

CMS-500

MICRO PROCESSOR VEHICLE STARTER AND KEYLESS ENTRY SYSTEM INSTRUCTION MANUAL

BUTTON 1: 

BUTTON 2: 

BUTTON 3: 

BUTTON 4: 

STANDARD FEATURES: TRANSMITTER OPERATED

ARM THE SYSTEM

Press button  for 1-2 seconds to arm the system. The doors will lock, siren will chirp once, parking lights will flash once and starter killer will stand-by.

PANIC

Press button  for over 2 seconds to activate Panic Mode. Siren will chirp and parking lights will flash continuously until button  is pressed to release/disable Panic Mode.

DISARM THE SYSTEM

Press button  for 1-2 seconds to disarm the system. The doors will unlock, siren will chirp twice, parking lights will flash twice and starter killer will disable.

REMOTE TRUNK RELEASE (AUXILIARY# 1)

Press button  for 1-2 seconds anytime to send out a momentary negative (-) output for Remote Trunk Release.

REMOTE ENGINE START OR STOP

Press button  for 1-2 seconds to Remote Start the engine. Siren will chirp thrice and parking lights will turn ON. Engine will start automatically. Press button  again for 1-2 seconds to Remote Stop the engine. (Please find the detailed operation below.)

OPERATION:

Remote Starting the Engine.

If engine starting is successful, parking lights will remain ON as a visual indication that the engine is running and the doors will lock depending on the programmed status of Programmable Feature# 13. The engine will run for 12, 24, 36 or 48 minutes depending on the programmed time of Programmable Feature# 18. If it fails, the system will attempt to start the engine 2 more times.

Shutting Off the Engine While Remote Started (Cancellation of Remote Engine Start).

While remote started, press  button for 1-2 seconds to shut off the engine. Parking lights will shut off and the status of the system will depend on the programmed status of Programmable Feature# 13.

Steps in Operating the Vehicle While Remote Started or Resuming on Operating the Car after Stand-By or Pit-Stop Mode:

- (1) Press  button for 1-2 seconds to disarm the system and unlock the doors. Siren will chirp twice and parking lights will flash twice.
- (2) Enter the vehicle. Be sure not to step on the brake pedal.
- (3) Insert the vehicle's key to the keyhole.
- (4) Turn the ignition key to ON position and step on the brake pedal. Remote start will shut off but the engine will remain running.

NOTE: If the ignition key is not turned to ON position and the brake pedal has been stepped on, the engine will shut off.

- (5) Drive the vehicle away.

Steps in Performing the Stand-By or Pit-Stop Mode:

- (1) Press  button for 1-2 seconds while vehicle's engine is running. Siren will chirp thrice and parking lights will turn ON indicating that Stand-By or Pit-Stop mode is enabled.
- (2) Turn the ignition key to OFF position.
- (3) Pull out the vehicle's key.
- (4) Open the door.
- (5) Get out of the car.
- (6) Close the door.
- (7) Press  button to arm the system if necessary.

Remote Engine Start Cranking Time.

When  button is pressed for 1-2 seconds, cranking of the engine starts in which depends on the programmed status of Programmable Feature# 15.

Before Remote Starting the Engine.

- (1) Gear must either be in P (park) or N (neutral) position.
- (2) Ignition key must be in OFF position.
- (3) Hand brake must be activated (pulled).
- (4) Hood must be closed.

Engine Start Detection

Two(2) kinds of Engine Start Detection (choose only one during installation):

- (1) Tachless (Voltage Wire Detection)

Engine Start is detected by measuring the battery voltage.

- (2) Tach Learning (RPM Detection)

Engine Start is detected by the supplied RPM signal to the unit and teaching the "vehicle Engine idle RPM".



CAUTION: FOR VEHICLES WITH DIESEL ENGINE, RPM DETECTION MUST BE USED TO DETECT ENGINE START.

OTHER STANDARD FEATURES

ANTI-SCAN PROTECTION

PARKING LIGHTS RELAY BUILT-IN

TWO STAGE DISARM

Two stages of disarming when triggered during armed condition as follows:

- (1) Press  button. System stops triggering however it remains in armed condition.
- (2) Press  button again to disarm the system.

SECURITY REARM

System will arm automatically if neither door has been opened nor ignition key is turned to ON position within 30 seconds after disarming. This feature is programmed since the user can accidentally press the disarm button of the remote control.

SMART LED & SMART CHIRP (Specific Zone Intrusion Indication)

The Smart LED indicates the status of the system.

LED	Status
Off	System is disarmed
On solid	Keyless Entry/Valet Mode
Slow flash	System is armed
Flashing cycles	See "Smart Chirp"

Rapid flash	Passive arming or System is triggered
-------------	---------------------------------------

While in armed condition, if system is intruded by dual zone shock sensor, door, hood or ignition, siren will chirp 4 more times than normal disarming when system is disarmed. Zone triggered can be determined through the flashing of LED in cycles when the system is disarmed.

LED	Zone
1 flash... a flash...	Dual Zone Shock Sensor input
2 flashes... 2 flashes...	Door trigger
3 flashes... 3 flashes...	Hood trigger
5 flashes... 5 flashes...	Ignition Key trigger

DUAL ZONE SHOCK SENSOR (Warn Away & Trigger)

Siren will chirp 5 times when touched lightly (Warn Away) and will blow for twenty seconds when touched heavily (Trigger).

PUSH BUTTON VALET SWITCH

Push Button Valet Switch is used in Code Learning, Programming of Programmable Features and Overriding the system in which are discussed in detailed operation on Process of Encoding to the Main Unit, Procedure of Setting User-Programmable Features on User-Programmable Features and System Override, respectively, below.

SYSTEM OVERRIDE

In case remote controller is lost, use the vehicle key to enter the vehicle. When the door is opened, siren will blow until the user turn the ignition key to ON position and press push button valet switch for 5 seconds to override the arming status of the system.

ZONE BY-PASS 5 MINUTES

While in armed condition, if system is intruded by door, hood, trunk or ignition key, siren will blow. Siren will blow for 1 minute if door, hood or trunk has been opened and closed or ignition key has been turned to ON and OFF position. Siren will blow for a maximum of five(5) minutes if the door, hood or trunk is opened and not closed or ignition key is turned to ON position.

In addition, system remains in arm condition.

SPECIAL FEATURES

CODE HOPPING

1. This feature has 2^{20} codes and 2^{10} rolling codes.
2. When any button is pressed once, rolling code changes automatically while main code remains the same to protect rolling codes from being copied.
3. Each time code hopping is used, different code will be accepted by main unit.



WARNING: This feature can only accept 255 mistouches. However, this can be reset by removing and placing back the battery of the transmitter. Then, press any button twice. On the next touch or third press of any button, the system will function normally.

BUILT-IN CODE LEARNING FEATURE

Main unit has a built-in code learning feature that can learn 4 different codes during each process of code learning. Most advanced technology in the world.

COMPUTERIZED MEMORY CODE FEATURE

When the power supply is cut off, original remote coding will still be kept in the memory.

SELF-ENCODING FEATURE

The consumers can encode their own remote code, convenient and safe.

PROCESS OF ENCODING TO THE MAIN UNIT

1. Pull up the hand brake.
2. Turn the ignition key to ON position while disarmed.
3. Press the push button valet switch for 5 times. Siren will chirp 5 times and parking lights and LED will turn ON to confirm system is into code learning.
4. Within 30 seconds, press any button of 1st transmitter to send out its code to main unit. Parking lights and LED will flash twice, confirming 1st encoding has been successful. Then, parking lights and LED will turn ON waiting for the 2nd encoding.
5. Within another 30 seconds after the turning ON of the parking lights and LED, press any button of 2nd transmitter. Parking lights and LED will flash 3 times for a successful 2nd encoding and 4 times for 3rd encoding. Parking lights and LED will turn OFF for the 4th encoding.



WARNING: New transmitters must be code learned together with the existing transmitters. If only the new transmitters are code learned, existing transmitters cannot be used anymore. You must code learn all the transmitters (both new and existing) once again.

CAUTION: 4 different codes can be encoded or learned during each process of code learning with an allotted 30 second interval after each encoding. If no button is pressed within 30 seconds after the 1st encoding, then only 1 code is processed. After ignition key is turned to OFF position or 30 seconds after the last encoding, it will be back to normal mode.

USER-PROGRAMMABLE FEATURES

Features	Factory Setting (Default)	Number of Chirps	Transmitter			
			Button 1	Button 2	Button 3	Button 4
Tachless/Tach Learning	Tachless	1	Tachless	Tach Learning (RPM Learning)		
Active/Passive Arming	Active	2	Active	Passive		
Passive Door Locking	OFF	3	OFF	ON		
Audio Indication for Interior Light Illumination (Door Ajar)	60 Seconds	4	60 Seconds	5.0 Seconds		
Parking Lights Illumination on Disarm	ON	5	ON	OFF		
Remote Arm/Disarm Siren Chirps	ON	6	ON	OFF		
Ignition Safety Door Lock/Unlock	ON	7	ON	OFF		
Door Lock/Unlock Output Duration	0.75 Second	8	0.75 Second	3.0 Seconds		
Single/Double Lock Pulse	Single	9	Single	Double		
Single/Double Unlock Pulse	Single	10	Single	Double		
Starter Killer/Immobilizer	Starter Killer	11	Starter Killer	Immobilizer		
Audio Confirmation for Remote Start Reception	ON	12	ON	OFF		
Remote Engine Start & Stop Safety Door Lock	ON	13	ON	OFF		
Automatic/Manual Transmission	Automatic	14	Automatic	Manual		
Crank Time	Automatic	15	Automatic	Fix		
Pre-Timed Starter Crank (Fix)	0.5 Second	16	0.5 Second	0.75 Second	1.0 Second	1.5 Second
Gasoline Engine/Glow Plug Delay for Diesel Engine	Gasoline	17	Gasoline	10 Seconds	20 Seconds	30 Seconds
Remote Start Run Time	12 Minutes	18	12 Minutes	24 Minutes	36 Minutes	48 Minutes
Return All Settings to Default		19	Press Button 1			

TACHLESS/TACH LEARNING

This feature must be programmed to Tachless mode for vehicles in which tach signal is difficult to read. In addition, VR switch (potential meter) must be tuned at the same time. If the engine is already running and starter is still cranking, VR Switch must be turned to counter clockwise direction slowly and stop at the best performance. If the starter keeps on cranking and engine is not started successfully, VR switch must be turned to clockwise direction slowly and stop at the best performance.

This feature must be programmed to Tach Learning mode for vehicles in which tach signal is easy to read. In learning the tach, engine must be running. Therefore, after entering the programming mode and Programmable Feature# 1, engine must be started before selecting button  (Tach Learning).

ACTIVE/PASSIVE ARMING

When this feature is programmed to Active, there is no arming of the system if the user forgets to arm it after driving the vehicle.

When this feature is programmed to Passive, after driving the vehicle wherein ignition key is turned to OFF position, last door has been opened and closed and the user forgets to arm the system, the system will arm automatically 30 seconds after the closing of the last door. Parking lights will flash twice and LED will flash rapidly for 30 seconds when the last door is closed.

PASSIVE DOOR LOCKING

This feature works only when Active/Passive Arming feature is programmed to Passive.

When this feature is programmed to ON, there is locking of the doors when the system passive arms.

When this feature is programmed to OFF, there is no locking of the doors when the system passive arms.

AUDIO INDICATION FOR INTERIOR LIGHT ILLUMINATION (DOOR AJAR)

This feature must be programmed to 60 seconds for vehicles with interior light or dome light delay. If a door is ajar (not closed) and the system is armed, siren will chirp 5 times 60 seconds after the system is armed.

This feature must be programmed to 5 seconds for vehicles without interior light or dome light delay. If a door is ajar (not closed) and the system is armed, siren will chirp 5 times 5 seconds after the system is armed.

PARKING LIGHTS ILLUMINATION ON DISARM

When this feature is programmed to ON, parking lights will illuminate for 30 seconds when disarmed.

When this feature is programmed to OFF, parking lights will not illuminate at all when disarmed. They will only flash twice.

REMOTE ARM/DISARM SIREN CHIRPS

When this feature is programmed to ON, there is the chirping of the siren during arming and disarming the system.

When this feature is programmed to OFF, there is no chirping of the siren during arming and disarming of the system.

IGNITION SAFETY DOOR LOCK/UNLOCK

When this feature is programmed to ON, after ignition key has been turned ON for 5 seconds, doors will lock passively for ultimate security and convenience. In addition, central lock will unlock immediately upon turning the ignition key to OFF position.

When this feature is programmed to OFF, there is no locking and unlocking of the doors after ignition key has been turned ON for 5 seconds and OFF, respectively.

DOOR LOCK/UNLOCK OUTPUT DURATION

This feature must be programmed to 0.75 second for vehicles without air compressor power door lock.

This feature must be programmed to 3 seconds for vehicles with air compressor power door lock.

SINGLE/DOUBLE LOCK PULSE

This feature must be programmed to Single Pulse for vehicles in which sends only 1 pulse when locking the doors.

This feature must be programmed to Double Pulse for vehicles in which sends 2 pulses when locking the doors.

SINGLE/DOUBLE UNLOCK PULSE

This feature must be programmed to Single Pulse for vehicles in which sends only 1 pulse when unlocking the doors.

This feature must be programmed to Double Pulse for vehicles in which sends 2 pulses when unlocking the doors.

STARTER KILLER/IMMOBILIZER

This feature must be programmed to Starter Killer if the user uses a normal-open starter killer relay in which when the system is armed, starter killer is ON.

This feature must be programmed to Immobilizer if the user uses a normal-close starter killer relay in which when the system is disarmed, starter killer is ON.

AUDIO FOR REMOTE START

When this feature is programmed to ON, Siren will chirp 3 times when remote started.

When this feature is programmed to OFF, Siren will not chirp when remote started.

REMOTE ENGINE START & STOP SAFETY DOOR LOCK

When this feature is programmed to ON, 3 seconds after the engine starting is successful or cancelled, doors will lock passively for ultimate security and convenience.

When this feature is programmed to OFF, there is no locking of the doors, 3 seconds after the engine starting is successful or cancelled.

AUTOMATIC/MANUAL TRANSMISSION

This feature must be programmed to Automatic for vehicles with automatic transmission engine.

This feature must be programmed to Manual for vehicles with manual transmission engine.

CRANK TIME

When this feature is programmed to Automatic, the cranking time of the starter when remote started depends on the tach (RPM) or voltage.

When this feature is programmed to Fix, the cranking time of the starter when remote started depends on the programmed time of Programmable Feature# 16, Pre-Timed Starter Crank.

PRE-TIMED STARTER CRANK

When this feature is programmed to 0.5, 0.75, 1 or 1.5 second(s), starter cranking time will depend on the programmed time.

GASOLINE ENGINE/GLOW PLUG DELAY FOR DIESEL ENGINE

This feature must be programmed to Gasoline for vehicles with gasoline engine.

This feature must be programmed to 10, 20 or 30 seconds for vehicles with diesel engine.

RUN START RUN TIME

When this feature is programmed to 12, 24, 36 or 48 minutes, the engine of the vehicle will run depending on the programmed time.

Procedure in Setting User-Programmable Features:

1. Know the number of chirps of the feature to be set by referring to the features table above.
2. Turn the ignition key to ON position.
3. Press push button valet switch 6 times. Parking lights will flash 6 times and will turn ON with system led to confirm system is into programming mode.
4. Press push button valet switch again depending on the number of chirps of the feature to be set. Parking lights will flash once in every pressing of the push button valet switch. You can set all or some features in a procedure.
5. Select your choice by pressing button  or  of the transmitter. If you want to set the succeeding feature(s), press push button valet switch again for the next feature setting.
6. Turn the ignition key to OFF position to exit the setting mode.

TRANSMITTER OPERATION

BUTTON 1:

ARM & LOCK

Press this button for 1-2 seconds to arm the system. The doors will lock, siren will chirp once, parking lights will flash once and starter killer will stand-by.

LOCK WHILE DRIVING

Press this button for 1-2 seconds to lock the doors while driving. There will be neither siren chirps nor parking lights flash.

PANIC

Press this button for over 2 seconds to activate Panic Mode. Siren (option) will chirp and parking lights will flash continuously until button  is pressed to release/disable Panic Mode.

BUTTON 2: **DISARM**

Press this button for 1-2 seconds to disarm the system. The doors will unlock, siren (option) will chirp twice and parking lights will flash twice.

UNLOCK WHILE DRIVING

Press this button for 1-2 seconds while driving to unlock the doors. There will be neither siren chirps nor parking lights flash.

BUTTON 3: **REMOTE TRUNK RELEASE (AUXILIARY# 1)**

Press this button for 1-2 seconds anytime to send out a momentary negative (-) output for Remote Trunk Release.

BUTTON 4: **REMOTE ENGINE START OR STOP**

Press this button for 1-2 seconds to Remote Start the engine. Siren (option) will chirp thrice and parking lights will turn ON. Engine will start automatically. Press this button again to remote stop the engine.

STAND-BY (PIT-STOP) MODE

Press this button for over 2 seconds while vehicle's engine is running. Siren (option) will chirp thrice and parking light will remain ON indicating that Stand-By (Pit-Stop) mode is enabled. Then, turn the ignition key to OFF position and pull out the vehicle's key. The Engine will continue running.

BUTTONS 1 & 2: + **SHOCK SENSOR BYPASS**

Press these buttons simultaneously for 1-2 seconds to bypass the shock sensor of the system.

REMOTE KEYLESS ENTRY

Press these buttons simultaneously for 1-2 seconds after the ignition key is turned to ON position within 5 seconds to activate Remote Keyless Entry. Parking lights will flash 3 times and system led will turn solid ON confirming system is into Keyless Entry Mode. While in Keyless Entry Mode, only lock, unlock and all auxiliary negative (-) outputs can activate. There is only flashing of parking lights during this mode. There is no chirping of siren except for car finder.

To release/disable Remote Keyless Entry Mode feature, repeat the procedure in entering the Remote Keyless Entry Mode feature. Siren will chirp 3 times confirming system is back to normal mode.

BUTTONS 1 & 3: + **ANTI-ROB/CAR JACKING**

Press these buttons simultaneously for over 2 seconds while driving to activate Anti Rob/Car Jacking.

BUTTONS 2 & 3: + **AUXILIARY# 3**

Press these buttons simultaneously for over 2 seconds anytime to send out a momentary negative (-) output for Auxiliary# 3.

BUTTONS 2 & 4: + **AUXILIARY# 4**

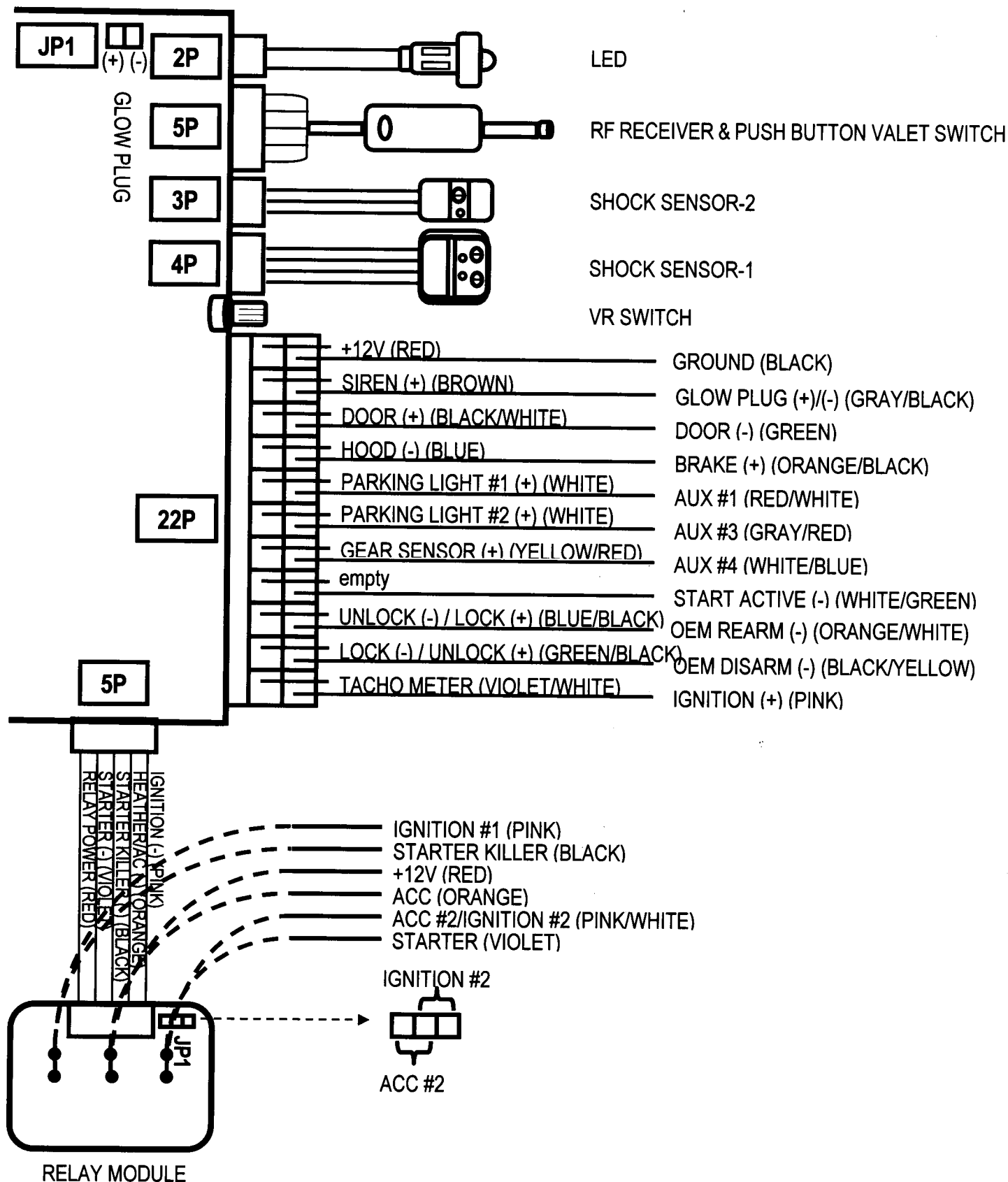
Press these buttons simultaneously for over 2 seconds anytime to send out a momentary negative (-) output for Auxiliary# 4.

BUTTONS 3 & 4: + **CHIRP DEFEAT ARM**

Press these buttons simultaneously for 1-2 seconds to arm the system silently. The doors will lock and parking lights will flash once.

WIRING INSTALLATION

WIRING DIAGRAM:



**Notice : The changes or modifications not expressly approved by the party
Responsible for compliance could void the user's authority to operate
the equipment.**

**THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATIONS IS
SUBJECT TO THE FOLLOWING TWO CONDITIONS:**

- (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND**
- (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING
INTERFERENCE THAT MAY CAUSE UNDESRIED OPERATION.**