ALTHOUGH THIS PRODUCT HAS BEEN THOROUGHLY TESTED KPIERSON TECHNOLOGIES ASSUMES NO RESPONSIBILITY FOR ANY DAMAGE THAT MAY RESULT BY THE INSTALLATION OF THIS PRODUCT. INSTALL AND USE THIS PRODUCT AT YOUR OWN RISK. IF YOU DO NOT AGREE TO THESE TERMS DO NOT ATTEMPT TO INSTALL THIS PRODUCT.

THIS PRODUCT IS DESIGNED TO BE INSTALLED BY QUALIFIED PERSONNEL ONLY. IMPROPER INSTALLATION CAN RESULT IN IRREVERSIBLE DAMAGE TO YOUR VEHICLE. IT IS THE INSTALLERS RESPONSIBILITY TO VERIFY ALL WIRES PRIOR TO MAKING ANY CONNECTIONS.

INSTALLATION:

1. Secure the control module under the drivers side dash board. It may be necessary to remove the lower dash board to find a suitable mounting location away from heat sources and moving parts.
2. Select a suitable location for mounting the push button. Be sure to verify mounting depth before making any cuts. Route the wire from the push button towards the control unit, but do not plug the wire in. Custom modifications will most likely be needed to make the button mount and lock in the desired location.

ELECTRICAL CONNECTIONS: Due to the harsh environment found in vehicles, KP Technologies recommends always soldering and securely taping EVERY connection.

1. BLACK – GROUND
   a. Connect this wire to ground. It is recommended to connect this wire directly to the metal chassis of the car.

2. YELLOW – 12VDC IGNITION POWER
   a. Connect this wire to a source that reads 12 volts when the key is in both the ON and START key positions. This wire can typically be found in the main ignition harness running to the key switch.

3. ORANGE – 12VDC ACC POWER
   a. Connect this wire to a source that reads 12 volts when the key is in both the ACC and ON positions. This wire typically powers the radio and can be found in the main ignition harness running to the key switch.

4. PURPLE – LOCK LED INPUT (OPTIONAL)
   a. Connect this wire to a pulsing (-) ground signal that drives the OEM security LED. If no LED signal is available this wire can be permanently
grounded to enable internal flashing of the “LOCK LED” or can be left unhooked to never illuminate the “LOCK LED”.

5. WHITE – BRAKE LIGHT INPUT
   a. Connect this wire to the vehicle’s brake light circuit. This signal must read 12vdc when the brake is on and is used as a safety to inhibit the module from starting/ stopping the vehicle when the driver’s foot is not on the brake. This wire can typically be found at the switch on the foot brake.

6. BLUE – TACHOMETER INPUT
   a. Connect this wire to a pulsing RPM signal in the car. This signal is used to prevent cranking the starter when the motor is running. If no RPM signal is available this wire can be permanently tied to 12vdc. This signal can typically be found at the ECU in the form of a fuel injector or coil driver.

NOTE: When tied to 12vdc it will be possible to crank the starter when the motor is running.

7. GREEN – STARTER OUTPUT
   a. Connect this 500mA (-) output to pin 85 of the supplied starter relay.

8. STARTER RELAY WIRING (See Figure 3a)
   a. Pin 85 – Connects to GREEN wire from KP technologies control module
   b. Pin 86 – Connects to the 12 Volts signal between the inline 3A fuse and the KP technologies control module
   c. Pin 30 – Connects to 12 Volts through supplied 15A fuse
   d. Pin 87 – Connects to vehicle Starter wire
   e. Pin 87A – No Connection

NOTE: This 500mA output is capable of driving three 12vdc automotive relays. If more than three relays are needed you must use a single relay to drive the additional relays.

9. BROWN – IGNITION CUT OUTPUT
   a. Connect this 500mA (-) output to pin 85 of the supplied ignition cut relay.

10. IGNITION CUT RELAY WIRING (See Figure 3b)
    a. Pin 85 – Connects to BROWN wire from KP technologies control module
    b. Pin 86 – Connects to the 12 Volts signal between the inline 3A fuse and the KP technologies control module
    c. Pin 30 – Connects to Ignition wire (Switch Side – must cut wire) (This is the same wire from step 2 above)
    d. Pin 87 – No Connection
    e. Pin 87A – Connects to Ignition wire (Ignition Side – must cut wire)

NOTE 1: This 500mA output is capable of driving three 12vdc automotive relays. If more than three relays are needed you must use a single relay to drive the additional relays.
NOTE 2: The ignition wire must be cut in order for this relay to be connected properly.
NOTE 3: Most vehicles have more than one ignition wire – it is imperative that the vehicle shut off when the ignition wire used is interrupted by the relay. After installation, if the module does not shut off the car try a different ignition wire.

Figure 3a
STARTER RELAY WIRING

Figure 3b
IGNITION CUT RELAY WIRING

11. RED – 12 VOLT INPUT
   a. Connect this wire directly to a high current 12 volt feed. This connection must be capable of supplying enough current to power the starter solenoid. This wire can typically be found in the main ignition harness running to the key switch.

NOTE 1: Once all connections are secure first plug in the main control harness and then plug in the push button cable second.
NOTE 2: When power is first applied to the KPtechnologies control module it will auto program itself based on the tachometer input and the LOCK LED input. Please make sure the vehicle is not running and that the OEM security LED is not lit when first applying power to the module. To reset the hardware configuration of the module disconnect power for at least 30 seconds and then reapply power or follow the “Hard Reset” procedure documented in the “Hard Reset” section of this manual.
NOTE 3: Once the module is installed it is recommended to immediately perform a hard reset of the module by following the instructions found in the “Hard Reset” section of this manual.
**OPERATION:** Please read this section carefully – the operation of this module is very flexible to allow customization.

**LOCK LED:** The “LOCK LED” is used to visually alert people on the outside of the vehicle that there is an alarm present – even if there isn’t one! For flexibility, the “LOCK LED” can be configured in one of three different ways - to work in sync with most OEM security indicators, with an internal timer, or not at all. When wired to an OEM security indicator whenever the ignition and accessory are off and the OEM security indicator is illuminated the “LOCK LED” will be lit. If configured to work with the internal timer (see wiring section for configuration information) the “LOCK LED” will illuminate for ~1 second every ~3 seconds whenever the ignition and accessory are off. If the “LOCK LED input” (purple wire) is not hooked up at all the “LOCK LED” will never illuminate.

**ACC LED:** The “ACC LED” is used to visually notify the driver that the ignition is in the ACC position. This LED will light up when the key is turned to the ACC position and will stay lit until the key is removed or turned to another position.

**ON LED:** The “ON LED” is used to visually notify the driver of the module’s ON status by staying illuminated as long as the module believes that the motor is running. When the “ON LED” is lit activating the “Start/Stop” button will cause the motor to shut off.

**ON AND ACC LEDS ALTERNATING:** If the key is in the “ON” position but the motor isn’t running the “ON LED” and “ACC LED” will flash back and forth to notify the driver that the Start/Stop button is active. When the LEDs are flashing activating the “Start/Stop” button will cause the starter to crank the motor.

**START/STOP BUTTON:** Depending on the vehicle and the installation the start/stop button will function in one of two ways – Tach or Tachless.

**TACH MODE:** If the tachometer input (blue wire) is hooked up to a valid tachometer signal (the preferred method of installation) then the module will operate in Tach Mode. However, before the module will work in Tach Mode the tach signal of the vehicle must be learned by the module by following the programming procedure found in the “Tach Programming” section of this manual.

Once the tach signal is learned the module will be capable of internally controlling the amount of time the starter output is active based on how long it takes the vehicle to actually start.

In Tach Mode to start the vehicle:
1. Insert key and turn it to the “ON” position
2. Place foot on brake
3. Press and hold the Start/Stop button for ~1 second then release
4. Once the motor starts to run the starter output will automatically turn off
To stop the vehicle:
1. Place foot on brake
2. Press and hold the Start/Stop button for ~1 second then release
3. The Ignition Cut Output will activate for ~3 seconds to kill the vehicle. After ~3 seconds the ignition will turn back on, even though the motor is no longer running

With the tachometer input hooked up correctly the KPtechnologies Push Button Start system will always display the correct ON status, regardless of if the car was started/stopped via the Start/Stop button or the key. This prevents the module from cranking the starter if the motor is started with the key.

**TACHLESS MODE**: If no tach signal is available this mode provides the ability to still use this module, although the automatic crank feature will be disabled and the module will not be able to automatically update the ON status, which can allow the module to try and start the vehicle even if it is already running.

In Tachless Mode to start the vehicle:
1. Insert key and turn it to the “ON” position
2. Press and hold the Start/Stop button until the motor is running
3. Once the motor starts to run release the Start/Stop button

To stop the vehicle:
1. Place foot on brake
2. Press and hold the Start/Stop button for ~1 second then release

The Ignition Cut Output will activate for ~3 seconds to kill the vehicle. After ~3 seconds the ignition will turn back on, even though the motor is no longer running

With the tachometer input not hooked up properly the system will only update the ON status when the car is started/stopped via the Start/Stop button. If the vehicle is started/stopped with the key the modules ON status can be manually updated by quickly pressing and releasing the Start/Stop button. This update feature only works when the tachometer input is permanently connected to 12 volts. To prevent the module from cranking the starter while the engine is running it is imperative that the ON status always reflects the status of the motor.
**TACH PROGRAMMING:** Before this module will function in the Tach mode a valid tachometer signal must be programmed.

To program the tach signal of the vehicle to the module:
1. Put your foot on the brake for this entire process
2. Put the key in the ignition and start the car
3. For approximately 5 seconds the “LOCK LED” will illuminate – while it is lit press and release the “Start/Stop” button. It is recommended to allow the vehicles RPM to stabilize before pushing the button – this may require that the vehicle run for 30-60 seconds before completing the programming sequence.
4. If the tach signal is valid all three LEDs will illuminate for ~5 seconds
   a. If no tach signal was detected only the “LOCK” and “ACC” LEDs will illuminate. If this happens make sure the tach input is connected to a valid tach signal.
   b. If the tach signal was not stable and consistent the “LOCK” and “ON” LEDs will illuminate. If this happens verify that the tach input is connected to a valid tach signal and perform the tach programming again.

**HARD RESET:** The programming of this module can be cleared by holding the “Start/Stop” button down for ~10 seconds with the ignition and accessory in the OFF position. While you hold the “Start/Stop” button down the LEDs will start to light, one by one. Once all three LEDs are lit the module can be reset by releasing the “Start/Stop” button. If you are using the OEM security indicator make sure the OEM security indicator is NOT lit when releasing the “Start/Stop” button.

The hard reset clears the tach data that is programmed to the unit and will also reset the hardware configuration (Tach / Tachless mode and “LOCK LED” control).

**TROUBLESHOOTING:**

For installation questions or concerns, please contact KPtechnologies at support@kptechnologies.com or visit us at www.kptechnologies.com/forums

For product information, please visit our website at www.kptechnologies.com

[www.kptechnologies.com](http://www.kptechnologies.com)