



2GO-PBS-X

Installation Guide



**INTELLIGENT
PUSH BUTTON START
X-PANSION Module**

Package Contents	3
Pre-Installation Information and Preparation	4
Major Component information.....	5
Push Button Start.....	15
Different Types of Push Button Start Installations.....	16
Push Button Start Module (Harness Connections).....	19
Push Button Start Wiring Diagram	23
Start Button Dimensions.....	24
Basic System Operation.....	25

Attention

- 1) **This product must be installed by qualified personnel such as a MECP Certified Installer and specifically according to these instructions and observing all safety features.**
- 2) The Digital Guard Dawg accepts no responsibility for any electrical damage resulting from improper installation of the product, be that either damage to the vehicle itself or to the product.
- 3) Please ensure the target vehicle has proper grounding and no electrical shorts.
- 4) Please completely review the Product Installation Guide carefully before beginning any work.

1

Package Contents

2GO KEYLESS 2GO-PBS-X components included with each kit:

Push Button Start Kit:

- 1 – Push Button Start Control Unit
- 1 – Push Start Button
- 1 – Push Button Main Harness - 8 PIN
- 1 – Push Button Accessory Harness - 10 PIN
- 1 – Installation Guide / User Manual

Overview:

Completely read this manual and review the wiring diagram carefully.

Installation of the Push Button Start module & harnesses.

1. Always install in a well-lit, dry, covered area away from the elements and keep at least one window open during installation, to avoid a lock out.
2. Disconnect the ground wire (-) terminal from the vehicle's battery prior to making connections. To avoid accidents, it is recommended to remove related fuses from sockets before making connections and put them back during the very last steps.
3. Locate necessary wires related to the installation (most required wires are under driver dash or kick panel areas) and connect to the unit according to the included wiring diagram. Use only a digital multi-meter to verify signal wires.
4. Once the control unit is connected, begin function tests only after verifying and ensuring all wires have been connected correctly and insulated properly. Do not power up the module before it is properly grounded. Should the unit be powered before being grounded, serious damage to internal components could occur.
5. Mount the Control Module in a secure area, away from vehicle computers and heating/air conditioning ducts. The location should be convenient for your installation, but well hidden from thieves. Try to mount the unit as far away from metal objects as possible. This will increase the range of its Remote Control Transmitter.
6. Route the wires of the harnesses to areas in which the different connections will be made. DO NOT plug the two wiring harnesses into the Control Module until all connections have been completed. When running the harness wires through the vehicle, be careful to run them where they could be damaged or shorted to GROUND. Keep them away from ALL MOVING PARTS of the vehicle or where high heat could damage their insulation. Always protect the harness wires where they pass through holes in metal panels by using rubber grommets.

Push Button Start Module: Select a mounting location inside the passenger compartment and secure using cable ties. Be certain that the chosen location will not interfere with the proper operation of the vehicle. Avoid mounting the module to or routing the wiring around the steering column, as the module or wiring could wrap around or block the steering wheel preventing proper control of the vehicle. Do not mount the modules in the engine compartment, as it is not waterproof.

Start Button: The system Start Button is used to control the Start, ON, ACC & STOP modes of your vehicle's ignition system. In addition, the Start Buttons LED provides a visual indication of when the system has recognized a valid RFID Dawg Tag and when the vehicle is ready to be started. Typically the Start Button is installed in the dash or center console of the vehicle, but it can be installed in any location within the length of the buttons 32" harness. Your choice of Start buttons will determine the diameter and depth of hole needed for button installation. Be sure and confirm that you have ample room behind the dash for the type Start Button you have chosen before cutting or drilling. Specific Start Button dimensions can be found on page 24 of this manual.

PUSH BUTTON START

The PBS-X Module PBS houses a group of high current Micro Relays that provide all switching operations for the Ignition, Accessory and Starter circuits.

Independent switching of two Ignition circuits and one accessory circuit allows **2 GO KEYLESS™** to be configured in several different ways: One Ignition circuit can be turned **OFF** during starter “crank” to reduce battery load while another Ignition and Accessory circuits stay **ON**

Basic installation consists of; mounting and connecting the Start Button, mounting the PBS-X module, making connections to 3 or 4 wires that connect to your vehicles Ignition switch and rerouting them through the PBS, then making the connections between your Alarm or Remote Start Module and a connection to your Brake Switch and final testing of your system.



There are a few different ways to install **2 GO KEYLESS™** what is right for you will depend on the style of install you are doing.

New Ignition Installations

A fresh installation where you are installing all ignition wiring from scratch.

Retrofit Installation for Customs, Hotrods and Vintage vehicles

An installation where you're replacing an existing ignition key system.

Newer Vehicle Installations

An Installation where locking steering columns or security "chip" keys are a consideration.

▶ **New Ignition Installations**

On a fresh build where you are installing all your wiring from scratch, installation is as easy as wiring in a traditional Ignition switch. Generous harness lengths allow for great freedom of choice of module and Start button placement. **2 GO KEYLESS™ Push Button Start Accessory module** even lets you choose how you would like to configure the systems operation. *See *Installation Diagrams*

▶ **Custom, Hotrod or Vintage vehicles**

The **2 GO KEYLESS™ Push Button Start** adds an elegant touch of technology to any vehicle. Our advanced and versatile design using only professionally quality components lets **2 GO KEYLESS™** fit right into even the world's most elite vehicles. Straight forward easy to understand directions make replacing a traditional ignition key system an enjoyable afternoon's project.

▶ **Newer Vehicles** *(with locking column or security "chip" keys)*

Rather than connecting to every wire of a modern ignition switch, the **2 GO KEYLESS™ Push Button Start** can be installed as an "Ignition Switch Controller" on most newer vehicles. This simple **two wire** installation allows **2 GO KEYLESS™** to control all ignition operations through the existing power connection in the switch. It completely eliminates any need to use a key to start your vehicle, while leaving the existing locking steering column or manufacturer security key systems in place. *See "Newer Vehicle Discussion" and "EZ Installation" pages.

When installing on a newer vehicle there some factors to consider before starting your Installation.

- ▶ **Do you have a “Locking” steering column?**
- ▶ **Do you have a “Chip in the key”**
- ▶ **Where to access the ignition switch wires?**

▶ **Do you have a “Locking” steering column?** For almost 30 years now vehicles have had one or another type of “Locking Steering Column” system. These range in design from mechanical to electronic, simple to complex and can be easy as pie to harder then # @ *! to remove. An initial consideration as to your installation is what you plan to do with it if you have a locking steering column.

▶ **There are a couple of approaches.** First, if you are mechanical and feel up to the work, steering column locks can be removed. One of the best sources for information for any vehicle is a qualified body shop. They remove and replace column locks frequently as a matter of repairing attempted auto thefts.

▶ **If you are less inclined, don’t worry there are other options.**

One popular option is the ***EZ Installation***. This method sacrifices an existing key to have its “head cut off” By doing so, the cut key shaft can be left in the ignition switch. With the switch turned to the ON position, the steering column remains unlocked, but the vehicles ignition secure. Many switches can be easily hidden with a cap or cover. *** See *EZ Installation*

► **Does your vehicle have a security chip in the key?**

Many newer vehicles also have some type of “chip in the key” as part of a factory security system. If your vehicle has one of these systems this will need to be addressed for the **2 GO KEYLESS™**- to work correctly. There are several ways this type of installation can be approached. Either by removing the keys “Chip” and attaching it behind the ignition switch so the factory system still reads it, or by purchasing a “Factory Security Bypass Module” . Factory Security Bypass modules are available through vehicle alarm distributors or shops. They are commonly used when installing a remote start system. They wire into the factory system and automatically give the factory system the code information needed to allow the vehicle to start without the chip in the key being present. .

► **Determining what type of chip in the key do you have?**

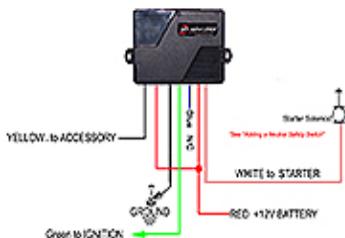
There are two basic types; one has the “Chip” in the head of the key, (*Toyota, Ford and Chrysler to name a few) and the other type which has the chip in the keys shaft (*this looks like a black dot in the key shaft and was popular in older GM vehicles*) If you are leaving a “**Cut key**” in the lock, and you have the chip in the keys shaft, there’s nothing more to do; since the chip remains in the lock. On the other hand if you have the *chip in the head of your key* and must cut off the head of the key, you may want to reuse the cut off key head which houses the “chip””. It can often simply be attached to the ignition lock from behind where the factory security system can read it and bypass the factory system. If you damage the chip during cutting the key or prefer a wire in system, you can purchase a third party “Factory Security Bypass Module”

**Once you choose the type of installation that fits your vehicle,
use the information and wiring diagrams that follow to
complete your connections.**

There are three general configurations used for New and Retrofit keyless installations.

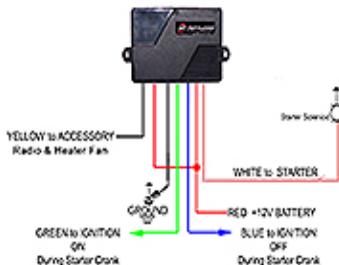
TYPE 1

In the Type 1 configuration only the IGNITION #1 circuit and the system ACCESSORY circuits are hooked up. When the Start button is depressed both circuits energize and remain powered during the entire time the starter is "Cranking". This configuration works fine on most basic three wire Ignition systems found in most older vehicles.



TYPE 2

In the Type 2 configuration there are 1 IGNITION Circuit and Two Accessory Circuits. Ignition #1 activates the moment the Start Button is depressed and Accessory #1 & 2 remain "OFF" during the time the Starter is Cranking. Accessory #1 will come on with the first push of the start button (with no brake applied) and IGN #1 and Accessory #1 & 2 will come on with the second push.



Once you have decided which type of installation is right for your vehicle. Locate the vehicle Main Ignition switch harness. Begin by locating all Ignition and signal wires listed below and then connect wires according the wire diagram. **Make sure to connect the Ground wire first before making the 12-volt connections or powering up the PBS Module**

Push Button Start ~ Main Harness (8-Pin)

	Wire	Description
1	Purple	Currently Not Used
2	White Starter (+)	Connect to the wire going to the Start Solenoid
3	Red (+) 12V Battery	Connect to the 12V supply wire of the Ignition harness. Ensure that the OEM power wire is fuse is more than 15A. Note: certain new vehicles have no suitable 12 volts source at the IGNITION switch (the 12 Volt wire is too small to supply the necessary current). In this case, the fuse box, or the + connection on the battery is recommended.
4	Blue Accessory #2 (+)	This wire is provides a circuit that switches OFF during starter cranking. Use for A/C or other circuits not necessary during starting.
5	Green Ignition #1 (+)	This wire is the primary Ignition circuit that remains ON during starter cranking. Use to provide power to all primary Ignition components
6	Black Ground (-)	This wire is the system Ground and must be connected to bare, unpainted metal Chassis or true Body ground. It is preferable to use a factory ground bolt rather than a self-tapping screw. Screws tend to get loose or rusted over time and can cause erratic problems.
7	Red +12V Battery	Connect to the 12V supply wire of the Ignition harness. Ensure that the OEM power wire is fuse is more than 15A.
8	Yellow Accessory #1 (+)	This wire provides power to vehicle Accessories such as radio and climate control fan. This circuit also switches OFF during Starter cranking but is able to be independently switched ON as "Accessory Only" mode

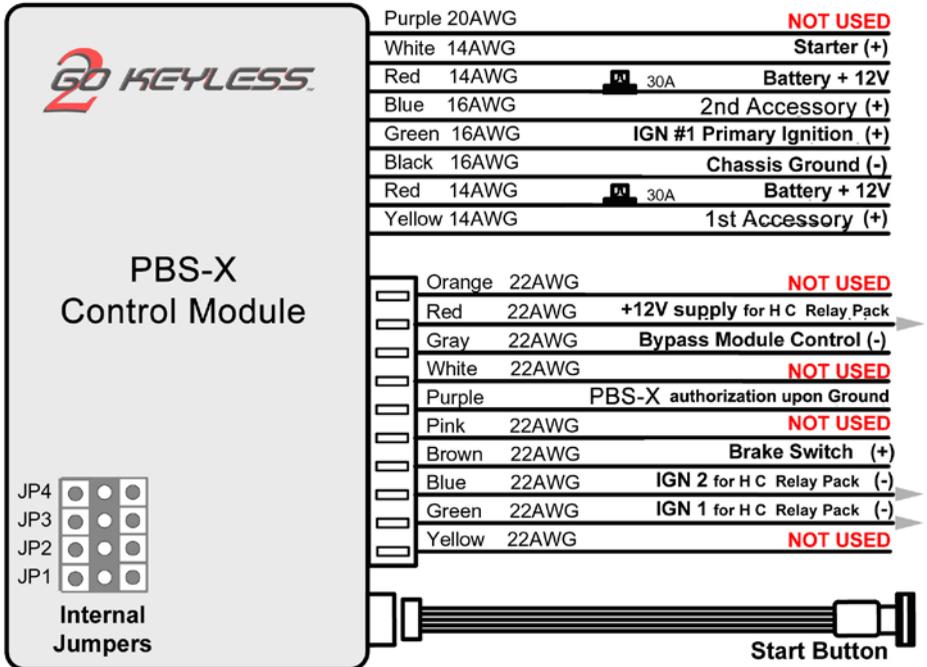
Push Button Start ~ Accessory Harness (10-Pin)

Wire		Description
1	Orange	NOT USED
2	Red +12V Supply	This wire is a +12v constant supply wire used to supply power to External High Current Relays (optional)
3	Gray (-) Factory security bypass	This wire can be used to control a factory security bypass module. It switches to Ground when ignition is switched to "ON"
4	White	NOT USED
5	Purple PBS X Authorization from existing Alarm or Remote Start	The PBS-X Module receives its authorization signal from this wire. Attach it to output on your existing Alarm or Remote Start will supply a LATCHED GROUND upon DISARM. Grounding this wire will activate your PBS III module and light up the Start button.
6	Pink	NOT USED
7	Brown (+) Brake or Clutch	This wire senses when you step on the Brake. It allows the system to enter "Start" mode. The wire will be +12V as you depress the brake pedal, and will be ground when release brake.
8	Blue (-)	Optional: External High Current Relay Control for Ignition #2 ***see page 29
9	Green (-)	Optional: External High Current Relay Control for Ignition #1 ***see Page 29
10	Yellow	NOT USED

HIGH CURRENT NOTICE:

For Heavy Duty / High Current Ignition circuits requiring greater than 40 AMPS. On vehicles with dual AC, extensive lighting or other high current accessories with higher than normal current requirements you must use the additional external high-current relay schematic found on Page 29

PBS-X Module



The PBS-X Authorizes when it gets a LATCHED GROUND signal on the purple wire from an Alarm or Remote Start output upon DISARM. If your Alarm or R/S only supplies a momentary ground you will need to add a PAC TR-7 (programmed to #3) or a timer relay to convert the alarm output to a latch signal. The PBS-X start Button LED will light up when the module receives authorization.

The **2GO-PBS-X** Push Button Start / Keyless Ignition system operates using your existing Alarms/Remote Start transmitters and eliminates the need to carry two different transmitters with you. The **2GO-PBS-X** uses a standard (Latched Ground when disarmed) output signal found on most traditional alarms to activate and deactivate the systems Push Button Start functions at the same time your current alarm system arms and disarms. As you approach your vehicle and press the unlock button of your alarm transmitter the **2GO-PBS-X** Start Button LED will illuminate. Just get in, place your foot on the brake and press the star

When you enter the vehicle:

To Start:

- ~The LED in the Start Button will light upon seeing a Ground upon Disarm
- ~Step on the Brake Pedal and the Start Button will begin to flash
- ~ Push and hold the Start Button and the STARTER will begin to crank.
- ~The driver decides when to release the start button to stop starter cranking.

To Turn on only ACCESSORIES

- ~The LED in the Start Button will light upon seeing a Ground upon Disarm
- ~ Do not step on the Brake Pedal
- ~ Push the Start Button once to turn on the ACCESSORIES (ACC#1)
- ~Push the button once more and turn on IGNITION & ACCESSORIES
- ~Push the button again and switch all circuits OFF

~To turn engine OFF:

Depress brake and push start button for 2 Seconds