CompuStar S Controllers

INSTALLATION GUIDE
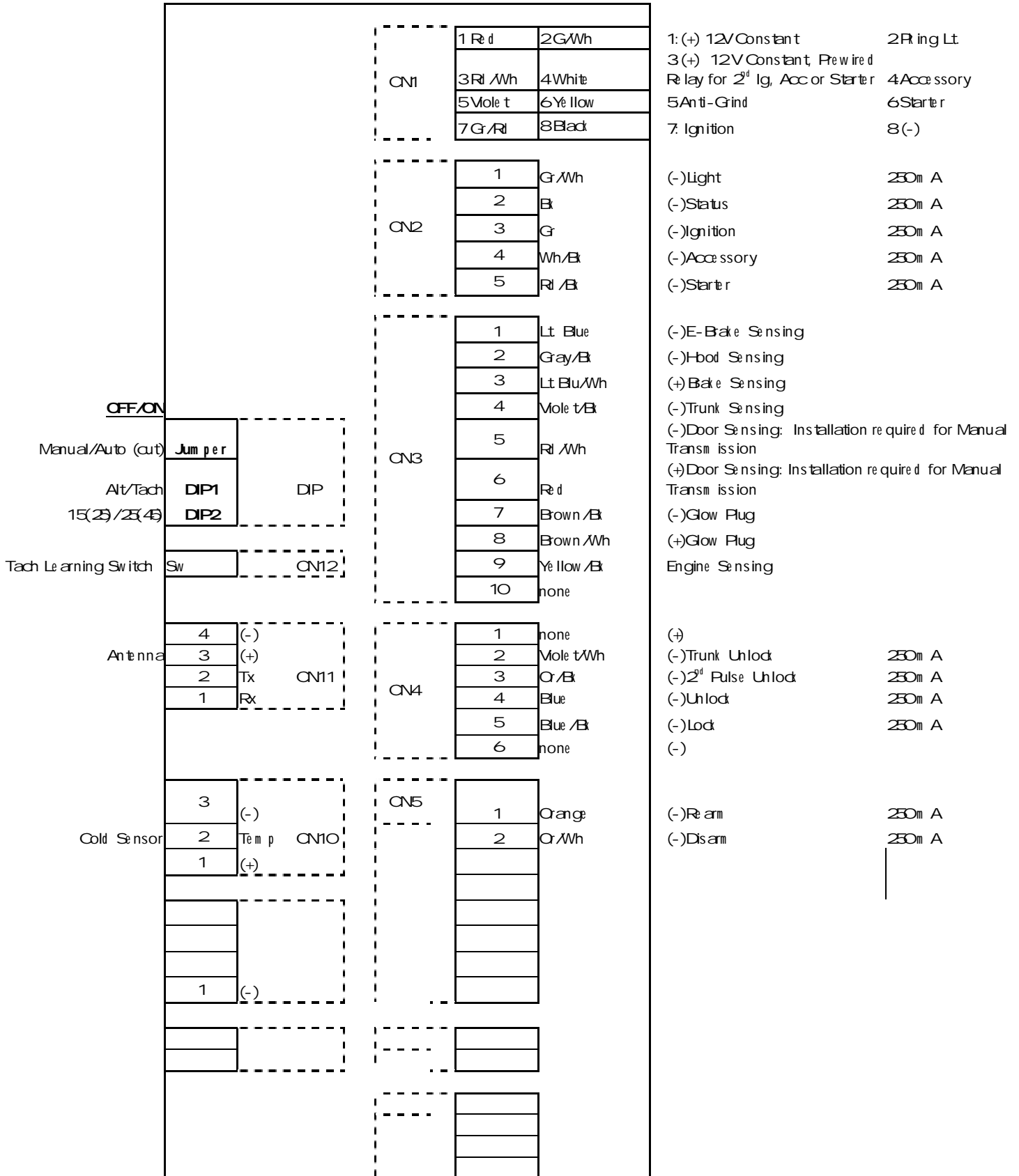
By Firstech, Inc.

Website: www.compustar.org

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Wiring Diagram

CN1					
1 Red	2 G/Wh	1: (+) 12V Constant		2 Pking Lt.	
3 Rd/Wh	4 White	3 (+) 12V Constant, Pre-wired Relay for 2nd Ig, Acc or Starter		4 Accessory	
5 Violet	6 Yellow	5 Anti-Grind		6 Starter	
7 Gr/Rd	8 Black	7: Ignition		8 (-)	

CN2

1	Gr/Wh	(-) Light	250mA
2	Bk	(-) Status	250mA
3	Gr	(-) Ignition	250mA
4	Wh/Bk	(-) Accessory	250mA
5	Rd/Bk	(-) Starter	250mA

CN3

1	Lt Blue	(-) E-Brake Sensing
2	Gray/Bk	(-) Hood Sensing
3	Lt Blu/Wh	(+) Brake Sensing
4	Violet/Bk	(-) Trunk Sensing
5	Rd/Wh	(-) Door Sensing: Installation required for Manual Transmission
6	Red	(+) Door Sensing: Installation required for Manual Transmission
7	Brown/Bk	(-) Glow Plug
8	Brown/Wh	(+) Glow Plug
9	Yellow/Bk	Engine Sensing
10	none	

OFF/ON

Manual/Auto (cut)	Jumper		DIP
Alt/Tach	DIP1		
15(25)/25(45)	DIP2		

| Tach Learning Switch | Sw | | CN12 |

Antenna / CN11

4	(-)	
3	(+)	CN11
2	Tx	
1	Rx	

CN4

1	none	(+)	
2	Violet/Wh	(-) Trunk Unlock	250mA
3	Or/Bk	(-) 2nd Pulse Unlock	250mA
4	Blue	(-) Unlock	250mA
5	Blue/Bk	(-) Lock	250mA
6	none	(-)	

Cold Sensor / CN10

3	(-)	
2	Temp	CN10
1	(+)	

CN5

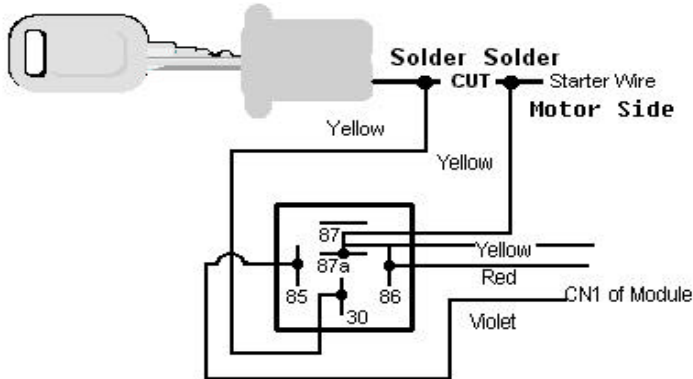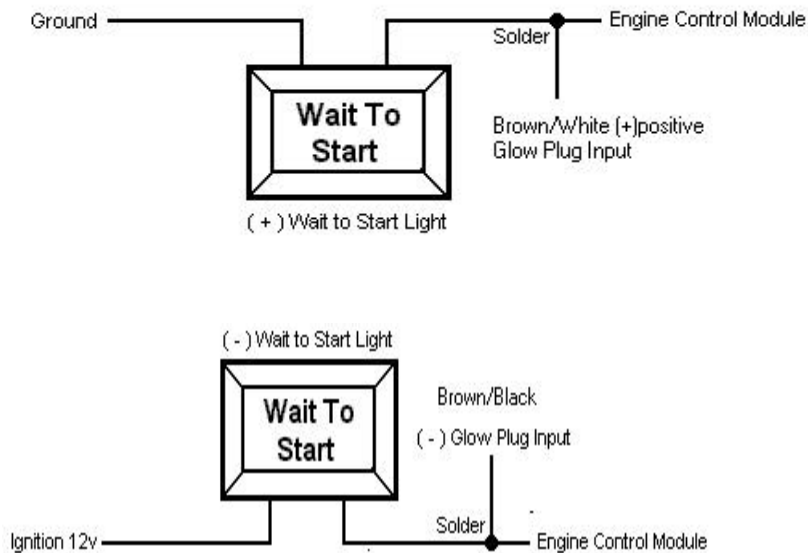| 1	Orange	(-) Rearm	250mA
2	Or/Wh	(-) Disarm	250mA

| 1 | (-) |

A. Notes for Wire Connection

1. There are two 12 V Constant Wires in the CN1. One is to supply power to the CPU and ignition and the other is to supply power to Starter and Accessory.
2. Pre-wired Relay for Anti-Grind - Violet at CN1 supplies a negative 250mA output when the system is remote starting.   The Yellow wire from 87a should go to the Starter Motor side.

3. Pre-wired Relay for 2nd Ignition, 2nd Starter or 2nd Accessory.   You may select the relay's trigger input from one of the three outputs of CN2.
4. (-) Output for the Parking lights: Some vehicles, such as Jeep, have negative Parking lights. Please note that this output is for only 250 mA. only.
5. (-) Status Output: This comes in one second before ignition on and continues until one second after ignition off.
6. **Light Blue of CN3:** You need to tie this wire into the emergency brake for Manual Transmission Mode or Turbo mode. Most emergency brake wires will show 12V at rest when the ignition is on or ground when you set the brake. In either Manual Transmission or Turbo Mode, the engine will stay running for two minutes after the key is turned off.
Wire Connection for Automatic Transmission vs. Manual Transmission. For manual transmission vehicles, *three additional connections are required* – 1) Red/White or Red wire of CN3 to the door switch, 2) Light Blue wire of CN3 to the emergency brake and 3) Red/Black wire of CN2 to over-ride the clutch switch momentarily during remotestart.
7. Glow Plug wires for diesel engines: If the negative glow plug wire sees ground, the remote starting is delayed until this ground disappears. Likewise, if the positive glow plug wire sees positive, the remote starting is delayed until this positive disappear. There is no programming for diesel mode. It is automatic once this wire is used.

8. The sequence for the rearm pulse: (1) pulse when armed (locked), (2) pulse after Starter, and (3) pulse one second after remote start shut down.
9. The sequence for the disarm pulse: (1) pulse when disarmed (unlocked), (2) pulse before remote starting.
10. Learning Tach/Injector Wire: Start the vehicle with the key manually and let the engine idle down to a minimum. The next step is to press the black tachometer button. The car's lights will flash once to confirm the tach was learned. If the lights flash 3 times, you have the wrong tach wire.
11. Alternator Sensing: Locate the small gauge wire from the alternator. When tested with your meter, it should show you less than 3V/dc when the key is on and the vehicle is not started. When the vehicle is started, the wire should read between 7V to 14V/dc.
12. Diagnosing Tach Learning Error

If the cars parking lights flash 3 times, there is a problem with the tachometer learning. Wait for 2 seconds and the cause for the error will be indicated by the number of times the parking lights flash.

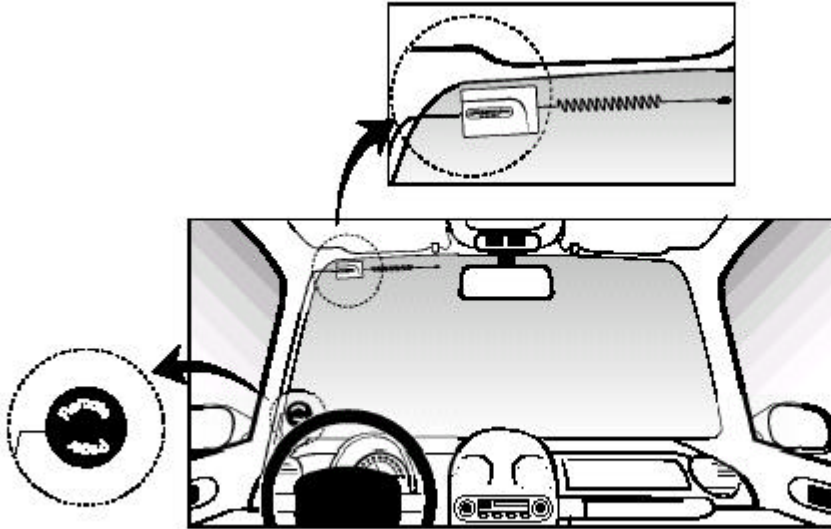| Error Number (# of times parking lights flash)	Tach Learning Error Diagnosis
1	Dip Switch #1 is on alternator sensing.
2	Manual Car Key is in the off position.
3	No signal or the signal is not fast enough. Find a different wire.

B. Dip Switches and Jumper Setting

Dip Switch	Jumper Wire	#1	#2
On	Uncut: Manual Transmission	Tach Sensing	25 min run time (45 min diesel)
Off	Cut: Automatic Transmission	Alternator Sensing	15 min run time (25 min diesel)

Important! Once you cut the Jumper Wire, you are not allowed to reconnect the wire. *The reconnection will completely void the warranty*. A trace of reconnection of this wire will prevent you from any claim whatsoever pertaining to the manual transmission mode.

C. Installation of Antennas and RPS.

The antennas have been calibrated for horizontal installation at the top-left corner of the windshield. Different installation may adversely affect the transmitting distance.

D. Option Programming for Four Button Remotes

Step 1: For programming menu 1: Press Buttons **(I+II)** for 2 seconds.
For programming menu 2: Press Buttons **(I+IV)** for 2 seconds. The parking lights will flash once indicating that you are in programming mode.
Step 2: **Within 2 seconds** after pressing **(I+II)** or **(I+IV)**, press Button **IV** the number of times to go to the option number you want to change. You will see the parking light flash each time when you press Button **IV**.
Step 3: Wait a few seconds. You will see a number of parking light flashes corresponding to the option number you want to change. If the number of flashes, do not correspond with what you want, Revert to Step 1.
Step 4: Press Button **I** for the default factory settings and your car will respond with one flash of the parking lights. Press Button **II** for the optional setting and your car will respond with two parking light flashes.

✎ **If you see an extended flash of the lights, you are going out of programming mode, please go back to Step 1.**
✎ **If you want to change more options, go back to Step 1.**

Resetting the Programming Options to the factory default settings.

Step 1: Press Buttons **(I+II)** simultaneously or Buttons **(I+IV)** simultaneously for 2 seconds. A one flash of the parking lights confirms step 1.
Step 2: Press Button **III** three times. This is confirmed by a parking light flash each time you press Button **III**. A few second later, your cars parking lights will flash three times rapidly. Your car is now set to all of the original factory default settings.

E. Option Programming for Six Button Remotes

The procedures will be the same as the 4 button remotes except the use of the different buttons.

Programming	6 Button Remote	4 Button Remote
Programming Menu 1	(Trunk+Start)-	(I+II)-
Programming Menu 2	(Trunk+Stop)-	(I+IV)-
Option Selection	(Stop)-	(IV)
Factory Setting	Lock	(I)
Option Selection	Unlock	(II)
Default Setting Selection	(Start)-	(III)

F. Programming Menu Options

Programming Menu #1 (Auto-Start and Door Lock Options)

	Feature	**Factory Default** Setting – Button **I**	**Optional** Setting – Button **II**
1-1	Unlock Before, Lock After Starting, Lock after remote start	OFF	ON
1-2	Door Lock / Unlock Pulse Duration	0.8 sec	2.5 sec
1-3	Min. Crank Time for the 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	N/A		
1-7	Turbo	OFF	ON

Note
1-1   Some vehicles such as Mercedes-Benz and the Lexus ES300 require you to unlock the car to disarm the factory alarm before remote starting the vehicle. Activating this feature will unlock the vehicle for a brief second in order to disarm the factory alarm before auto-starting the vehicle remotely then lock after starting.
1-4   This feature unlocks the driver's side door lock with the first unlock pulse. A second unlock pulse is needed to unlock the rest of the car doors
Important! In order for this feature to operate, the installer must use the 2nd Unlock Wire (Or/Bk wire of Connector 4). Isolate the driver's door motor from the rest of the other doors. Call us for technical support if you are not sure about this.
1-7   Turbo mode requires the connection of the emergency brake wire for either automatic or manual transmission vehicles. With this mode, engine will continue running for two minutes after key is turned off if the emergency brake was set before the key was turned off and the foot brake was not being pressed when the key was turned off.

Programming Menu #2 (Security Options)

	Feature	**Factory Default** Setting – Button **I**	**Optional** Setting – Button **II**
2-1	Cold Start with Temp Sensor	OFF	ON
2-2	Timer Start or Minimum Interval between Cold Starts	3 Hr	1.5 Hr
2-3	N/A		
2-4	N/A		
2-5	Ignition Controlled Door Lock	OFF	ON
2-6	N/A		
2-7	N/A		
2-8	N/A		

Note:

2-1 Cold start mode requires installation of the optional temperature sensor. In the default factory setting, Cold Sensor input works as Remote Start Activation Input. A Ground pulse to this wire will start the vehicle

2-5 Automatic Transmission Vehicle: This programmable option enables your vehicle to automatically lock the doors upon starting the vehicle with a key. In addition, the vehicle will automatically unlock the doors upon pulling the key out from the ignition. This option must be chosen at the time of installation.

Manual Transmission Vehicle or Turbo Mode: This programmable option will lock the doors in 5 seconds after starting the vehicle with a key *and* the emergency brake is released.

G. Diagnosing problems with Auto-Start

If there is a problem in auto-starting your car, you will see three flashes of the parking lights when you attempt to auto-start the car. 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)

H. Limited Lifetime Consumer Warranty

Firstech, Inc Warrants to the original purchaser that this product shall be free of defects in material and workmanship under normal use and circumstances for the period of time that the original owner of this product owns the vehicle in which it is installed; except that the remote controller unit for the period of one year from the date of installation to the original owner of this product. When the original purchaser returns the product to the retail store where it was purchased or pre-paid postal to **Firstech, Inc., 801 E. 82nd Ave Suite 1 Anchorage, Alaska 99518**, USA within the warranty period, and if the product is defective, Firstech, Inc, will at its option repair or replace such.

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