TBKV Universal Transponder Bypasskit is used when installing a remote car starter in a vehicle equipped with an RFID (Radio Frequency ID) based engine immobilizer system. This type of system uses a small chip imbedded in the ignition key, called a transponder, to transmit a very low powered RF identification signal. This ID is picked up through an antenna (exciter ring) built into the ignition switch which is then sent to the immobilizer's transceiver. Once an authorized ID signal is received, the immobilizer system will enable the ignition and/or fuel management system. If an attempt is made to start the vehicle and the transceiver does not receive a valid code, the ignition and sometimes the fuel systems are disabled. The immobilizer system effectively prevents remote start up. TBKV introduces an authorised RFID only while the remote starter is activated. When the remote starter is not in use the integrity of the factory immobilizer system is maintained and is fully functional.

Please note that the instructions outlined in the Type A Standard Installation section describe an immobilizer interface that will work with the majority of vehicles; however some vehicle immobilizer systems may require an alternative installation due to mounting issues, cosmetic differences, or RF loss when coupling the factory transponder key with TBKV to the factory antenna ring. (See Alternative Installations)

IMPORTANT! Before installing, inform the customer that one of the vehicle's coded keys must be used in the installation and installed permanently in the unit. If a new key is purchased at the dealer, make sure to code the new key to the factory immobilizer or have the dealer do this. In many vehicles, the new key must be coded at the dealer.

IMPORTANT! It is also the installer's responsibility to inform the customer of the following: If they wish to have additional keys programmed to the vehicle's immobilizer system, certain vehicle manufacturers require that all programmed keys be reprogrammed at the time the new key is added. In this case, it would be necessary to remove the already programmed key from TBKV module to reprogram it. (The shaft of the key used in TBKV should not be altered if customer expects to add new keys in the future.)

### 6 PIN Harness Wire Guide: Connections

<table>
<thead>
<tr>
<th>PIN#</th>
<th>WIRE COLOR</th>
<th>VEHICLE TYPE</th>
<th>IO STATUS</th>
<th>Connect Location</th>
<th>SPECIFIC WIRE CONNECTION LOCATION</th>
<th>ACTIVATION / FUNCTIONALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Green</td>
<td>N/A</td>
<td>Input (-)</td>
<td>Vehicle</td>
<td>(OPTIONAL) To vehicle's negative keysense output.</td>
<td>(See optional wire connections Pg. 3)</td>
</tr>
<tr>
<td>2</td>
<td>Violet</td>
<td>N/A</td>
<td>Input (+)</td>
<td>Vehicle</td>
<td>(OPTIONAL) To vehicle's positive keysense output.</td>
<td>(See optional wire connections Pg. 3)</td>
</tr>
<tr>
<td>3</td>
<td>Black</td>
<td>N/A</td>
<td>Input (-)</td>
<td>RCS</td>
<td>*Chassis Ground</td>
<td>Ground Source</td>
</tr>
<tr>
<td>4</td>
<td>Pink</td>
<td>N/A</td>
<td>Input (+)</td>
<td>Vehicle</td>
<td>(OPTIONAL) To vehicle's primary ignition wire.</td>
<td>(See optional wire connections Pg. 3)</td>
</tr>
<tr>
<td>5</td>
<td>Blue</td>
<td>N/A</td>
<td>Input (-)</td>
<td>RCS</td>
<td>*Connect to Ground When Running Output of Remote Starter.</td>
<td>Bypasskit Activation (Override)</td>
</tr>
<tr>
<td>6</td>
<td>Red</td>
<td>N/A</td>
<td>Input (+)</td>
<td>RCS</td>
<td>*Constant (+) 12 Volt Source</td>
<td>Power Source</td>
</tr>
</tbody>
</table>

Legend: RCS = Remote Control System, N/C = No Connection, N/A = Not Applicable, * = Mandatory Connection

### Type A - STANDARD INSTALLATION: TRANSPONDER BYPASS

**Key Winding Selections**

- **18 Windings**
- **60 Windings**

**“Type A” Install**

See Wire Guide for detailed information regarding wire connections & functionality

1. Open the module and place one of the vehicles coded key through the center of the black receiver ring as shown.
2. Reassemble the module making sure the key is securely aligned between the foam retention pads. This will secure the key from moving.
3. Disassemble the steering column shroud & place the included Rubber Loop Antenna Ring around the vehicle’s ignition cylinder as shown. The rubber membrane can be trimmed to fit most size cylinders. The membrane is flexible & should fit tightly to limit movement of ring.
4. Plug 3 pin rubber loop antenna ring connector into the TBKV control module.

IMPORTANT! When using the included TBKV rubber loop antenna ring installation method, make sure the rubber loop antenna ring is as close to the front of the factory receiver ring as possible. It will not operate as effectively if it is too far from the factory receiver ring (See Fig.2).
Type B - Alternative Installation

1. Open the module and place the vehicle’s coded key through the center of the black receiver ring as shown.
2. Reassemble the module to secure the key inside.
3. Disassemble the steering column shroud and locate the factory transponder ring’s antenna wires. The two wires are usually located in a tube routing from the transponder ring to the factory transceiver module.
4. Plug the three (3) pin loop antenna connector into module and cut loop antenna wire off two inches from the loop.
5. Split open the factory transponder ring tube and cut one of the two wires in half.
6. Connect the BLACK/WHITE normally closed input wire of module to the factory transponder ring side of the cut wire.
7. Connect the factory transceiver module side of the cut wire to module BLACK wire.
8. Plug the 6-pin power plug into the module.

NOTE: Some vehicles may require other methods to access the factory transponder ring antenna wires.

Type C - Alternative Installation

1. Open the module and place the vehicle’s coded key through the center of the black receiver ring as shown.
2. Reassemble the module to secure the key inside.
3. Disassemble the steering column shroud and locate the factory transponder ring’s antenna wires. The two wires are usually located in a tube routing from the transponder ring to the factory transceiver module.
4. Plug the three (3) pin loop antenna connector into module and cut antenna loop wire off 2 inches from the loop.
5. Split open the factory transponder ring tube and cut one of the two wires in half.
6. Connect the BLACK/RED and BLACK/WHITE wires to the factory transponder ring side of the cut wire.
7. Connect the factory transceiver module side of the cut wire to modules BLACK/WHITE wire.
8. Connect the BLACK/RED wire to the uncut factory transponder ring antenna wire.
9. Plug the 6-pin power plug into the module.

NOTE: Some vehicles may require other methods to access the factory transponder ring antenna wires.
TBKV INSTALLATION OPTIONS:

BYPASSKIT TBKV is the latest design in a series of universal transponder bypasskit solutions intended to keep pace with the global changes implemented by the car manufacturers as they work to improve the security and reliability of anti-theft technology. In keeping with the latest technologies, this 5th generation Universal Transponder Bypass Kit has been designed with a series of installation features & options which provide the installer with alternative methods in which to reliably override these sophisticated vehicle anti theft systems when remote starting. All vehicles are not created equal and TBKV provides the installation flexibility to select the optimum RFID pick up sensitivity as well as modify the method in which the TBKV supplies the RFID to the factory transceiver during remote start up.

BYPASSKIT TBKV has also incorporated a series of innovative circuits which allow the installer to select when and if the BYPASSKIT shuts off during the driver ignition key takeover process after remote starting. For more specific applications please go to www.bypasskit.com

KEY WINDING SELECTION -  (Coil turns around factory transponder key in TBKV module)

DEFAULT JUMPER POSITION: TBKV is shipped with the jumper set in a 60 coil winding position. For most applications this should be the optimal setting. The other jumper position is the 18 coil winding position. You may use the 18 winding position for most American and Asian vehicles, but for most European vehicles the 60 coil winding position is required. The 60 coil winding position is more sensitive to picking up RFID of the key in the box than the 18 winding position.

OPTIONAL WIRE CONNECTIONS

GREEN WIRE:  (-) KEYSENSE INPUT
VIOLET WIRE: (+) KEYSENSE INPUT

The KEYSENSE inputs are an optional (+/-) shut off circuit designed to prevent the vehicle from detecting two transponder keys at the same time. This can occur after a remote start during the driver ignition key take over process. Some vehicles will enter a “Tamper Mode” if two keys are detected. (Eg: Ford Escape, Mazda Tribute). Connecting one of the TBKV keysense input (+/-) circuits to the vehicles’ keysense wire (chime) will shut off the BYPASSKIT the moment the driver’s key is inserted into the ignition cylinder.

KEYSENSE SHUT OFF CIRCUIT INSTALLATION: Use a digital multi-meter to determine the polarity of the keysense wire coming from the ignition switch. Test vehicles keysense wire polarity with key out and in. This wire will show either ground (-) or positive (+) voltage when the key is slid in the ignition cylinder and the key chime sounds. Depending on the polarity, attach either the GREEN (-) or the VIOLET (+) wire from TBKV to the key sense wire in the vehicle. When TBKV senses an input on these wires it will drop out immediately allowing the vehicle to only read the key that was just placed in the ignition.

PINK WIRE : LATCHING INPUT

Some vehicles require that the key code does not change during a run cycle (Mercedes ML series). By attaching the PINK wire from TBKV to the ignition wire in the vehicle, TBKV will stay engaged the entire time the vehicle is running. This includes after the take-over with the key. With the PINK wire of TBKV attached to the ignition in the vehicle, TBKV will stay engaged until the vehicle is shut off.

Caution : There is a risk of deleting existing transponder key codes when installing a bypasskit in conjunction with a remote start system. The dealer /installer assumes all liability for damages or injury caused by installation this part.

LOOP ANTENNA OPTIONS

Vehicles vary greatly in feature and design and this extends to the shape and design of the vehicles ignition cylinder. In order to effectively & reliably bypass the factory immobilizer during remote start it is critical to have the best possible fit and placement of the loop antenna. Some installations require alternative loop antenna designs in order to gain a proper fit. BYPASSKIT has 5 different loop antenna design options which can be used interchangeably with the TBKV module. Alternative style loop antennas can be ordered separately. www.bypasskit.com

BYPASSKIT Loop Antenna Part Numbers are listed below.

TBKV-LPFLX-L: Large Flexi-Loop Peel & Stick PCB style Antenna
TBKV-LPFLX-M: Medium Flexi-Loop Peel & Stick PCB style Antenna
TBKV-LPFLX-S: Small Flexi-Loop Peel & Stick PCB style Antenna
TBKV-LRPCR: Xpress-Loop Single wire lasso style
TBKV-LPPVC: PVC covered 18 coil copper ring antenna ( 18 windings)
TBKV-LPPVC6: PVC covered 6 coil copper ring antenna ( 6 windings)
TBKV-LPRUB: Rubber Molded Loop Style antenna Ring (with cut 2 fit inner rubber membrane) Included with TBKV

*Note: The TBKV module has a 3 pin male mating connector which the 3 pin female connector of the included TBKV-LPRUB loop antenna plugs directly into. All other BYPASSKIT loop antenna types have a standard two wire lead with a two pin female connector. To use any of these alternative loop antenna styles with TBKV, you will need to cut off the two pin connector and use the three pin connector included with the original rubber loop antenna. (TBK-LPRUB) See instructions below.

STEP #1
CUT TBKV (TBK-LPRUB)
LOOP ANTENNA LEAD WIRES APPROX 3 INCHES FROM THE 3 PIN CONNECTOR

STEP #2
CUT ALTERNATIVE LOOP ANTENNA LEAD WIRES APPROX 3 INCHES FROM THE 2 PIN CONNECTOR

STEP #3
CONNECT ALTERNATIVE LOOP ANTENNA LEAD WIRES TO 3 PIN CONNECTOR LEAD WIRES.