Model APS-610
Installation Manual

SELECTABLE FEATURES

Note: The method of manual override can either be selected to operate from the valet switch or operate as custom code. Be certain to place a check mark indicating the method used in the box located on the last page of the owner's manual.

Note: When both Passive Arming and Voltage Sensing are selected, you must hardwire the driver's door pin switch in order to begin the passive arming sequence.

RF Programmable Features :

Feature Selection	1 Chirp	2 Chirps	3 Chirps	4 Chirps	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	Auto UL Dr.	Auto UL All	Auto UL Off		Auto UL Off
4th Headlights	On Arm	On Disarm	On Both	Off	Both
5th Passive Locks	Passive	Active			Active
6th Passive/Active Arm	Passive Arm	Active Arm			Active Arm
7th Voltage Sense	Voltage Sense	Hardwire			Hardwire
8th Siren/Horn	Siren/Horn	Siren Only	Horn Only		Siren/Horn
9th Horn Chirp	10mS	16mS	30mS		16mS
10th Override Method	Custom Code	Valet			Valet
11th Two Step Unlock	On	Off			Off
12th Chirp Delete From Tx	On	Off			Off

To program these selectable features;

	Action	System Response
	Turn ignition on	No response
	Press and release the valet switch 3 times	1 Chirp - LED 1 flash
	Within 3 seconds, turn ignition Off	Short chirp, then long chirp
First	Then On	1 chirp = 1 second door locks
	Press transmitter Lock button to change	2 chirps = 3.5 second door locks
	Press transmitter Lock button to change	3 chirps = 1 sec. lock, dbl 1 sec. unlock
	or	
Second	Press and release the valet switch	2 chirps = auto locks off
	Press transmitter Lock button to change	1 chirp = auto locks on
	or	
Third	Press and release the valet switch	3 chirps = auto unlock off
	Press transmitter Lock button to change	1 chirp = auto unlock drivers door only
	Press transmitter Lock button to change	2 chirps = auto unlock all doors
	or	

Fourth	Press and release the valet switch	3 chirps = headlight output when arming and disarming
	Press transmitter Lock button to change	4 chirps = headlight output off
	Press transmitter Lock button to change	1 chirp = headlight output when arming
	Press transmitter Lock button to change	2 chirps = headlight output when disarming
	or	
Fifth	Press and release the valet switch	2 chirps = active locks
	Press transmitter Lock button to change	1 chirp = passive locks
	or	
Sixth	Press and release the valet switch	2 chirps = active arming
	Press transmitter Lock button to change	1 chirp = passive arming
	or	
Seventh	Press and release the valet switch	2 chirps = hardwire
	Press transmitter Lock button to change	1 chirp = voltage sense
	or	
Eighth	Press and release the valet switch	1 chirp = siren and horn output
	Press transmitter Lock button to change	2 chirps = siren output only
	Press transmitter lock button to change	3 chirps = horn output only
	or	
Ninth	Press and release the valet switch	2 chirps = horn chirp output 16mS
	Press transmitter Lock button to change	3 chirps = horn chirp output 30mS
	Press transmitter Lock button to change	1 chirp = horn chirp output 10 mS
	or	
Tenth	Press and release the valet switch	2 chirps = valet switch override operation
	Press transmitter Lock button to change	1 chirp = custom code override operation
	or	
Eleventh	Press and release the valet switch	2 chirps = 2 step unlock off
	Press transmitter Lock button to change	1 chirp = 2 step unlock on
	or	
Twelfth	Press and release the valet switch	2 chirps = chirp delete from transmitter inactive
	Press transmitter Lock button to change	1 chirp = chirp delete from transmitter active
	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.

INSTALLATION OF MAJOR COMPONENTS

Note: This system allows the transmitter to be programmed for single button lock/unlock or separate button lock/unlock. The receiver is set up as follows:

Channel #1	=	Lock/Unlock/Unlock 2 &Panic
Channel #2	=	If Programmed, Unlock/Unlock 2 & Panic
Channel #3	=	Channel 3 & Alternate Channel 3
Channel #4	=	Channel 4 Output
Channel #5	=	Channel 5 Output (If so Equipped)

During the program routine, if a transmitter button is programmed into receiver channel 2, then the unit will always have separate lock/unlock from that transmitter.

If during the program sequence receiver channel 1 is programmed, and received channel 2 is skipped over, as indicated in the transmitted program guide, then the unit will operate as a single button lock/unlock unit from that transmitter.

It is possible to have one transmitter programmed for single button lock/unlock, and one transmitter programmed for separate button lock/unlock if the customer so desires.

If you inadvertently incorrectly program the transmitter, please read the information on re-prioritizing found in the transmitter programming guide.

Control Module:

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

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.

Siren:

Select a mounting location in the engine compartment that is well protected from access below the vehicle. Avoid areas near high heat components or moving parts within the engine compartment. To prevent water retention, the flared end of the siren must be pointed downward when mounted.

Mount the siren to the selected location using the screws and bracket provided.

Hood or Trunk Pin Switch:

A pin switch is included for use in protecting the hood or trunk (or hatchback) of the vehicle. The switch must always be mounted to a grounded, metal surface of the vehicle. It is important to select a location where water cannot flow or collect, and to avoid all drip gutters on hood and trunk fender walls. Choose locations that are protected by rubber gaskets when the hood or trunk lid is closed.

The pin switch can be mounted using the bracket provided, or direct mounted by drilling a ¼ " diameter mounting hole. Keep in mind that when properly mounted, the plunger of the pin switch should depress at least ¼ " when the hood or trunk lid is closed.

Dash Mounted L.E.D.:

A small red L.E.D. is included that will serve as a visual indicator of the alarm 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 ¼ " diameter hole, and pass the red and blue wires from the L.E.D. through the hole, from the front of the panel. Firmly press the body of the L.E.D. into the hole until fully seated.

Valet Switch:

Select a 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 valet switch can be mounted to the lower side of the dash by drilling a ¼ " diameter hole in the selected 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 two pin connector toward the control module.

Shock Sensor:

Select a solid mounting surface for the shock sensor on the firewall inside the passenger compartment, and mount the sensor using the two screws provided. The shock sensor can also be secured to any fixed brace behind the dash using tie straps.

Whichever mounting method is selected, make certain that the sensitivity adjustment is accessible for use later in the installation.

WIRING THE SYSTEM

Large 10 Pin Edge Connector:

Red/White (5Amp) & Red (15Amp) Fused Wires: +12 VDC Constant Battery Source

This wire controls the sensitivity of the voltage sensing circuit, which detects the turning on of an interior light when a door is opened. It will also detect the switching on of parking or headlamps, and in many cases will trigger the alarm when a thermostatically controlled electronic radiator cooling fan switches on.

When installing this system into vehicles with electronic “after fans“, it is recommended you disable the voltage sense circuit.

In voltage sensing applications, the closer to the battery that the red wire is connected, the less sensitive the voltage sense circuitry will be. Moving this connection point to the fuse panel will increase the sensitivity, and connecting to the courtesy lamp fuse in the vehicle will provide maximum sensitivity of the voltage sense circuit. Be certain to set selectable feature # 7 to 1 chirp, Voltage Sense On.

When hardwiring the control module to pin switches at all entry points, the voltage sense circuit must be disabled.

White w/ Black Trace Wire: Positive Output to Siren

Route this wire through a rubber grommet in the firewall, and to the siren location.

Connect the white / black wire to the positive wire of the siren. Secure the black ground wire of the siren to chassis ground.

2 Dark Green w/ White Trace Wires: Entry Illumination

The dark green w/ white trace wires provide the entry lighting, and flash the vehicle’s dome light while the alarm is sounding. These are NO (normally open) and COM (common) contacts of an on board, 10 Amp maximum relay.

Connect one of the dark green w/ white trace wires to the wire in the vehicle that turns on the interior courtesy light. Connect the other dark green w/ white trace wire to either chassis ground if the vehicle switches ground to the courtesy lights, or a fused + 12 volt constant battery source if the vehicle switches 12 volts to the courtesy lights.

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 the dome light pulses when the alarm is triggered.

Black Wire: Chassis Ground

Connect this wire to a 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.

2 Dark Blue Wires: Delayed Pulsed Output / Channel 3 (Optional Device)

Typically Used For Remote Electric Trunk Release Operation, when activated, this output provides a 800 ms closure of the on board relay.

The dark blue wires are controlled via an independent RF channel from the keychain transmitter. These are the N.O. and COMMON contacts of an on board, 10 Amp relay, so they can be connected to positive or negative switched circuits.

Connect one of the dark blue wires to the output of the optional device you wish to control, and connect the other dark blue wire to either chassis ground, or to a fused + 12 VDC battery source, depending on the input required to activate the device you are controlling.

WARNING ! 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.

Orange Wire: 300 mA Ground Output When Armed - N. C. Starter Disable

This wire is provided to control the starter cut relay. Connect the orange wire to terminal 86 of the relay.

Connect relay terminal 85 to an ignition wire in the vehicle that is live when the key is in the on and crank positions, and off when the key is in the off position.

(This is where the yellow wire from the alarm should be connected).

Cut the low current starter solenoid wire in the vehicle, and connect one side of the cut wire to relay terminal 87A. Connect the other side of the cut wire to relay terminal 30.

Note: This is a normally closed starter cut arrangement, and when power is removed from the security system, the starter disable feature will not operate, allowing the vehicle to start. Audiovox does not recommend using the Orange wire to interrupt anything but the starting circuit of the vehicle.

White Wire: +12 VDC Pulsed Parking Light Output (15 Amp Max.)

This wire is provided to flash the vehicle's parking lights. Connect the white wire to the positive side of one of the vehicle's parking lights.

Mini 11 Pin Edge Connector :

Dark Green w/ Black Trace Wire: Latching Output / Channel 4

This 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 button(s) on the keychain transmitter remain pressed.

WARNING ! Connecting this wire to the high current switched output of trunk release circuits will damage the control module.

Connect this output to terminal 86 of the AS 9256 relay (or an equivalent 30 Amp automotive relay), and wire the remaining relay contacts to perform the selected function of channel 4.

Dark Blue w/Black Trace 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. 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.

NOTE: Pressing the transmitter button, then immediately pressing and holding it will cause this output to be active as long as the transmitter button is depressed.

Black w/ White Trace Wire: 300 mA Horn Output

The black w/ white trace wire is provided to beep the vehicle's horn. This is a transistorized low current output, and should only be connected to the low current ground output from the vehicle's horn switch.

If the vehicle uses a +12 VDC horn switch, then connect the black w/ white trace wire to terminal 86 of the AS 9256 relay (or an equivalent 30 Amp automotive relay) and connect relay terminal 85 to a fused +12 VDC battery source. Connect relay terminal 87 to the vehicle's horn switch output, and connect relay terminal 30 to a fused +12 VDC battery source.

Orange w/ White Trace Wire: 300 mA GROUND OUTPUT WHEN DISARMED - N. O. STARTER DISABLE **(Optional Relay Required).**

This wire is provided to control the starter cut relay. Connect the orange w/white wire to terminal 86 of the relay. Connect relay terminal 85 to an ignition wire in the vehicle that is live when the key is in the on and crank positions, and off when the key is in the off position. (This is where the yellow wire from the alarm should be connected).

Cut the low current starter solenoid wire in the vehicle, and connect one side of the cut wire to relay terminal 87. Connect the other side of the cut wire to relay terminal 30.

Note: This is a normally opened starter cut arrangement, and when power is removed from the security system, the starter disable feature will remain operational, and the vehicle will not start. Audiovox does not recommend using the Orange w/ White trace wire to interrupt anything but the starting circuit of the vehicle.

Dark Green Wire: (-) INSTANT TRIGGER ZONE
This is an instant on ground trigger wire. It must be connected to the previously installed hood and trunk pin switches.

Brown Wire: - DOOR TRIGGER
If the vehicle's courtesy light switches have a (-) ground output when the door is opened (GM and most Imports), you must connect this wire to the negative output from one of the door switches.
WARNING: Do not use the brown wire if the vehicle has +12 volt output type door switches.
(see Purple Wire).

Purple Wire: + DOOR TRIGGER
If the vehicle's door courtesy light switches have a +12 volt output when the door is opened (most Fords and some Imports), you must connect this wire to the positive output from one of the door switches.
WARNING: Do not use the purple wire if the vehicle has ground output type door switches.
(see Brown Wire).

Yellow Wire: +12 VDC IGNITION SOURCE
Connect this wire to a source that is live when the key is in the on and crank positions. Be sure that this source is off when the key is in the off position.

White w/ Blue Trace Wire: Low Current (-) Ground Headlight Output
The White w/ Blue Trace wire is provided to operate the optional headlamp illumination feature of the system. This is a low current (300mA) output and must be connected to an external relay to control the high current switching circuit of the vehicle's headlamps. To use this option, connect the White /w Blue Trace wire to terminal # 86 of a P&B VF45F11 relay or equivalent. Connect Terminals #85 and # 30 to a fused +12 Volts source with a current capability equal to or in excess of the factory headlamp fuse. Connect terminal # 87 of the relay to the switched +12 volt wire feeding the vehicle's headlamp circuit.
NOTE: For ground switched headlamp circuits, connect the White /w Blue Trace wire to terminal # 86 of a P&B VF45F11 relay or equivalent. Connect Terminal #85 to a fused + 12 Volts source. Connect terminal # 30 to a clean chassis ground. Connect terminal # 87 to the ground switched headlamp control wire in the vehicle.

Light Green Wire: (-) Instant Trigger Zone 1
This is a instant on ground trigger input intended for the connection of optional triggering devices. The ground trigger output wire of motion detectors, microwave detectors, or glass break detectors, can be connected to this Light Green trigger input wire.

Light Blue/Green Wire: DELAYED 300 mA PULSED OUTPUT / CHANNEL 5
The light blue/green wire pulses to ground via an independent RF channel from the keychain transmitter. This is a transistorized, low current output, and should only be used to drive an external relay coil.
WARNING: Connecting the light blue/green to the high current switched output of trunk release circuits, some remote start trigger inputs, will damage the control module.
Connect the light blue/green to terminal 86 of the AS-9256 relay (or equivalent 30 A automotive relay), and wire the remaining relay contacts to perform the selected function of channel 3.

2 Pin Blue Connector: Valet Switch
Route the grey and black wires in the 2 pin connector from the valet switch to the control module, and plug it into the mating blue connector on the side of the module.

2 Pin White Connector: Dash Mounted L.E.D.

Route the red and blue wires in the 2 pin white connector from the L.E.D. to the control module, and plug it into the mating white connector on the side of the module.

4 Pin White Connector: Shock Sensor

Route the red, black, green and blue wires in the 4 pin white connector from the shock sensor to the control module, and plug one end into the shock sensor, and the other end into the mating white connector on the side 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	**Unlock Relay**
Blue w/ White Trace = N.O. Relay Contact	Orange = N.O. Relay Contact
Dark Green = N.C. Relay Contact	Dark Blue = N.C. Relay Contact
Yellow = Common 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.

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, White will connect to the vehicle side of the cut wire and Dark Blue 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 switches 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 by - pass 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.

Refer to the door lock wiring supplement for proper connection of these wires into the various locking circuits available in current vehicles.

6 Pin Door Lock Output Connector:

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.

Red w/ Black & Green w/ 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.

Resistive Circuits, As Well As 4 Wire Polarity Reversal and 5 Wire Alternating 12 Volt Door Lock Control Circuits

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 it's full length, and cable tie into place where it cannot be damaged. Avoid wrapping this wire around major, high current wire looms.

Adjusting the Shock Sensor: If used, the sensitivity of the pre-detect circuit is automatically set 30% less sensitive than the full trigger circuit.

Using a small screwdriver, gently turn the adjustment screw fully counterclockwise. (DO NOT over turn this screw. Maximum rotation for this adjustment is 270°). Close the hood and trunk lids, and arm the alarm. Wait 6 seconds for the accessories trigger zone to stabilize, then firmly strike the rear bumper with the side of a closed fist considering the amount of force required to break a window.

CAUTION: Never perform this test on the vehicle's glass, as you may break the window.

Turn the adjustment screw clockwise (increasing sensitivity) about ¼ turn and re-test. Repeat this procedure until the alarm sounds. Ultimately, one firm strike to the rear bumper will cause the alarm to emit pre-detect warning tones.

WARNING ! Setting the sensitivity too high can cause false alarms due to noise vibrations from passing trucks and heavy equipment. To decrease sensitivity, turn the adjustment screw counter-clockwise.

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.