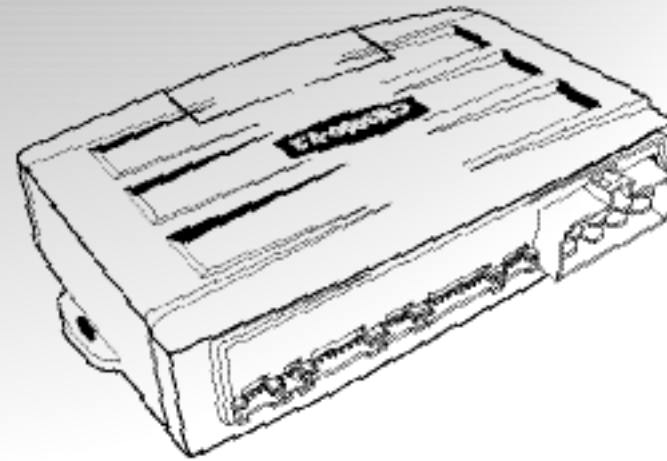# INSTALLATION GUIDE

NuAS Module

[CM 3000]

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INSTALLATION GUIDE
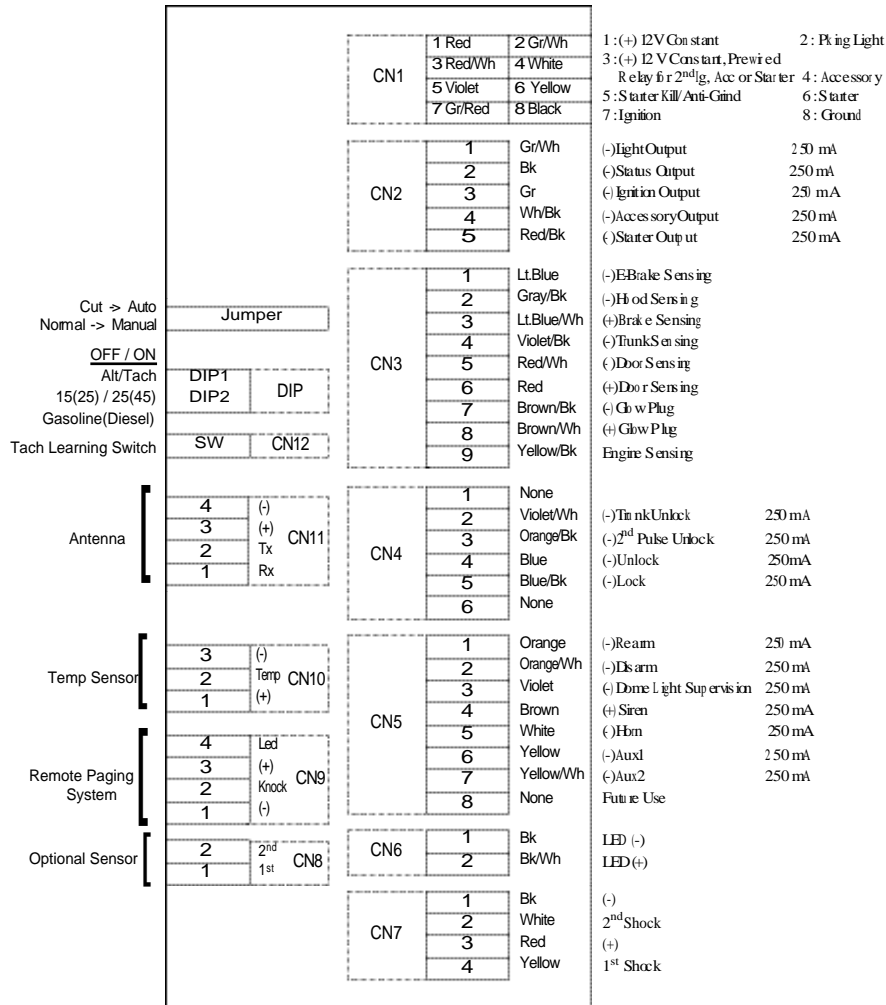CM3000
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TABLE OF CONTENTS

CN1	1 Red	2 Gr/Wh	1 : (+) 12V Constant	2 : Pking Light
	3 Red/Wh	4 White	3 : (+) 12 V Constant, Prewired Relay for 2nd Ig, Acc or Starter	4 : Accessory
	5 Violet	6 Yellow	5 : Starter Kill/Anti-Grind	6 : Starter
	7 Gr/Red	8 Black	7 : Ignition	8 : Ground

CN2	1	Gr/Wh	(-) Light Output	250 mA
	2	Bk	(-) Status Output	250 mA
	3	Gr	(-) Ignition Output	250 mA
	4	Wh/Bk	(-) Accessory Output	250 mA
	5	Red/Bk	(-) Starter Output	250 mA

CN3	1	Lt.Blue	(-) E-Brake Sensing
	2	Gray/Bk	(-) Hood Sensing
	3	Lt.Blue/Wh	(+) Brake Sensing
	4	Violet/Bk	(-) Trunk Sensing
	5	Red/Wh	(-) Door Sensing
	6	Red	(+) Door Sensing
	7	Brown/Bk	(-) Glow Plug
	8	Brown/Wh	(+) Glow Plug
	9	Yellow/Bk	Engine Sensing

CN4	1	None		
	2	Violet/Wh	(-) Trunk Unlock	250 mA
	3	Orange/Bk	(-) 2nd Pulse Unlock	250 mA
	4	Blue	(-) Unlock	250 mA
	5	Blue/Bk	(-) Lock	250 mA
	6	None		

CN5	1	Orange	(-) Rearm	250 mA
	2	Orange/Wh	(-) Disarm	250 mA
	3	Violet	(+) Dome Light Supervision	250 mA
	4	Brown	(+) Siren	250 mA
	5	White	(-) Horn	250 mA
	6	Yellow	(-) Aux1	250 mA
	7	Yellow/Wh	(-) Aux2	250 mA
	8	None	Future Use	

CN6	1	Bk	LED (-)
	2	Bk/Wh	LED (+)

CN7	1	Bk	(-)
	2	White	2nd Shock
	3	Red	(+)
	4	Yellow	1st Shock

Cut -> Auto
Normal -> Manual   **Jumper**

OFF / ON
Alt/Tach   DIP1
15(25) / 25(45)   DIP2   **DIP**
Gasoline(Diesel)
Tach Learning Switch   **SW**   **CN12**

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

Temp Sensor
3	(-)	
2	Temp	**CN10**
1	(+)	

Remote Paging System
4	Led	
3	(+)	**CN9**
2	Knock	
1	(-)	

Optional Sensor
2	2nd	**CN8**
1	1st	

Notes

1. There are two 12V Constant Wires in the Main Harness(CN1). One is to supply power to the CPU and Ignition and the other is to supply power to Starter and Accessory.

2 . Starter Kill/Anti-Grind-Violet at CN1 supplies a negative 250mA output when the system is armed.

3 . There are two pre-wired relays. One for Starter-kill and the other for 2nd Ignition, 2nd Starter or 2nd Accessory.

4 . (-) Output for Parking light(CN2): Some vehicles, such as Jeep, have negative Parking lights.

5 . (-) Status Output(CN2): 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 <u>12V at rest</u> when the ignition is on or <u>ground</u> when you set the brake. In either Manual Transmission or Turbo Mode, Engine stays running for two minutes after key off.

7 . Glow Plug wires for diesel engines(CN3) : 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 . (-)2nd Pulse Unlock wire (Or/Bk of NC4) requires option programming under Programming Menu #1, 1-4 before the wire generates a ground pulse. See Note on Page 9.

9 . The sequence for the rearm pulse(CN5): (1) pulse when armed (locked), (2) pulse after Starter, and (3) pulse one second after remote start shut down.

10 . The sequence for the disarm pulse(CN5): (1) pulse when disarmed (unlocked), (2) pulse before remote starting.

11 . Dome Light Supervision(CN5): Automatic Transmission Only. Dome light is turned on for one minute after unlock.

If you program Dome Light Rearm option, The Violet wire of CN5 supplies a ground pulse before Lock and a pulse after remote start. The Dome Light Rearm Option is to simulate Opening the door and pressing the factory lock button for factory arming.

12 . Learning Tach/Injector Wire: Start the vehicle with the manual key and let the engine idle down. The next step is to press the black tachometer button. The car siren will chirp once to confirm the tach was learned. If the siren chirps 3 times, you have the wrong tach wire.

13 . Alternator Sensing: Locate the small gauge wire from the alternator. When tested with your meter, it should show you less than 5V when the key is on and the vehicle is not started.
When the vehicle is started, the wire should read between 9V to 14V.

14 . Diagnosing Tach Learning Error

If the car siren chirps 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 parking lights flash.

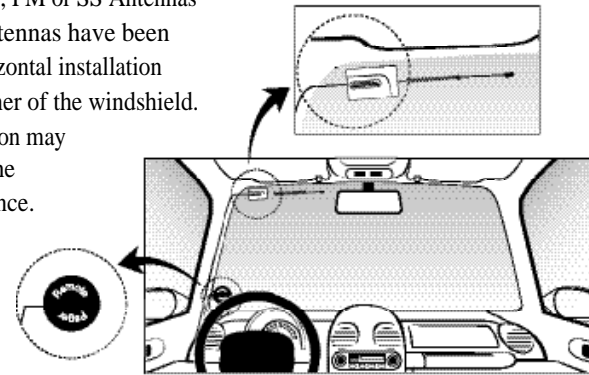| Error Number (# of times parking lights flash)	Tach Learning Error Dignosis
1	Dip Switch #1 is on alternator sensing.
2	Manual Car Key is in the off position.
3	No signal or the signal is not fast enough. Find a different wire.

Switch and Jumper Settings

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 warranty.

Installation of AM, FM or SS Antennas

Installation of AM, FM or SS Antennas and RPS. The antennas have been calibrated for horizontal installation at the left-top corner of the windshield. Different installation may adversely affect the transmitting distance.

Option Programming for Four Button Remotes

Step1 : For Programming menu 1: Press Buttons (I+II) for 2 seconds. For Programming menu 2: Press Buttons (I+IV) for 2 seconds. The car will chirp once indicating that you are in programming mode.

Step2 : Wihin a 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 have to hear a chirp and see the parking light flash each time when you press Button IV.

Step3 : Wait a few seconds. You will hear a number of chirps and see a number of parking light flashes corresponding to the option number you want to change. If the number of chirps or flashes is not what you want, go back to Step 1.

Step4 : Press Button I for the default factory settings and your car will respond by one chirp and one flash. Press Button II for the optional setting and your car will respond by two chirps and two parking flashes.

- **If you hear a long chirp, you are going out of programming mode, please go back to Step1.**
- **If you want to change more options, go back to Step1.**

Resetting all of Menu #1 or Menu #2 of Programming Options to the factory default settings - if you are not sure about current programming, change everything to the factory settings and start again.

1. Resetting all of Menu #1 to the factory setting

Step1 : Press buttons (I+II) simultaneously for 2 seconds. This will be confirmed by a siren chirp and a one-time flashing of the parking light.

Step2 : Press button III once. This will be confirmed by a car chirp and parking light flash. Press button III again. You will be confirmed by a car chirp and parking light flash again. Press button III third time. You will be confirmed by a car chirp and parking light flash third time. A few second later, your car will chirp and parking light flash three times rapidly to confirm the resetting.

2. Resetting all of Menu #2 to the factory setting.

Follow the same steps above except that you press buttons (I+IV) for 2 seconds at the Step 1 instead of buttons (I+II).

The procedures will be 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)

Remote-Pager Programming Menu Options

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

	Feature	Factory Default Setting - Button I	Optional Setting - Button II	Programming Method
1-1	Unlock Before, Lock After Starting, Lock after remote start	OFF	ON	Remote controller
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				
1-7	Turbo	OFF	ON	

	Feature	OFF	ON	Programming Method
1-8	Diesel Preheating Time	20 sec	3~99 sec	Option Programmer (CM3 -Series)

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 need 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 actuator from the rest of the other doors. Call us for the 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.

1-8 This feautre is needed for diesel engine when you don't use glow plug wires.

Programming Menu #2 (Security Options)

	Feature	Factory Default Setting - Button I	Optional Setting - Button II	Programming Method
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	Passive Arming	Passive Locking, too	No Passve Locking	Remote controller
2-4	Anti-jacking	OFF	ON	
2-5	Ignition Controlled Door Lock	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	

	Feature	OFF	ON	Programming Method
2-9	Channel Expander	Non using of Channel Expander module	Using of Channel Expander module	Option Programmer (CM3 -Series)
2-10	Passive Arming with the Channnel Expander	When Option 2-9 is on		
		Non using of Passive Mode with remote	Using of Passive Mode with remote	

Note : 2-1 Cold start mode requires installation of the 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

2-4 With this option, Panic mode becomes Anti-Jacking mode.
The differences between Panic mode and Anti-Jacking mode are:

	Panic Mode	Anti-Jacking Mode
Button	IV for 2 seconds	IV for 2 seconds
Siren	1.5 minutes	1.5 minutes
Installation required	Starter-Kill	Ignition-Kill
Starter Kill	Activated immediately	N/A
Ignition Kill	N/A	Activated immediately if key is not on. If key is on, activated in 30 seconds after pressing the Button IV

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 locks the doors after starting the vehicle with a key **_and_** the emergency brake is released.

Setting Contents		2-9	
		Off	On
2-6	off	Pluse	1-99, Latch
	on	Latch	
2-7	off	Pluse	1-99, Latch
	on	Latch	

2-6 & 2-7
You can program the duration between 1 to 99 seconds.
You can program the "Latch Mode" also.

2-9 If you need more than 2 Aux outputs, you can interface the CM3000 with Channel Expander for 7 Aux outputs. If you take this Channel Expander option and you turn on the Passive setting of the Nu4000R, the four buttons of the Nu4000R operate these 7 outputs instead of normal button functions such as arm/disarm or start/stop. Refer to the manual of the Channel Expander.

2-10

If you take the Channel Expander option of 2-9, the Passive setting of the remote will change the button functions to operate of the Channel Expander. The Passive setting of the remote will no longer work as the Passive Arming function. Therefore, if you need both Channel Expander and Passive Arming function, you need to choose this option.

Setting / AUX No.	2-9		off
	On		**off**
	Access to passive mode through a remote		
	Non setting of passive mode	Setting of passive mode	
AUX 1	Button **II**	Button **I**	Button **II**
AUX 2	Button **III**	Button **II**	Button **III**
AUX 3		Button **III**	
AUX 4		Button **IV**	
AUX 5		Button **II-**	
AUX 6		Button **III-**	
AUX 7		Button **IV-**	
Output	All outputs are connecting with Channel Expander through AUX1.		AUX1, AUX2

Adjusting the Car Siren Volume:

In order to decrease the chirping volume of the siren, cut the loop located on the siren.

Adjusting the Shock Sensor Sensitivity:

In order to the shock sensor sensitivity, turn the screw located on the sensor clockwise. In order to decrease the sensitivity, turn the screw located on the sensor counter-clockwise. Turning the screw just a small amount can make a big difference so make sure you recheck the sensitivity after each adjustment.

Diagnosing Problems with Auto-Start

If there is a problem in auto-starting your car, you will hear three chirps 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 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)