



Model PRO 9246CH Installation Manual

PRE-INSTALLATION NOTES: RF Programmable Features :

Feature Selection	1 Flash	2 Flash	3 Flash	Default
1st Door L/UL	1 Sec.	3.5 Sec.	1 Sec L, Dbl. U/L	1 Sec.
2nd Accy Lock	Auto Lock On	Auto Lock Off		Auto Lock Off
3rd Accy. UL	Drivers Door	All Doors	Off	Auto UL Off
4th Passive Locks	Passive	Active		Active
5th Passive/Active Arm	Passive Arm	Active Arm		Active Arm
6th Horn Chirp Duration	10 mS	16 mS	30 mS	16 mS
6th Override Method	Custom Code	Valet		Valet

To program these selectable features;

	Action	System Response
	Turn ignition on No response	
	Press and release the valet switch 3 times Within 3 seconds, turn ignition Off	1 Flash - LED 1 flash
<u>First</u>	Then On Press transmitter Lock button to change Press transmitter Lock button to change	1 Flash = 1 second door locks 2 Flash = 3.5 second door locks 3 Flash = 1 sec. lock, dbl 1 sec. unlock
	or	
<u>Second</u>	Press and release the valet switch Press transmitter Lock button to change	2 Flash = auto locks off 1 Flash = auto locks on
	or	
<u>Third</u>	Press and release the valet switch Press transmitter Lock button to change Press transmitter Lock button to change	3 Flash = auto unlock off 1 Flash = drivers door only 2 Flash = all doors unlock
	or	
<u>Fourth</u>	Press and release the valet switch Press transmitter Lock button to change	2 Flash = active locks 1 Flash = passive locks
	or	
<u>Fifth</u>	Press and release the valet switch Press transmitter Lock button to change	2 Flash = active arming 1 Flash = passive arming
	or	
<u>Sixth</u>	Press and release the valet switch Press transmitter Lock button to change Press transmitter Lock button to change	2 Flash = 16 mS horn output 3 Flash = 30 mS horn output 1 Flash = 10 mS horn output
	or	
<u>Seventh</u>	Press and release the valet switch Press transmitter Lock button to change	2 Flash = valet switch override operation 1 Flash = custom code override operation
	or	
	Press and release the valet switch	Exit program mode
	or	
	Turn ignition key off	Exit program mode

Note: Once you enter the feature programming mode, do not allow more than 15 seconds to pass between steps, or the programming will be terminated.

Pre-Installation Notes:

Receiver Channels and Functions:

Channel 1 is the Lock and Programming select channel of the receiver. This will allow locking of the doors, arming of the system, if the optional starter inhibit relay is installed and feature selections when in the programming mode.

Channel 2 is the Unlock drivers, and Unlock all doors channel of the receiver. When the transmitter button programmed into this channel is pressed once, the on-board door unlock relay activates, when the button is pressed a second time, the 2nd unlock output activates.

Note: Anytime the system is unlocked, the on-board interior illumination relay becomes active for 30 seconds, or until the ignition is turned on.

Channel 3 allows access to the on-board "Trunk Release Relay". Press and hold the programmed transmitter button for 3 seconds.

NOTE: An alternate output, (Blue/Black) is accessed when the same transmitter button is pressed and released 2 times within 3 seconds (double pressed). This output is typically used for a remote start option and will likely prevent inadvertent activation of the remote start device if young children are playing with the hand held transmitter.

Channel 4 allows access to the negative pulsed or switched output, Green/Black. Press and release the programmed transmitter button for a 1 second output, press and hold the transmitter button for extended output.

Parking Light Flasher Output:

This system provides an output to control an optional parking light flasher relay (not included).

When this option is installed, the vehicles parking lamps will flash during arm and disarm, as well the output will flash when car finder mode is activated.

This is a ground (**300 mA maximum**) output, therefore, a relay **must** be used to take advantage of this feature.

Horn Output:

This system provides an output to operate the vehicle's horn relay to annunciate arm/disarm/programming and when used the car finder mode. This low current output is to be used to operate a existing horn relay only. If the vehicle does not have a horn relay, one will have to be added as the output is capable of 300 mA maximum. The duration of the output is adjustable (see feature #6), and can be selected off by turning the ignition on then off, then press and release the program switch 3 times. If the horn was on, it will be turned off, if the horn was off, it will be turned on.

Starter Disable Output:

This system provides an output to control an optional starter cut relay (not included).

When this option is installed, any time the system is locked, the vehicle's starting circuit is inoperable.

Remote Entry Illumination:

This system provides an on-board relay that will operate the vehicle interior light for 30 seconds whenever the system is disarmed. This circuit will also operate to provide feedback during the transmitter and feature programming modes. Since both the NO and COMMON relay contacts are wired through the harness, this feature can be used with both positive and negative switched dome light circuits.

Note: If the accessory lock option is selected on, the interior illumination circuit **MUST** be connected in order to prevent accidental locking of the doors. In this situation, the Green/White wire connects to the door pin switch, sensing when the door is opened. The doors will not lock when the ignition is turned on if the door is opened. This safety feature prevents the operator from reaching into the car, starting it, then closing the door. If this circuit was not connected, the doors would lock and the operator would be stuck outside the vehicle with the engine running.

Since both the NO and COMMON relay contacts are wired through the harness, this feature can be used with both positive and negative switched dome light circuits.

Mounting Of The Components:

Control Module:

Select a mounting location inside the passenger compartment (up behind the dash), and secure using two screws provided. The control module can also be secured in place using cable ties.

Be certain that the mounting location chosen, will insure the wire routing to and from the module, is clear of any moving parts, especially the steering column. If the steering column has an exposed shaft that rotates with the steering wheel, wires may become entangled preventing safe operation of the vehicle.

Do not mount the control module in the engine compartment, as it is not waterproof. You should also avoid mounting the unit directly onto factory installed electronic components. These components may cause RF interference, which can result in poor transmitter range or intermittent operation.

Valet Switch:

Select a desired mounting location for the switch, that is easily accessible to the driver of the vehicle.

The switch does not have to be concealed, however, concealing the switch is always recommended, as this provides an even higher level of security to the vehicle. The switch may be mounted in the dash by drilling a 1/4" diameter hole in the location. Be sure to check behind the dash for adequate clearance for the body of the switch and to confirm that the drill will not damage any existing components as it passes through the dash.

Route the Grey and Black wires from the switch toward the control module.

Starter Inhibit Relay: (Optional)

Mount the relay at a convenient location considering wire length. The relay should be mounted as close as practical to the circuit you intend to interrupt to prevent extended wiring and voltage drops. See wiring guide for connections to the relay and vehicle.

LED:

A small red LED (Light Emitting Diode) is included that will serve as a visual indicator of the system's status. It should be installed in the dash, located where it can be easily seen from outside the vehicle, yet not be distracting to the driver. Once a location has been selected, check behind the panel for wire routing access and to confirm the drill will not damage any existing components as it passes through the panel.

Drill a 1/4 " diameter hole, and pass the red and blue wires from the LED through the hole, from the front of the panel. Firmly press the body of the LED into the hole until fully seated. Route the wires from the LED toward the control module.

Wiring The System:

Dark Blue w/ White Trace: (Dome Light Relay Source)

This wire is the source for the on-board entry illumination feature. This wire also activates the passive arming feature, therefore, it is important to use this connection as source for entry illumination, and the Dark Green w/ White tracer wire for the output to the dome light circuit.

Connect the Dark Blue w/ White tracer wire to chassis ground if the vehicle's dome light circuit is ground switched, or to a + 12 VDC constant battery source if the vehicle's dome light circuit is positive switched.

Positive Or Negative Select: On-Board Jumper

This control module has an on-board, hard wire jumper located behind the access door in the module case, that must be set prior to installing the system. This jumper is used to determine the polarity of the door trigger circuit.

If the vehicle has a ground switched dome light circuit, be sure this jumper is connected to the negative terminal on the circuit board.

If the vehicle has a positive switched dome light circuit, be sure this jumper is connected to the positive terminal on the circuit board.

NOTE: Be sure to set the jumper location on the control module to either positive or negative dome light switching.

2 Dark Blue Wires: Pulsed Output (Channel 3, Trunk Release)

The dark blue wires are controlled via an independent RF channel from the keychain transmitter. These are the NO and COMMON contacts of an on-board, 10 A relay, so they can be connected to positive or negative switched circuits. Connect one of the dark blue wires to the output of the trunk release push-button switch and the other dark blue wire to either chassis ground, or + 12 VDC battery, depending on the polarity of the trunk release circuit in the vehicle. When using this channel for an accessory other than trunk release, connect one dark blue wire to the accessory, and the other dark blue wire to either chassis ground, or, to a fused + 12 volt battery source, depending upon the requirements of the accessory.

CAUTION! Never attempt to pull more than 10 Amperes of current through this relay. The circuit will be damaged. Always check the requirements of accessories prior to connecting them to the circuit.

Green/Black Wire: Latching Output (Channel 4)

The green w/ black tracer wire latches to ground via an independent RF channel from the keychain transmitter. This is a transistorized, low current (300 mA.) output and should only be used to drive an external relay coil.

This wire provides an immediate ground signal and stays at ground for as long as the buttons on the keychain transmitter remain pressed.

CAUTION! Connecting the dark green w/ black tracer wire to the high current switched output of trunk release circuits, some remote starter trigger inputs, and some window roll up trigger inputs, will damage the control module.

Connect the dark green w/ black tracer wire to terminal 86 of the AS 9256 relay (or an equivalent 30 A automotive relay), and wire the remaining relay contacts to perform the selected function of channel 3.

White Wire: 300 mA Pulsed Ground Output

This wire is provided to control an optional (not included) parking lamp flasher relay. Connect the white wire to terminal 86 of the AS 9256 relay (or an equivalent 30 A automotive relay), and wire the remaining relay contacts as shown in the wiring diagram.

Black/White: 300 mA Pulsed Ground Output Intended For Horn Activation

This wire provides a low current negative output whenever the system is armed/disarmed or used for car finder mode. This output can be used to control the factory horn relay or used to operate a added relay for use with horn or siren. Connect the Black/White wire to terminal 86 of a AS-9256 relay, (or an equivalent 30 A automotive relay). Connect terminal 85 to a fused + 12 volt source, and wire the remaining contacts to switch either + 12 volts, or ground dependent on the requirement of the factory horn system.

Red/White Fused Wire: + 12 Volts Constant Battery Source

Connect the Red w/ White tracer wire to a + 12 VDC constant battery source.

Black Wire: Chassis Ground

Connect this wire to a clean, solid, metal part of the vehicle's chassis.

Do not confuse this wire with the thin black antenna wire that exits the control module independently.

Yellow Wire: + 12 VDC Ignition Source

Connect this wire to a source that has + 12 volts when the key is in the on and start positions and off when the key is in the off position.

Orange Wire: 300 mA Ground When Armed Output

This wire is provided to control the optional (not included) starter cut relay. Connect the orange wire to terminal 86 of the AS 9256 relay (or an equivalent 30 A automotive relay) and wire the remaining relay contacts as shown in the wiring diagram.

IMPORTANT: Audiovox does not recommend using this relay to interrupt the ignition wire. Only connect this relay to the low current starter solenoid feed wire, as indicated on the wiring diagram.

Blue/Black Wire: Alternate Channel 3 Output (Dbl. Push Required)

This wire is controlled from the transmitter button programmed to the receiver's channel 3. By double pressing this the transmitter button, this output will become active for 1 second. Connect this wire to the ground switched input of the device you wish to operate. This is a transistorized, low current (300 mA) output, designed to provide an output only when the transmitter is intentionally operated, such as is the case with remote start add on modules. If you require more than 300mA drive from this output, you must drive an external relay coil, and arrange the relays contacts

to preform the specified function.

Green/White Wire: COMMON contact of an on-board, 10 A maximum, relay.

Connect the green/white wire to the switched output of one of the door pin switches.

NOTE: When wiring this feature in vehicles with factory equipped delay lighting circuits, it is best to connect to the output of the timer which feeds the dome light, rather than at the door switch. This will ensure that during the programming modes, the interior light pulses as it should.

Additionally: This wire is also the initiation wire for the passive arming feature when selected. If you select passive arming, this wire must connect to the door pin switch to allow the system to recognize that a door has been opened after the ignition switch is turned off. Also be sure to set the module's jumper for positive or negative dependent on the vehicle you are installing the unit into. (See wiring diagram)

Red & Blue 2 pin LED connector:

Plug the connector from the previously installed LED to the mating connector on the control module.

Red/Black & Green/Black 2 Pin Red Connector :

2 Step Unlock Connector

The green w/ black tracer wire provides a 300 mA ground pulse output for the all doors unlock signal and can be connected to the negative door unlock wire in 3 wire negative switched vehicles.

The red w/ black trace wire provides a low current (300 mA) + 12 VDC source for those applications that require a relay for the all doors unlock feature. This wire should be connected to the relay coil only. A separate +12 VDC source must be used for the high current relay contacts. See two step reference below.

Grey & Black 2 Pin Blue Connector: (Valet Switch)

Route the two conductor, blue connector from the valet switch to the control module, and plug it into the mating blue connector on the end of the module.

Normal Door Lock Operation

6 Pin Door Lock Output Connector:

The orange, blue w/ white tracer, yellow, white, green, and blue wires in the 6 conductor connector are the contacts of the on-board door lock relays. The function of each of these wires is listed below;

Lock Relay

Blue w/ White Trace = N.O. Relay Contact

Dark Green = N.C. Relay Contact

Yellow = Common Relay Contact

Unlock Relay

Orange = N.O. Relay Contact

Dark Blue = N.C. Relay Contact

White = Common Relay Contact

3 Wire Ground Switched Door Lock Circuits:

In this application, the dark green and dark blue door lock wires are not used.

The white and yellow wires must be connected to a chassis ground source.

The blue w/ white stripe wire is the ground pulse "lock" output, and should be connected to the negative lock wire in the vehicle.

The orange wire is the ground pulse "unlock" output, and should be connected to the negative unlock wire in the vehicle.

2 STEP OPERATION OVERVIEW REFERENCE

When wiring for 2 step unlock operation, you must connect the outputs of the on-board unlock relay to the driver's door lock motor. Wire these outputs as follows;

Orange = N.O. Relay Contact to + 12 VDC Battery

Dark Blue = N.C. Relay Contact to Motor leg switch side

White = Common Relay Contact to Motor leg motor side

Wire the transistorized negative "all doors unlock" output directly to the negative unlock wire from the door lock switch in vehicles with 3 wire ground switched circuits.

In vehicles with 3 wire positive or 5 wire alternating switched circuits, you must add a 30 Amp automotive relay to provide the "all doors unlock" feature.

3 Wire Ground Switched 2 Step Door Locks

In this application, the **Dark Green is not used, the Yellow wire connects to chassis ground, and the Blue w/White wire connects to the negative switched low current door lock wire, or the lock wire at the door switch.**

Next, locate the drivers door unlock motor wire and cut it at a convenient location to allow wiring of the White and Dark Blue wires, Dark Blue will connect to the vehicle side of the cut wire, and White will connect to the "Unlock Drivers Door Motor" side of the cut wire. Most vehicles door lock/unlock motor legs rest at ground and switch +12 volts to the door lock/unlock motor legs for operation. If this is the case in the vehicle you are working on, connect Orange to a + 12 volt source. In the rare instance that the vehicle door lock/unlock motor legs rest at + 12 volts and switches ground to the door lock/unlock motors, connect Orange to chassis ground.

Connect the Green/Black wire of the two pin 2nd step unlock connector to the low current ground switched door unlock wire. The Red/Black wire is not used for this application.

3 Wire Positive Switched Door Lock Circuits :

In this application, the dark green and dark blue wires are not used.

The orange and blue w/ white stripe wires must be connected to a + 12 volt battery source.

The yellow wire is the positive pulse "lock" output and should be connected to the positive lock wire in the vehicle.

The white wire is the positive pulse "unlock" output and should be connected to the positive unlock wire in the vehicle.

3 Wire Positive Switched 2 Step Door Locks

In this application, the **Dark Green is not used, the Blue/White connects to + 12 volt source, and the Yellow wire connects to the positive switched low current door lock wire, or the lock wire at the door switch.**

Next, locate the drivers door unlock motor wire and cut it at a convenient location to allow wiring of the White and Dark Blue wires, Dark Blue will connect to the vehicle side of the cut wire and White will connect to the "Unlock Drivers Door Motor" side of the cut wire. Most vehicles door lock/unlock motor legs rest at ground, and switch +12 volts to the door lock/unlock motor legs for operation. If this is the case in the vehicle you are working on, connect Orange to a + 12 volt source. In the rare instance that the vehicle door lock/unlock motor legs rest at + 12 volts and switch ground to the door lock/unlock motors, connect Orange to chassis ground.

An optional relay will be required for this application. Connect the Green/Black wire of the two pin 2nd step unlock connector to terminal 85 of a VF45F11 P&B relay or equivalent automotive 12 volt relay. Connect Red/Black to terminal 86. Connect terminal 87 to a fused + 12 volt source and connect terminal 30 to the low current +12 volt switched wire from the door unlock switch.

5 Wire Alternating Door Lock Circuits:

In this application, it is necessary to cut the existing door lock bypass wires. These wires run from the master door lock switch to the slave door lock switch and then on to the door lock motors.

Cut the existing lock wire and connect the yellow wire to the slave switch or motor side of the cut wire. Connect the green wire to the master switch side of the cut wire.

Cut the existing unlock wire and connect the white wire to the slave switch or motor side of the cut wire. Connect the blue wire to the master switch side of the cut wire.

The orange and blue w/ white stripe wires must be connected to a fused + 12 VDC battery source.

Resistive Circuits, As Well As 4 Wire Polarity Reversal.

These applications require the use of additional components which may include relays, fixed resistors, or for convenience, the AS 9159 Door Lock Interface. Refer to the AUDIOVOX Door Lock Wiring Supplement and or the Audiovox fax back service for information on your particular vehicle for properly connecting to these types of circuits.

Completing The Installation:

Antenna Wire: Be sure to extend the thin black antenna wire to its full length, routed as high as possible. Avoid wrapping this wire around major, high current wire looms, then cable tie into place where it cannot be damaged.

Wire Dressing: Always wrap the alarm wires in convoluted tubing, or with a spiral wrap of electrical tape. Secure these looms along the routing using cable ties.

This will ensure that the alarm wires are not damaged by falling onto hot or sharp moving surfaces in the vehicle.

Operation: Take a few moments to check off the appropriate option boxes in the owner's manual and to fully explain the operation of the system to your customer.



