Thank you for purchasing PIVOT "ENGINE STARTER SWITCH". Please read these instructions carefully before installing or using this device. Please do not lose this user’s guide, as you will be held liable for the cost of reissuing it.

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

- The improper installation of this product may cause damage to your car including engine failure. Please take great care to install this product safely and properly.
- Make sure to disconnect the battery’s \( \oplus \) terminal when doing any wiring. (Reconnect to check wiring.)
- Make sure to properly insulate all connections.
- Make sure to lay wires so as not to cause a short or a break in the wire.
- 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.

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

- If the device is improperly installed or settings have been improperly made a check lamp may go on.
- When installing this product, we recommend that if technical knowledge becomes necessary please consult a qualified mechanic.

PIVOT does not sell or supply special harnesses for the Turbo Timer. To get a compatible harness, please contact a supplier or maker of such harnesses.

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Please check the contents of the package.

- Switch x 1
- Ring x 1
- Relay Box x 1
- Electro-tap x 2
- Wire Connecter x 1
- Female Wire Crimp with Cover x 1
- Brightness-Adjusting Resistor x 2
- Double-Sided Tape x 1
- User’s Guide

Please prepare all tools necessary for wiring and connection.

- Pliers
- Crimping Tool
- Nippers
- Insulation Tape
- Tester
- Soldering Iron
- Solder
- Electric Drill (with approximately a \( \oplus 5 \) bit)
- Soldering Iron (if no drill is available)
- Sanding Rod
- Marker (something to write on plastic)
- Round Hole on Package (A \( \oplus 22 \) template)

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**FEATURES**

Versatile Switch :
Use to Start Engine and
Use Flashing Light for Protection

**Press Switch to Start Engine**

Starting the engine can be done with the push type starter after the key has been put into the ON position.
(This does not apply to standard push type starters)

**New Random Flashing Light means Increased Theft Prevention**

When engine is stopped, the random flashing light of the switch button brings about a greater threat than one which blinks at a set interval and hence better prevention.

**Switch Button Lights Up**

While the engine is on the switch button remains lit, and for easy locating when the engine is off the switch remains flashing.

**Easy to Install**

By purchasing a specialized harness for the Turbo Timer it is possible to install simply by connecting the coupler. (Wiring may be necessary for some types of harnesses)

**Can be installed in a Variety of Places**

By making a hole for the switch button, it can be installed in places such as shown below. (A drill is necessary for making the hole)

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**USING THE ENGINE STARTER SWITCH**

1. **Key Switch ON**
2. **Press switch to start engine**

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**How to use the Engine Starter**

- 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 Page2 [CONNECTING THE WIRES].

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**Image of flashing pattern**

- **Brightness-Adjusting Resistor**
  - MAX
  - Auto Dimmer (4 sec)
  - Bink (0.2 sec)
  - Bink (0.2 sec)
- **Image of flashing pattern**

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**Dimensions**

<table>
<thead>
<tr>
<th>Hole Size</th>
<th>Outer diameter of Bezel</th>
<th>Panel, etc.</th>
<th>Max thickness</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \oplus 28 )</td>
<td></td>
<td></td>
<td>( 30 ) or more</td>
<td>( \text{mm} )</td>
</tr>
<tr>
<td>( \oplus 22 )</td>
<td></td>
<td></td>
<td>( 8 )</td>
<td></td>
</tr>
<tr>
<td>( \oplus 16 )</td>
<td></td>
<td></td>
<td>( 24 ) or more</td>
<td></td>
</tr>
</tbody>
</table>

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**CAUTION NOTE**

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

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**Production Date**

[ES/ESS As of June, 2008 No.1]
1. Check the Wiring

Check which type of connection method you should use.

- **Are you using a harness for your type of car model?**
  - **Yes**: Is the coupler branching off from the harness a 3-pin type?
  - **No**: Is there an ST terminal branching off?

2. 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.

- **Key Switch Position**
  - **Off**: B (Normal Power)
  - **Acc**: ACC (Accessory Power)
  - **On (IG)**: IG (Ignition Power)

3. Carry out Wiring

Please see 1 and 2 for details about how to properly carry out the wiring.

- **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**
  - 1. Set wires in channels of electro-tap.
  - 2. With pliers, firmly press down on contact.
  - 3. Lock the cover.

- **How to use cut connectors**
  - 1. Tear the uncovered wires.
  - 2. Use a crimping tool to press the cut connector, if you do not have such a tool, use pliers or such to fold and crush the cut connector together for a secure contact. After covering, make sure to insulate properly with vinyl tape.

- **How to use female wire crimp**
  - 1. Pull the wire through the crimp, bend the outside of the crimp around the center of the wire.
  - 2. Securely connect the male and female crimp, making sure to twist the male cover firmly into the female cover.

- **Wiring Method A**
  - **Direct wiring method (without special harness)**

- **Wiring Method B**
  - **Wiring method used with special harness (without ST terminal branching off)**

- **Wiring Method C**
  - **Without using a tester, prepare and connect the wiring.**


**WIRING METHOD USED WITH SPECIAL HARNESS (with ST terminal branching off)**

**BASIC WIRING**

Key Switch Side Car Harness Side

- **ST Terminal (Cannot use)**

- **ST Terminal**

- **Connect (Wire Crimps)**

- **ST1**

- **ST2**

- **WHITE wire**

- **Loop**

- **WHITE wire**

- **Earth**

- **ST Terminal**

- **Relay Box**

- **ST Terminal**

- **Connect to Turbo Timer, etc.**

**CONNECT RED AND YELLOW WIRES**

- **GB X1 (Normal Power)**

- **GB X2 (Ignition Power)**

- **ST Terminal**

- **3-pin Coupler**

- **Turbo Timer, etc.**

**WIRING METHOD**

**BASIC WIRING**

1. **If there is a loop on the key switch side**
   - Cut both wires connected by the loop.
   - Install a female connector to the ST wire from the car harness side and connect the WHITE wire.
   - Make sure to properly insulate the remaining tip of the cut wires.

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

3. **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.

4. **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.

**CONNECT WHITE WIRE**

- **Connect the WHITE wire to the ST terminal coming from the harness using a crimp 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 harness side.**

**2 PREPARE AND CONNECT WHITE WIRE**

**If the harness connected to the ST terminal has a loop wiring it to another wire.**

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

**If there is a loop on the harness side.**

- Cut the 2 wires on the key switch side of the spot where they are shorted.
- Connect the WHITE wire to the car harness side.
- 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.
SWITCH INSTALLATION

Place the circular part of the package at the spot where you wish to open a hole and with a marking pen draw an outline of the necessary size of circle.

1 Decide the Place for Installation
Make sure you can open a Ø22 hole where you wish to install.
How to Check
Place the template or round hole on package against the installation spot.

2 Opening a Hole
Place the circular part of the package at the spot where you wish to open a hole and with a marking pen draw an outline of the necessary size of circle.

IN CASE OF DRIVER’S SEAT PANEL

IN CASE OF SWITCH CUTOUT

Confirm the following before starting installation.

Trouble Possible Causes Possible Solutions
The starter does not turn over when the key is switched ON.
There is a sound. Improper  + B (Normal Power) 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 • Make sure you are using the proper harness for your car model.

Check to see if there is a sound in the relay box when you push the switch button.

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 (Accessory Power). If directly connected • 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  + B (Normal Power) 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 • Make sure you are using the proper harness for your car model.

Improper wiring between Relay Box and switch.
Improper GND wiring connection.

Possible Causes
Possible Solutions
Check to make sure of a proper connection to the black wire (GND wire).
Make sure there is a connection to place that is earthed.

TROUBLESHOOTING

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

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

1 Cut the red cable on the switch 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 THE ILLUMINATION IS TOO BRIGHT AT NIGHT