

VATS / PASSLOCK / TRANSPONDER Universal Alarm Bypass Module

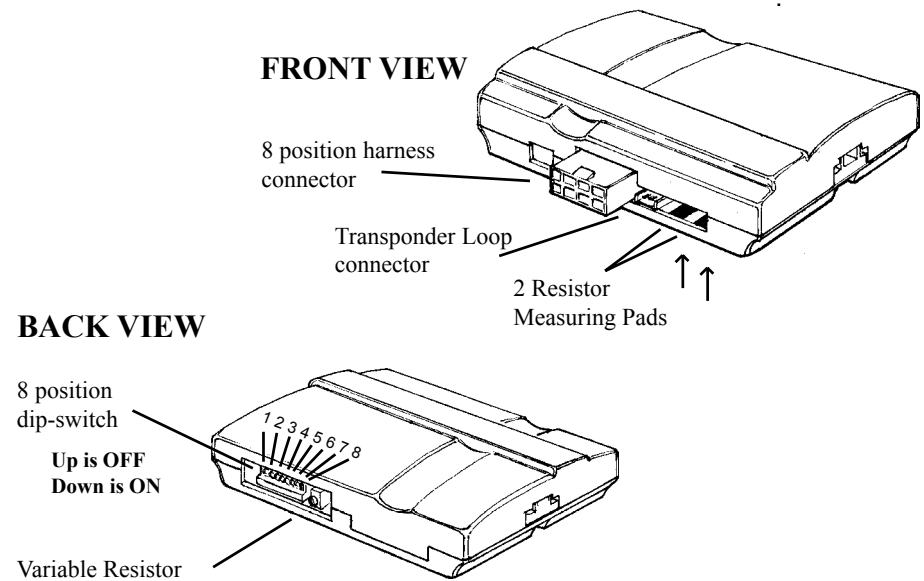
Model #s 20402 & 29402

This module lets you bypass virtually any type of factory passive anti-theft system on the market today to remotely start your vehicle without permanently disabling the vehicle's anti-theft system.

In 1983, General Motors came out with their first Vehicle Anti-Theft System known as VATS which uses a resistor pellet in the key. Since that time, other more sophisticated theft systems have followed. Most of these theft systems are still resistance based, and another uses a "Transponder" which is a tiny pellet or chip embedded within the the head of the ignition key.

Contents:

- 1 Universal Alarm Bypass Module
- 1 8 position wire harness
- 1 Transponder loop w/connector
- 2 Cable Ties
- 1 Instruction booklet
- 2 Double-stick foam tape



List of vehicles and the types of security systems:

Acura 3.2TL 98+	Transponder	GMC Denali 99+	Passlock II
Audi A4,A6,A8 98+	Transponder	GMC Sierra	Passlock II
Acura CL 97+	Transponder	GMC Sonoma 98 +	Passlock II
Acura Integra	Transponder	GMC Suburban 98+	Passlock II
Acura NSX	Transponder	GMC Yukon 98+	Passlock II
Acura RL 98+	Transponder	Honda Accord 98+	Transponder
BMW (all 97 +)	Transponder	Honda Odyssey 98+	Transponder
Buick LeSabre 90 - 01	VATS	Honda Prelude 98+	Transponder
Buick Park Ave 91 - 96	VATS	Honda S2000	Transponder
Buick Park Ave 97+	Transponder	Infiniti I30 98+	Transponder
Buick Regal 93 -96	VATS	Infiniti Q45 98+	Transponder
Buick Rendez Vous	Transponder	Infiniti QX4	Transponder
Buick Riviera 93 -96	VATS	Jaguar (all 98+)	Transponder
Buick Roadmaster 93 - 96	VATS	Isuzu Hombre 98+	Passlock II
Buick Skylark 96-98	Passlock	Jeep Grand Cherokee 99+	Transponder
Cadillac Allante	VATS	Jeep Liberty	Transponder
Cadillac Brougham	VATS	Jeep TJ (Wrangler) 99+	Transponder
Cadillac Catera 97+	Transponder	Lexus (all 97+)	Transponder
Cadillac DeVille 92 - 98	VATS	Lincoln Blackwood	Transponder
Cadillac DeVille 99+	Transponder	Lincoln Continental 97+	Transponder
Cadillac Eldorado 89 - 98	VATS	Lincoln LS 2000+	Transponder
Cadillac Eldorado 99+	Transponder	Lincoln Mark VIII 97+	Transponder
Cadillac Escalade 00+	Passlock	Lincoln Navigator 97+	Transponder
Cadillac Fleetwood 90 - 96	VATS	Lincoln Town Car 97+	Transponder
Cadillac Seville 90 - 98	VATS	Mazda Tribute	Transponder
Cadillac Seville 99+	Transpond	Mercedes (all 97+)	Transponder
Chevrolet Astro Van 98+	Passlock II	Mercury Cougar 99+	Transponder
Chevrolet Avalanche 01	Passlock	Mercury Grand Marquis	Transponder
Chevrolet Blazer 98+	Passlock II	Mercury Mountaineer 98 +	Transponder
Chevrolet Camaro 86 +	VATS	Mercury Mystique 97+	Transponder
Chevrolet Cavalier 96-99	Passlock	Mercury Sable 96+	Transponder
Chevrolet Cavalier 2000+	PasslockII	Mini Cooper 02	Transponder
Chevrolet Corvette 88 +	VATS	Mitsubishi Eclipse	Transponder
Chevrolet Express 97+	Passlock	Mitsubishi Galant	Transponder
Chevrolet Impala 2000+	Passlock II	Nissan Frontier S/C	Transponder
Chevrolet Lumina 96 -99	VATS	Nissan Maxima 98+	Transponder
Chevrolet Malibu 97 -01	Passlock II	Oldsmobile Achieva 95	Passlock I
Chevrolet Monte Carlo 96-99	VATS	Oldsmobile Achieva 96+	Passlock II
Chevrolet Monte Carlo 00+	Passlock II	Oldsmobile Alero 99+	Passlock II
Chevrolet Pickup Full-size 98+	Passlock II	Oldsmobile Aurora	VATS
Chevrolet S-10 98+	Passlock II	Oldsmobile Bravada 98	Passlock II
Chevrolet Silverado HD 01	PasslockII	Oldsmobile Cutlass 97+	Passlock II
Chevrolet SSR 01	Passlock	Oldsmobile Eighty-Eight	VATS
Chevrolet Suburban 98+	Passlock II	Oldsmobile Intrique 98+	Passlock II
Chevrolet Tahoe 98+	Passlock II	Oldsmobile Ninety-Eight	VATS
Chevrolet Trailblazer 01+	PasslockII	Oldsmobile Silhouette 99	Transponder
Chevrolet Van 98+	Passlock II	Pontiac Aztek 01	Transponder
Chevrolet Venture 99+	Transponder	Pontiac Bonneville 89+	VATS
Chrysler Concorde 98+	Transponder	Pontiac Firebird 88+	VATS
Chrysler LHS 99+	Transponder	Pontiac Grand Am 96 - 98	Passlock
Chrysler PT Cruiser 00+	Transponder	Pontiac Grand Am 99+	Passlock II
Chrysler Sebring Convertible 98+	Transponder	Pontiac Grand Prix 92 – 96	VATS
Daewoo Leganza	Transponder	Pontiac Grand Prix 97+	Transponder
Dodge 300 M 99+	Transponder	Pontiac Montana 99+	Transponder
Dodge Intrepid 98+	Transponder	Pontiac Sunfire 96-99	Passlock I
Dodge Neon 00+	Transponder	Pontiac Sunfire 2000+	Passlock II
Ford Contour 97 +	Transponder	Porsche (all 97+)	Transponder
Ford Crown Victoria 98+ (optional)	Transponder	Saab (all 97+)	Transponder
Ford Excursion 01+	Transponder	Saturn 97-99	Factory Alarm
Ford Expedition 97+	Transponder	Saturn 00+	Transponder
Ford Explorer 98+	Transponder	Subaru Legacy 00+	Transponder
Ford Focus 01+	Transponder	Subaru Outback 00+	Transponder
Ford Mustang 98+	Transponder	Toyota Avalon 98+	Transponder
Ford Pick Up (optional)	Transponder	Toyota Camry 98+	Transponder
Ford Ranger 99+(optional)	Transponder	Toyota Highlander 01+	Transponder
Ford Sport Trac 01	Transponder	Toyota Land Cruiser 98+	Transponder
Ford Taurus 96 +	Transponder	Toyota Solara 99 +	Transponder
Ford Windstar 2000 +	Transponder	Toyota Supra 98+	Transponder
GMC Envoy 01+	Passlock II	Volkswagen Beetle 98+	Transponder
GMC Jimmy 98+	Passlock II	Volkswagen Golf 98+	Transponder
GMC Safari 98+	Passlock II	Volkswagen Passat 98+	Transponder
		Volvo (all 98+)	Transponder

Determine which type system you have in your vehicle. If unsure - follow the chart on the previous page to determine the system you have. There are several types of systems as outlined below:

General Motors **VATS** and **PASSLOCK 1** and **PASSLOCK 2** theft systems. For these, you will be required to dial-in a resistor value which matches the one on your security system. The method is described on the following pages for each type system using the dip switches and the variable resistor. The variable resistor is a 10 turn potentiometer which can be dialed up from zero ohms to 1,000 ohms.

SATURN vehicles up to the 2000 model year simply hook up to the Universal Alarm Bypass Module as shown on page 9. If you have a 2000 model year or later Saturn vehicle, see page 10.

TRANSPONDER / PASSKEY 3 / P.A.T.S. systems require a transponder (or extra key) to be used with our system. Follow the directions on page 10 and 11.

Use this chart with VATS, PASSLOCK 1 and PASSLOCK 2.

Dip Switch #	2	3	4	5	6	Final Resistance (k ohms)
Resistor Value	0.825	1.65	3.32	6.65	13.3	
	ON	ON	ON	ON	ON	0.000 +Variable Resistor Value
	OFF	ON	ON	ON	ON	0.825 +Variable Resistor Value
	ON	OFF	ON	ON	ON	1.650 +Variable Resistor Value
	OFF	OFF	ON	ON	ON	2.475 +Variable Resistor Value
	ON	ON	OFF	ON	ON	3.320 +Variable Resistor Value
	OFF	ON	OFF	ON	ON	4.145 +Variable Resistor Value
	ON	OFF	OFF	ON	ON	4.970 +Variable Resistor Value
	OFF	OFF	OFF	ON	ON	5.795 +Variable Resistor Value
	ON	ON	ON	OFF	ON	6.650 +Variable Resistor Value
	OFF	ON	ON	OFF	ON	7.475 +Variable Resistor Value
	ON	OFF	ON	OFF	ON	8.300 +Variable Resistor Value
	OFF	OFF	ON	OFF	ON	9.125 +Variable Resistor Value
	ON	ON	OFF	OFF	ON	9.970 +Variable Resistor Value
	OFF	ON	OFF	OFF	ON	10.795 +Variable Resistor Value
	ON	OFF	OFF	OFF	ON	11.620 +Variable Resistor Value
	OFF	OFF	OFF	OFF	ON	12.445 +Variable Resistor Value
	ON	ON	ON	ON	OFF	13.300 +Variable Resistor Value
	OFF	ON	ON	ON	OFF	14.125 +Variable Resistor Value
	ON	OFF	ON	ON	OFF	14.950 +Variable Resistor Value
	OFF	OFF	ON	ON	OFF	15.775 +Variable Resistor Value
	ON	ON	OFF	ON	OFF	16.620 +Variable Resistor Value
	OFF	ON	OFF	ON	OFF	17.445 +Variable Resistor Value
	ON	OFF	OFF	ON	OFF	18.270 +Variable Resistor Value
	OFF	OFF	OFF	ON	OFF	19.095 +Variable Resistor Value
	ON	ON	ON	OFF	OFF	19.950 +Variable Resistor Value
	OFF	ON	ON	OFF	OFF	20.775 +Variable Resistor Value
	ON	OFF	ON	OFF	OFF	21.600 +Variable Resistor Value
	OFF	OFF	ON	OFF	OFF	22.425 +Variable Resistor Value
	ON	ON	OFF	OFF	OFF	23.270 +Variable Resistor Value
	OFF	ON	OFF	OFF	OFF	24.095 +Variable Resistor Value
	ON	OFF	OFF	OFF	OFF	24.920 +Variable Resistor Value
	OFF	OFF	OFF	OFF	OFF	25.745 +Variable Resistor Value

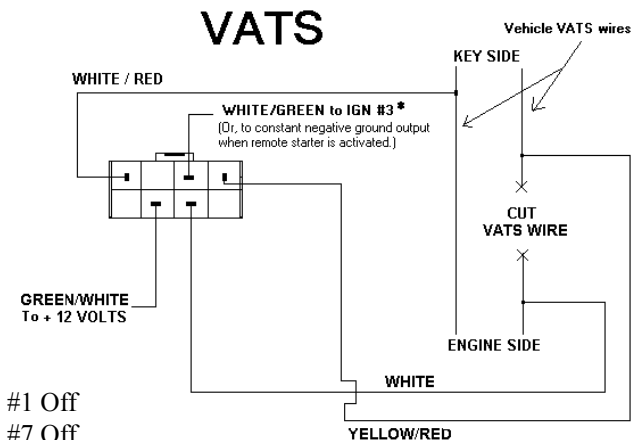
All resistor values shown are in 'K-ohms' -- or 1,000 ohms. Thus the 1.650 value shown in the third row is 1,650 ohms or 1.65 K ohms.

	DipSwitch #1	Dip Switch #7	Dip Switch #8
VATS	OFF	OFF	OFF
PASSLOCK 1	ON	ON	OFF
PASSLOCK 2	OFF	OFF	OFF

VATS:

Before performing this set up, make sure the vehicle will start with the transmitter if you leave the ignition key in the key cylinder.

- Put dip switch 1, 7 and 8 into the OFF (up) position
- Measure the resistance of the key. It should be between 392 ohms and 11,800 ohms. To do this, put the ohm meter probes on each side of the key pellet. This value should be close to one of the following (all values in ohms): 392, 523, 681, 887, 1.13K, 1.47K, 1.87K, 3.01K, 3.74K, 4.75K, 6.04K, 7.5K, 9.53K, 11.8K.
- Locate the closest value which is less than your desired value on the chart on page 4. Set dip-switches 2 through 6 as shown on page 4.
- Put your ohm meter (multi-meter) probes on the two silver resistance measuring pads through the opening shown in the drawing -- making good contact with these two silver pads on the board. (See drawing on page 1). Or put your two probes into the two holes on the bottom of the case making contact with the underside of the silver pads. Either contact point method will work.
- With the probes held firmly, finish reaching the final resistance value needed for your system by turning the screw on the variable resistor on the side of the unit next to the dip switches. Turn the screw until the resistance value matches the resistance value of the key.
- Locate the pair of VATS wires (sometimes **White/Black** striped and **Purple/Black** striped). These wires are often in a plastic tube. Be careful not to cut into the Yellow Air Bag wires! The Air Bag wires are often in a yellow plastic tube that is clearly marked. The VATS wires run from the ignition switch down the column under the dash. Connect the Universal Alarm Bypass Module using the diagram below.



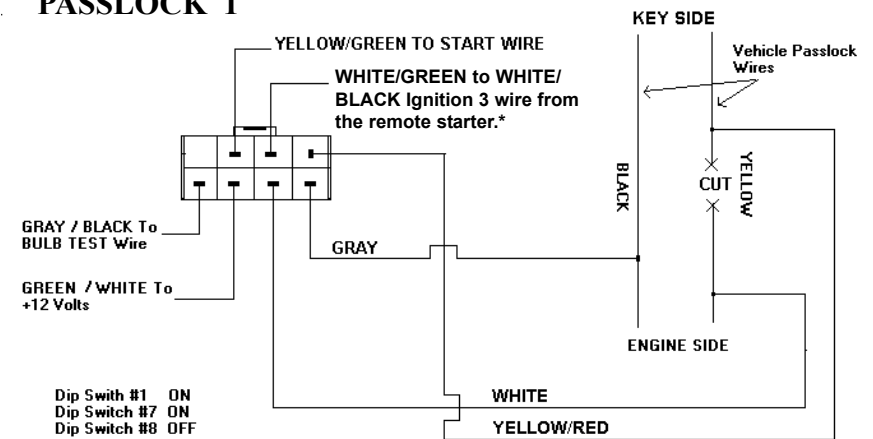
Dip Switch #1 Off
Dip Switch #7 Off
Dip Switch #8 Off

*See page 12 if you do not have an IGN3 wire on your remote starter

PASSLOCK 1:

1. Put dip switches 1 and 7 in the ON (down) position and dip switch 8 in the OFF (up) position.
2. Remove the bottom half of the steering column shroud.
3. Locate the small three wire harness (with **White**, **Black** and **Yellow** wires) running down from the ignition key cylinder on the top right hand side of the steering column into the instrument panel. These wires are usually the smallest wires in the harness.
4. Cut the **Yellow** wire in half and strip back both ends. Remove some of the insulation on the **Black** wire without cutting the wire. The **White** wire is not used.
5. Turn the ignition key to the "ON" or "RUN" position and place the vehicle into reverse.
6. With the ignition key still in and turned to the "**RUN**" position, measure the resistance between the key side of the **Yellow** wire (connected to the + positive lead of your digital meter) and the **Black** wire (connected to the - negative side of your digital meter).
7. Turn the ignition key to the "**START**" position and release it. Denote the resistance reading as this will be the resistance that will need to be duplicated. Repeat this step several times to verify that you have a consistent reading.
8. When you have identified the correct resistance use the chart on page 4 to set the resistance on the bypass module. Locate the closest value which is less than your desired value. Set dip-switches 2 through 6 to match the chart on page 4 for this value.
9. Put your ohm meter (multi-meter) probes on the two silver resistance measuring pads through the opening shown in the drawing -- making good contact with these two silver pads on the board. (See drawing on page 1). Or put your two probes into the two holes on the bottom of the case making contact with the underside of the silver pads. Either contact point method will work.
10. With the probes held firmly -- dial-in the final resistance value needed for your system by turning the screw on the variable resistor on the side of the unit next to the dip switches. Turn the screw until the resistance value matches the resistance value of the key.
11. Locate the **Black** "Bulb Test" wire on the left side of the steering column in cavity "D" or "E" of the Black 5-way connector, just above the main ignition switch connector. This is a different wire than the **Black** wire mentioned in the above steps.
12. Connect the bypass module using the diagram below. Be sure to tape over any connections to not leave any exposed wires.

PASSLOCK 1



*See page 12 if you do not have an IGN3 wire

To verify the Passlock 1 installation has the correct resistance value and that the installation is correct -- hold the **WHITE/GREEN** wire to ground and start the vehicle with the key. If the vehicle starts and stays running - the installation is correct.

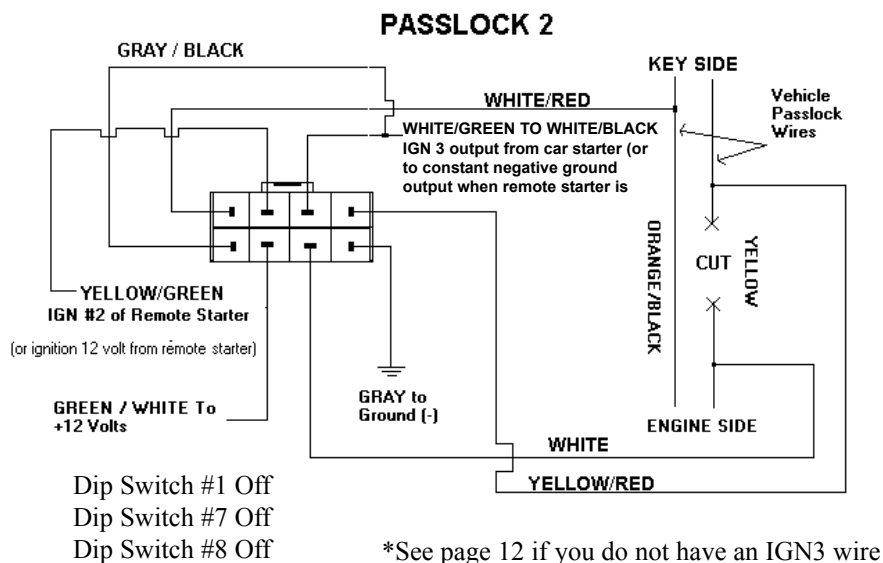
PASSLOCK 2:

1. Turn dip switches 1, 7, and 8 to the OFF (up) position.
2. Remove the bottom half of the steering column shroud.
3. Locate the small three wire harness (with **Red/White**, **Yellow** and **Orange/Black** wires on trucks and **White**, **Yellow** and **Black** on cars) that come off the ignition lock cylinder. These are usually the smallest wires.
4. Cut the **Yellow** wire in half and strip back both ends. Remove the insulation on the **Orange/Black** wire (trucks) or the **Black** wire (cars) without cutting the wire. The **Red/White** or **White** wire is not used.
5. Turn the key to the "Run" position and place the vehicle in Reverse.
6. Connect the key side of the **Yellow** wire to the + positive lead of your digital meter and the **Black** wire (cars) or **Orange/Black** wire (trucks) to the - negative lead of your digital meter.
7. Turn the ignition key to the "**START**" position and release it. Denote the resistance reading as this will be the resistance that will need to be

duplicated. Repeat this step several times to verify that you have a consistent reading.

8. When you have identified the correct resistance use the chart on page 4 to set the resistance on the bypass module. Locate the closest value which is less than your desired value. Set dip-switches 2 through 6 to match the chart on page 4 with this value.
9. Put your ohm meter (multi-meter) probes on the two silver resistance measuring pads through the opening shown in the drawing -- making good contact with these two silver pads on the board. (See drawing on page 1). Or put your two probes into the two holes on the bottom of the case making contact with the underside of the silver pads. Either contact point method will work.
10. With the probes held firmly -- dial-in the final resistance value needed for your system by turning the screw on the variable resistor on the side of the unit next to the dip switches. Turn the screw until the resistance value matches the resistance value of the key.
11. Connect the bypass module using the diagram on the next page. Be sure to tape over any connections to not leave any exposed wires.

To verify that this installation is correct -- hold the WHITE/GREEN wire and the GRAY/BLACK wire to ground and start the vehicle with the key. If the vehicle starts and stays running - the installation is correct.

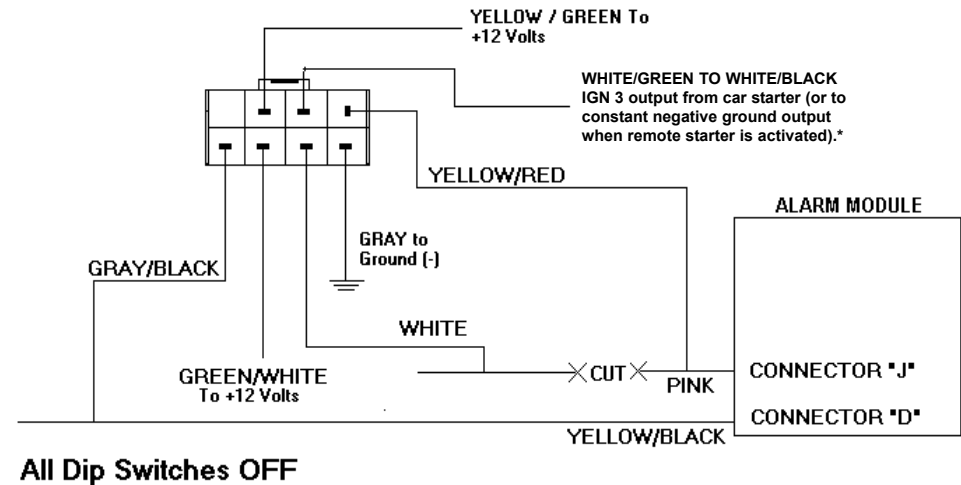


SATURN:

Saturn vehicles up to the 2000 model year with factory keyless entry have a unique bypass.

1. Set all dip switches to the OFF (up) position.
2. Locate the Alarm Module behind the right rear quarter trim panel (trunk area). Connect the Pink and Yellow/Black wires of Connector J and D of the alarm module as shown.
3. Cut the Pink wire in half and connect as shown.

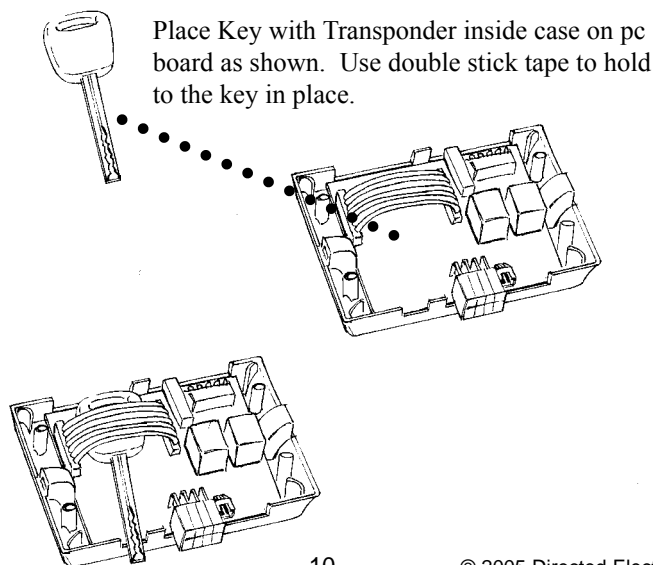
SATURN ALARM BYPASS



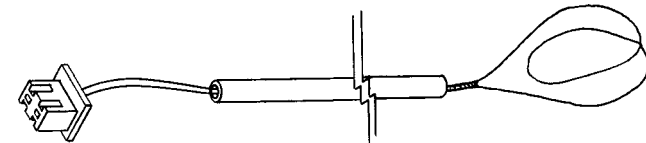
TRANSPONDER / PASSKEY 3 / P.A.T.S.: 'Smart Key' & other Transponder systems

Note: For this type of security system - you must sacrifice one of the spare keys that comes with the car. This key will be used for the transponder. The dealership can program a spare key, but make sure they program all keys to the vehicle since learning just one transponder could erase all other key transponders (including the key used for the Bypass Module).

1. Set all dip switches on the bypass module to the OFF (up) position.
2. Remove the transponder from the key (there maybe a door on the top of the key that can be opened and the transponder can be removed). Or, the entire key may be mounted inside the Bypass Module. Be sure to cut the key in half or grind off some of the teeth to render it unusable.
3. Pull apart the case and place the transponder, or the head of the key, inside the 10 wire loop on the circuit board. Transponders are directional and must be placed along the same direction that the key would lay. Use the double stick foam tape provided -- one layer on the circuit board and then the transponder, or key, and finally the second double-stick foam tape layer on top of it to hold key securely in place.

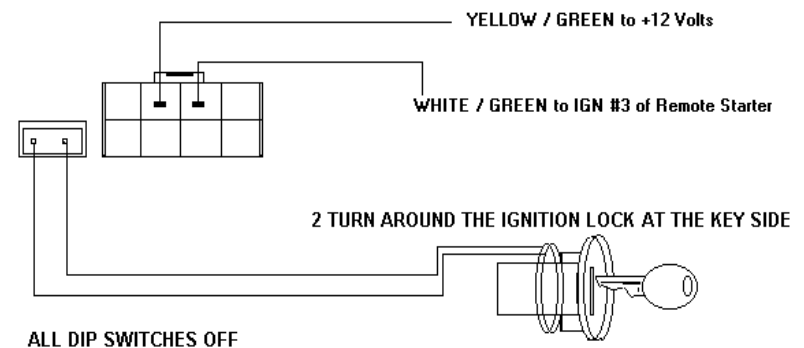


4. The transponder LOOP goes underneath the steering column and up toward the ignition key cylinder and needs to be positioned so that there are 2 turns around the ignition key cylinder as shown below. Transponder systems often have a black plastic ring around the ignition lock switch. This is the vehicle's transponder pick-up antenna. It is important that the two loops of the Bypass Module be mounted on or as close to this black plastic ring as possible. Slide the tube up toward the ignition switch to tighten up the loops of wire. Tape in place to hold. Plug the other end of the transponder loop into the Universal Alarm Bypass Module.



5. Now start the vehicle with the remote starter. If the vehicle starts and runs for at least 30 seconds the transponder bypass is correct. Note: If the vehicle does not start with the remote starter, try adjusting or changing the position of the transponder in the Bypass Module or adjusting the position of the two loop wire around the transponder pick-up antenna mentioned above.

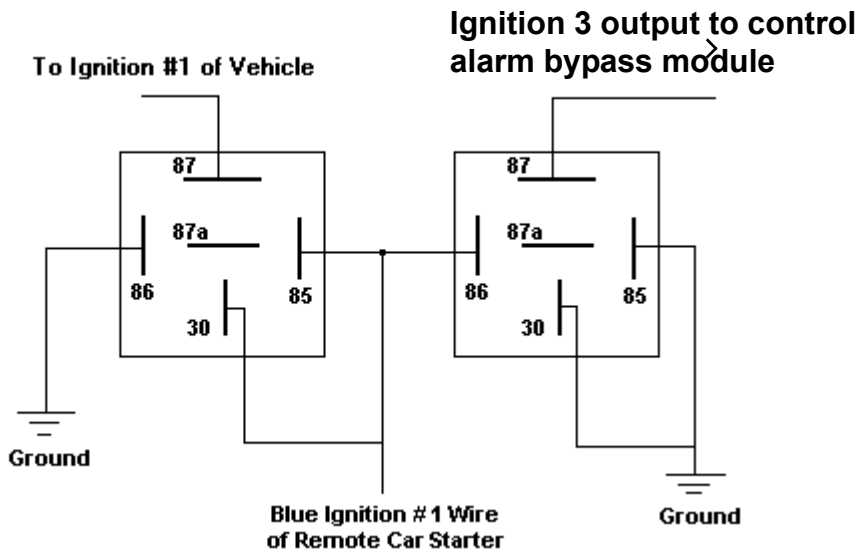
TRANSPONDER



Note: The key that the transponder was removed from will no longer start the vehicle.

For Car Starters that do not have an Ignition 3

output: You will need an **Ignition 3** output from your remote car starter for all of the hookups shown on the preceding pages. Most models of remote starters use the WHITE/BLACK wire in the control harness as the Ignition 3 output. If you have a brand of remote car starter that does not have an Ignition 3 output -- or, if you have an AutoCommand model 25522 which does not have an Ignition 3 output -- follow the relay hook-up below using Bosch type 30 Amp relays for creating the Ignition 3 output.



limited lifetime consumer warranty

Directed Electronics, Inc. (hereinafter "Directed") promises to the original purchaser to repair or replace with a comparable reconditioned Directed alarm bypass unit if this Directed alarm bypass unit (hereinafter "Unit"), excluding without limitation, any remote transmitters or associated accessories, proves defective in materials or workmanship under normal use for the life of the vehicle which the Unit is originally installed. During this period, so long as the Unit remained installed in the original vehicle, Directed will at its option, repair or replace this Unit if it is proved defective in workmanship or material PROVIDED the Unit is returned to Directed's warranty department at One Viper Way, Vista, CA 92081, along with \$20 postage and handling fee, a bill of sale or other dated proof of purchase bearing the following information: Date of purchase, name and location of the merchant who sold the Unit, and product description. This warranty does not cover labor costs for the removal or reinstallation of the Unit. This warranty is non-transferable and does not apply to any Unit that has been modified or used in a manner contrary to its intended purpose, and this warranty does not cover damage to any Unit caused by installation or removal of the Unit. This warranty is void if the Unit has been damaged by accident or unreasonable use, neglect, improper service or other causes not arising out of defects in materials or workmanship. Directed makes no warranty against theft of a vehicle or its contents.

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IMPORTANT NOTE:

This product warranty is automatically void if its date code or serial number is defaced, missing, or altered.

Make sure you have all of the following information from your dealer:

A clear copy of the sales receipt, showing the following:

- Date of purchase
- Authorized dealer's company name and address
- Item number

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