AUTOSTART
AS-1200/1202/1203/1204 SH
Automatic transmission remote engine starter systems.

INSTALLATION GUIDE
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NOTICE:

DUE TO THE POTENTIAL FOR DAMAGE TO THE VEHICLE, THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY ELECTRICAL OR MRCHANICAL DAMAGE TO THE VEHICLE OR TO THE UNIT THAT HAS CAUSED VEHICLE DAMAGE DUE TO IMPROPER INSTALLATION OF THE PRODUCT.

THIS UNIT MUST BE INSTALLED BY AN AUTHORIZED AUTOSTART TRAINED TECHNICIAN USING ALL SAFETY DEVICES SUPPLIED.

Please review the installation guide carefully before any work begins.

WARNING

THIS UNIT IS FOR AUTOMATIC TRANSMISSION ONLY, BEFORE INSTALLING THE UNIT TEST THAT THE VEHICLE WILL NOT START IF THE GEAR SELECT LEVER IS IN A DRIVE POSITION. IF IT STARTS IN GEAR, INSTALL A MANUAL TRANSMISSION CAR STARTER. (AS-1260M)

Rev:1.04 - 8/16/99 Manufactured in Canada by AUTOSTART

WHAT'S INCLUDED

Please review the installation guide before beginning the installation, particularly the wiring diagram and the list of programming options.
Prior to installation please be sure that all hardware components required to install the system are in the box.
The following is a list of components included in the Kit:

- 1 - Control unit
- 1 – Transmitter (As per model)
- 1 - 5 Pin 14 AWG harness (Ignition harness)
- 1 - 7 Pin 18 AWG harness (Main harness)
- 1 - 4 Pin / 2 Wire 18 AWG harness (Accessories)
- 1 Antenna
- 1 Parts Bag (hood switch, valet switch, connector, wires)
- User guide, tech bulletins.

NOTICE:

THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

INSTALLATION POINTS TO REMEMBER

- When working on a vehicle always leave a window open.
- Remove courtesy light fuse if possible to prevent battery drain.
- Never Install control unit where it could interfere with normal operation or obstruct service technicians.
- Do not disconnect the battery on vehicles equipped with air bags and anti-theft radios.
- Always use a grommet when running wires into the engine compartment. Never run wires through bare or sharp metal.
- Always solder and tape all connections.
- Never ground control unit to vehicle steering column.
- Make sure that vehicles equipped with automatic transmission do not start while in any of the drive gears. ***(If it will start in gear please install a manual transmission starter)***

FEATURES

- Dual 12 volt power lines.
- 12 volt parking light output.
- Multi channel transmitter. (AS-1203/04 Only)
- Multi car operation. (AS-1203/04 Only)
- Factory alarm control.
- Electronic Valet Mode (AS-1202 Only)
- Gasoline or Diesel engine ready.
- Negative door lock output.
- Cold weather timer.
- Negative trunk output.
- Up to 1500 feet range.(SH models only)
- Ground output (pulsed or constant)
- Starter kill out (Ground when armed)
- External trigger control (From external receiver. e*.g.: alarm*)

OPTIONS

- Remote keyless entry
- Remote Trunk release
- Engine kill
- Flashing LED
- Pager Ready
- 2 YEAR LIMITED WARRANTY

PROGRAMMABLE OPTIONS

- Door lock pulse duration (1 sec, 4 sec, or two ¼ sec unlock pulses).
- Ignition controlled door locks.
- Constant or pulsed Groundout when running.
- Run time (5,15, or 25 minutes)
- Maximum crank duration (6,8, or 12 seconds).
- Childproof operation.
- Gasoline or Diesel engine operation.

VALET MODE (AS-1202 ONLY)

The AS-1202 system ONLY is equipped with an electronic valet mode. The Electronic Valet Switch works only with the ignition key turned to the RUN position, so the vehicles key must be present to place the system IN or OUT of Valet mode.

In order to place the unit <u>INTO</u> valet mode you must do the following:

1- Turn ignition key to the "ON" position (Wait 3 sec)
2- With key ON, turn Valet switch to the "ON" position. (Wait 3 sec)
3- Now L.E.D should be on solid
4- Turn ignition key OFF (system should now be in valet)If L.E.D is not on constant than repeat steps 1 to 4.

To get the system OUT of VALET mode you must do the following:

1- Turn ignition key to the "ON" position (Wait 3 sec)
2- With key ON, turn Valet switch from the ON position to the "OFF" position. (Wait 3 sec)
3- Now L.E.D should be off.
4- Turn ignition key OFF (system should now be in valet)If L.E.D is not off than repeat steps 1 to 4.

TRANSMITTER CODE LEARNING

All Autostart transmitters do not come pre-programmed. They must be "CODE LEARNED" at the time of installation. The unit will hold up to 4 transmitter codes in memory.
To program a new transmitter:

1. Raise the hood
2. Turn valet switch "off".
3. Turn ignition "on".
4. Turn valet switch "ON". Parking lights SHOULD turn on for 5 seconds.
5. Press channel 1 on transmitter within 5 seconds of step 4. (lights will flash 5 times fast, and 2 times slow)
6. Turn ignition off and close the hood.

MULTI CAR OPERATION *(Only available on 1203 & 1204)*

***To program transmitter to second vehicle for multi-car operation, you must press on the transmitters channel 3(trunk) in step 5 of transmitter code learning. (See above for Transmitter code learning)**

The AS-1203/04 systems feature multi-car operation.
This allows the owner of two Autostart systems in two of his/her vehicles to control both systems with one transmitter. (Both vehicles must be equipped with an AS-1203/04.
The remote transmitter of the primary vehicle can control the starter disable system, the door locks and the remote car starter operation of the second vehicle.
The remote transmitter of the second vehicle can also operate the primary vehicle

TACH ADJUSTMENTS

Autostart systems have two methods of fine tuning the tach signal that is generated from the vehicle, the first method is manual tach search and setting, and the second is automatic tach search and setting. Either method can be used, however an automatic search is recommended. **Tach adjustment procedures should be done every time a new unit is installed.** This is because the tach signal from some ignition systems can sometimes be too high or too low, thus causing failed starts under different temperatures.

The procedures for tach adjustment are as follows:

1. Hold hood switch down for 6 seconds
2. Release pinswitch (parking lights should come on)
3. With parking lights on, immediately push and release pinswitch again.
4. Parking lights will stay on for up to 20 seconds (if not repeat from step 1)
5. With lights on press Channel 3 (Trunk) of remote transmitter at the same time. (lights will flash 1 to 7 times)
6. Start the vehicle using the key.
7. If lights stay on, then you have selected an incorrect tach wire. *(relocate tach wire and start from step 1)* If lights go off then proceed to the next step.
8. Allow vehicle to reach regular engine idle speed, then press and release brakes. (parking lights will flash appropriate setting, from 1 to 7 flashes)
9. Press Channel 3 (Trunk) of remote transmitter, to save setting. (Parking lights will flash one long flash)

NOTE: A manual adjustment should only be done if the auto setting is not completing the crank cycle properly in cold weather.

MANUAL TACH SEARCH AND SETTING

1. Hold hood switch down for 6 seconds
2. Release pinswitch (parking lights should come on)
3. With parking lights on, immediately push and release pinswitch again.
4. Parking lights will stay on for 20 sec. (if not repeat from step 1)
5. Press Channel 3 (Trunk) of remote transmitter at the same time (lights will flash 1 to 7 times)
6. Now you can increase or decrease the tach setting, depending on your needs.
7. Button 1 will decrease the setting, and button 2 will increase the setting.
8. After proper setting has been reached, push Channel 3 (Trunk) to save setting. (parking lights should flash once long)

CUSTOM PROGRAMMING OPTIONS

Autostart systems are equipped with 2 custom programming menus that allow the user to custom fit the system according to the installation requirements.
These options are designed to help make interfacing with all vehicles possible.
To get into custom programming mode you must do the following:

1. Hold pinswitch down for 6 sec.
2. Release pinswitch (parking lights will come on)
3. Immediately push and release pinswitch once again. (parking lights will stay on for 20 sec.)
4. Press and hold brakes, and press 1 or 2 on remote transmitter. (***Button 1 for mode one, and Button 2 for mode two)*** (lights will flash once for mode 1 and twice for mode 2)

After you have entered into one of the two programming menus you can release the brake pedal. The unit will stay in programming mode until the hood pinswitch is pressed or the valet switch has been turned off. (*so take your time to make the proper selection)*
The menu will automatically start you at function one, once you choose from one of the three Options, you will automatically jump to the next function.
To select one of the three options press the appropriate transmitter button. (see below)

1. Button 1 = Option 1
2. Button 2 = Option 2
3. Button 1 & 2 = Option 3

Once an option has been selected the parking lights will flash 1,2 or 3 times. (*Depending on option selected)*

MODE 1

*INDICATES DEFAULT SETTING

FUNCTION 1

OPTION 1*	Ignition Lock ON
OPTION 2	Ignition Lock OFF
OPTION 3	Ignition Lock ON and locks in TOGGLE MODE*

***DOOR LOCK TOGGLE MODE**

Autostart has a built-in starter kill feature and even if the starter kill is not installed, the logic for it still dominates the operation of the system. What this means is that the starter kill will arm automatically 45 seconds after the vehicle's ignition is turned "OFF". The vehicle's starter wire is then interrupted until the starter kill is disarmed by pressing button 1 (unlock) on the remote. If the doors were not locked within the initial 45 seconds of the ignition being turned "OFF" the first press of button 1 will disarm the starter kill, unlocking the already unlocked doors before they can be locked again, arming the starter kill. Enabling Toggle Mode will circumvent this logic and allow the doors to lock on the first press of the button regardless of how much time has elapsed since the ignition was turned "OFF". This means that when the door lock will always perform the opposite of the last remote door lock action.

FUNCTION 2

OPTION 1*	Constant "GROUNDOUT"
OPTION 2	Pulsed "GROUNDOUT"(1 sec)
OPTION 3	Constant "GROUNDOUT" with disarm pulse on defrost line (pin # 15)

FUNCTION 3

OPTION 1*	.75 second door lock / unlock pulses.
OPTION 2	4 second door lock / unlock pulses.
OPTION 3	One 1 second lock pulse and two ¼ second unlock pulses.

FUNCTION 4

OPTION 1*	Trunk release on channel 3 (will not receive signal while ignition is "ON")
OPTION 2	Garage door transmitter control (will receive signal with Ignition "ON")
OPTION 3	Channel 3 used for activation / deactivation of cold weather mode.

FUNCTION 5

OPTION 1*	External trigger disabled
OPTION 2	External trigger enabled
OPTION 3	Child proof Operation (Transmitter button must be pressed for 4 seconds)

MODE 2

* INDICATES DEFAULT SETTING

FUNCTION 1

OPTION 1	5 minute run time
OPTION 2*	15 minute run time
OPTION 3	25 minute run time

FUNCTION 2

OPTION 1	2 start attempts
OPTION 2*	3 start attempts
OPTION 3	4 start attempts

FUNCTION 3

OPTION 1	6-second crank time
OPTION 2*	8 second crank time
OPTION 3	12-second crank time

FUNCTION 4

OPTION 1	gasoline engines & enable idle mode
OPTION 2*	gasoline engines
OPTION 3	diesel engines & enable idle mode.

VACUUM MODE

The systems can operate in vacuum mode as Well as tach mode. Although Vacuum mode requires an optional *normally closed vacuum switch.*
In order for the system to work in vacuum mode you must first set the tach signal to a setting of 8 flashes. (see manual tach adjustment)
The vacuum switch has two contacts, one contact must connect to the tach input of the module, **and the other contact must be connected to +12v.**

TACH WATCH LOCKOUT

Tach Watch lockout is a safety feature built into the remote starter to protect the vehicle's starter motor. If, during remote start, the vehicle's engine ever cranks the entire programmed crank time without detecting any tach pulses during the first crank cycle, the unit will go into tach watch lockout. The diagnostics for this is 3 quick parking light flashes when trying to remote start the vehicle. If your module is in Tach Watch Lockout it is indicating that a problem exists with the tach signal it is receiving. Verify that the tach wire from the remote starter is properly connected to a good tach signal in the vehicle.
To remove the unit from Tach Watch Lockout you must do the following:

1. Close the hood
2. Disable starter kill (if installed)
3. Start the engine using the key.
4. Let it run for at least 25 seconds, then shut it off.
5. The module should now be out of Tach Watch Lockout.

If module is still in Tach Watch Lockout move tach wire to a better tach source and perform an Automatic Tach Setting. Then repeat steps 1 to 5.

IDLE MODE

When programmed this option allows the user to engage the remote starter to take over the vehicle while it is already running. This option will keep the vehicle running for the programmed run time or until shut down by remote control.
To activate Idle Mode you must do the following:

1. Select Mode 2, Function 4, Option 1 for gasoline engines.
2. With vehicle running press either button on the transmitter until the parking lights come on.
3. Remove the key and exit the vehicle.
4. Vehicle will stay running for the entire programmed run time.

DIESEL ENGINES

All systems are equipped with a dedicated "GLOW PLUG" input (pin #4).
This input must be wired to the "Wait to Start" light in the vehicle and must receive 12 volts for as long as the light is on. When this input is used a protection diode must be installed on the brake input.
Note: On some diesel vehicles the wait to start light is a negative when ON, for this type of system a relay must be used to convert the signal to a positive.

RESETING THE MODULE

The systems are equipped with a reset function that allows the installer to erase all transmitter codes and return all programmed options to factory default.
To reset the module:

1. Turn the valet switch "off".
2. Temporarily ground to pin # 12 (External Trigger).
3. Turn the Ignition "ON".
4. Raise hood.
5. Press and hold brake pedal.
6. Turn valet switch "on"
7. Lights should flash 8 times quickly.
8. Press transmitter button within 5 seconds of parking light flashes to program transmitter.

*** See Custom Programming options for default settings.**

HARNESS DESCRIPTION

7-PIN HARNESS

PIN #	COLOR	POLARITY	DESCRIPTION (connect to...)
1	BLACK	Chassis Ground	Ground to vehicles chassis.
2	VIOLET	Tach Input (Coil -)	Connect to vehicle's tach wire (coil -)
3	GRAY	Hood Switch	Hood switch - grounded when hood open
4	EMPTY	Glow plug input(+)	Connect to wait to start light on diesel vehicles.
5	ORANGE	Brake switch	To brake switch wire with +12 volt when brake pressed
6	RED	Valet switch	Depends on model. (See wiring Schematic.)
7	YELLOW	Parking light output	Connect to the vehicles parking light wire that is +12 volts when the parking light switch is ON.

4 PIN HARNESS

PIN #	COLOR	POLARITY	DESCRIPTION (Connect to...)
8	BROWN	Lock (-)	Gives a negative pulse when locking by remote. For pulse duration see MODE 1 FUNCTION 3
9	GREEN	Unlock (-)	Gives a negative pulse when unlocking. For pulse duration see MODE 1 FUNCTION 3
10	Empty	Channel 3 (Trunk-Out)	Auxiliary channel negative output (gives a 1 second pulse when buttons # 1 and 2 are pressed simultaneously)
11	WHITE/YELLOW	Starter kill out (-)	Armed output for starter kill option - see installation diagram

4 PIN HARNESS (wires must be inserted as necessary)

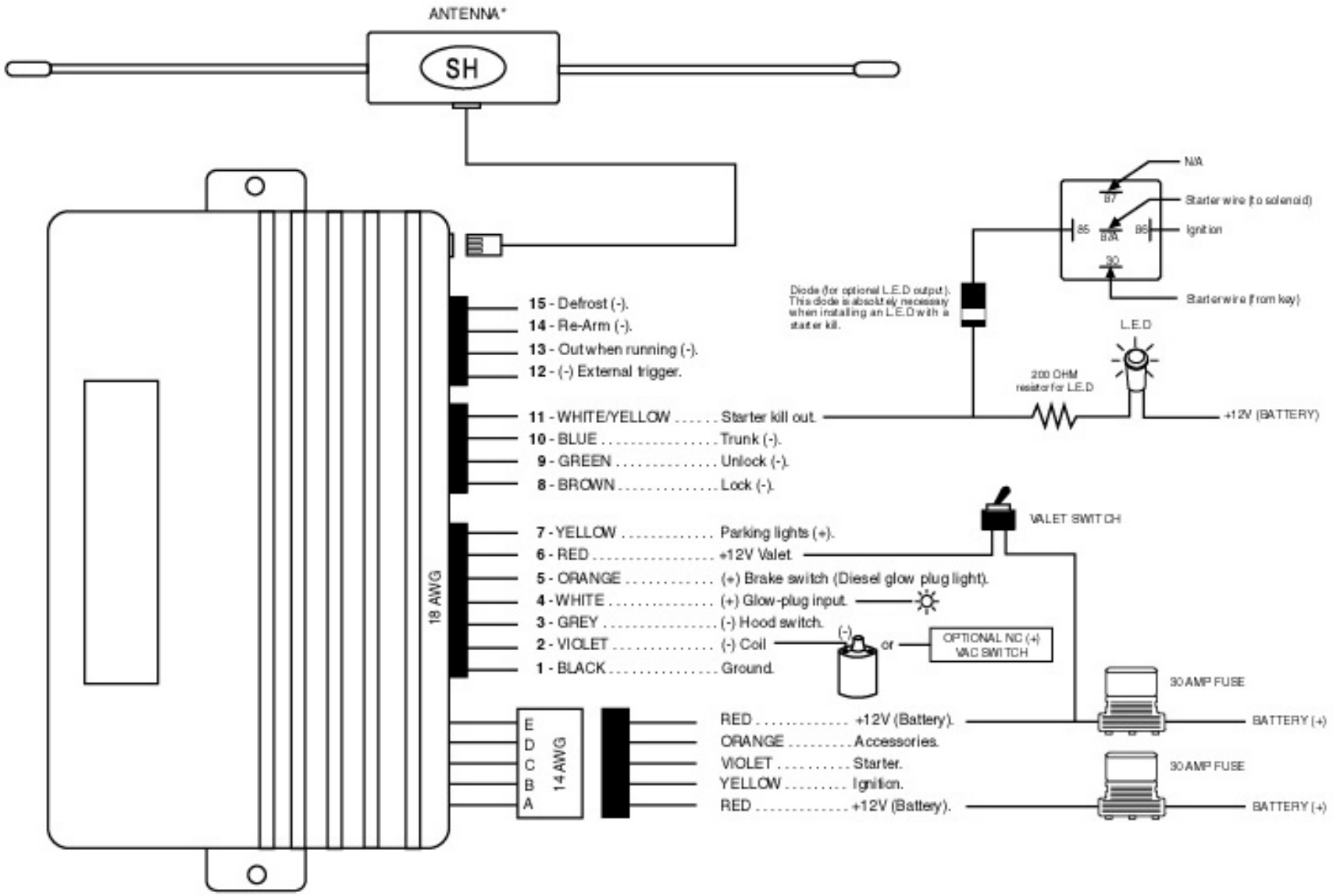
12	OPEN	External Trigger Control	Used to trigger remote starter from an external receiver's output (option must be programmed)
13	OPEN	Ground-out	Negative output when running "GROUNDOUT"
14	OPEN	Rearm (-)	Gives a 1 second pulse 4 seconds after remote starter shut down
15	OPEN	Disarm (-)	Provides a negative pulse 4 seconds after starting by remote and can be programmed to give a pulse upon activation of remote starter (disarm).

5 PIN HARNESS

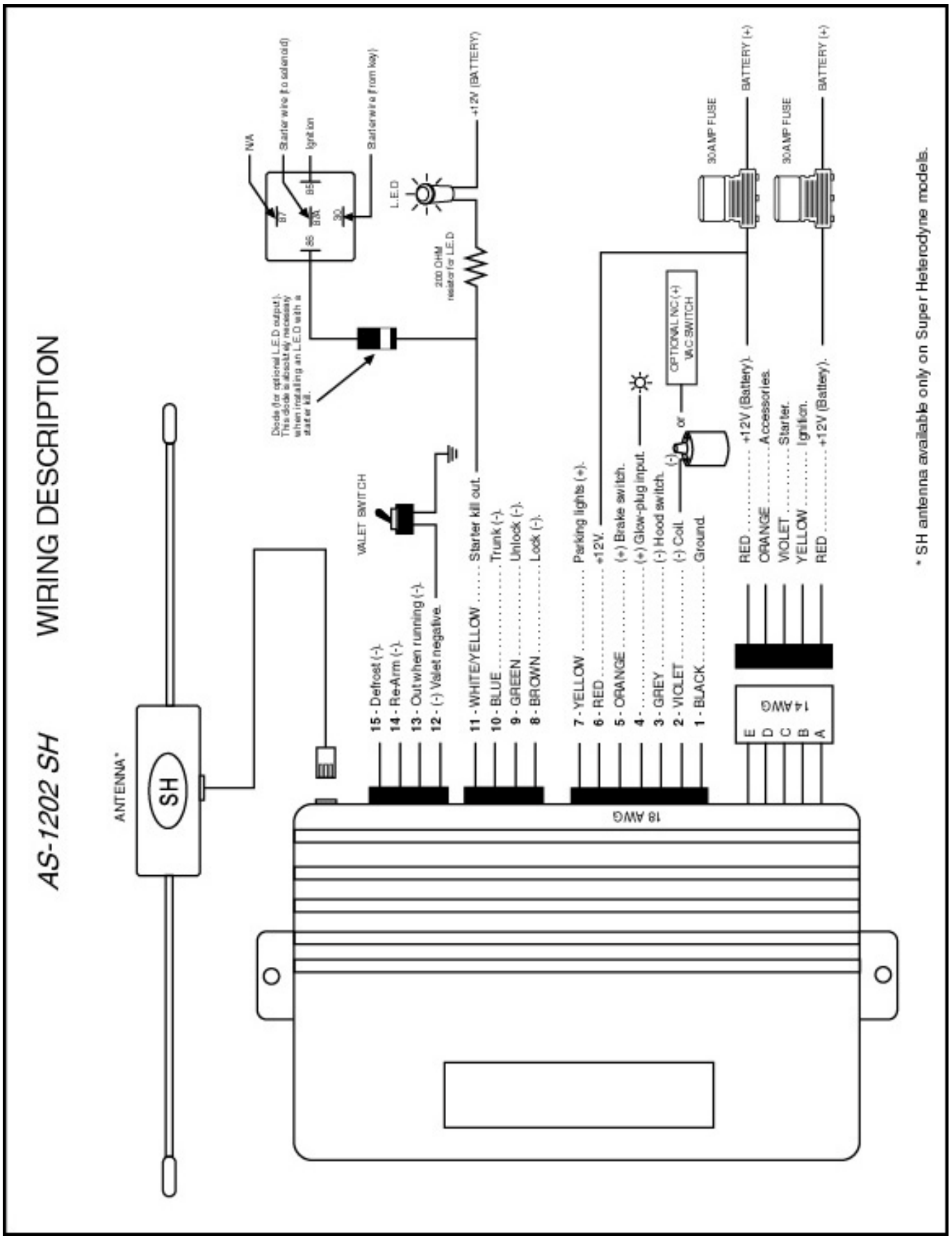
PIN #	COLOR	POLARITY	DESCRIPTION (Connect to...)
A	RED	+12V Battery	Constant 12 volts *
B	YELLOW	Ignition	Ignition - 12 volts during "RUN" and "START"
C	VIOLET	Crank	Starter - 12 volts during “START” only
D	ORANGE	Accessories	Accessories - 12 volts during "ACC" only
E	RED	+12V Battery	Constant 12 volts *

- NOTE: **Constant 12 volts wires must be connected to heaviest gauge 12 volt wires at ignition switch. When there are two constant 12 volt wires at ignition switch wires A and E must be separated (each to their own 12 volts source). When there is only one 12 volt source at ignition switch then and only then can they be connected together.**

AS-1200 /1203 /1204 SH WIRING DESCRIPTION



* SH antenna available only on Super Heterodyne models.


AS-1202 SH
WIRING DESCRIPTION
ANTENNA*
SH
VALET SWITCH
Diode (for optional L.E.D output). This diode is absolutely necessary when installing an L.E.D with a starter kill.
N/A
Starter wire (to solenoid)
Ignition
Starter wire (from key)
87
85
87A
30
86
L.E.D
200 OHM resistor for L.E.D
+12V (BATTERY)
15 - Defrost (-).
14 - Re-Arm (-).
13 - Out when running (-).
12 - (-) Valet negative.
11 - WHITE/YELLOW ..... Starter kill out.
10 - BLUE ..... Trunk (-).
9 - GREEN ..... Unlock (-).
8 - BROWN ..... Lock (-).
7 - YELLOW ..... Parking lights (+).
6 - RED ..... +12V.
5 - ORANGE ..... (+) Brake switch.
4 - ..... (+) Glow-plug input.
3 - GREY ..... (-) Hood switch.
2 - VIOLET ..... (-) Coil
1 - BLACK ..... Ground.
18 AWG
14 AWG
E
D
C
B
A
OPTIONAL NC (+) VAC SWITCH
or
(-)
30AMP FUSE
BATTERY (+)
RED ..... +12V (Battery).
ORANGE ..... Accessories.
VIOLET ..... Starter.
YELLOW ..... Ignition.
RED ..... +12V (Battery).
* SH antenna available only on Super Heterodyne models.