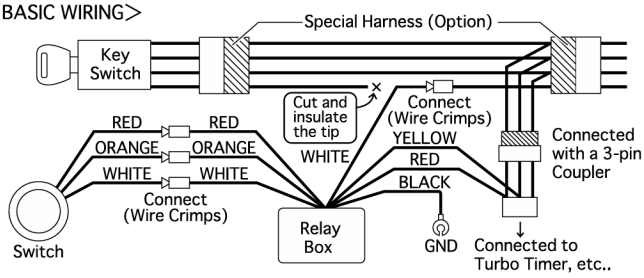
●Match each switch wire by color and use crimp connectors to connect.

⚠ Do not connect the RED, WHITE or ORANGE switch wire directly to ⊕12V. If you connect directly it will cause damage to the illumination LED.

⚠ If the illumination is too bright at night, see the right page at bottom for how to change.

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

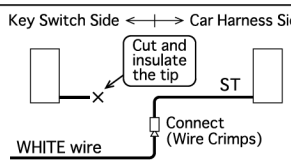
<BASIC WIRING>



1 CONNECT WHITE WIRE(ST)

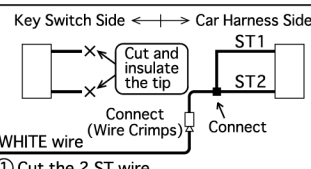
※The connection methods differ depending on whether there are 1 or 2 ST (starter power) wires.
※Check the wires that aren't connected to the 3-pin coupler by tester.

If there is 1 ST wire



① Cut the ST wire.
② Make sure to insulate wire from the key switch side.
③ Install a female connector to the ST wire from the car harness side and connect the WHITE wire.

If there are 2 ST wires



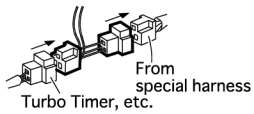
① Cut the 2 ST wire.
② Make sure to insulate wire from the key switch side.
③ Install a female connector to the ST wire from the car harness side and connect the WHITE wire.
④ Connect the other ST wire to the ST wire you just connected to WHITE wire.

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(GND)>

●Ground wire must be connected with the screw on the car body.

<RED・WHITE・ORANGE wire>

●Match each switch wire by color and use crimp connectors to connect.

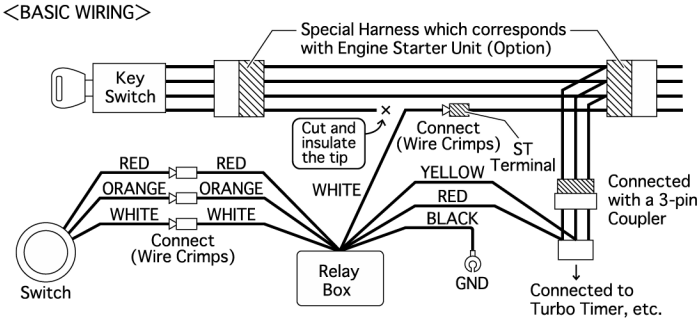
⚠ Do not connect the RED, WHITE or ORANGE switch wire directly to ⊕12V. If you connect directly it will cause damage to the illumination LED.

⚠ If the illumination is too bright at night, see the right page at bottom for how to change.

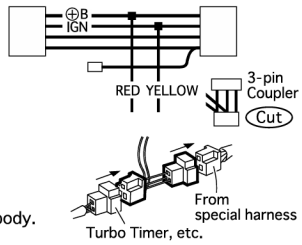
WIRING METHOD **C**

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(GND)>
- Ground wire must be connected with the screw on the car body.

<RED・WHITE・ORANGE wire>
- Match each switch wire by color and use crimp connectors to connect.

⚠ Do not connect the RED, WHITE or ORANGE switch wire directly to ⊕12V. If you connect directly it will cause damage to the illumination LED.

⚠ If the illumination is too bright at night, see the right page at bottom for how to change.

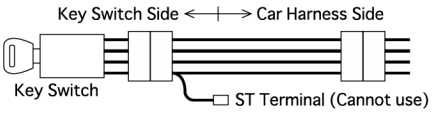
CONNECT WHITE WIRE (with male connector)

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.

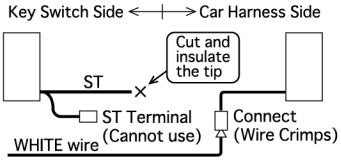
●The ST terminal is branching off from the key switch side.

⚠ Cannot use an ST terminal



2 PREPARE AND CONNECT WHITE WIRE

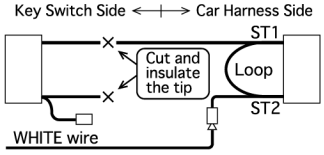
<BASIC WIRING>



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.

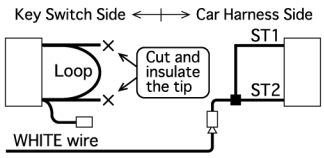
●If the harness connected to the ST terminal has a loop wiring it to another wire. (=2 ST wires)

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



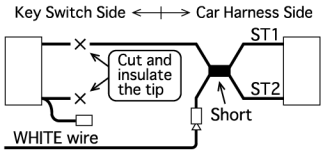
① Cut both wires connected by the loop.
② Install a female connector to the ST wire from the car harness side and connect the WHITE wire.
③ Make sure to properly insulate the remaining tip of the cut wires.

<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>

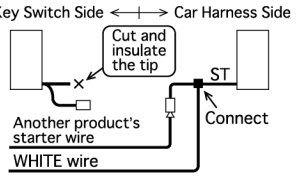


① Cut the 2 wires on the key switch side of the spot where they are shorted.
② Connect the WHITE wire to the car harness side.
③ Make sure to properly insulate the remaining tip of the cut wires.

●If another product is using the ST terminal.

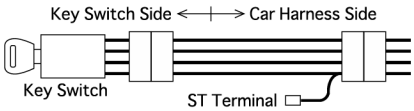
⇒Make sure to reconnect the other product's starter wire to the harness side, as well as, connect the WHITE wire to the harness side.

※ If the other product remains connected to the ST terminal, you will not be able to use that product to start your car.



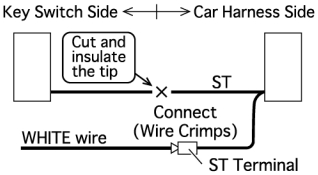
●The ST terminal is branching off from the car harness side.

⚠ Can use an ST terminal



2 PREPARE AND CONNECT WHITE WIRE

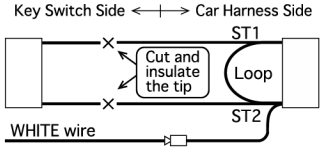
<BASIC WIRING>



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.

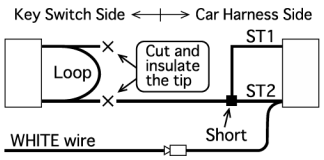
●If the harness connected to the ST terminal has a loop wiring it to another wire. (=2 ST wires)

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



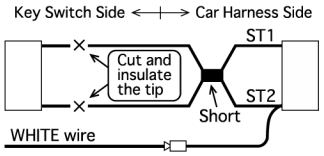
① Cut both wires connected by the loop.
② Connect the WHITE wire to the ST terminal.
③ Make sure to properly insulate the remaining tip of the cut wires.

<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.

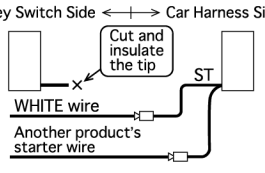
<The wires are shorted on the harness side>



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.

⇒Leave the other product's starter wire connected as is and connect the WHITE wire to the harness side.



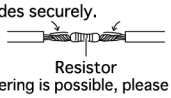
⚠ IF THE ILLUMINATION IS TOO BRIGHT AT NIGHT

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

① Cut the WHITE switch wire.

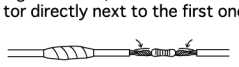
② Peel off the vinyl cover about 15mm from the cut ends.

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.

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