

AUTO SECURITY COMPUSTAR

By:



Master Install Guide CM3 Series - CM4200 – CM1000A

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Install Checklist

Please use this checklist to complete the installation of any CompuStar system. These steps should be done in the order shown.

Prep/Install Module:

Begin preparing the system for installation by removing any wires you are not going to be using, leave some of the wire in case you need to use it in the future. Then wire up any relays, etc., and install the control module in the vehicle.

Code Remote:

Code the remote using the remote coding procedure shown in this manual. The remotes do not come preprogrammed as a result of the modular design of the CompuStar lineup.

Program Tach:

Program tach by tapping the tach learn button located on the back of the control module.

Set Options:

Using the Option Programming section of this manual, set the options of the control module.

Test:

Test the system by testing and adjusting the shock sensor, testing the remote start process, and verifying all of the alarm triggers.



Remote Programming Procedures



Remote Programming Procedures

Because the CompuStar systems are modular in design (upgradeable), the remotes **Do Not** come pre-programmed from the factory. Listed below are the procedures for programming the CompuStar transmitters.

Programming for:

1WAM4R (all versions), **1WFM4R** (all versions), **1W900FM4R** (all versions), and for programming the **1WSS4R** as a standalone remote:

1. Insert the key into the ignition and turn the ignition ON then OFF five times.
2. The fifth time you turn the ignition on, the parking lights will flash once.
3. Tap the **Top Left** button on the transmitter once. The parking lights will again flash once to confirm that the remote was coded.
4. After a few seconds, the parking lights will flash twice to signal the ending of the remote programming mode.

If you have multiple remotes, you can program them all at once by coding the first remote, then right after getting the confirmation flash, coding the second remote (you will get another confirmation flash), and then coding the third remote.

Programming for:

1WSS4R, when using it in conjunction with the **2WSSR**.

If you plan to use the 2WSSR and the 1WSS4R together, you must program them at the same time.

1. Pull the positive side of the battery out of the 2WSSR, do not remove the whole battery as you will need to quickly insert it again.
2. Insert the key into the ignition and turn the ignition ON then OFF five times.
3. The fifth time you turn the ignition on, the parking lights will flash once.
4. Quickly push the positive side of the battery back into the 2WSSR. The parking lights will flash once to confirm that the remote was coded.
5. Immediately after, tap the **Top Left** button on the 1WSS4R once. The parking lights will again flash once to confirm that the remote was coded.
6. After a few seconds, the parking lights will flash twice to signal the ending of the remote programming mode. **Do not** press any buttons on either remote, the 2WSSR will still be in the process of synchronizing. As soon as the 2WSSR chirps once or twice, you are finished and can use the remotes. This should only take a few seconds.



Programming for:

1WFM6R

1. Insert the key into the ignition and turn the ignition ON then OFF five times.
2. The fifth time you turn the ignition on, the parking lights will flash once.
3. Tap the **Lock** button on the transmitter once. The parking lights will again flash once to confirm that the remote was coded.
4. After a few seconds, the parking lights will flash twice to signal the ending of the remote programming mode.

If you have multiple remotes, you can program them all at once by coding the first remote, then right after getting the confirmation flash, coding the second remote (you will get another confirmation flash), and then coding the third remote.

Programming for:

2WFMR-S, 2WAMR, 2WFMR, and 2W900FMR

1. Insert the key into the ignition and turn the ignition ON then OFF five times.
2. The fifth time you turn the ignition on, the parking lights will flash once.
3. Tap the (**I**) button on the transmitter once. The parking lights will again flash once to confirm that the remote was coded.
4. After a few seconds, the parking lights will flash twice to signal the ending of the remote programming mode.

If you have multiple remotes, you can program them all at once by coding the first remote, then right after getting the confirmation flash, coding the second remote (you will get another confirmation flash), and then coding the third remote.

Programming for:

2WSSR

1. Pull the positive side of the battery out of the 2WSSR, do not remove the whole battery as you will need to quickly insert it again.
2. Insert the key into the ignition and turn the ignition ON then OFF five times.
3. The fifth time you turn the ignition on, the parking lights will flash once.
4. Quickly push the positive side of the battery back into the 2WSSR. The parking lights will flash once to confirm that the remote was coded.
5. After a few seconds, the parking lights will flash twice to signal the ending of the remote programming mode. **Do not** press any buttons on the remote, the 2WSSR will still be in the process of synchronizing. As soon as the 2WSSR chirps once or twice, you are finished and can use the remote. This should only take a few seconds.

AUTO SECURITY COMPUSTAR

You can only use 1 two-way remote at a time with each install. However, 1 one-way remote can be added to the system.



Common Procedures



Antenna Mounting

CompuStar antennas can, in general, be mounted with any orientation. Horizontal or vertical, doesn't really matter. Things to consider would be the routing of the antenna cable, and mounting the antenna a few inches down from the roof and/or tint line. If the antenna cable is pinched or crimped on its way to the antenna, the system may experience problems such as; poor range, one-way communication on two-way models, or possibly no response at all. Metal acts as a natural shield to radio frequency signals so mounting the antenna close to the roof, or behind some kinds of tint that have metal content to them, can cause poor performance.

Dipswitch and Jumper Settings

Dipswitch settings for:

CM3000, CM3200, CM3300, and CM4200

1. Dipswitch #1 will select the engine-sensing mode, tach or alternator. The **ON** position is for tach sensing (Note: Factory default is tach sensing.) The **OFF** position is for alternator sensing.
2. Dipswitch #2 will select the remote start run time. The **OFF** position will provide a 15-minute run time for gas vehicles and a 25-minute run time for diesel vehicles. The **ON** position will provide a 25-minute run time for gas vehicles and a 45-minute run time for diesel vehicles.

Jumper settings for:

CM4200

1. **Jumper #1**- 2nd Ignition 12-volt (+) positive output to the blue wire on connector 1.
2. **Jumper #2**- 2nd Accessory 12-volt (+) positive output to the blue wire on connector 1.
3. **Jumper #3**- 2nd Starter 12-volt (+) positive output to the blue wire on connector 1.



The Little Green Loop

This wire is only present in international models. This jumper wire will determine the transmission setting. If the jumper wire is not cut the control module will be set for manual transmission mode. (Note: The factory default is manual transmission. If the control module is installed in a manual transmission vehicle and the jumper is cut **ALL WARRANTY** is void.) When the jumper wire is cut the control module will be set for automatic transmission mode.

Adjusting Siren Volume

To increase the volume of the siren, cut the black loop of wire located on it. This will increase the volume of the siren by 3 dB.

Adjusting Shock Sensor Sensitivity

To adjust the sensitivity of the shock sensor, turn the dial located on it. The higher the number, the higher the sensitivity to impacts to the vehicle. Even a small adjustment to the dial can make a big difference in the sensitivity. Most vehicles will use a sensitivity setting **below** "4".

Programming Tach / Alternator Sensing

Tach sensing:

When using tach mode on vehicle, the tach signal must be learned to the control module before vehicle will remote start.

Tach sensing procedure

(To test for tach sensing set digital multi-meter for AC voltage.)

1. Start the vehicle with the key. Allow time for the engine to idle down.
2. At idle the tach wire will test between 1 to 4-volts AC. As the R.P.M.'s increase the voltage on the meter will increase.
3. While vehicle is at idle, tap the tach learn button. The parking lights will flash once and siren will chirp once to confirm the control module accepted the tach signal. If the parking lights flash three times and the siren chirps three times this is confirmation that the control module did not accept the tach signal. After two seconds the number of parking light flashes will indicate the cause of the error.

Error Number (# of times parking lights flash)	Tach Learning Error Diagnosis
1	Dipswitch #1 is on alternator sensing.
2	Key is in the off position.
3	No signal, or the signal is not fast enough. Find a different wire

Alternator sensing:

This is not voltage sensing. To use alternator sensing the engine sense input, (yellow/black) must be connected to the stator wire on the alternator. This will be a small gauge wire.

Alternator sensing procedure

(To test for alternator sensing set digital multi-meter for DC voltage. Alternator is pre-programmed in the control module and does not require programming.)

1. The stator wire will rest at 0-volts DC while the vehicle is off.
2. Turn the ignition to the run position with the key. The stator wire will test between 4 to 6-volts DC.

Start the vehicle with the key. While the vehicle is running at idle the stator wire will test between 12 to 14-volts DC.

Diagnosing Remote Start Problems

If there is a problem auto-starting the vehicle, you will hear three chirps or see three parking light flashes when you attempt to auto-start it. Wait for 2 seconds and the cause for the error will be indicated by the number of times the parking lights flash.

Error Number (# of times parking lights flash)	Error Reason
1	Engine On
2	Key On
3	Door Open
4	Trunk Open
5	Brake On
6	Hood Open
7	Reservation Off (Manual Transmission Only)

Control Modules

CM3000 Wiring Diagram

			CN1	1 Red	2 Gr/Wht	1: (+) 12v Constant	2: (+) Parking Light			
				3 Red/Wht	4 White	3: (+) 12v Constant	4: (+) Accessory			
				5 Violet	6 Yellow	5: (-) When Armed	6: (+) Starter			
				7 Gr/Red	8 Black	7: (+) Ignition	8: (-) Ground			
Cut = Auto Uncut = Manual	Jumper		CN2	1	Gr/Wht	(-) Parking Lt. Output	250 mA			
				2	Black	(-) Status Out (GWR)	250 mA			
				3	Green	(-) Ignition Output	250 mA			
				4	Wht/Blk	(-) Accessory Output	250 mA			
				5	Red/Blk	(-) Starter Output	250 mA			
OFF / ON Alternator / Tach 15 (25) / 25 (45) Gas (Diesel)	DIP		CN3	1	Lt. Blue	(-) E-Brake Input				
				2	Gray/Bk	(-) Hood Input				
				3	Lt. Blue/Wh	(+) Brake Input				
				4	Violet/Blk	(-) Trunk Input				
				5	Red/Wht	(-) Door Input				
				6	Red	(+) Door Input				
				7	Brown/Blk	(-) Glow Plug Input				
				8	Brown/Wht	(+) Glow Plug Input				
				9	Yellow/Blk	Tach / Alternator Input				
Tach Switch	SW CN12									
			CN4	1	None	(-) Trunk Release Output	250 mA			
				2	Violet/Wht	(-) 2nd Unlock Output	250 mA			
				3	Orange/Blk	(-) Unlock Output	250 mA			
				4	Blue	(-) Lock Output	250 mA			
				5	Blue/Blk					
6	None									
Antenna	CN11									
			4	(-)						
			3	(+)						
			2	Tx						
1	Rx									
Temp Sensor	CN10									
			3	(-)						
			2	Temp						
			1	(+)						
Remote Paging System	CN9									
			4	LED						
			3	(+)						
			2	Knock						
			1	(-)						
			Optional Sensor Input	CN8						
						2	2nd			
1	1st									
			CN7	1	Black	(-)				
				2	White	2nd Stage Shock				
				3	Red	(+)				
				4	Yellow	1st Stage Shock				

CM-3000 WIRING DETAIL

CONNECTOR 1

- Pin 1 **Red**- Constant 12-volt (+) positive power input for the control module. This wire must be connected to a constant 12-volt (+) positive source. The proper wire will test 12-volt (+) positive with the key in the off position, while key is in the on position and during crank.
- Pin 2 **Green/White**- Parking light (+) positive output. Connect this wire to the (+) positive parking light wire generally at the parking light switch or behind the fuse box. The proper wire will test 12-volts (+) positive when the parking light switch is in the on position.
- Pin 3 **Red/White**- Constant 12-volt (+) positive power input for the starter and accessory on-board relays. This wire must be connected to a constant 12-volt (+) positive source. The proper wire will test 12-volts (+) positive with the key in the off position, while the key is in the on position and during crank
- Pin 4 **White**- Accessory 12-volts (+) positive output. This wire must be connected to the heater and A/C blower motor wire. The proper wire will test 0-volts with the key in the off position, 12-volts (+) positive while key is in the on position, 0-volts while cranking and back to 12-volts (+) positive with the key in the on position
- Pin 5 **Violet**- 250mA (-) negative output when armed and remote started. This wire will provide a (-) negative output when system is locked and armed and during remote start for anti-grind. (**Note:** This wire can also be used to trigger after-market L.E.D. kits and other after-market accessories. Output must be diode isolated when used to trigger after-market accessories.)
- Pin 6 **Yellow**- Starter 12-volt (+) positive output. This is pre-wired to pin 87a of the starter interrupt relay. This wire will provide 12-volts (+) positive to the vehicles starter. The proper wire will test 0-volts with the key in the off position, 0-volts while the key is in the on position and 12-volts (+) positive during crank. (**Note:** The vehicle starter wire will need to be cut. The yellow wire from pin 87a on the starter interrupt relay will go to the starter side of the vehicles starter wire. The yellow/black wire from pin 30 of the starter interrupt relay will go to the key side of the vehicles starter wire.)
- Pin 7 **Green and Red** -Ignition output and input. This wire must be connected to the vehicles ignition to power up all accessories and to trigger remote programming. The proper wire will test 0-volts with the key in the off position, 12-volts (+) positive while the key is in the on position and 12-volts (+) positive during crank. (**Note: Red wire is the ignition input for the pre-wired starter kill relay.**)



Pin 8 **Black**- Ground (-) negative input. This wire will connect to chassis ground.

CONNECTOR 2

These outputs can be used to trigger the secondary external pre-wired relay on the main ignition harness. (**I.e.**: 2nd ignition (-) negative output green wire connected to the violet wire of the relay will give you a 2nd ignition (+) positive output on the blue wire of the relay.

Pin 1 **Green/White**- Parking light 250mA (-) negative output. This is an optional output that will provide a (-) negative output with parking light flash.

Pin 2 **Black**- Status 250mA (-) negative output. This is an optional output that will provide a (-) negative output before the ignition is triggered, during remote start and will shut down after ignition has shut down. (**Note:** This wire can be used to trigger factory security interface modules)

Pin 3 **Green**- 2nd Ignition 250mA (-) negative output. This is an optional output that will provide a (-) negative output while the ignition is triggered and during remote start.

Pin 4 **White/Black**- 2nd Accessory 250mA (-) negative output. This is an optional output that will provide a (-) negative output while the accessory output is triggered.

Pin5 **Red/Black**- 2nd Starter 250mA (-) negative output. This is an optional output that will provide a (-) negative output during crank only.

CONNECTOR 3

Pin 1 **Light Blue**- Parking brake (-) negative input. This input is required for manual transmission reservation mode and to trigger the turbo-timer mode. The proper wire will provide a (-) negative trigger only when parking brake is set. (**Note:** Turbo mode is optional.)

Pin 2 **Gray/Black**- Hood-pin (-) negative input. This input is a safety shut down that will prevent the vehicle from remote starting and shut down the engine when the hood is opened. (**Note:** This wire will also trigger the alarm when the system is armed.)

Pin 3 **Light Blue/White**- Brake 12-volts (+) positive input. This input is required to shut down vehicle when remote started. The proper wire will test 12-volts (+) positive only when the foot brake is pressed.



- Pin 4 **Violet/Black**- Trunk-pin (-) negative input. This is an optional input that will monitor when the vehicles trunk is opened. (**Note:** This wire will also trigger the alarm when the system is armed.)
- Pin 5 **Red/White**- Door trigger (-) negative input. This wire monitors (-) negative trigger door-pins. The proper wire will provide a (-) negative trigger only when the doors are opened. (**Note:** This wire is required for manual transmission remote starts.)
- Pin 6 **Red**- Door trigger (+) positive input. This wire monitors (+) positive trigger door-pins. The proper wire will provide a (+) positive trigger only when the doors are opened. (**Note:** This wire is required for manual transmission remote starts.)
- Pin 7 **Brown/Black**- Glow plug (-) negative input. This wire will delay the starter output to allow the glow plugs to warm up on diesel engine vehicles. The proper wire will only provide a (-) negative trigger while the “Wait to Start” light is on.
- Pin 8 **Brown/White**- Glow plug (+) positive input. This wire will delay the starter output to allow the glow plugs to warm up on diesel engine vehicles. The proper wire will only provide a (+) positive trigger while the “Wait to Start” light is on.
- Pin 9 **Yellow/Black**- Engine sensing input. A tach input or alternator input is required for the system to sense when the vehicle is running. (**Note:** Option selected by dipswitch #1. On=Tach sensing. Off=Alternator sensing.)

CONNECTOR 4

- Pin 1 **Not used**
- Pin 2 **Violet/White**- Trunk release 250mA (-) negative output. This wire will provide a (-) negative trigger pulse. (**Note:** Positive trigger trunk release will require a relay. System will unlock doors and disarm alarm prior to trunk release.)
- Pin 3 **Orange/Black**- 2nd Unlock 250mA (-) negative output. This wire is an optional output that will provide a (-) negative pulse output for driver’s priority door lock. (**Note:** This feature will require additional relays and programming.)
- Pin 4 **Blue**- Unlock 250mA (-) negative output. This wire will provide a (-) negative pulse output during unlock and disarm. (**Note:** Positive and reverse polarity will require additional relays.)
- Pin 5 **Blue/Black**- Lock 250mA (-) negative output. This wire will provide a (-) negative pulse output during lock and arm. (**Note:** Positive and reverse polarity will require additional relays.)



Pin 6 **Not used.**

CONNECTOR 5

Pin 1 **Orange**- Factory alarm re-arm 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse output during lock, after crank and after ignition shut down.

Pin 2 **Orange/White**- Factory alarm disarm 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse output during unlock and before ignition is turned on.

Pin 3 **Violet**- Dome light 250mA (-) negative output. This is an optional output that will provide a 30 second (-) negative output after system is unlocked for dome-light supervision.

Pin 4 **Brown**- Siren 12-volt (+) positive output. This wire will provide a 30 or 60 second (+) positive output for the external siren. (Note: Factory default is 30 seconds.)

Pin 5 **White**- Horn honk 250mA (-) negative output. This is an optional output that will provide a 30 or 60 second (-) negative pulse when the alarm is triggered or during panic.

Pin 6 **Yellow**- Aux 1- 250mA (-) negative output. This is an optional output that will provide a pulse, latch or a timed pulse output. (Note: Options programmer is required to program a timed pulse output.)

Pin 7 **Yellow/White**- Aux 2- 250mA (-) negative output. This is an optional output that will provide a pulse, latch or a timed pulse output. (Note: Options programmer is required to program a timed pulse output.)

Pin 8 **Not used.**

CONNECTOR 6 (Pre-wired L.E.D.)

Pin 1 **Black**-L.E.D. - (-) negative output.

Pin 2 **Black/White** - 3-volt L.E.D. (+) positive output.



CONNECTOR 7 (Pre-wired Shock Sensor)

Pin 1 **Black**-Shock sensor (-) negative ground input.

Pin 2 **White**-Shock sensor 2nd stage (-) negative input. (Instant trigger)

Pin 3 **Red**-Shock sensor 12-volt (+) positive input.

Pin 4 **Yellow**-Shock sensor 1st stage (-) negative input. (Warn away)

CONNECTOR 8 (Optional add on sensors; i.e. proximity)

Pin 1 **Gray/White**- Optional sensor 1st stage (-) negative input. (Warn away)

Pin 2 **Black/White**-Optional sensor 2nd stage (-) negative input. (Instant trigger)

CONNECTOR 9 (Pre-wired Remote Paging Sensor or R.P.S.)

Pin 1 **Black**-R.P.S. sensor (-) negative ground input.

Pin 2 **White**-R.P.S. sensor (-) negative paging input.

Pin 3 **Red**-R.P.S. sensor 12-volt (+) positive input.

Pin 4 **Yellow**- R.P.S. sensor 9-volt (+) positive L.E.D. output

CONNECTOR 10 (Optional Temperature sensor)

Pin 1 **Gray**-12-volt (+) positive output. This wire will provide 12-volt (+) positive to temperature sensor.

Pin 2 **Brown**-Temp sensor (-) negative input. This wire will activate remote start when provided a (-) negative input. (Note: If vehicle is remotely started, a (-) negative input will turn the vehicle off.)

Pin 3 **Black**-Temp sensor (-) negative ground output.



CONNECTOR 11
(Pre-wired Antenna Cable)

Pin 1 **Yellow**-RX input. This wire receives signal from remote.

Pin 2 **White**-TX output. This wire transmits signal to remote.

Pin 3 **Red**-12-volt constant (+) positive input.

Pin 4 **Black**- (-) negative ground input.

CM3300 Wiring Diagram

		CN1	Brown	1	(+) Siren Output		
			Green/Wh	2	(+) Parking Light		
			Red	3	12v Constant		
			Black	4	Ground		
		CN2	Green/Wh	1	(-) Parking Light	200mA	
			White	2	(-) Horn Output	200mA	
			Yellow	3	(-) Aux 1 Output	200mA	
			Yellow/Wh	4	(-) Aux 2 Output	200mA	
			Purple	5	(-) Starter Kill Output	200mA	
			Green	6	(+) Ignition Input		
			Purple	7	(-) Dome Light Output	200mA	
			Orange	8	(-) Rearm Output	200mA	
			Orange/Wh	9	(-) Disarm Output	200mA	
(-)	4	Black	CN8				
(+)	3	Red					
Tx Antenna Cable		2			White		
Rx Antenna Cable		1			Yellow		
		CN3	Gray/Blk	1	(-) Hood Pin Input		
			Purple/Blk	2	(-) Trunk Trigger		
			Red/Wh	3	(-) Door Trigger		
			Red	4	(+) Door Trigger		
			Black/Wh	5	(-) Optional Trigger 1		
			Gray/Wh	6	(-) Optional Trigger 2		
		CN4	None	1	(+) 12v Constant		
			Purple/Wh	2	(-) Trunk Release	200mA	
			Orange/Blk	3	(-) 2nd Unlock Output	200mA	
			Blue	4	(-) Unlock Output	200mA	
			Blue/Blk	5	(-) Lock Output	200mA	
			None	6	(-) Ground		
		CN5	Black	1	(-) LED		
			Black/Wh	2	(+) LED		
		CN6	Black	1	(-)		
			White	2	2nd Stage Shock Sensor		
			Red	3	(+)		
			Yellow	4	1st Stage Shock Sensor		
LED (-)	4	Yellow	CN7				
(+)	3	Red					
RPS		2			White		
(-)	1	Black					



CM-3300 WIRING DETAIL

CONNECTOR 1

- Pin 1 **Brown**- Siren 12-volt (+) positive output. This wire will provide a 30 or 60 second (+) positive output for the external siren. (Note: Factory default is 30 seconds.)
- Pin 2 **Green/White**- Parking light (+) positive output. Connect this wire to the (+) positive parking light wire generally at the parking light switch or behind the fuse box. The proper wire will test 12-volts (+) positive when the parking light switch is in the on position.
- Pin 1 **Red**- Constant 12-volt (+) positive power input for the control module. This wire must be connected to a constant 12-volt (+) positive source. The proper wire will test 12-volt (+) positive with the key in the off position, while key is in the on position and during crank.
- Pin 4 **Black**- Ground (-) negative input. This wire will connect to chassis ground.

CONNECTOR 2

- Pin 1 **Green/White**- Parking light 250mA (-) negative output. This is an optional output that will provide a (-) negative output with parking light flash.
- Pin 2 **White**- Horn honk 250mA (-) negative output. This is an optional output that will provide a 30 or 60 second (-) negative pulse when the alarm is triggered or during panic.
- Pin 3 **Yellow**- Aux 1- 250mA (-) negative output. This is an optional output that will provide a pulse, latch or a timed pulse output. (**Note:** Options programmer is required to program a timed pulse output.)
- Pin 4 **Yellow/White**- Aux 2- 250mA (-) negative output. This is an optional output that will provide a pulse, latch or a timed pulse output. (**Note:** Options programmer is required to program a timed pulse output.)
- Pin 5 **Violet**- 250mA (-) negative output when armed. This wire will provide a (-) negative output when system is locked and armed. (**Note:** This wire can also be used to trigger after-market L.E.D. kits and other after-market accessories. Output must be diode isolated when used to trigger after-market accessories.)



- Pin 6 **Green** –Ignition input. This wire must be connected to the vehicles ignition to trigger remote programming. The proper wire will test 0-volts with the key in the off position, 12-volts (+) positive while the key is in the on position and 12-volts (+) positive during crank.
- Pin 7 **Violet**- Dome light 250mA (-) negative output. This is an optional output that will provide a 30 second (-) negative output after system is unlocked for dome-light supervision.
- Pin 8 **Orange**- Factory alarm re-arm 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse output during lock, after crank and after ignition shut down.
- Pin 9 **Orange/White**- Factory alarm disarm 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse output during unlock and before ignition is turned on.

CONNECTOR 3

- Pin 1 **Gray/Black**- Hood-pin (-) negative input. This is an optional input that will monitor when the vehicles hood is opened.. (**Note:** This wire will also trigger alarm when system is armed.)
- Pin 2 **Violet/Black**- Trunk-pin (-) negative input. This is an optional input that will monitor when the vehicles trunk is opened. (**Note:** This wire will also trigger alarm when system is armed.)
- Pin 3 **Red/White**- Door trigger (-) negative input. This wire monitors (-) negative trigger door-pins. The proper wire will provide a (-) negative trigger only when the doors are opened.
- Pin 4 **Red**- Door trigger (+) positive input. This wire monitors (+) positive trigger door-pins. The proper wire will provide a (+) positive trigger only when the doors are opened.
- Pin 5 **Black/White**- Optional sensor 2nd stage (-) negative input. (Instant trigger)
- Pin 6 **Gray/White**- Optional sensor 1st stage (-) negative input. (Warn away)



CONNECTOR 4

Pin 1 **Not used**

Pin 2 **Violet/White**- Trunk release 250mA (-) negative output. This wire will provide a (-) negative trigger pulse. (**Note:** Positive trigger trunk release will require a relay. System will unlock doors and disarm alarm prior to trunk release.)

Pin 3 **Orange/Black**- 2nd Unlock 250mA (-) negative output. This wire is an optional output that will provide a (-) negative pulse output for driver's priority door lock. (**Note:** This feature will require additional relays and programming.)

Pin 4 **Blue**- Unlock 250mA (-) negative output. This wire will provide a (-) negative pulse output during unlock and disarm. (**Note:** Positive and reverse polarity will require additional relays.)

Pin 5 **Blue/Black**- Lock 250mA (-) negative output. This wire will provide a (-) negative pulse output during lock and arm. (**Note:** Positive and reverse polarity will require additional relays.)

Pin 6 **Not used.**

CONNECTOR 5

(Pre-wired L.E.D.)

Pin 1 **Black**-L.E.D. - (-) negative output.

Pin 2 **Black/White** - 3-volt L.E.D. (+) positive output.

CONNECTOR 6

(Pre-wired Shock Sensor)

Pin 1 **Black**-Shock sensor (-) negative ground input.

Pin 2 **White**-Shock sensor 2nd stage (-) negative input. (Instant trigger)

Pin 3 **Red**-Shock sensor 12-volt (+) positive input.

Pin 4 **Yellow**-Shock sensor 1st stage (-) negative input. (Warn away)



CONNECTOR 7

(Pre-wired Remote Paging Sensor or R.P.S.)

Pin 1 **Black**-R.P.S. sensor (-) negative ground input.

Pin 2 **White**-R.P.S. sensor (-) negative paging input.

Pin 3 **Red**-R.P.S. sensor 12-volt (+) positive input.

Pin 4 **Yellow**- R.P.S. sensor 9-volt (+) positive L.E.D. output

CONNECTOR 8

(Pre-wired Antenna Cable)

Pin 1 **Yellow**-RX input. This wire receives signal from remote.

Pin 2 **White**-TX output. This wire transmits signal to remote.

Pin 3 **Red**-12-volt constant (+) positive input.

Pin 4 **Black**- (-) negative ground input.

CM4200 Wiring Diagram

Cut = Auto Uncut = Manual	Jumper		CN1	1 Red	2 Gr/Wht		
				3 Red/Wht	4 White	1: (+) 12v Constant	2: (+) Parking Light
				5 Blue	6 Yellow	3: (+) 12v Constant	4: (+) Accessory
OFF / ON				7 Gr/Red	8 Black	5: (+) Output, *JM1	6: (+) Starter
Altenator / Tach 15 (25) / 25 (45)	DIP 1 DIP 2	DIP				7: (+) Ignition	8: (-) Ground
Gas (Diesel)							
JM1	3 2 1	2nd Starter 2nd Acc 2nd Ign	CN8	CN2	1 2 3 4 5 6 7	(-) Parking Lt. Output 250 mA (-) Starter Output 250 mA (-) Output to Sterer Kill 250 mA (-) Status Out (GWR) 250 mA (-) Rearm Output 250 mA (-) Disarm Output (-) Horn Output	
Tach Switch	SW		CN12				
TX RX (-) (+)	4 3 2 1	White Blue Black Red	CN7	CN3	1 2 3 4 5 6 7 8 9	(-) E-Brake Input (-) Hood Input (+) Brake Input (-) Trunk Input (-) Door Input (+) Door Input (-) Glow Plug Input (+) Glow Plug Input Tach / Altenator Input	
Antenna	4 3 2 1	(-) (+) Tx Rx	CN11				
Temp Sensor	3 2 1	(-) Temp (+)	CN5	CN4	1 2 3 4 5 6	(-) Trunk Release Output 250 mA (-) 2nd Unlock Output 250 mA (-) Unlock Output 250 mA (-) Lock Output 250 mA	

* Output of Pin 5 of CN1 is determined by the placement of Jumper JM1.

CM-4200 WIRING DETAIL

CONNECTOR 1

- Pin 1 **Red**- Constant 12-volt (+) positive power input for the control module. This wire must be connected to a constant 12-volt (+) positive source. The proper wire will test 12-volt (+) positive with the key in the off position, while key is in the on position and during crank.
- Pin 2 **Green/White**- Parking light (+) positive output. Connect this wire to the (+) positive parking light wire generally at the parking light switch or behind the fuse box. The proper wire will test 12-volts (+) positive when the parking light switch is in the on position.
- Pin 3 **Red/White**- Constant 12-volt (+) positive power input for the starter and accessory on-board relays. This wire must be connected to a constant 12-volt (+) positive source. The proper wire will test 12-volts (+) positive with the key in the off position, while the key is in the on position and during crank
- Pin 4 **White**- Accessory 12-volts (+) positive output. This wire must be connected to the heater and A/C blower motor wire. The proper wire will test 0-volts with the key in the off position, 12-volts (+) positive while key is in the on position, 0-volts while cranking and back to 12-volts (+) positive with the key in the on position
- Pin 5 **Blue**- 2nd Ign., Acc. or Starter 12-volts (+) positive output. This wire is an optional output that will provide 12-volts (+) positive output. The jumper setting on the control module will determine the output.
- Pin 6 **Yellow**- Starter 12-volts (+) positive output. This is pre-wired to pin 87a of the starter interrupt relay. This wire provides 12-volts (+) positive to the vehicles starter. The proper wire will test 0-volts with the key in the off position, 0-volts while the key is in the on position and 12-volts (+) positive during crank. (**Note:** The vehicle starter wire will need to be cut. The yellow wire from pin 87a on the starter interrupt relay will go to the starter side of the vehicles starter wire. The yellow/black wire from pin 30 of the starter interrupt relay will go to the key side of the vehicles starter wire.)
- Pin 7 **Green and Red** –Ignition output and input. This wire must be connected to the vehicles ignition to power up all accessories and to trigger remote programming. The proper wire will test 0-volts with the key in the off position, 12-volts (+) positive while the key is in the on position and 12-volts (+) positive during crank. (**Note: Red wire is the ignition input for the pre-wired starter kill relay.**)
- Pin 8 **Black**- Ground (-) negative input. This wire will connect to chassis ground.



CONNECTOR 2

- Pin 1 **Green/White**- Parking light 250mA (-) negative output. This is an optional output that will provide a (-) negative output with parking light flash.
- Pin 2 **Red/Black**- 2nd Starter 250mA (-) negative output. This is an optional output that will provide a (-) negative output during crank only.
- Pin 3 **Violet**- 250mA (-) negative output when locked and remote started. This wire will provide a (-) negative output when system is locked and armed and during remote start for anti-grind. (**Note:** This wire can also be used to trigger after-market L.E.D. kits and other after-market accessories. Output must be diode isolated when used to trigger after-market accessories.)
- Pin 4 **Black**- Status 250mA (-) negative output. This is an optional output that will provide a (-) negative output before the ignition is triggered, during remote start and will shut down after ignition has shut down. (**Note:** This wire can be used to trigger factory security interface modules)
- Pin 5 **Orange**- Factory alarm re-arm 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse output during lock, after crank and after ignition shut down.
- Pin 6 **Orange/White**- Factory alarm disarm 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse output during unlock and before ignition is turned on.
- Pin 7 **White**- Horn honk 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse when the door locks are activated and 30 or 60 second pulse output during panic.

CONNECTOR 3

- Pin 1 **Light Blue**- Parking brake (-) negative input. This input is required for manual transmission reservation mode and to trigger the turbo-timer mode. The proper wire will provide a (-) negative trigger only when parking brake is set. (**Note:** Turbo mode is optional.)
- Pin 2 **Gray/Black**- Hood-pin (-) negative input. This input is a safety shut down that will prevent the vehicle from remote starting and shut down the engine when the hood is opened. (**Note:** This wire will also trigger the alarm when the system is armed.)



- Pin 3 **Light Blue/White**- Brake 12-volts (+) positive input. This input is required to shut down vehicle when remote started. The proper wire will test 12-volts (+) positive only when the foot brake is pressed.
- Pin 4 **Violet/Black**- Trunk-pin (-) negative input. This is an optional input that will monitor when the vehicles trunk is opened. (**Note:** This wire will also trigger the alarm when the system is armed.)
- Pin 5 **Red/White**- Door trigger (-) negative input. This wire monitors (-) negative trigger door-pins. The proper wire will provide a (-) negative trigger only when the doors are opened. (**Note:** This wire is required for manual transmission remote starts.)
- Pin 6 **Red**- Door trigger (+) positive input. This wire monitors (+) positive trigger door-pins. The proper wire will provide a (+) positive trigger only when the doors are opened. (**Note:** This wire is required for manual transmission remote starts.)
- Pin 7 **Brown/Black**- Glow plug (-) negative input. This wire will delay the starter output to allow the glow plugs to warm up on diesel engine vehicles. The proper wire will only provide a (-) negative trigger while the “Wait to Start” light is on.
- Pin 8 **Brown/White**- Glow plug (+) positive input. This wire will delay the starter output to allow the glow plugs to warm up on diesel engine vehicles. The proper wire will only provide a (+) positive trigger while the “Wait to Start” light is on.
- Pin 9 **Yellow/Black**- Engine sensing input. A tach input or alternator input is required for the system to sense when the vehicle is running. (**Note:** Option selected by dipswitch #1. On=Tach sensing. Off=Alternator sensing.)

CONNECTOR 4

- Pin 1 **Not used**
- Pin 2 **Violet/White**- Trunk release 250mA (-) negative output. This wire will provide a (-) negative trigger pulse. (**Note:** Positive trigger trunk release will require a relay. System will unlock doors prior to trunk release.)
- Pin 3 **Orange/Black**- 2nd Unlock 250mA (-) negative output. This is an optional output that will provide a (-) negative pulse output for driver’s priority door lock. (**Note:** This feature will require additional relays and programming.)
- Pin 4 **Blue**- Unlock 250mA (-) negative output. This wire will provide a (-) negative pulse output during unlock. (**Note:** Positive and reverse polarity will require additional relays.)



Pin 5 **Blue/Black**- Lock 250mA (-) negative output. This wire will provide a (-) negative pulse output during lock. (**Note:** Positive and reverse polarity will require additional relays.)

Pin 6 **Not used.**

CONNECTOR 5 (Optional Temperature sensor)

Pin 1 **Gray**-12-volt (+) positive output. This wire will provide 12-volt (+) positive to temperature sensor.

Pin 2 **Brown**-Temp sensor (-) negative input. This wire will activate remote start when provided a (-) negative input. (Note: If vehicle is remotely started, a (-) negative input will turn the vehicle off.)

Pin 3 **Black**-Temp sensor (-) negative ground output.

CONNECTOR 6 (Pre-wired Antenna Cable)

Pin 1 **Yellow**-RX input. This wire receives signal from remote.

Pin 2 **White**-TX output. This wire transmits signal to remote.

Pin 3 **Red**-12-volt constant (+) positive input.

Pin 4 **Black**- (-) negative ground input.

CONNECTOR 7 RS 232

Pin 1 **Yellow**-RX input. This wire receives signal from remote.

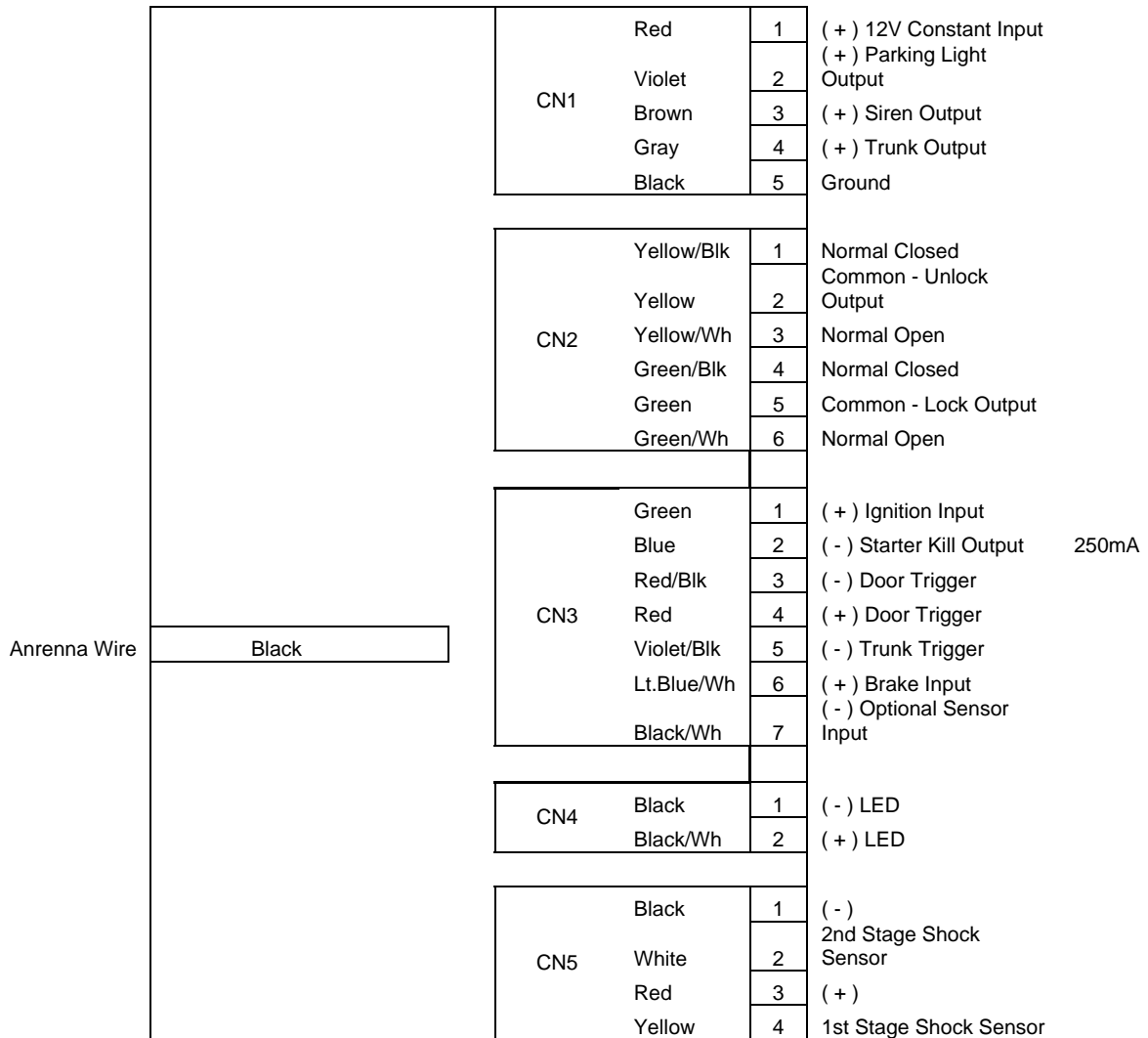
Pin 2 **Blue**-TX output. This wire transmits signal to remote.

Pin 3 **Black**-(-) negative ground in

Pin 4 **Red**-12-volt constant (+) positive input.

AUTO SECURITY
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CM1000A Wiring Diagram





CM-1000A WIRING DETAIL

CONNECTOR 1

- Pin 1 **Red**- Constant 12-volts (+) positive power input for the control module. This wire must be connected to a constant 12-volt (+) positive source. The proper wire will test 12-volt (+) positive with the key in the off position, while key is in the on position and during crank.
- Pin 2 **Violet**- Parking light (+) positive output. Connect this wire to the (+) positive parking light wire generally at the parking light switch or behind the fuse box. The proper wire will test 12-volts (+) positive when the parking light switch is in the on position.
- Pin 3 **Brown**- Siren 12-volts (+) positive output. This wire will provide a 30 or 60 second (+) positive output for the external siren. (Note: Factory default is 30 seconds.)
- Pin 4 **Gray**- Trunk release 12-volts (+) positive output. This wire will provide a (+) positive trigger pulse. (Note: Negative trigger trunk release will require a relay. System will unlock doors and disarm alarm prior to trunk release.)
- Pin 5 **Black**- Ground (-) negative input. This wire will connect to chassis ground.

CONNECTOR 2

- Pin 1 **Yellow/Black**- Normally closed pin (87a) of unlock relay. For a positive or negative unlock system this wire will not be used. For after-market actuators this wire will go to chassis ground. For reverse polarity this wire will go to the switch side of the unlock wire of the vehicle. When the factory unlock wire is cut the switch side will test 12-volts positive when the switch is pressed to unlock.
- Pin 2 **Yellow**- Common pin (30) of unlock relay. For positive or negative unlock system this wire will go to the vehicles unlock wire. For after-market actuators this wire will go to the unlock wire of the actuator. For reverse polarity this wire will go to the motor side of the unlock wire of the vehicle.
- Pin 3 **Yellow/White**- Normally opened pin (87) of unlock relay. For a positive unlock system this wire will go to a 12-volts (+) positive source. For a negative unlock system this wire will go to chassis ground. For after-market actuators this wire will go to a 12-volts (+) positive source. For reverse polarity this wire will go to a 12-volts (+) positive source.

- Pin 4 **Green/Black**- Normally closed pin (87a) of lock relay. For a positive or negative lock system this wire will not be used. For after-market actuators this wire will go to chassis ground. For reverse polarity this wire will go to the switch side of the lock wire of the vehicle. When the factory lock wire is cut the switch side will test 12-volts positive when the switch is pressed to unlock.
- Pin 5 **Green**- Common pin (30) of lock relay. For positive or negative lock system this wire will go to the vehicles lock wire. For after-market actuators this wire will go to the lock wire of the actuator. For reverse polarity this wire will go to the motor side of the lock wire of the vehicle.
- Pin 6 **Green/White**- Normally opened pin (87) of lock relay. For a positive lock system this wire will go to a 12-volts (+) positive source. For a negative lock system this wire will go to chassis ground. For after-market actuators this wire will go to a 12-volts (+) positive source. For reverse polarity this wire will go to a 12-volts (+) positive source.

CONNECTOR 3

- Pin 1 **Green** -Ignition input. This wire must be connected to the vehicles ignition to trigger remote programming. The proper wire will test 0-volts with the key in the off position, 12-volts (+) positive while the key is in the on position and 12-volts (+) positive during crank
- Pin 2 **Blue**- 250mA (-) negative output when armed. This wire will provide a (-) negative output when system is locked and armed. (**Note:** This wire can also be used to trigger after-market L.E.D. kits and other after-market accessories. Output must be diode isolated when used to trigger after-market accessories.)
- Pin 3 **Red/Black**- Door trigger (-) negative input. This wire monitors (-) negative trigger door-pins. The proper wire will provide a (-) negative trigger only when the doors are opened.
- Pin 4 **Red**- Door trigger (+) positive input. This wire monitors (+) positive trigger door-pins. The proper wire will provide a (+) positive trigger only when the doors are opened.
- Pin 5 **Violet/Black**- Trunk-pin (-) negative input. This is an optional input that will monitor when the vehicles trunk is opened. (**Note:** This wire will also trigger alarm when system is armed.)

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Pin 6 **Light Blue/White**- Brake 12-volts (+) positive input. This input is used for ignition controlled door locks. The proper wire will test 12-volts (+) positive only when the foot brake is pressed.

Pin 7 **Black/White**- Optional sensor (-) negative input. (Instant trigger)

CONNECTOR 4 (Pre-wired L.E.D.)

Pin 1 **Black**-L.E.D.- (-) negative output.

Pin 2 **Black/White**-3-volt L.E.D. (+) positive output.

CONNECTOR 5 (Pre-wired Shock Sensor)

Pin 1 **Black**-Shock sensor (-) negative ground input.

Pin 2 **White**-Shock sensor 2nd stage (-) negative input. (Instant trigger)

Pin 3 **Red**-Shock sensor 12-volt (+) positive input.

Pin 4 **Yellow**-Shock sensor 1st stage (-) negative input. (Warn away)



Option Programming



Option Programming

1WAM4R, 1WFM4R, 1W900FM4R, and 1WSS4R

With lock and unlock on the same button.

1. Enter programming by pressing:
 - a. The (lock/unlock) button, and the (start/stop) button simultaneously until the parking lights flash once. This is Menu 1.
 - b. The (lock/unlock) button, and the (query) button simultaneously until the parking lights flash once. This is Menu 2.
2. Tap the (query) button the number of times equal to the option you would like to change. For example, if it were the 5th option in the menu that you would like to change, you would tap the (query) button five times. The CompuStar system will flash the parking lights once each time you tap the (query) button.
3. Wait a few seconds, and the parking lights will flash the number of times corresponding to the option number you are about to modify. If the number of times the lights flash does not correspond with the option you want to change, wait a few seconds and the siren/horn will sound, signaling that you have exited programming mode. After the siren/horn sounds, you can retry the process from the beginning.
4. Immediately after the parking lights stop flashing from step 3, press:
 - a. The (lock/unlock) button for the factory default setting. The parking lights will flash once.
 - b. The (start/stop) button for the optional setting. The parking lights will flash twice.

You will need to perform these steps for each option you would like to change.

1WAM4R, 1WFM4R, 1W900FM4R, and 1WSS4R

With lock and unlock on separate buttons.

1. Enter programming by pressing:
 - a. The (lock) button, and the (unlock) button simultaneously until the parking lights flash once. This is Menu 1.
 - b. The (lock) button, and the (start/stop) button simultaneously until the parking lights flash once. This is Menu 2.
2. Press the (trunk) button and the (start/stop) button simultaneously until the parking lights flash, the number of times equal to the option you would like to change. For example, if it were the 5th option in the



menu that you would like to change, you would press the (trunk), and (start/stop) buttons simultaneously five times.

3. Wait a few seconds, and the parking lights will flash the number of times corresponding to the option number you are about to modify. If the number of times the lights flash does not correspond with the option you want to change, wait a few seconds and the siren/horn will sound, signaling that you have exited programming mode. After the siren/horn sounds, you can retry the process from the beginning.
4. Immediately after the parking lights stop flashing from step 3, press:
 - a. The (lock) button for the factory default setting. The parking lights will flash once.
 - b. The (unlock) button for the optional setting. The parking lights will flash twice.

You will need to perform these steps for each option you would like to change.

R500A (CM1000A)

1. Enter programming by pressing the (trunk) button, and the (siren) button simultaneously until the parking lights flash once.
2. Tap the (siren) button the number of times equal to the option you would like to change. For example, if it were the 5th option in the menu that you would like to change, you would tap the (query) button five times. The CompuStar system will flash the parking lights once each time you tap the (siren) button.
3. Wait a few seconds, and the parking lights will flash the number of times corresponding to the option number you are about to modify. If the number of times the lights flash does not correspond with the option you want to change, wait a few seconds and the siren/horn will sound, signaling that you have exited programming mode. After the siren/horn sounds, you can retry the process from the beginning.
4. Immediately after the parking lights stop flashing from step 3, press:
 - a. The (lock) button for the factory default setting. The parking lights will flash once.
 - b. The (unlock) button until the parking lights flash, for the optional setting. The parking lights will flash twice.

You will need to perform these steps for each option you would like to change.



1WFM6R

1. Enter programming by pressing:
 - a. The (trunk) button, and the (start) button simultaneously until the parking lights flash once. This is Menu 1.
 - b. The (trunk) button, and the (stop) button simultaneously until the parking lights flash once. This is Menu 2 .
2. Press the (stop) button until the parking lights flash, the number of times equal to the option you would like to change. For example, if it were the 5th option in the menu that you would like to change, you would press the (stop) button five times.
5. Wait a few seconds, and the parking lights will flash the number of times corresponding to the option number you are about to modify. If the number of times the lights flash does not correspond with the option you want to change, wait a few seconds and the siren/horn will sound, signaling that you have exited programming mode. After the siren/horn sounds, you can retry the process from the beginning.
6. Immediately after the parking lights stop flashing from step 3, press:
 - a. The (unlock) button for the factory default setting. The parking lights will flash once.
 - b. The (start) button until the parking lights flash, for the optional setting. The parking lights will flash twice.

You will need to perform these steps for each option you would like to change.

2WFMR-S, 2WAMR, 2WFMR, and 2W900FMR

1. Enter programming by pressing:
 - c. Button (I), and button (II) simultaneously until the parking lights flash once. This is Menu 1.
 - d. Button (I), and button (IV) simultaneously until the parking lights flash once. This is Menu 2.
2. Tap button (IV) the number of times equal to the option you would like to change. For example, if it were the 5th option in the menu that you would like to change, you would tap button (IV) five times. The CompuStar system will flash the parking lights once each time you tap button (IV).



3. Wait a few seconds, and the parking lights will flash the number of times corresponding to the option number you are about to modify. If the number of times the lights flash does not correspond with the option you want to change, wait a few seconds and the siren/horn will sound, signaling that you have exited programming mode. After the siren/horn sounds, you can retry the process from the beginning.
4. Immediately after the parking lights stop flashing from step 3, press:
 - a. Button (I) for the factory default setting. The parking lights will flash once.
 - b. Button (II) for the optional setting. The parking lights will flash twice.

You will need to perform these steps for each option you would like to change.

2WSSR

The 2WSSR programs options just like the other 2-way remotes listed above, but a more focused approach may be needed. Inherent to the type of technology used in the 2WSSR, is a noticeably longer delay in the response time. Given the delayed response time, and that the option programming is a timed process in itself, option programming with this remote can be a more difficult process if you are not sure of which buttons you need to press during the process. Another option is the below mentioned Option Programmer, which eliminates the need for remote option programming altogether.

CM3 Series Option Programmer

The Option Programmer is an installer's tool used to modify options within the CompuStar System. This unit plugs into the CompuStar system through the antenna cable and is powered through this cable as well, therefore requiring no batteries to replace. The Option Programmer makes it easier to program options available to remote programming and also makes available some options that the remotes are unable to modify. The Option Programmer has its own user's guide in the "Accessory Manuals" section.

Resetting all of Menu #1 or Menu #2 to the factory default settings.

If you are not sure about current programming, you can change everything to the factory settings and start again.



1-Way 4 Button Remotes

With lock and unlock on the same button.

1. Enter programming by pressing:
 - a. The (lock/unlock) button, and the (start/stop) button simultaneously until the parking lights flash once. This is Menu 1.
 - b. The (lock/unlock) button, and the (query) button simultaneously until the parking lights flash once. This is Menu 2.
2. Tap the (trunk) button 3 times, waiting for a parking light flash between each time.
3. The parking lights will flash three times, signaling that all of the options have been reset, and that you have exited programming mode.

1-Way 4 Button Remotes

With separate lock and unlock buttons.

1. Enter programming by pressing:
 - a. The (lock) button, and the (unlock) button simultaneously until the parking lights flash once. This is Menu 1.
 - b. The (lock) button, and the (start/stop) button simultaneously until the parking lights flash once. This is Menu 2.
2. Tap the (start/stop) button 3 times, waiting for a parking light flash between each time.
3. The parking lights will flash three times, signaling that all of the options have been reset, and that you have exited programming mode.

R500A (CM1000A)

1. Enter programming by pressing the (trunk) button, and the (siren) button simultaneously until the parking lights flash once.
2. Tap the (trunk) button three times, waiting for a parking light flash between each time.
3. The parking lights will flash three times, signaling that all of the options have been reset, and that you have exited programming mode.



1WFM6R

1. Enter programming by pressing:
 - a. The (trunk) button, and the (start) button simultaneously until the parking lights flash once. This is Menu 1.
 - b. The (trunk) button, and the (stop) button simultaneously until the parking lights flash once. This is Menu 2 .
2. Press the (start) button until the parking lights flash, do this 3 times.
3. The parking lights will flash three times, signaling that all of the options have been reset, and that you have exited programming mode.

All 2-Way Remotes

1. Enter programming by pressing:
 - a. Button (I), and button (II) simultaneously until the parking lights flash once. This is Menu 1.
 - b. Button (I), and button (IV) simultaneously until the parking lights flash once. This is Menu 2.
2. Tap button (III) 3 times, waiting for a parking light flash between each time.
3. The parking lights will flash three times, signaling that all of the options have been reset, and that you have exited programming mode.

AUTO SECURITY COMPUSTAR

CM3000

Option Menu 1

	Feature	Option 1	Option 2	Option 3	Option 4
1-1	Unlock Before, Start, Lock After Start	OFF	ON		
1-2	Door lock / Unlock Pulse Duration	0.8 sec	2.5 sec		
1-3	Crank Time w/ Alternator Sensing	0.8 sec	1.0 sec		
1-4	Driver's Priority Unlock	OFF	ON		
1-5	Double Pulse Unlock	OFF	ON		
1-6	Dome Light Factory Rearm	OFF	ON		
1-7	Turbo Mode	OFF	ON		
1-8	Diesel Timer *	Glow Plug Wire	18 Sec		
1-9	Delayed Door Trigger for Locking	OFF	90 Sec Delay		
1-11	Valet option for R.P.S. Sensor	ON	OFF		

Option Menu 2

	Feature	Option 1	Option 2	Option 3	Option 4
2-1	Cold Start w/ Optional Temp. Sensor	OFF	ON		
2-2	Timer Start or Minimum Interval Between Cold Starts	3 Hours	1.5 Hours		
2-3	Lock Behavior During Passive Arming	Passive Locking	Passive Locking Off		
2-4	Anti - Jacking	OFF	ON	Auto Anti-Jacking** / No Auto Lock	Auto Anti-Jacking** / With Auto Lock
2-5	Ignition Controlled Door Locks	OFF	ON		
2-6	Aux 1 Output	0.5 Sec	Latch		
2-7	Aux 2 Output	0.5 Sec	Latch		
2-8	Siren Duration	30 Sec	60 Sec		
2-9	Channel Expander *	OFF	ON		
2-10	Passive Arming With Channel Expander *	OFF	ON		

* Denotes Options That Can Only Be Programmed With The Option Programmer V.2

** International Models Only

AUTO SECURITY COMPUSTAR

CM3300

Option Menu 1

	Feature	Option 1	Option 2	Option 3	Option 4
1-1	Unlock Before, Start, Lock After Start	N/A	N/A		
1-2	Door lock / Unlock Pulse Duration	0.8 sec	2.5 sec		
1-3	Crank Time w/ Alternator Sensing	N/A	N/A		
1-4	Driver's Priority Unlock	OFF	ON		
1-5	Double Pulse Unlock	OFF	ON		
1-6	Dome Light Factory Rearm	OFF	ON		

Option Menu 2

	Feature	Option 1	Option 2	Option 3	Option 4
2-1	Cold Start w/ Optional Temp. Sensor	N/A	N/A		
2-2	Timer Start or Minimum Interval Between Cold Starts	N/A	N/A		
2-3	Lock Behavior During Passive Arming	Passive Locking	Passive Locking Off		
2-4	Anti - Jacking	OFF	ON	Auto Anti-Jacking** / No Auto Lock	Auto Anti-Jacking** / With Auto Lock
2-5	Ignition Controlled Door Locks	OFF	ON		
2-6	Aux 1 Output	0.5 Sec	Latch		
2-7	Aux 2 Output	0.5 Sec	Latch		
2-8	Siren Duration	30 Sec	60 Sec		
2-9	Channel Expander *	OFF	ON		
2-10	Passive Arming With Channel Expander *	OFF	ON		

* Denotes Options That Can Only Be Programmed With The Option Programmer V.2

** International Models Only

AUTO SECURITY COMPUSTAR

CM4200

Option Menu 1

	Feature	Factory Default	Optional
1-1	Unlock Before, Start, Lock After Start	OFF	ON
1-2	Door lock / Unlock Pulse Duration	0.8 sec	2.5 sec
1-3	Crank Time w/ Alternator Sensing	0.8 sec	1.0 sec
1-4	Driver's Priority Unlock	OFF	ON
1-5	Double Pulse Unlock	OFF	ON
1-6	Dome Light Factory Rearm	N/A	N/A
1-7	Turbo Mode	OFF	ON
1-8	Diesel Timer *	Glow Plug Wire	18 Sec
1-9	Short Pulse Lock / Unlock	OFF	0.125 Sec
1-10	Starter Kill Relay	Anti-Grind Only	Anti Grind + Starter Kill
1-11	Manual Transmission Auto Lock	Lock After Reservation	Does Not Lock After Reservation
1-12	Delayed Door Trigger for Locking	OFF	90 Sec Delay
1-13	Factory Style Alarm	OFF	ON
1-14	Double Pulse Start Input for Use as Slave Unit With OEM Remotes	OFF	ON

Option Menu 2

	Feature	Factory Default	Optional
2-1	Cold Start w/ Optional Temp. Sensor	OFF	ON
2-2	Timer Start or Minimum Interval Between Cold Starts	3 Hours	1.5 Hours
2-3	Lock Behavior During Passive Arming	Passive Locking	Passive Locking Off
2-4	Anti - Jacking	N/A	N/A
2-5	Ignition Controlled Door Locks	OFF	ON

* Denotes Options That Can Only Be Programmed With The Option Programmer V.2

CM1000A

Option Menu 1

	Feature	Factory Default	Optional
1	Lock/Unlock Pulse Duration	0.8 sec	4 sec
2	Application of Pre-Wired Kill Relay	Starter Kill	Anti-Jacking (Ign Kill)
3	Door Open Parking Light Indicator	Disabled	Enabled
4	30 sec Passive Relock	Disabled	Enabled
5	Double Pulse Unlock	Disabled	Enabled

These option descriptions are for the **CM1000A ONLY**. They differ from the regular option menus so much that they need their own section. The full listing of option menu descriptions immediately follows this page.

1. Lock / Unlock Pulse Duration

This option determines the output duration of the lock and unlock pulses. Some Vehicles do not respond to short lock/unlock pulses.

2. Application of Pre-Wired Kill Relay

This option requires that the starter kill relay be installed in the ignition circuit, rather than into the starter circuit. With this option turned on, Panic mode will become Anti-Jacking mode. If Anti-Jacking is activated while the vehicle is running with the key in the ignition, the siren will sound for 30 seconds. After 30 seconds the system will break the ignition circuit, thereby disabling the vehicle. The siren will continue to play for 1 more minute. With this option turned off, when Panic mode is activated, the system will arm, activate the starter kill, and play the siren for 1.5 minutes.

3. Door Open Parking Light Indicator

With this option enabled, the parking lights will flash if a door is left open while the vehicle is being armed. This serves as a warning that all of the doors have not been closed.

4. 30 sec Passive Relock

With this option enabled, after disarming the system with the remote, the system will relock the doors and arm the alarm after 30 seconds if a door has not been opened. At 10 and 20 seconds after the disarm command was given, the siren will chirp once to indicate that the alarm is about to rearm. At 30 seconds after, the siren will chirp once, and the system will arm the alarm. If you wish to stop this process, you must open a door within 30 seconds of disarming the alarm.

5. Double Pulse Unlock

With this option enabled, the unlock wire will perform a double pulse every time the unlock command is given. Some vehicles require this double pulse to operate the locks correctly.



Options Explained In Detail

CM3000-3300-4200

1-1 – Unlock Before, Lock After Starting. Lock After Remote Start.

If enabled, this option will make the system unlock the doors before remote starting, start the vehicle, then lock the doors after the vehicle starts. It will then lock the doors again if the remote start run time expires and the vehicle shuts down. This feature is for vehicles that have factory alarms that need to be disarmed before remote starting.

1-2 – Door Lock/Unlock Pulse Duration.

This option determines the output duration of the door lock and unlock pulses. Some vehicles do not respond to short door lock/unlock pulses.

1-3 – Minimum Crank Time When Using Alternator Sensing

This option determines the minimum amount of crank time used when the system is operating in Alternator Sensing mode. The CompuStar system automatically increases its crank time if it fails to start during either the first or second attempts. This is how the CompuStar system will crank under the following conditions:

Option Setting	1st Start Attempt	2nd Start Attempt	3rd Start Attempt
Option 1-3, Factory Setting	0.8 sec	0.9 sec	1.0 sec
Option 1-3, Optional Setting	1.0 sec	1.1 sec	1.2 sec

1-4 – Driver’s Door Priority Unlock

If enabled, this option will cause the system to unlock the driver’s door first, and if the unlock button is pressed again within 3 seconds, the other doors will unlock. This option requires additional installation to function; you must isolate the driver’s door from the rest of the doors.

1-5 – Double Pulse Unlock

If enabled, this option will cause the system to double pulse the unlock output. This option is used on a majority of Chrysler vehicles. The first unlock pulse disarms the alarm, and the second pulse unlocks the doors.

1-6 – Dome Light Factory Rearm

If enabled, this option will cause the system to send a pulse to the vehicle through the dome light wire if:

- a. The run time has expired and the vehicle shuts down.
- b. The vehicle is shut down manually through the remote.
- c. The system is locked and/or armed.

This option can be used to shut down the radio in vehicles where the radio stays on until the door opens after the ignition has been on. The system will also send



the lock and rearm pulses to the vehicle while the dome light output is active. This will simulate the door being opened and the lock button being pressed, therefore arming the factory alarm.

1-7 – Turbo Mode

If enabled, this option will allow the system to be put in Turbo mode through the remote. In Turbo mode, the system will keep the vehicle running until two minutes after the ignition has been turned to the OFF position, if the emergency brake wire has been grounded. This feature is useful for vehicles with turbochargers because it allows the turbo too slowly cool before shutting off the engine. To use Turbo mode, you must turn on option 1-7, enable Turbo mode on the remote, and set the emergency brake.

1-8 – Diesel Timer Mode

With this option on the default setting, the CompuStar system will remote start normally unless it senses input on either the (+) or (-) glow-plug input wires. If it senses input on either one of these wires, it will delay the start until the input goes away. With this option on the optional setting, the system will turn on the ignition wires then wait 18 seconds before starting. This 18 second delay is adjustable between 3 and 99 seconds, but only with the CM3 Series Option Programmer.

1-9 – CM3000:

Delayed Door Trigger for Locking

With this option turned on, the system will ignore the door trigger for 90 seconds after the lock command has been issued. This will prevent the “door open” indication on 2-way remotes. If the door is still seen as open after 90 seconds, the remote will be paged to indicate that the door is still open.

CM4200

Short Pulse Lock/Unlock

With this option enabled, the output duration of the door lock will be reduced from 0.8 seconds to 0.125 seconds.

1-10 – Starter Kill Relay

With this option on the default setting, the starter kill relay will act as an anti-grind circuit only, and will not disable the starter when the system is locked. In the optional setting, the starter kill relay will act as an anti-grind and starter kill circuit.

1-11 – CM3000

Valet Option for RPS Sensor

With this option turned off, the RPS sensor will not be activated.

(Continued...)



CM4200

Manual Transmission Auto-Lock

With this option on the default setting, the doors will lock right after reservation mode is set. On the optional setting, the doors will have to be locked with the remote after reservation mode has been set.

1-12 – CM4200:

Delayed Door Trigger for Locking

With this option turned on, the system will ignore the door trigger for 90 seconds after the lock command has been issued. This will prevent the “door open” indication on 2-way remotes. If the door is still seen as open after 90 seconds, the remote will be paged to indicate that the door is still open.

1-13 – CM4200:

Factory Style Alarm

With this option turned on, the 4200 starter only system will function as a factory style alarm by monitoring the door trigger and sounding the horn and flashing the parking lights if the door is opened after the doors have been locked.

1-14 – CM4200:

Double Pulse Start Input

With this option turned on, the ground trigger start input of the temp sensor will require 2 pulses to initiate the start sequence. This will allow you to install the system as a slave start unit by tying the start input to the lock wire in the vehicle. Make sure it is a ground pulse, or flip the polarity with a relay.

2-1 – Cold Start with Temperature Sensor

To use this option, an optional temperature sensor must be installed. With this option turned on, the system will check the status of the temperature sensor every 1.5 to 3.0 hours, depending on the setting of option 2-2. If the temperature of the sensor is below the specified start temperature, the system will remote start.

2-2 – Timer Start, or Minimum Interval Between Cold Starts.

This option regulates the start intervals in Cold Start and Timer Start modes. On the default setting, if Timer mode is activated, the system will remote start every 3 hours. If the optional temperature sensor is installed, and option 2-2 is turned on, the system will check the status of the temperature sensor every 3 hours. On the optional setting, if Timer mode is activated, the system will remote start every 1.5 hours. If the optional temperature sensor is installed, and option 2-2 is turned on, the system will check the status of the temperature sensor every 1.5 hours.

2-3 – Lock Behavior During Passive Arming

With this option on the default setting, the doors will lock once Passive Arming mode has armed the alarm. With this option on the optional setting, the doors will remain unlocked even if the system passively arms.

2-4 – Anti Jacking

This option requires the starter kill relay to be installed in the ignition circuit rather than into the starter circuit. With this option set to Option 2, Panic Mode becomes Anti-Jacking Mode. If Anti-Jacking is activated while the vehicle is running with the key in the ignition, the siren will sound for 30 seconds then the system will disconnect the ignition, thereby disabling the vehicle. The siren will continue to sound for 1 more minute. With this option turned off, when Panic Mode is activated, the system will arm, activate starter kill, and sound the siren for 1.5 minutes.

** International models only, with this option set to Option 3, the ignition kill and alarm will activate 30 seconds after the system stops receiving the “Auto” signal from the remote. “Auto” lock will not be active on this option setting.

** International models only, with this option set to Option 4, it will function the same as the above Option 3, but “Auto” lock will be active as well.

2-5 – Ignition Controlled Door Locks

If turned on, this option will cause the door locks to respond to the key in the ignition. (Continued...)

Automatic Transmission Vehicles:

The doors will lock once the vehicle has been started with the key and the brake is pressed, or once the ignition is turned on and the brake pressed if the vehicle is already running by remote start. The doors will unlock once the ignition is turned to the off position.

Manual Transmission Vehicles, or Vehicles Using Turbo Mode:

The doors will lock within 5 seconds of starting the vehicle with the key and releasing the emergency brake, or once the ignition is turned on and the emergency brake is released if the vehicle is already running by remote start.

2-6 – Aux 1 Output Duration

Through the remote, this option can be programmed for the default setting of a pulsed output, or for the optional setting of a latched output. The latched output will stay latched until the auxiliary output is activated again. If the Option Programmer is used, you can program this output for a timed latched output of 3 to 99 seconds.

2-7 – Aux 2 Output Duration

Through the remote, this option can be programmed for the default setting of a pulsed output, or for the optional setting of a latched output. The latched output



will stay latched until the auxiliary output is activated again. If the Option Programmer is used, you can program this output for a timed latched output of 3 to 99 seconds.

2-8 – Siren Output Duration

With this option on the default setting, if the alarm is triggered, the siren will sound for 30 seconds. On the optional setting, the siren will sound for 60 seconds.

2-9 – Channel Expander Mode

This option requires the installation of the optional Channel Expander module. If you need more than the 2 supplied auxiliary outputs, you can install the Channel Expander for 5 additional outputs. With this option turned on, the Aux 2 wire from the system becomes non functional and the Aux 1 wire becomes the data wire that communicates with the Channel Expander. Please see the Channel Expander instruction manual for more details.

2-10 – Passive Arming With Channel Expander Mode Enabled

The ability to activate/deactivate Passive Arming through the remote is lost once Channel Expander mode is activated. If the Channel Expander is being used, set this option to the optional setting to activate Passive Arming. Leave it on the default setting to prevent Passive Arming.

Additional Programming

Some additional features have been added to the CompuStar systems that are not programmed through the option menus. Details on how to program these options are listed here

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Installation Assistance

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Frequently Asked Questions / Troubleshooting

I have everything hooked up, but the system still doesn't do anything.

The remotes need to be programmed. The remotes for CompuStar systems do not come programmed. This is because the CompuStar systems are modular in design and the remotes are packed right before shipping the units out.

What wires do I need to hook up?

That all depends on what vehicle you are working with and what you want the system to be capable of. There is no set answer for this question.

What is the green/white wire inside the brain module?

This wire determines the transmission mode. See page 7.

Where do the blue and purple wires off this extra relay go? (CM3000/CM3200)

This is a pre-wired positive output, negative trigger relay. See page 18, 'Connector 2'.

Which parking light output do I use?

If you have a positive parking light circuit, then use the positive parking light output, pin 2 of connector 1. If you have a negative parking light circuit, then use the negative parking light output, pin 1 of connector 2.

What is the status output used for?

This is an optional output that will provide a (-) negative output before the ignition is triggered during remote start, and will shut down after ignition has shut down. (**Note:** This wire can be used to trigger factory security interface modules and clutch bypasses.) Also known as a Ground While Running. (GWR)

I need a ground when armed, where can I get it?

You can use the starter kill output that goes to the starter kill relay. You must cut this wire and place a diode in line so that when the ignition on the other side of the relay goes to ground, it cannot back feed to your accessory. Have the stripe side of the diode facing the CompuStar module and attach your accessory on the CompuStar side of the diode.

Is the system Voltage Sensing?

No. You must have the engine sensing wire from connector 2 connected to either a tach source or the alternator. See page 14.

How many times should the parking lights flash or siren chirp when I press the tach learn button?

Once, see page 14.



The vehicle will remote start when disarmed, but not when armed.

Most likely, the starter kill relay was installed backwards. Check to make sure the yellow/black wire is going to the ignition side of the wire, and that the yellow wire is going to the engine side. If installed backwards, when armed, you will be applying 12v+ to the key cylinder, and not to the rest of the vehicle.

Do I have to hook up both 12v+ wires?

Yes. Power for the various functions of the system is divided between these two wires.

How do I upgrade my current install to a higher end model?

Simply unplug the old antenna, plug the new antenna in, stick it to the windshield, and then program the new remote.

The vehicle starts then shuts down 3 times in a row.

This usually means that the CompuStar is not satisfied with the tach or alternator signal it is sensing. One of the main causes of this is the use of T-taps, or Scotch-Locks. These devices do not make good connections. If you have soldered onto these wires and still have this problem, you can try to find a different source for the signal. Please see page 7 for details on how these wires should test.

The vehicle will lock and unlock, but will not remote start or flash the parking lights.

The system is in valet mode. Please see the user's guide for the remote you are using, for the button configuration to get the system out of valet mode.

Whenever I try to arm the vehicle, it chirps the siren 3 times and will not arm.

The most likely cause for this would be that the system thinks that either the trunk and/or hood is/are open. Please verify that the trunk and hood are closed and that the wires for these inputs have not been grounded anywhere.

Do the door locks flip-flop in polarity?

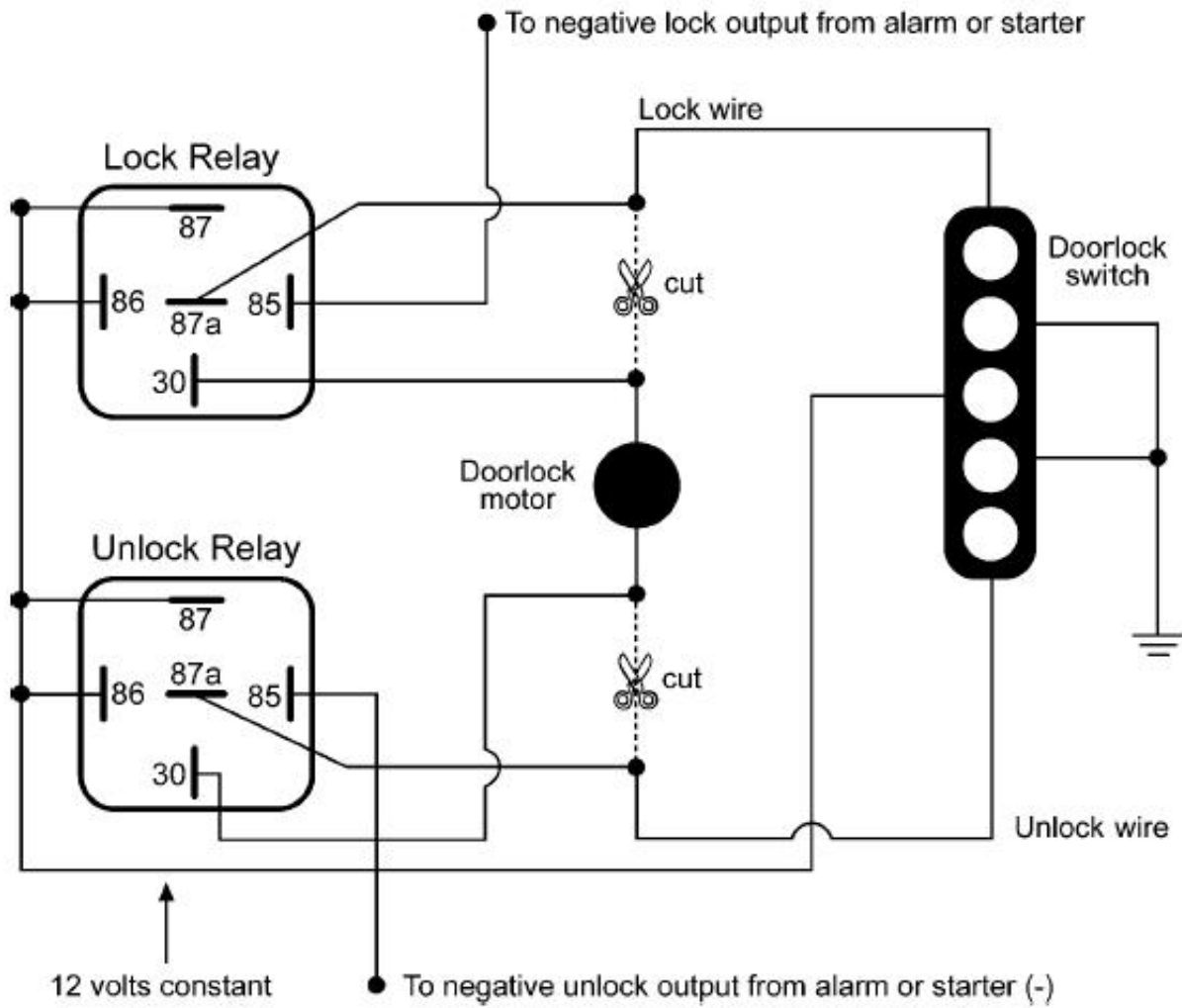
No. We had this configuration at one point and experienced problems with improper installations that caused damage to the lock outputs. We do provide a Door Relay Pack that simplifies various door lock integrations.

Diagnosing Remote Start Problems.

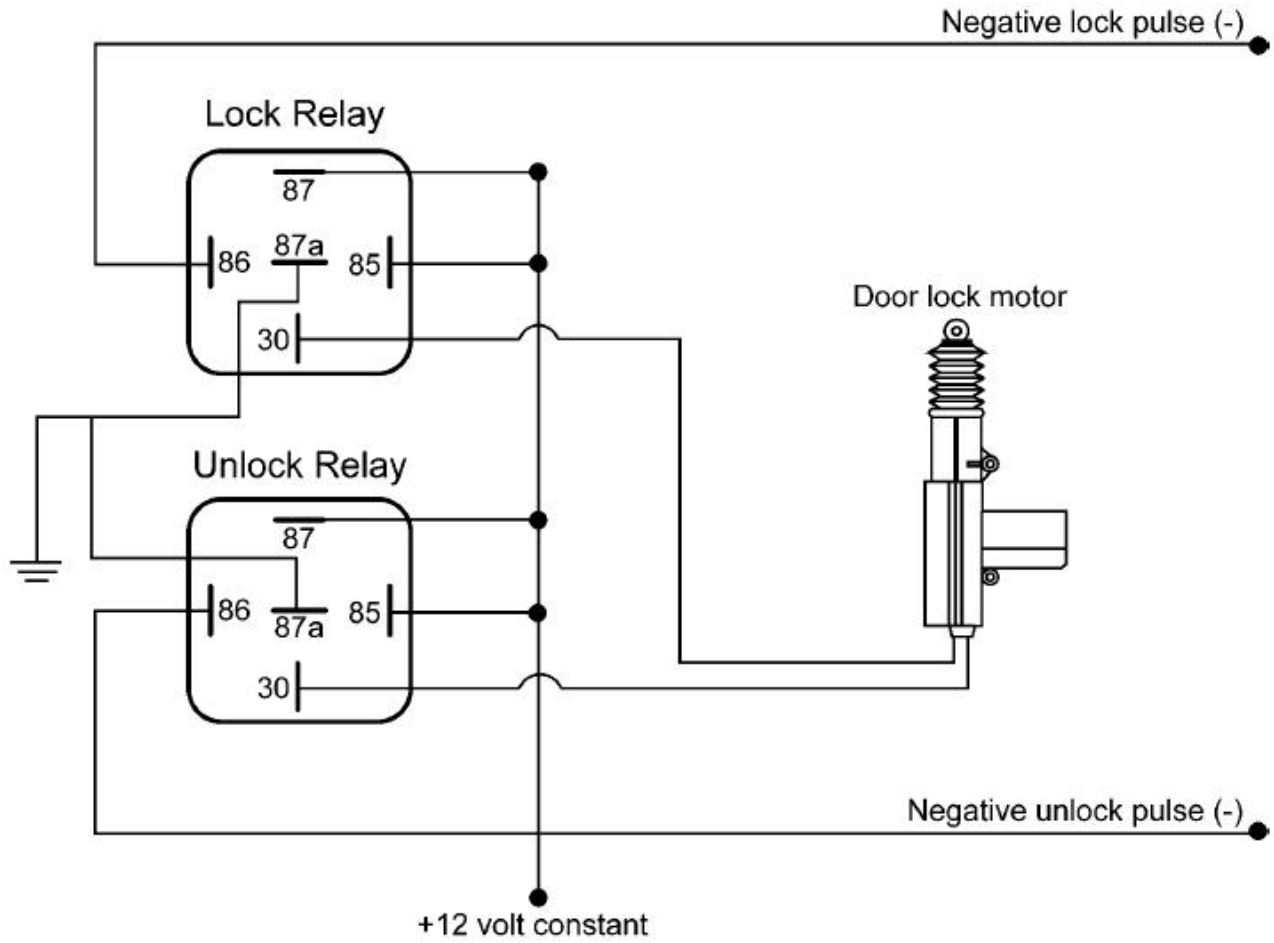
If there is a problem auto-starting the vehicle, you will hear three chirps or see three parking light flashes when you attempt to auto-start it. Wait for 2 seconds and the cause for the error will be indicated by the number of times the parking lights flash. Please see page 11 for the error list.

Common Diagrams

Reverse Polarity Door Locks

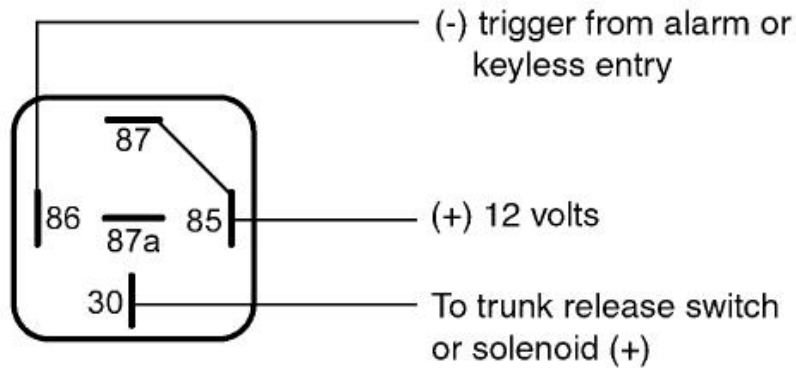


Adding Door Actuators

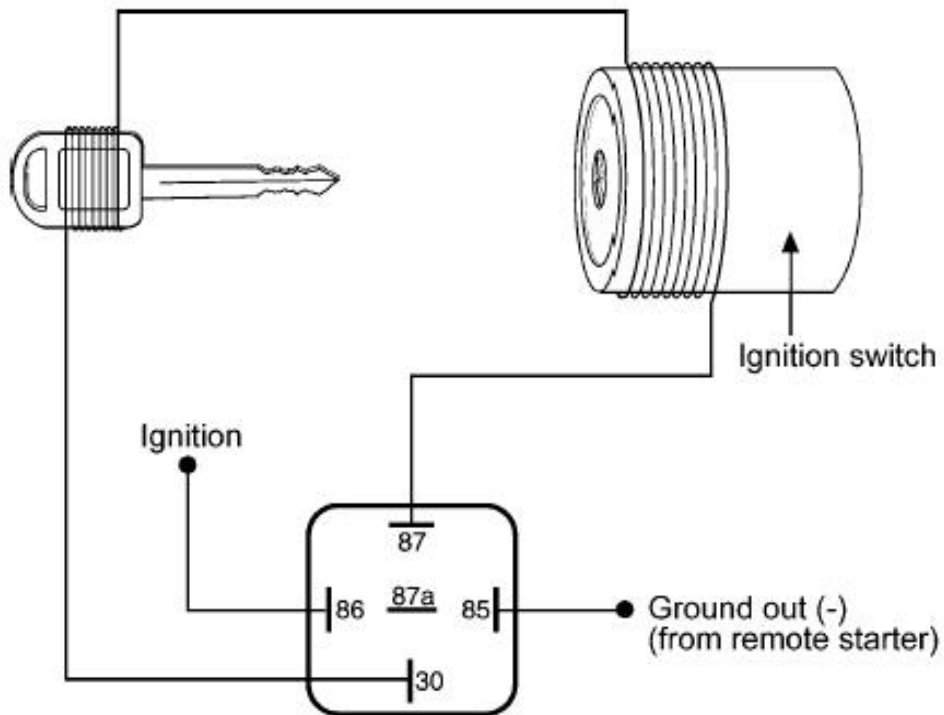


Trunk Release

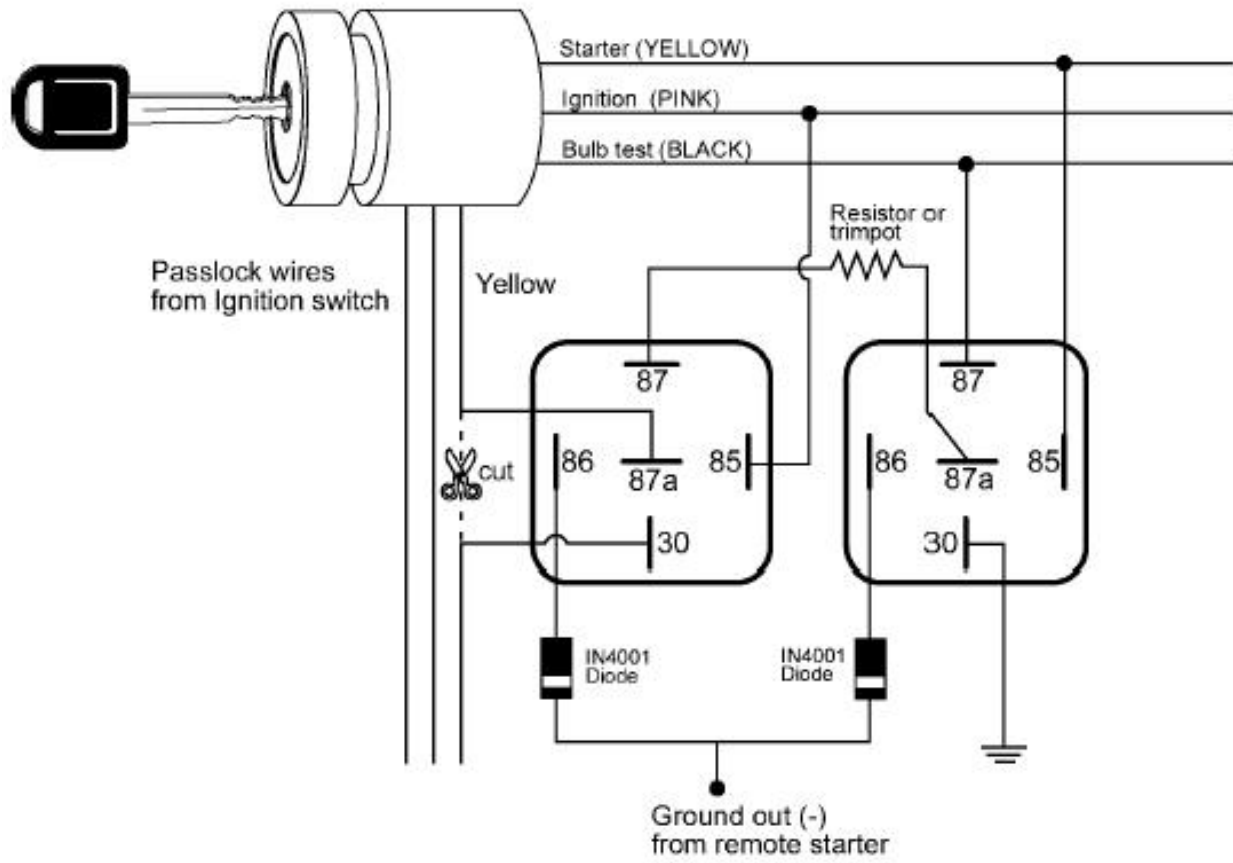
This configuration is used when the vehicle's trunk switch operates with a 12-volt signal to the trunk solenoid. Always fuse the 12-volt supply to the relay.



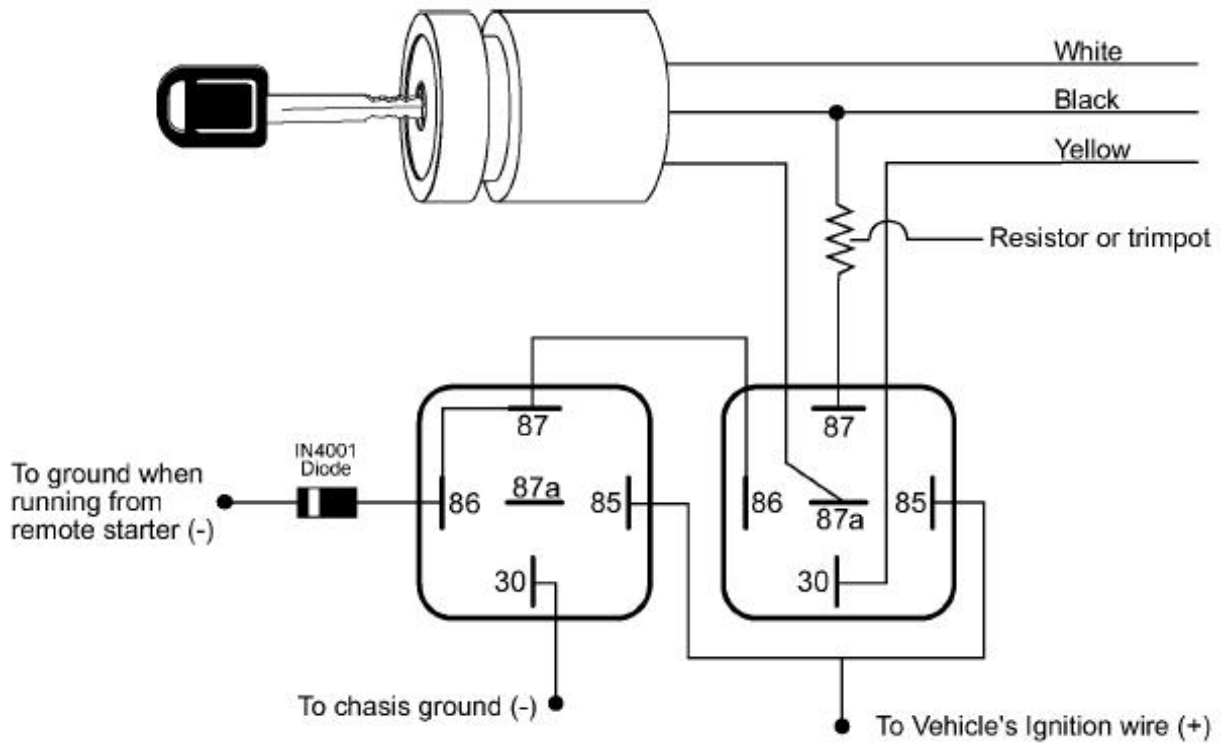
Transponder



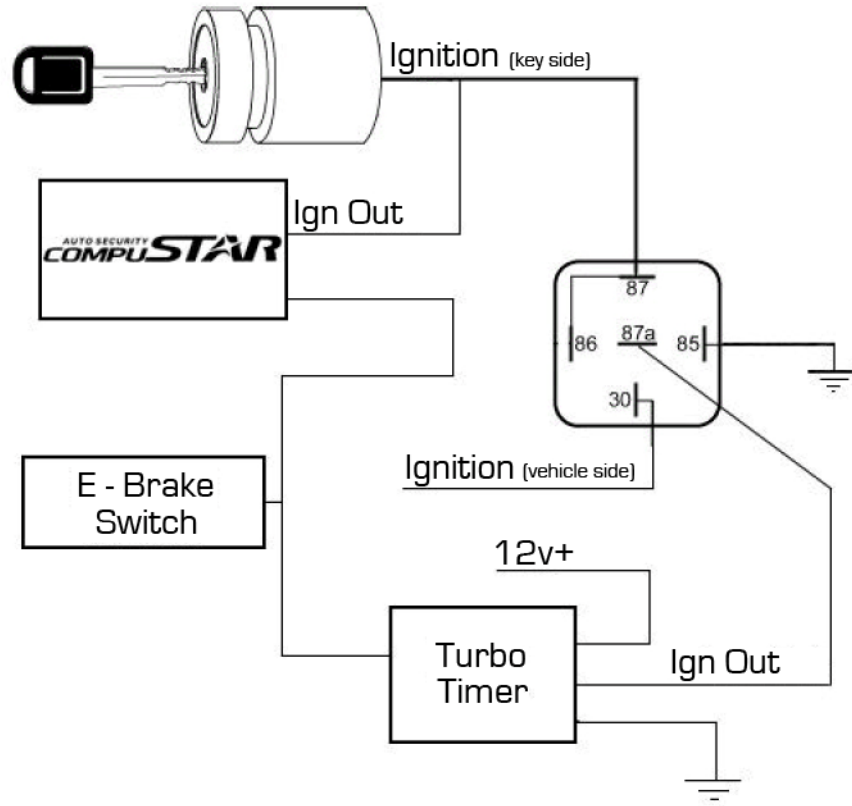
Passlock I



Passlock II

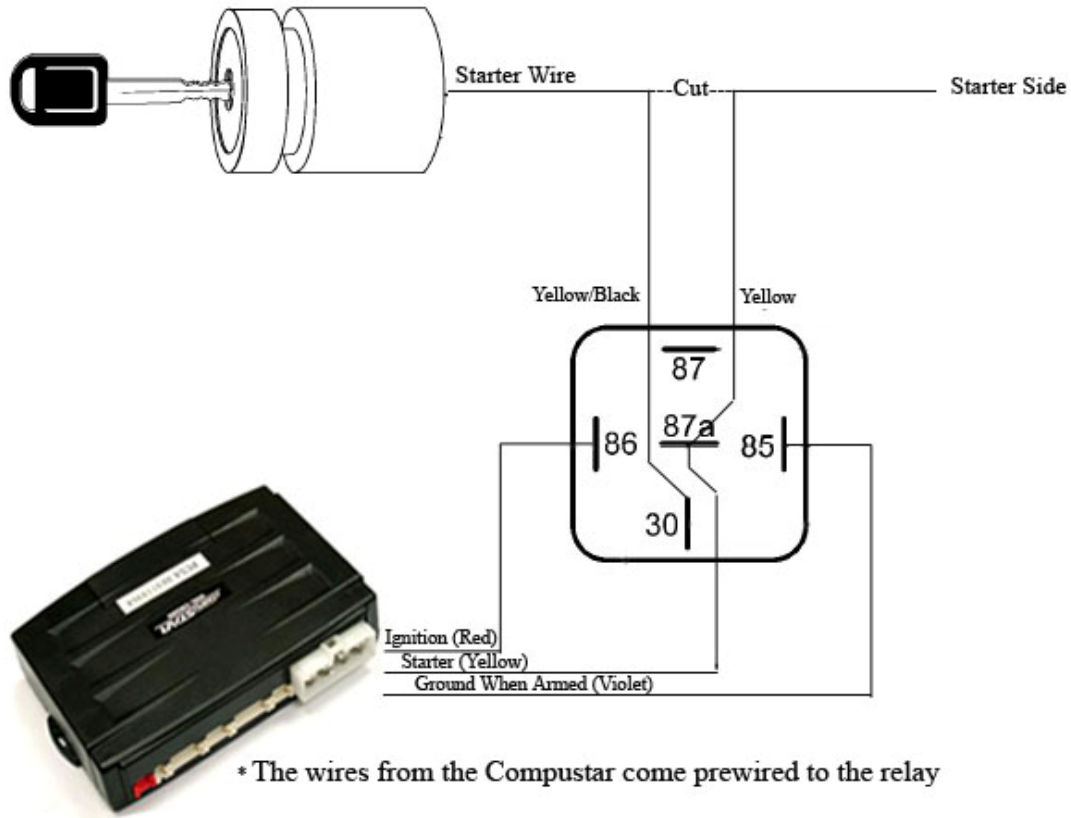


Aftermarket Turbo Timer with Parking Brake Trigger

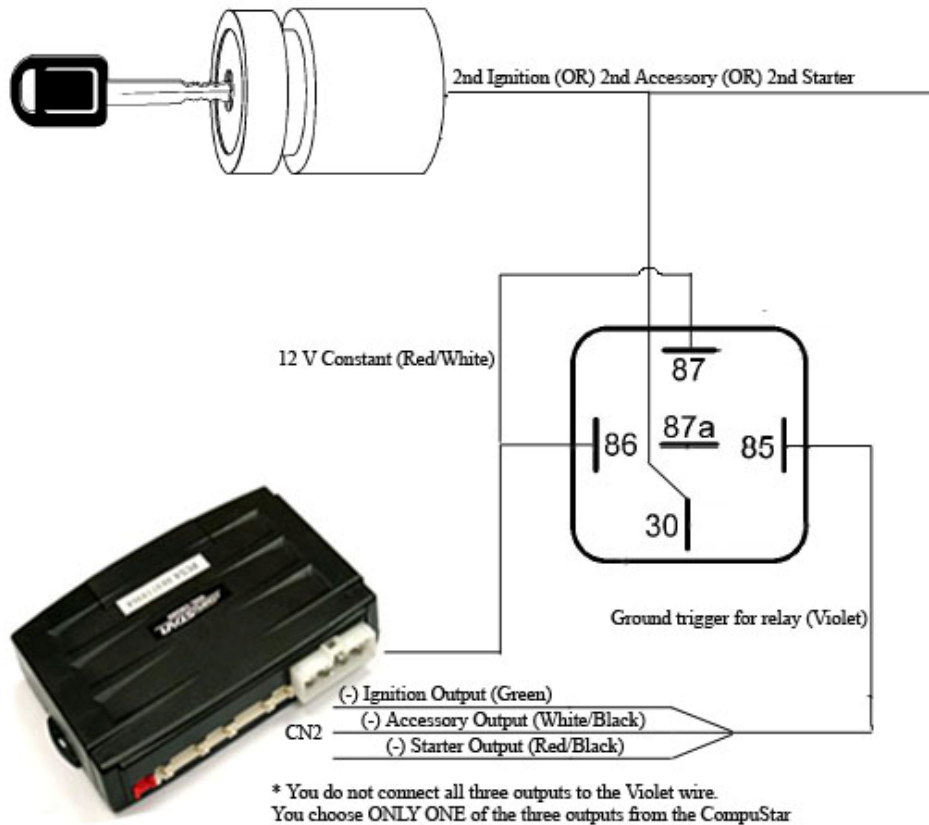


Note: This diagram will not work with all turbo timers.

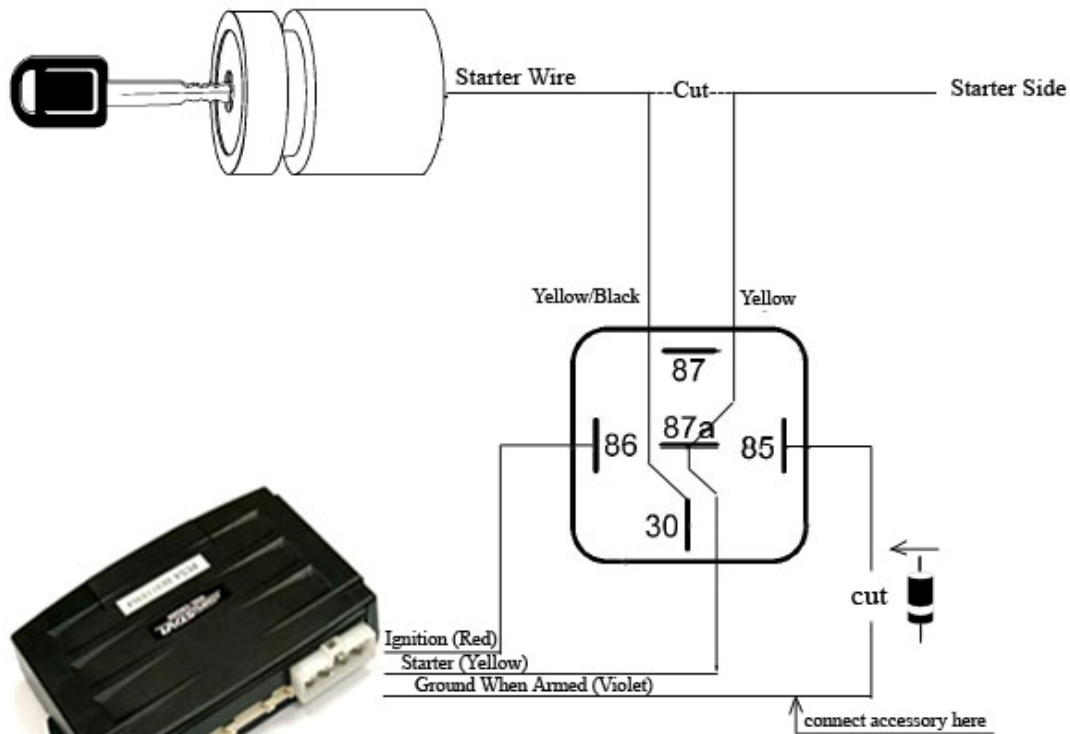
Starter Kill Relay Installation



Adding a Relay to Power a Secondary Ignition, Accessory, or Starter



Adding Aftermarket Alarm Accessories Using the Ground While Armed Output



* The Ground When Armed (Violet) wire must be cut in half and diode inserted in-line when a Ground When Armed output is required. (i.e. window modules or tilt sensors)

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Accessory Manuals

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OP500 Option Programmer

The OP-500 is the new option programmer for Firstech's various lines of product. This option programmer replaces the CM-3 Series option programmer. Included in the kit is;

- 1: OP-500
- 2: USB interface cable
- 3: Antenna cable extension



Option Pro 500



USB Interface



Antenna Extension

Instructions:

Stand Alone Mode

To use the OP-500 in stand alone mode, simply connect it to the control module via the antenna wire. (Use the included extension cable if necessary.) Connect the antenna wire to the blue port on the top of the OP500. Once connected, the OP-500 will power up. (The control module must have 12v+ and ground.)

To change the option number you wish to program, use the left and right arrow keys on the OP-500, it will scroll through then options available in menu 1 and then move to menu 2. At the end of menu 2, if you have turned on diesel mode or set one or more of the auxiliary outputs to "Latch", you will have the option to program the duration of the diesel timer and/or auxiliary outputs.

You can then use the up and down arrow buttons to adjust the option's settings. "1" is the default setting, and "2" is the optional setting.

When you are done adjusting the various option settings, press and hold the "W" (write) button until the OP-500 chirps. This will write the settings to the control module.

Note1: The USB interface cable is for future use to connect the OP500 to a computer. Once the software for this feature is complete, additional instructions will be supplied.

Channel Expander

The channel expander is an add-on module that can be used to expand the existing two auxiliary outputs to a total of seven auxiliary outputs. Each one of these seven outputs can be individually programmed for pulsed, latched, or timed-latch output. The programming of the Channel Expander outputs must be done with the Option Programmer; the CompuStar remotes do not have the ability to access these programming options.

Input	12v+	3
	Aux1 In	2
	GND	1
Output	12v+	8
	Aux 7 (-)200mA	7
	Aux 6 (-)200mA	6
	Aux 5 (-)200mA	5
	Aux 4 (-)200mA	4
	Aux 3 (-)200mA	3
	Aux 2 (-)200mA	2
	Aux 1 (-)200mA	1

Connector 1 - Input

Pin1: This is the ground wire for the Channel Expander. Ground this wire to the vehicle chassis.

Pin2: This is the data input wire used to communicate with the CompuStar brain module. Connect this wire to the Aux 1 output wire from the CompuStar brain module.

Pin3: This is the 12v constant wire for the Channel Expander. Connect this wire to a constant 12v+ source within the vehicle.

Connector 2 - Output

Pin1: Aux 1, 200mA negative output.

Pin2: Aux 2, 200mA negative output.

Pin3: Aux 3, 200mA negative output.

Pin4: Aux 4, 200mA negative output.

Pin5: Aux 5, 200mA negative output.

Pin6: Aux 6, 200mA negative output.

Pin7: Aux 7, 200mA negative output.



Please note that the Auxiliary outputs are low-level outputs, and should not be used to directly power any devices/accessories in the vehicle. This will damage the output and void the warranty on this item

Pin8: This wire is a 12v+ constant output, provided for convenience during installation. The seven auxiliary outputs will, in most cases, be used to trigger a relay that will activate/power the vehicle accessory you are trying to control. Being negative outputs, you would require a positive 12v trigger on the other side of the relay coil. You can use this wire as that 12v+ source.

Programming the Outputs

Programming of the Channel Expander outputs must be done with the Option Programmer. To program the Channel Expander outputs, connect the Option Programmer and move to option 2-9. Once this option is set to the optional setting, the auxiliary outputs will be adjustable at the end of menu 2. Use the up and down buttons to adjust the timing of the outputs. "LA" means it is set up as a latched output that will stay latched until the auxiliary is triggered again. For the timed latch settings, you can set the output duration for 1-99 seconds. Don't forget to "write" the settings to the control module when you are finished.

RPS – Remote Paging Sensor

The RPS is a dual function sensor that can be used as a theft deterrent and a paging unit for the remote. We recommend that the RPS is mounted on the left hand side of the windshield in plain view. While the system is armed the blue LED will flash through the windshield. At the customer's request a dash mounted LED can be installed but this eliminates the need for drilling unnecessary holes in the interior dash. If the RPS is tapped while the system is armed the LED will come on solid to indicate that the remote is being paged. At that time the remote will ring and the phone icon will appear to notify the owner of the vehicle that someone is waiting at the vehicle. ****THIS IS NOT A GLASS BREAKAGE SENSOR. **** (The RPS is only available and included with, 2-way alarm and alarm/remote start systems).

Temperature Sensor

The temp sensor monitors the internal temperature of the vehicle. We recommend mounting this sensor inside the vehicle accessible to the owner for adjustment. This sensor plugs directly into Compustar control modules that offer remote start features. With this option the remote start checks the internal temperature of the vehicle every three hours. The vehicle will only remote start if the temperature is below the pre-set

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temperature (Between -22 and 32 degrees fahrenheit). If started, the vehicle will run for the pre-set run time (Gas-15 or 25 min. Diesel-25 or 45 min).

**See option 2-1 and 2-2 for optional programming. **