



Model APS-30

KEYLESS ENTRY ALARM UPGRADE MODULE INSTALLATION INSTRUCTIONS

PRE-INSTALLATION NOTES :

This system provides an output that should be used to drive the siren, but can be programmed to pulse the vehicle's horn. When utilizing the horn, an additional relay is required. **Caution: on many vehicles the factory horn is not designed for continuous use, and it is recommended that the siren is used for these vehicles. Check to see if the horn in the vehicle is the same part that is used in a vehicle with the factory installed security system.**

STAND ALONE PASSIVE ALARM

When installing the APS-30 as a stand alone passive alarm system, the dip switches *must* be set as follows;

- Dip Switch # 1 = ON**
- Dip Switch # 2 = ON**
- Dip Switch # 3 = OFF**
- Dip Switch # 4 = OFF**
- Dip Switch # 5 = OFF**
- Dip Switch # 6 = OFF**

DIP SWITCH SETTINGS		
	ON	OFF
1	PASSIVE ARMING	ACTIVE ARMING
2	1 WIRE DISARM	2 WIRE DISARM
3	HORN MODE	SIREN MODE
4	INSTANT TRIGGER	ENTRY DELAY
5	- ARM INPUT	+ ARM INPUT
6	VOLTAGE SENSE	HARDWIRE

PASSIVE / ACTIVE ARMING SELECTION : DIP SWITCH # 1

This alarm can be programmed to operate as either a " PASSIVE " or " ACTIVE " arming security system.

As a passive arming system, the alarm will automatically arm 30 seconds after the ignition key is turned off, one door is opened, then all doors are closed. Additionally, if a door has been left opened, or if one of the trigger zones is defective, the system will always arm 10 minutes after the ignition key has been turned off, and ignore the defective trigger zone.

As an active arming system, the alarm will arm only when the vehicle's doors have been locked using the existing OEM Keyless Entry Transmitter.

The system is shipped from the factory in the active arming mode, and to select the passive arming mode, move dip switch # 1 to the " ON " position.

1 OR 2 WIRE DISARM INPUT SELECTION : DIP SWITCH # 2

This alarm can be programmed for either 1 wire or 2 wire disarm operation.

Many OEM keyless entry systems use on-board door unlock relays, which usually results in the ability to disarm the aftermarket security upgrade module by unlocking the doors using the door panel unlock switch. Wiring the system for 2 wire disarm will eliminate this problem.

The system is shipped from the factory in the 2 wire disarm mode, and to select the 1 wire disarm mode, move dip switch # 2 to the " ON " position.

HORN OR SIREN OUTPUT SELECTION : DIP SWITCH # 3

This alarm can be programmed to drive an electronic siren, or pulse the vehicle's horn.

In the siren mode, the audible output will deliver a switched + 12 VDC output when the system is triggered. This allows for direct connection to an optional electronic siren.

In the horn mode, the audible output (WHITE w/BLACK tracer wire) will deliver a pulsed + 12 volt output when the system is triggered. This allows for connection to the vehicle's horn, using an external relay, which will beep the horn when the alarm is triggered.

The system is shipped from the factory in the siren mode, and to select the horn mode, move dip switch # 3 to the " ON " position.

INSTANT OR DELAYED DOOR TRIGGER SELECTION : DIP SWITCH # 4

This alarm can be programmed for either instant trigger on the door zone, or for an entry delay on the door zone. The primary use of the entry delay would be when the APS-30 is installed as a stand alone passive alarm system, and is not being used with an existing Remote Keyless Entry system.

In the instant mode, opening any door will trigger the alarm immediately.

In the entry delay mode, opening any door will provide a 15 second delay before the alarm is triggered. This provides ample time to put the key into the ignition, and switch it to the " ON " position, which will disarm the system when wired as a stand alone alarm.

IMPORTANT: In the entry delay mode, when the alarm is armed actively, the doors will trigger the alarm instantly. The entry delay will only take place when the alarm is allowed to arm passively!

IMPORTANT: THE ENTRY DELAY WILL NOT OPERATE WHEN THE VOLTAGE SENSING CIRCUIT IS ACTIVE (DIP SWITCH # 6 ON).

POSITIVE OR NEGATIVE ARM INPUT SELECTION : DIP SWITCH # 5

This alarm can be programmed to accept either a positive or negative arm input signal. This allows for proper installation into vehicles using 3 wire ground, 3 wire + 12 volt, and 5 wire alternating door locking systems.

In the negative mode, the system will operate with keyless entry systems providing a ground output to the power door lock circuit.

In the positive mode, the system will operate with keyless entry systems providing a + 12 volt output to the power door lock circuit. The positive mode should also be used in vehicles whose Keyless Entry system uses on - board relays that switch a high current + 12 volts directly to the door lock motor legs.

The system is shipped from the factory in the + 12 volt input mode, and to select the ground input mode, move dip switch # 5 to the " ON " position.

VOLTAGE SENSE OR HARDWIRE SELECTION : DIP SWITCH # 6

This alarm can be programmed to operate as either a voltage sensing or hardwire system.

In the voltage sensing mode, any entry point that turns a light on will trigger the alarm.

In the hardwire mode, any entry point that is wired to the system will trigger the alarm.

The system is shipped from the factory in the hardwire mode, and to select the voltage sensing mode, move dip switch # 6 to the " ON " position.

TRUNK TRIGGER BY - PASS INPUT

This system provides a positive trunk release input, which allows the activation of the remote trunk release from the OEM transmitter without triggering the alarm, even when it is armed.

INSTALLATION OF MAJOR COMPONENTS :

ALARM CONTROL MODULE

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

Do not mount the control module in the engine compartment, as it is not waterproof.

DASH MOUNTED L.E.D.

VALET AND EMERGENCY OVERRIDE SWITCHES

This system provides individual inputs for two switches, a valet switch and a manual override switch. Moving these two functions to separate switches provides an even higher level of security.

UNDERSTANDING DISARM #1 AND #2:

Because of the complexities of the different factory Remote Keyless Entry Units on the market today, the APS-30 uses (2) disarm inputs. In all installations, whether installing with a 2 step unlock circuit, single step unlock circuit, or a stand alone passive alarm, **both of these wires must be connected.**

The following logic chart will help to demonstrate how these disarm inputs work. As shown in the chart, the APS-30 will disarm only when Disarm inputs #1 and #2 are at opposing polarities.

In addition, when Dip Switch #2 is set to the ON position (1 WIRE DISARM), the alarm will not disarm while it is triggered. In vehicles with the single step unlock circuits, it is always best to set Dip Switch #2 to the OFF position (2 wire disarm), and wire according to the Audiovox Tech Tips #22 and #23.

	DISARM #1 RED WIRE	DISARM #2 RED / BLACK WIRE	RESULT
SCENARIO A	POSITIVE	NEGATIVE	APS-30 DISARMS
SCENARIO B	POSITIVE	POSITIVE	NO CHANGE IN ALARM STATUS
SCENARIO C	NEGATIVE	NEGATIVE	NO CHANGE IN ALARM STATUS
SCENARIO D	NEGATIVE	POSITIVE	APS-30 DISARMS

A small red L.E.D. is included that will serve as a visual indicator of the alarm status. It should be installed into the dashboard, located where it is easily seen from outside the vehicle, yet not 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 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 valet switch, that is easily accessible to the driver of the vehicle.

The switch does not have to be concealed since it will in no way disarm the system from the armed or triggered state. The valet switch may be mounted below or on the dashboard by drilling a 9/32 " diameter hole in the selected location. Before drilling, be sure to check the area behind the panel for adequate clearance for the body of the switch, and to be sure that the drill will not damage any components as it passes through the panel.

MANUAL OVERRIDE SWITCH

Select a mounting location for the manual override switch, that is concealed, and does not necessarily have to be within reach of the driver. A secure location is in the trunk of the vehicle, since pressing this switch will activate a timer, which will then give the driver 12 seconds to turn the ignition key to the " ON " position.

The manual override switch may be mounted by drilling a 1/4 " diameter hole in the selected location. Before drilling, be sure to check the area behind the panel for adequate clearance for the body of the switch, and to be sure that the drill will not damage any components as it passes through the panel.

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 AND TRUNK PIN SWITCHES

Two pin switches are included for use in protecting the hood and trunk (or hatchback) of the vehicle.

The switches 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 switches can be mounted using the brackets and screws provided, or direct mounted by drilling a 1/4 " diameter mounting hole. Keep in mind that when properly mounted, the plunger of the pin switch should depress at least 1/4" when the hood or trunk lid is closed.

WIRING THE SYSTEM :

13 PIN CONNECTOR

RED FUSED WIRE - (VOLTAGE SENSING) : + 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 cooling fan switches on.

It is recommended that when installing this system into vehicles with electronic " after fans, " the procedure for RED FUSED WIRE - (HARDWARE) should be followed.

In voltage sensing applications, the closer to the battery that this wire is connected, the less sensitive the voltage sense circuitry will be. Moving the connection point to the fuse panel will increase the sensitivity of the voltage sensing circuitry.

RED FUSED WIRE - (HARDWARE) : + 12 VDC CONSTANT BATTERY SOURCE

When hardwiring the control module to switches at all points of entry, the voltage sense circuit must be disabled. Move dip switch # 6 to the " OFF " position. Connect the RED wire to a + 12 VDC constant battery source.

WHITE WIRE : + 12 VDC PULSED PARKING LIGHT OUTPUT (15 A 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.

WHITE w/ BLACK TRACE WIRE : POSITIVE OUTPUT TO SIREN OR HORN

This is a 3 A + 12 VDC transistorized switched or pulsed output when triggered (see Dip Switch #3).

In the siren mode, connect this wire to the positive wire of the siren. Secure the black ground wire of the siren to chassis ground.

In the horn mode, connect this wire to terminal 85 of an external relay, connect terminal 86 of the relay to ground, and use the normally open and common relay contacts (87 and 30) to pulse the vehicle's horn, and move Dip Switch #3 to the "ON" position.

PURPLE WIRE : (+) DOOR TRIGGER

If the vehicle's door courtesy light switches have a + 12 VDC output when the door is opened (most Fords), you must connect this wire to the positive output from one of the door switches. **Do not** connect this wire at the illuminated entry output from the keyless entry module. You **must** connect this wire at the door ajar switch. In most cases, the PURPLE wire will only need to be connected to one door switch, no matter how many doors the vehicle has.

IMPORTANT ! 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 + 12 VDC when the key is in the on and crank positions, and off when the key is in the off position.

DARK GREEN w/ WHITE TRACE WIRE : ENTRY ILLUMINATION (300 mA MAX.)

The DARK GREEN w/ WHITE TRACE wire provides a 30 second ground signal whenever the system is disarmed using the OEM transmitter, and pulses ground when the alarm is triggered.

It should be used to provide the optional entry lighting, and to flash the vehicle's dome light when the alarm is sounding.

This is a transistorized, low current output, and should only be used to drive an external relay coil. Connect the DARK GREEN w/ WHITE TRACE wire to terminal 86 of an external relay, connect terminal 85 of the relay to + 12 VDC battery, and wire the normally open and common relay contacts (87 and 30) according to the polarity of the vehicle's courtesy light circuit.

DARK BLUE WIRE : MANUAL OVERRIDE INPUT

Connect this wire to the DARK BLUE wire from the push-button manual override switch. Connect the BLACK wire from the switch to chassis ground.

BLACK WIRE : CHASSIS GROUND

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

ORANGE WIRE : 300 mA GROUND OUTPUT WHEN ARMED

This wire is provided to control the starter cut relay. Connect the ORANGE wire to terminal 86 of the relay, and wire the remaining relay contacts as shown in the wiring diagram.

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

BROWN WIRE : (-) DOOR TRIGGER

If the vehicle's door courtesy light switches have a - ground output when the door is opened (most GM and Imports) you must connect this wire to the negative output from one of the door switches. **Do not** connect this wire at the illuminated entry output from the keyless entry module. You **must** connect this wire at the door ajar switch. In most cases, the BROWN wire will only need to be connected to one door switch, no matter how many doors the vehicle has.

IMPORTANT ! Do not use the BROWN wire if the vehicle has + 12 Volt output type door switches (see PURPLE wire).

LIGHT GREEN WIRE : (-) INSTANT TRIGGER ZONE 1

This is an instant on ground trigger wire. This wire (zone) should be reserved for connection to optional ground output trigger devices such as motion and/or shock impact sensors.

DARK GREEN WIRE : (-) INSTANT TRIGGER ZONE 2

This is an instant on ground trigger wire. It must be connected to the previously installed hood and trunk pin switches.

4PINCONNECTOR

IMPORTANT ! When installing the APS-30 as a stand alone passive security system, the RED wire in this connector must be connected to a + 12 VDC switched ignition source. RED w/BLACK and GREEN wires must be connected to ground. The BLUE wire in this connector will not be required for the stand alone installation.

WIRING THE ARM / DISARM INPUTS IN VEHICLES WITH REMOTE 2 STEP UNLOCK

The following represents the most common wiring routine in vehicles using the remote 2 step unlock feature. Dip switches #2 & #5 must be switched to the OFF position in these cases.

GREEN WIRE : ARM INPUT

Connect this wire to the driver's door lock motor wire, which will receive +12 volts when the doors are locked using the door panel switch or the remote transmitter.

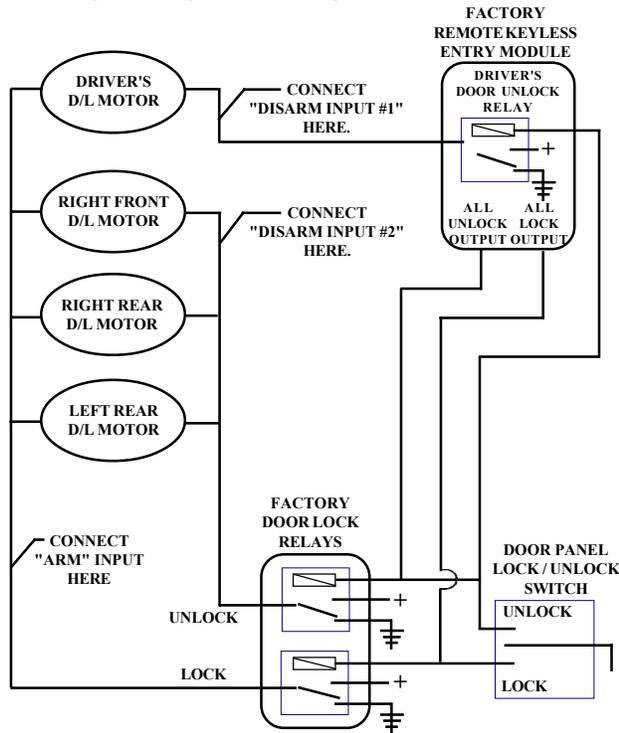
RED WIRE : DISARM INPUT #1

Connect this wire to the driver's door unlock motor wire, which will receive +12 volts when all doors are unlocked using the door panel switch or the remote transmitter.

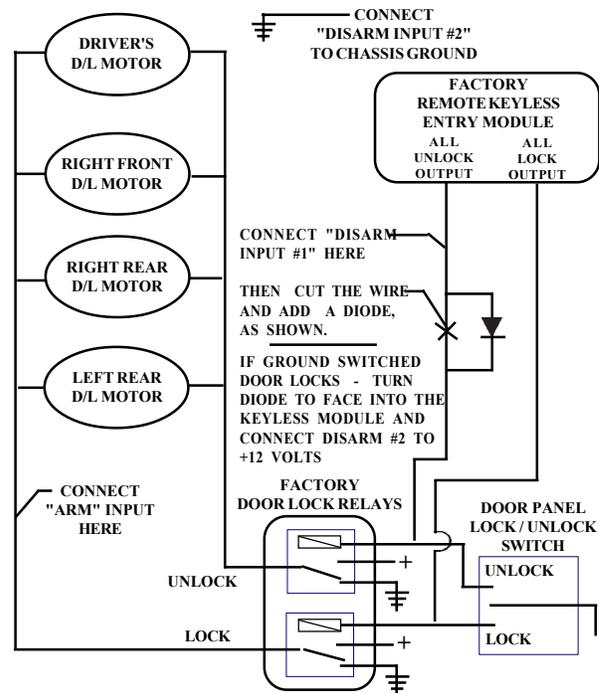
RED w/BLACK TRACE WIRE : DISARM INPUT #2

Connect this wire to any passenger door unlock motor wire, which will receive +12 volts when all doors are unlocked using the door panel switch or the remote transmitter, but will not receive the +12 volt pulse when **only the driver's door** is unlocked using the remote transmitter.

TYPICAL 2-STEP DIAGRAM



TYPICAL ONE-STEP DIAGRAM



WIRING THE ARM / DISARM INPUTS IN VEHICLES WITHOUT 2 STEP UNLOCK

GREEN WIRE : (+ or -) ARM INPUT

Connect this wire to the driver's door lock motor wire, which will receive +12 volts when the doors are locked using the door panel switch or the remote transmitter.

RED WIRE : DISARM INPUT # 1

Connect this wire to the unlock output wire from the OEM keyless entry control module. Refer to the diagram..

RED w/ BLACK TRACE WIRE : DISARM INPUT # 2

If the Red wire is switched to +12 volts when the doors are unlocked, connect the Red w/Black Trace wire to ground.

If the Red wire is switched to ground when the doors are unlocked, connect the Red w/Black Trace wire to +12 volts.

BLUE WIRE : (+) TRUNK TRIGGER SHUNT INPUT

This wire will determine if the vehicle's trunk has been opened using the OEM transmitter, and stop the alarm from triggering when the transmitter is used.

Connect this wire to the + 12 volt trunk release output from the OEM Keyless Entry module.

VALET SWITCH : Plug the 2 pin connector from the valet switch into the mating 2 pin connector on the control module.

L.E.D. : Plug the 2 pin connector from the L.E.D. into the mating 2 pin connector on the control module.