

ENFORCER

300B (315MHz) & 300B-4 (433.92MHz)

Tech Manual

GENERAL INSTALLATION CONSIDERATIONS

1. Solder all connections whenever possible. Do not run the wires too tight.
2. Run wires away from sharp edges which may cause short-circuits. Protect the wires with tubing or by wrapping with electrical tape whenever possible. Use grommets when wires are run through holes in the car body.
3. Mount all plastic components (such as the siren and shock detector) away from sources of extreme heat, such as the exhaust manifold or turbocharger, to prevent melting. Also, mount all components away from areas that receive water directly.
4. Mount all components in such a way that the normal operation of the vehicle's moving parts is not impaired or interfered with.
5. Mount all components and run all wires so they cannot easily be reached from underneath the vehicle by someone attempting to defeat the system.

IMPORTANT: DISCONNECT FUSE FROM ALARM'S RED WIRE BEFORE BEGINNING THE INSTALLATION. IF THE VEHICLE IS EQUIPPED WITH ANTI-THEFT RADIO OR AIR BAG SYSTEM, DO NOT DISCONNECT ITS BATTERY.

ALARM BRAIN/RECEIVER CONSIDERATIONS

The alarm brain/receiver of the Enforcer is very sophisticated. For maximum reliability and range, please note:

1. The alarm brain/receiver must not be mounted where it is exposed to extreme heat or moisture. Do not mount it in the engine compartment.
2. Mount the brain/receiver out-of-sight under the dash. Tie-wrap securely in place so that it is not easily reached by thieves or easily disconnected by accident. Make sure it does not disrupt the normal operation of any moving parts under the dash.
3. The higher the brain/receiver is mounted in the car (i.e., the closer to the windshield), and the farther it is mounted from metal, the greater the range of RF reception. Do not mount in the trunk.
4. Do not mount the receiver or antenna in front of the heater, defroster, or air conditioning ducts, or anywhere they may be exposed to extended air movements. Do not mount near a pager, a CB radio, car horns, or air horns, and do not mount under the hood.
5. Do not lengthen or cut the black antenna wire or mount it to the metal car body. (Exception: see below.)

NOTE 1: RF RANGE. Actual range depends on environmental conditions. Intervening walls and cars, or other RF activity, may temporarily decrease range. The most common cause of poor range is a weak transmitter battery.

NOTE 2: RF INTERFERENCE. In areas of strong RF activity, such as near airports or a military base, you may experience difficulties with arming or disarming. In this case, tape the black

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antenna wire to the car's metal body, or roll or fold the antenna wire so that its length is shorter. Do not cut the antenna. Note that this may reduce range.

NOTE 3: HARMONIC INTERFERENCE. Sirens or RF devices may interfere with arming or disarming. Face the siren away from the brain/receiver. Keep as much space as possible between RF devices, the siren, and the alarm.

NOTE 4: EASY TESTING WITH RED ARMING LED. The alarm arming LED lights when it receives a signal, for easy testing of the receiver and transmitter.

ADJUSTMENTS FOR GLASS BREAK DETECTOR

Both Red and Yellow LEDs are utilized to assist in adjusting the sensitivity of the Glass Break Detector. Before securing the alarm brain, rotate the sensitivity control clockwise to maximum with a flat blade screwdriver while the key is turned to ACC ON position and the alarm is disarmed. Then close all windows. Rap a window once with a degree of pressure you want the alarm to trigger with a metal object such as a teaspoon. The Red and Yellow LED will come ON. Then lightly tap the window with a force that you do not want the alarm to trigger. Thus the Red and Yellow LEDs should not come ON. If does, the sensitivity is too high and must be decreased. Repeat the process as outlined until the Red and Yellow LEDs light up when the window is rapped and stay OFF when lightly tapped. Finally check all windows for consistency of the sensitivity.

ADDING AN ADDITIONAL MICROPHONE

When installing in a large vehicle, van, or RV, rather than increasing the sensitivity to cover the additional area (a false alarm may result), it may be necessary to use an additional remote microphone (SECO-LARM Model No. SS-051RMP). If a second remote microphone is added, a "Y" connector will be required. "Y" connectors can be purchased at most electronic stores.

PATENTED PRE-TRIGGER "CHIRP" WARNING

The Enforcer 300's Glass Break Detector has SECO-LARM's Patented Pre-trigger "Chirp" Warning feature that is tied into the Yellow Turbulence LED. When this yellow LED flashes on, it cause the siren to "Chirp." When setting sensitivity, this is an indicator that the ambient environmental noise is high, and may cause a false alarm. This allows the installer to instantly adjust the sensitivity. Once the alarm is armed, the "Chirp" serves as a warning to would-be thieves who are tampering with the car. The "Chirp" tells would-be thieves that this vehicle is protected with an Enforcer.

PASSIVE OR ACTIVE ARMING (SW1)

PASSIVE ARMING: When the alarm is disarmed, the alarm will rearm automatically 15 seconds after disarming or after the last door is closed.

ACTIVE ARMING: When the alarm is disarmed, the alarm will not rearm itself unless the remote transmitter is pressed to rearm.

Flip SW1 to ON to enable active arming.

CHIRP DISABLE (SW2)

Arming or disarming chirp confirmation can be turned off by flipping SW2 to OFF. However, SW2 in the OFF position will not disable the pre-intrusion chirp and full siren blast.

AUTOMATIC OR MANUAL (ACTIVE) DOORLOCK SELECTION (SW3)

Auto Lock: The doorlocks will lock each time the alarm rearms by itself automatically.

Active Lock: The doorlocks will not lock unless the remote transmitter is used. Flip SW3 to OFF to enable autolock. (Passive mode only.)

QUIET MODE

Quiet Mode allows using the transmitters to temporarily arm or disarm the alarm without chirps. Pressing Button II and then, within 10 seconds, pressing button 1, the alarm will either arm or disarm without chirping for that one time only. When you arrive home at night and try to arm your alarm without disturbing your neighbor, Quiet Mode lets you arm your car without the awakening siren chirps.

SPECIFICATIONS

POWER: 12 Volt Negative Ground

CURRENT DRAIN: 10mA when disarmed, 20mA when armed and LED flashing

EXIT DELAY: 15 seconds for passive arm, none for active arm.

ENTRY DELAY: None

ALARM DURATION: Four 30-second cycles

TRIGGERING INPUTS: 8 separate inputs

RF emergency/panic

Ignition sensing

N.O. positive for door

N.O. negative for door

N.O. negative for hood and trunk

N.O. negative for motion/shock sensors

N.O. negative for pre-intrusion alert

N.C. negative for radio protection

ALARM OUTPUTS:

Siren/pager: +12VDC, 2A output

Flashing lights: 30A, dual contact relay output

Arming LED: +5V, 0.1 A, O/C transistor positive output

2nd channel output: 0.5A, O/C transistor ground output

Starter disable output: 30A, dry relay output

Door lock/unlock control: 0.5A, O/C transistor ground output

Arming Indicator:

1 "chirp" and 1 "flash"

Disarming Indicator:

2 "chirps" and 2 "flashes"

2 "chirps" and 7 "flashes" if the alarm has been triggered

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TRANSMITTER/RECEIVER:

Modulation: AM

Antenna impedance: 50 ohm

RF carrier frequency: 315MHz (for E-300B), 433.92MHz (for E-300B-4)

Digital coding: Over 68 billion possible codes

Power source (transmitter): One 12VDC battery (model no. SK-915BA)

Power source (receiver): +12VDC

ACCESSORIES INCLUDED: (2) RF transmitters with batteries

(1) Multi-tone siren

(1) Electromagnetic shock sensor

(2) Heavy-duty pin switches

(1) Four-function LED

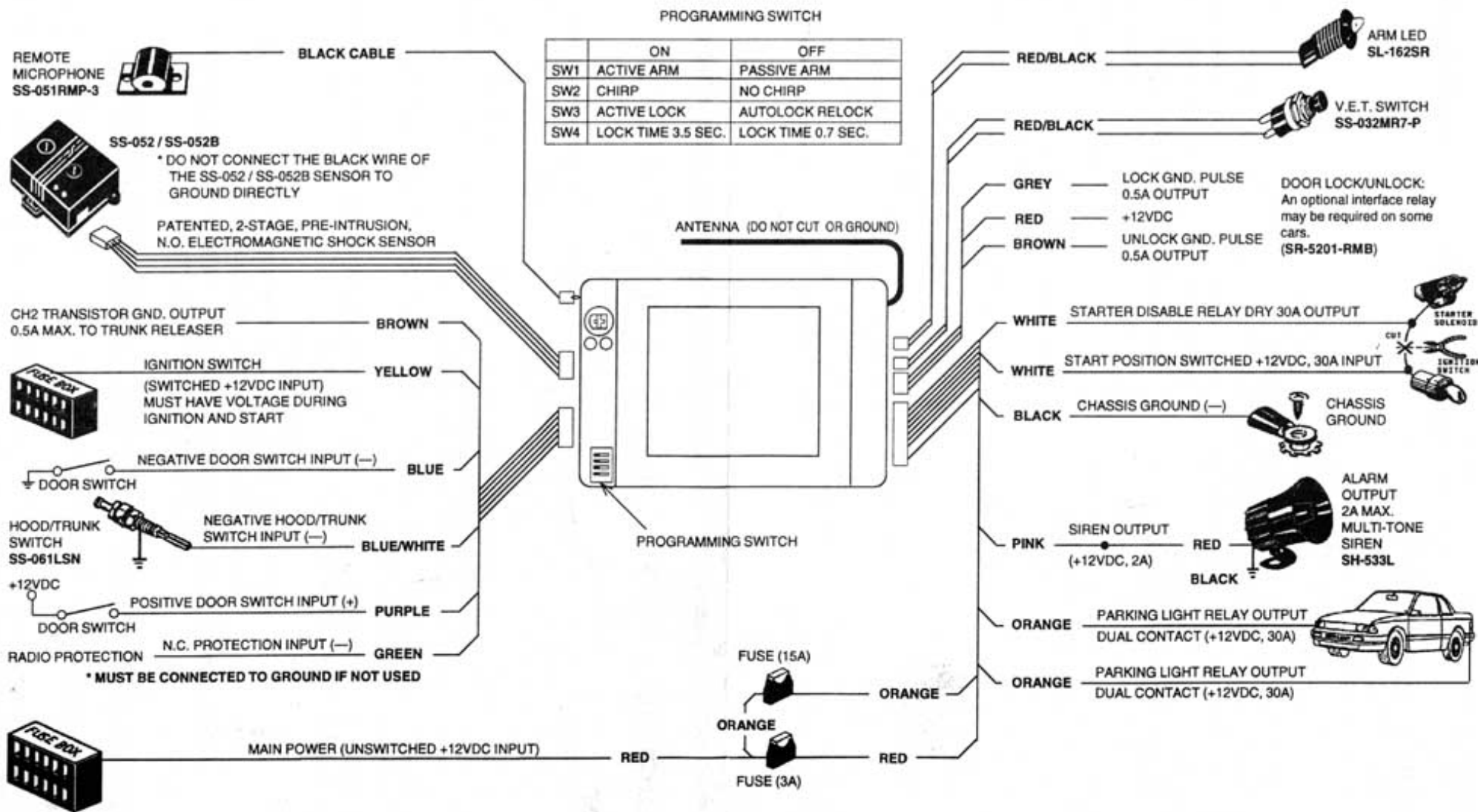
(1) Remote microphone

(1) V.E.T. switch

Mounting Hardware Owner's

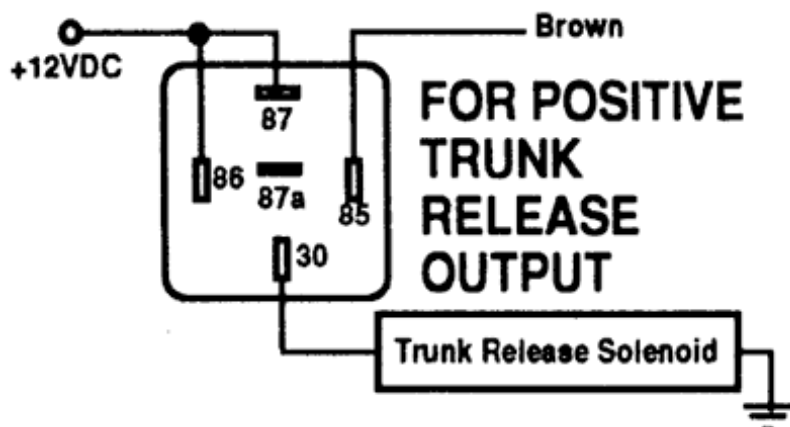
Manual Tech Manual

CONNECTION DIAGRAM



SECONDARY WIRE HARNESS - 6-PIN CONNECTOR

BROWN WIRE TO 2ND CHANNEL 0/P



This wire supplies a 500mA momentary ground output while the #2 button of the transmitter is pressed for 3 seconds. This output can be used to operate accessories such as automatic trunk release, etc. This output is operable when the ignition is off. This prevents accidental trunk release.

YELLOW WIRE TO IGN SWITCH

Connect to fuse or wire which outputs +12VDC only when the ignition key is in the ON and START position, but not the ACC and OFF position. Must be connected at all times in order to arm and disarm properly.

BLUE OR PURPLE WIRE TO DOOR SWITCHES

SWITCH SENSING (CAR DOOR SWITCHES)

If the vehicle has existing car door switches. Locate a car door switch wire which changes polarity when any door is opened. Connect to either the alarm's BLUE or PURPLE wire according to the following:

1. CONNECT TO THE BLUE WIRE if the wire switches to ground when a door is opened (this is the case with most cars, including GM and most imports).
2. CONNECT TO THE PURPLE WIRE if the wire switches to +12VDC when a door is opened (this is the case with American-made Fords and some imports).

If the vehicle is not equipped with car door switches. Install pin switches (model SS-061LSN) in each of the doors. Connect each of these switches to the alarm's BLUE wire.

NOTE 1: DELAYED DOME/COURTESY LIGHTS. Wait until the light is off before arming the alarm. If you press the transmitter button and the siren does not "chirp", it may be because the dome light is not yet fully off.

NOTE 2: DO NOT CONNECT BOTH THE PURPLE AND BLUE WIRES to the dome light circuit.

NOTE 3: EITHER THE BLUE OR THE PURPLE WIRE MUST BE CONNECTED IF PASSIVE ARMING IS USED.

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BLUE/WHITE WIRE TO PIN SWITCHES

Drill a 9/32" hole for each switch in the hood and trunk. Mount the switch to the car's metal chassis. The pin switches must open at least 1/4" when the hood or trunk is closed. IMPROPER INSTALLATION MAY RESULT IN FALSE ALARMS. Do not mount where exposed to dust or moisture.

GREEN WIRE TO N.C. RADIO PROTECTION

To protect a CB or stereo, connect directly to OB or stereo chassis. For special N.C. type detectors, connect the Green Wire to one terminal, and the other terminal to chassis ground. If more than one detector is to be used, wire them in series with only the last detector being wired to ground. IF THE GREEN WIRE IS NOT TO BE USED WITH A CB OR DETECTOR, IT MUST BE CONNECTED DIRECTLY TO CHASSIS GROUND. Any break in the Green Wire circuit will trigger the alarm.

LED - 2-PIN PLUG (RED)

The LED flashes when the ENFORCER is armed or in the valet mode and can be used to test your transmitter and the function of RF reception, great for installers & users.

It should be easily visible from any direction.

POWER DOOR LOCK - 3-PIN PLUG

The power door lock interface outputs may be connected to a car which has existing power door lock switching relays. The transistor ground output is high enough to energize most switching relays. When disarmed, UNLOCKS the doors with pulse output. When armed, LOCKS the doors with pulse output.

DO NOT CONNECT THESE POWER DOOR LOCK WIRES DIRECTLY TO THE DOOR LOCK ACTUATORS, AS THIS WILL DEFINITELY BURN OUT THE ALARM SYSTEM.

Installation will vary from car to car, depending on the car's power door lock wiring. In most cases, a separate door lock relay module (SECO-LARM model no. SR-5201-RMB) is required. Mercedes and Audi owners will need to set the lock time to 3.5 seconds (Sw4 should be on). For most cars, the lock time should be set to 0.7 second. Please refer to the module's manual for more information.

MAIN POWER LOST WARNING

When alarm is fully armed, if the red +12VDC wire is cut between alarm brain and fuse, or disconnected fuse, the siren will sound for 4 seconds to warn intruders that the alarm is still protecting the car. If any other zone is triggered, the alarm will function as normal, with a full siren response.

PATENTED, 2-STAGE, PRE-INTRUSION, SHOCK DETECTOR - 4-PIN PLUG

IMPORTANT: Make sure that the location. Is not near a source that will produce a strong magnetic field. Secure the shock sensor and allow space for further adjustments. It must be securely tightened to hard surfaces in order to achieve best sensitivity possible. Mounting the sensor very tightly onto the steering column by using cable-ties is recommended.

Setting the pre-trigger (pre-alert) stage - Turn the red pot (secondary adjuster for the trigger output) to min. before adjusting the black pot. Now, lightly tap the vehicle. If the pre-alert output is set correctly, the yellow LED flashes on (the siren chirps) and the red LED should not. If the red LED comes on (alarm goes off) with too light a tap, turn the black pot counterclockwise to reduce its sensitivity. If the yellow LED does not come on, turn it clockwise. *Note:* Adjusting the black pot (primary adjuster) will either increase or decrease the sensitivities of both pre-trigger and trigger outputs simultaneously.

Setting the trigger (2nd) stage - Hit the vehicle with the force necessary to trigger the alarm. If the sensitivity is correct, both the yellow and red LEDs should come on. If not, adjust the red pot to either increase or decrease sensitivity. If adjusting the red pot does not seem to reach the desired sensitivity of the 2nd stage trigger, then readjust the black pot before readjusting the red pot again.

WARNING: Setting the sensitivity too high may cause unnecessary chirps and/or false alarm.

Optional N.O. negative-triggering motion, and microwave sensors can be connected directly to the shock detector's blue wire. If the sensor has pre-intrusion output, such output can be connected to the yellow/green wire. SECO-LARM's SS-057 motion sensor, and, Space Enforcer SS-059 patented, 2-stage, pre-intrusion, microwave sensor are recommended.

PATENTED, 2-STAGE, PRE-INTRUSION, GLASS BREAK SENSOR (BUILT-IN)

The glass break sensor comes with a remote microphone for detecting the sound of breaking glass. Please see "ADJUSTMENTS FOR GLASS BREAK DETECTOR."

V.E.T. SWITCH - 2-PIN PLUG (WHITE)

Mount the switch where it cannot be easily detected. This switch contains three useful functions, and must be included with each and every vehicle alarm installation in the event that the transmitter is lost, stolen or malfunctioning. See Owner's Manual.

MAIN WIRE HARNESS - 8-PIN CONNECTOR

DUAL POWER PROTECTION (D.P.P.)

U.S.A. patent pending, all world wide patents applied for. If main power to alarm is cut, alarm will still protect the vehicle by utilizing power from the flashing light's input as back-up power.

IMPORTANT: SEE ORANGE WIRE.

BLACK WIRE

Choose a good chassis ground location. This is the most important point of a successful installation. If the ground is not connected properly, the siren will continuously emit a low siren sound whenever the alarm is armed. Scrape paint from the metal surface, and use a grounding lug and star washer for best results.

PINK WIRE TO SIREN'S RED WIRE

Mount siren under the hood as close to the grille as possible. Do not touch hot areas of the engine. Mount pointing down so it does not collect water, and facing away from the alarm, to prevent interference with the transmitter.

ORANGE WIRES TO FLASHING LIGHTS

For cars with one main parking lights circuit, connect one or both orange wire(s) to a wire which has +12VDC when the parking lights are turned on. This may be a wire coming from the car's light switch or a wire under the hood going to the parking lights. If the car has separate Left and Right parking lights circuits, connect both orange wires respectively to the left and right circuits. (Most European cars have separate left and right light circuits.)

NOTE: For safety, do not connect the orange wire to flash the car's headlights. The current required to turn on the headlights may cause a fire should a connection ever become loose. This warning applies to any brand alarm in any car, even if an optional heavy duty relay is used.

RED WIRE

Connect to constant (unswitched) source of +12VDC via the included 3-Amp fuse. Connect directly to battery (+) terminal or to constant +12VDC fuse.

DO NOT CONNECT THE RED WIRE UNTIL ALL OTHER CONNECTIONS ARE MADE!

WHITE WIRES TO STARTER DISABLE

The alarm module has a built-in N.C. starter disable relay for ease of installation.

1. Locate the starter solenoid wire (commonly located in the ignition wire harness along the steering column). This wire must be hot only when the ignition switch is in the start position. Test with a test meter (VOM).
2. Cut the starter solenoid wire. Now the engine should not start. Connect each end of this solenoid wire to each of the white wires. Refer to wiring diagram.

WARNING: DO NOT CONNECT TO AN IGNITION KILL. ONLY CONNECT TO A STARTER DISABLE. AN IGNITION KILL MAY VOID THE VEHICLE'S FACTORY WARRANTY, DAMAGE THE ALARM, AND/OR CAUSE A SERIOUS AUTOMOBILE ACCIDENT.