

microscansecurity

Accessories & Upgrades

- AN0010 Additional interior siren.
- AN0012 Central Door Locking interface. Suitable for single point CDL and positively switched CDL systems. 2 wire motor for single point locking (CDL will not operate from the passenger door). AN0012 is also required to operate this motor
- SCL2202
- AN0021 Ultrasonic detector (for AN311, AN312). Protects the interior of the vehicle.
- AN0027 Total close timer. For vehicles fitted with total close on the door lock circuit. This unit will close the electric windows and sunroof if the vehicle is equipped with a total close circuit.
- AN0031 Electric window interface. This unit will close two windows when the alarm is ARMED.
- SWK9000 Electric window kit. These will convert any pair of manually operated windows to electric.
- MP2000 Single zone pager. 400m range alerts when the siren is sounding.
- MP5000 Triple zone pager. 1 km range. Alerts you when the alarm is sounding.
- PP901 Digitalk system. Incorporating a Dual Zone Microwave to protect the interior and exterior of the vehicle an has a voice warn away message.
- AN0055 Spare self coding remote control

All these accessories and upgrades are available from your local MicroSCAN dealer.

TECHNICAL HELPLINE
 IF YOU ENCOUNTER ANY
 DIFFICULTIES INSTALLING THIS
 ALARM, PLEASE TELEPHONE OUR
 TECHNICAL HELPLINE

ON
0870 787 0700
 MONDAY TO FRIDAY
 10am to 4.30pm



PERFORMANCE PRODUCTS, CLEAVER HOUSE, CHESTER, CH3 5AG
 TEL:0870 787 0700 FAX: 01244 343 370

AN311/312/313/314 -01/02

microscansecurity

AN311, AN312, AN313 & AN314

Fitting Instructions & User Guide

Thank you for purchasing the MicroSCAN 300 Series Alarm. MicroSCAN Compact Alarm Systems offer the BEST in vehicle security in one easy to fit package, with the peace of mind of full technical support via our Technical Helpline (01244 321700)

Please read the installation and operating instructions carefully *BEFORE* starting the installation of this security product.

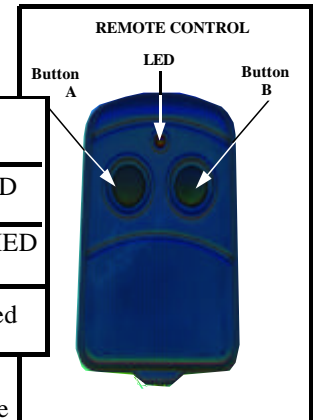
OPERATING INSTRUCTIONS.

To **ARM** the system press button **A** on the remote control for 1 second, the siren will respond with a “*System Armed*” message and the indicators will flash once to confirm the alarm is **ARMED**. The doors will now lock (if central locking fitted - see page 3) and after 25 seconds, the status LED on the dashboard will begin to flash.

To **DISARM** the system press button **A** on the remote control, the siren will respond with a “*System Disarmed*” message and the indicators will flash three times to confirm **DISARMING**. The status LED will stop flashing and the doors will unlock.

NOTE: If when the system is **DISARMED** the siren chirps four times the system has been triggered in your absence.

LED Flash	Status
Slow Flash	System ARMED
Off	System DISARMED
On Off On Off	Alarm Triggered



ALARM FEATURES

SHOCK SENSOR

The system has an integral two stage shock sensor, located on the rear of the siren. If the vehicle suffers a light impact the siren will sound a warn away message - “*Protected by a security system, stand back*” if a more serious impact is detected the siren will sound for 30 seconds before re-setting itself.

ALARM CYCLE

If the alarm is triggered the siren will sound for 30 seconds unless it is halted by **DISARMING** the system. After the alarm has sounded for 30 seconds it will reset itself.

ULTRASONIC SENSOR (AN313 only)

The ultrasonic sensor will detect air movement inside the vehicle, so it is important that **all** the windows and air vents are closed to prevent false alarms.

DUAL ZONE MICROWAVE (AN314 only)

The dual zone microwave emits two bubbles of radar which protect the interior and exterior of the vehicle. Violation of the exterior zone will sound either the warn away message or the Piezo beeper and violation of the interior zone will activate the full alarm.

ALARM FEATURES (continued)

ALARM TRIGGER DELAYS

Current sensing - The alarm will not trigger on the current sense circuit until the alarm has been ARMED for **3 minutes**.

Shock sensor - The alarm will not trigger on the shock sensor until it has been ARMED for **15 Seconds**.

The alarm LED will start to flash once the 30 second 'set up time' has elapsed.

Interior sensor - The Ultrasonic sensors (**AN313** only) will not trigger the alarm until it has been ARMED for **30 seconds**.

Dual Zone Microwave (**AN314** only) will not trigger the alarm until it has been ARMED for **30 seconds**.

Bonnet switch - The bonnet switch will not trigger the alarm until the alarm has been ARMED for **15 seconds**.

SHOCK SENSOR & INTERIOR SENSOR (if fitted) DELETE

If you need to isolate shock sensor and the interior sensor, this can be done via the remote control. **ARM** the system with button **A** then after the indicators have flashed once press button **A** again. The siren will chirp once and the indicators will flash once to confirm that the sensor has been isolated. To reinstate the sensor, DISARM then RE-ARM the alarm.

CURRENT SENSE ISOLATION

Press buttons **A** and **B** simultaneously for 5 seconds to **disable** the current sense, the siren will chirp twice to confirm. This function is used if the vehicle has an electric cooling fan that "runs on" longer than 2 minutes after the ignition is turned off or if other circuits "draw" current when the vehicle is not being used i.e. Engine management systems, analogue clocks etc.

PANIC MODE

The alarm siren can be sounded, to warn away potential intruders, via the remote control. Press and hold down button **A** for the 3 seconds. The siren will sound for 30 seconds or until the button is re-pressed.

SILENT ARM AND DISARM

To Arm or Disarm the system without the "System Armed / System Disarmed" message, press button **B** before pressing the Arm button (**A**). This will **temporarily** delete the Arm/Disarm message. To permanently delete the message, cut the loop on the siren. See page 6.

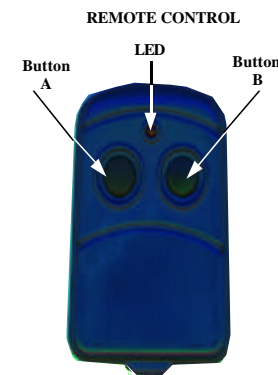
PROGRAMMING ADDITIONAL REMOTE CONTROLS

It is essential that ALL the remote controls that are required to operate the alarm are available at the time of programming. Any 'missing' remote will be 'programmed out' and they will not operate the alarm.

The system can be operated with up to three remote controls (additional remote controls **PART NUMBER** AN0055 can be purchased from your supplying MicroSCAN dealer).

To program additional remote controls follow the procedure below.

- 1) DISARM the system.
- 2) Disconnect the power to the system 3 times, by turning the key switch on the rear of the siren *Off* and *On* 3 times finishing in the *On* position - the switch must be in the *Off* position for 2 seconds intervals at a time, on the final turn of the key switch the siren will chirp and the status LED will be permanently illuminated **not** flashing.
- 3) Press button **A** on the first remote control, the siren will chirp once.
- 4) Within 5 seconds press button **B** on the second remote control, the siren will chirp twice.
- 5) If there is a third remote control to be programmed press button **A** and **B** simultaneously, the siren will chirp 3 times.
- 6) The alarm will exit the programming mode 10 seconds after the last remote is programmed, and the LED will go out.
- 7) All programmed remotes will now operate the alarm.



FAULT FINDING AND DIAGNOSTICS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Poor range from the remotes.	Battery discharged in the remotes The alarm aerial is 'masked'	Replace the remote batteries Move the aerial away from metal objects
The alarm sounds after 15 seconds	The interior sensor or the shock sensor may be too sensitive	Reduce Shock Sensor Sensitivity If ultrasonic are fitted check all the windows and air vents are closed. Check bonnet/boot pin connection
The current sense does not work.	The alarm may not have been armed long enough. The interior light may not be working. The Red wire from the alarm is not connected at the correct place. Has the current sense been overridden	Leave the alarm Armed for 3 minutes before opening the door. Check to see if the interior light is working, if not repair it. Relocate the connection of the Red wire to the fuse that protects the interior light. Press both buttons on the remote to 'turn on' the current sense (the siren will chirp Once to confirm).
The shock sensor does not sound the alarm	The adjuster is 'turned right down'.	Re adjust the shock sensor
The Piezo beeper sound when the alarm is off AN314 only	The microwave is constantly earthed.	The diode has not been fitted between the Yellow wire of Immobiliser and the Yellow wire of the alarm
Only one or none of the remote controls operate the Alarm	The remote is not programmed into the Alarm The battery in remote control is discharged	Program the remote control (see page 11 for details) Replace the battery on the Remote control

FITTING INSTRUCTIONS

Siren and main loom

The siren should be mounted in the engine compartment, away from direct heat and water spray. The best position would be either on the bulkhead or on the inner wing. Using the bracket as a template, drill two 3 mm holes and secure the bracket using the screws provided. Secure the siren to the bracket, but do not fully tighten the bolts yet.

Wrap the loom with insulation tape, so it blends in with the original vehicle loom. Route the cable into the interior of the vehicle ensuring the loom is secured so it can not foul any moving components and the loom should be secured to the existing vehicle loom whenever possible. When the loom is passing through the bulkhead a grommet should always be used.

Ultrasonic detector (AN313 only)

The ultrasonic transmitter and receiver should be fitted as high as possible on the 'A' pillar and angled towards the centre of the rear screen.

Route the cables from the sensors to the control unit, **never cut or extend the two sensor wires.**

The sensor plugs are colour coded and they should be plugged into the corresponding socket. The control unit should be concealed behind the dashboard.

The three wire loom should be connected as stated on page 8.

Dual Zone Microwave (AN314 only)

The **Dual Zone Microwave** emits two symmetrical 'bubbles' of radar which will protect the interior and exterior of the vehicle, because the 'bubbles' are symmetrical the positioning of the sensor is critical. It needs to be fitted in the centre of the vehicle preferably below the centre console, the radar will pass through glass, wood and plastic but not metal. The LED on the DZM must face the area to be protected. The DZM has a four wire loom details of the connections can be found on page 8. The beeper is activated by the exterior zone of the Dual Zone Microwave. The beeper must be fitted in a place where it can be heard from the outside of the vehicle, the best position would be behind the grill or the front bumper (avoid direct heat and water spray). The Talk/Off/Beep switch is used to switch the exterior warn away between the "**Protected by Security System, Stand Back**" message (talk), the Piezo beeper (Beep) or no warn away at all (Off). The switch should be mounted in a convenient switch blank on the dashboard.

Central Door Locking

The alarm has an integral Central Door Locking facility that will lock and unlock the doors when the alarm is Armed and Disarmed.

The integral central door locking facility can only control **Negative** pulsed system. If your vehicle has a different type of central locking system, you will require an additional central locking interface (AN0012), which is available from your **MicroSCAN** dealer.

The output for the central door locking is only 300mA – if your central locking system requires more than 300mA you must use an AN0012 central locking interface. Contact our Technical Helpline if you are unsure of the central door locking system of the vehicle

Status LED

The status LED should be fitted in a position where it is visible from both sides of the vehicle, the best position would be in a spare switch blank. Drill a 5 mm hole in the desired position and push the LED into the hole until it is firmly seated. The LED has a pre-wired loom so no further connection is required.

INSTALLATION INSTRUCTIONS

Please read the installation instructions **BEFORE** attempting to install this security product, if you have any questions regarding the installation, please contact our technical help-line on **01244 321 700**

ALL CONNECTIONS MUST BE SOLDERED AND INSULATED.

Before commencing with the installation, the vehicle battery should be disconnected, noting any **RADIO CODES**. Always refer to the vehicle manufacturer handbook regarding the procedure for reconnecting the battery in relation to **AIRBAGS**.

The alarm has three plugs, a 4 wire, a 6 wire and a 2 wire plug. Connection details listed below.

Four wire loom

Red wire 12v Positive input. Connect to the fuse that protects the interior light circuit. **The Red must be connected here for the current sense to work correctly.**

Black wire 12v Negative input. Connect to a good chassis earth.

Grey x 2 12v indicator output. Connect to the right and left hand indicators, the best place to connect would be at the hazard switch or the indicator switch.

Five wire loom

Brown wire 12v Negative trigger input. Connect to the bonnet/boot switch and/or the interior sensor trigger wire. **Do not connect to the door pin switches.**

Yellow wire 12v 500mA Negative output when the alarm is ARMED. Connect to Yellow of the Immobiliser relay via the diode provided (**AN312**, **AN313** and **AN314** only). It can also be used to 'switch' interfaces and/or interior sensors On and Off e.g. Central door locking interface and/or electric window interface.

Orange wire 12v 300mA Negative output when the alarm is sounding. Connect to a pager trigger and/or internal siren.

Blue/White 12v Negative warn away input. Connect to the Talk pin on the Talk/Off/Beep switch. When this wire receives a negative trigger, the alarm will respond with the **"Protected by security system, stand back"** message

Blue wire 12v Negative on Arm (1 Second Pulse). Connect to Lock circuit of Vehicle.

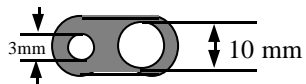
Green wire 12v Negative on Disarm (1 Second Pulse). Connect to Unlock circuit of Vehicle

Bonnet Switch

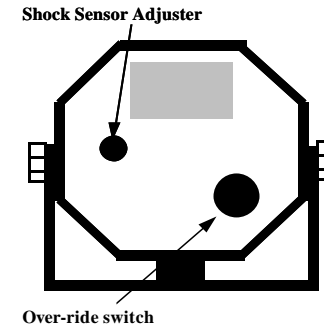
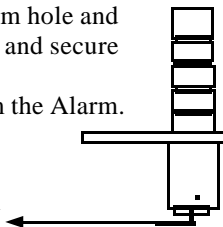
The bonnet switch should be fitted to the front 'slam plate' so when the bonnet is opened the switch will close and trigger the alarm.

To mount the switch, locate a suitable position on the slam plate, drill a 10 mm hole and place the switch in the hole - using the switch as a template drill a 3 mm hole and secure the switch using a self tapping screw (not supplied).

Using the spade terminal provided connect the switch to the Brown wire from the Alarm.



Connect to BROWN wire on the Alarm



ADJUSTMENT AND FINAL TESTING

Shock sensor

The adjuster for the shock sensor can be located at the rear of the siren. To access the adjuster remove the rubber grommet.

To adjust the shock sensor Arm the alarm and wait for 15 seconds and apply a light Knock to the vehicle, the alarm will repond with the warn away message. If the alarm does not respond with the warn away message, the sensitivity requires increasing, by rotating the adjusting screw clockwise.

Once the light knock level has been set you should test the heavy knock. Arm the alarm and wait for 15 seconds, apply a heavy impact to the vehicle, the siren should sound at full volume. Now the level is set replace the grommet in the rear of the siren and tighten the siren securing bolts. The siren should be angled towards the road surface at approximately 45 degrees in order to maximise the sensitivity of the shock sensor.

Ultrasonic sensors (AN313 only)

The AN0021 ultrasonics are SELF ADJUSTING, so once they are fitted they require no attention. Once the Ultrasonics are fitted they should be tested. To test the Ultrasonics, open the drivers window 1/2 way and Arm the alarm, wait for 30 seconds then wave your arm **inside** the vehicle, the alarm will sound. Close the window and repeat the test on the passenger side.

Dual Zone Microwave (AN314 only)

Refer to page 8 for details on the adjustment of the Dual Zone Microwave.

The adjustment of the sensors is critical to the trouble free operation of any security device. Please take an extra few minutes to adjust the sensors correctly.

Now the installation is complete you should secure all the alarm components, refit all trim panels and test the alarm system as well as all the electrical functions of the vehicle.

**Please complete your warranty card and return it to
*Performance Products Ltd.***

Ultrasonic Sensors (AN313 only)

Wiring instructions

Red: Permanent 12v Positive. Connect to FUSED 12v permanent supply.

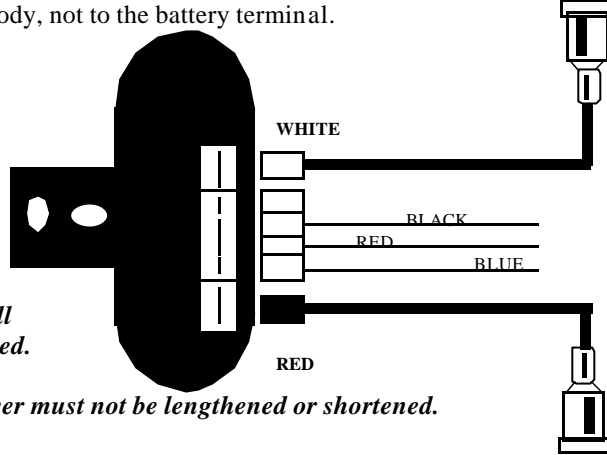
Blue: Trigger output wire. Connect to Brown wire from the alarm.

Black: Ground. Connect to the vehicle body, not to the battery terminal.

Please ensure that the Red transmitter plug is connected to the Red socket on the control unit and the White receiver plug is connected to the White socket.

Important:

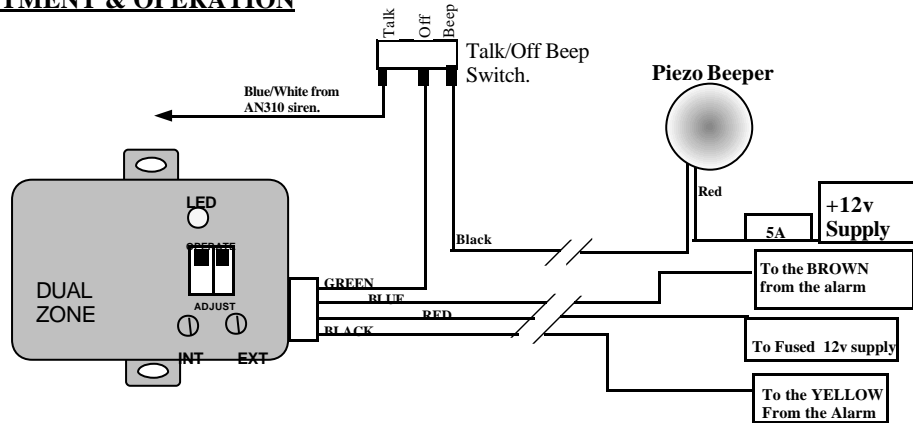
*Ensure the blue wire is connected to the negative Instant trigger input on the Alarm (Brown). **DO NOT** connect to a positive trigger input or the unit will be damaged and the warranty invalidated.*



The cables to the transmitter and receiver must not be lengthened or shortened.

Dual Zone Microwave instructions (AN314 only)

ADJUSTMENT & OPERATION



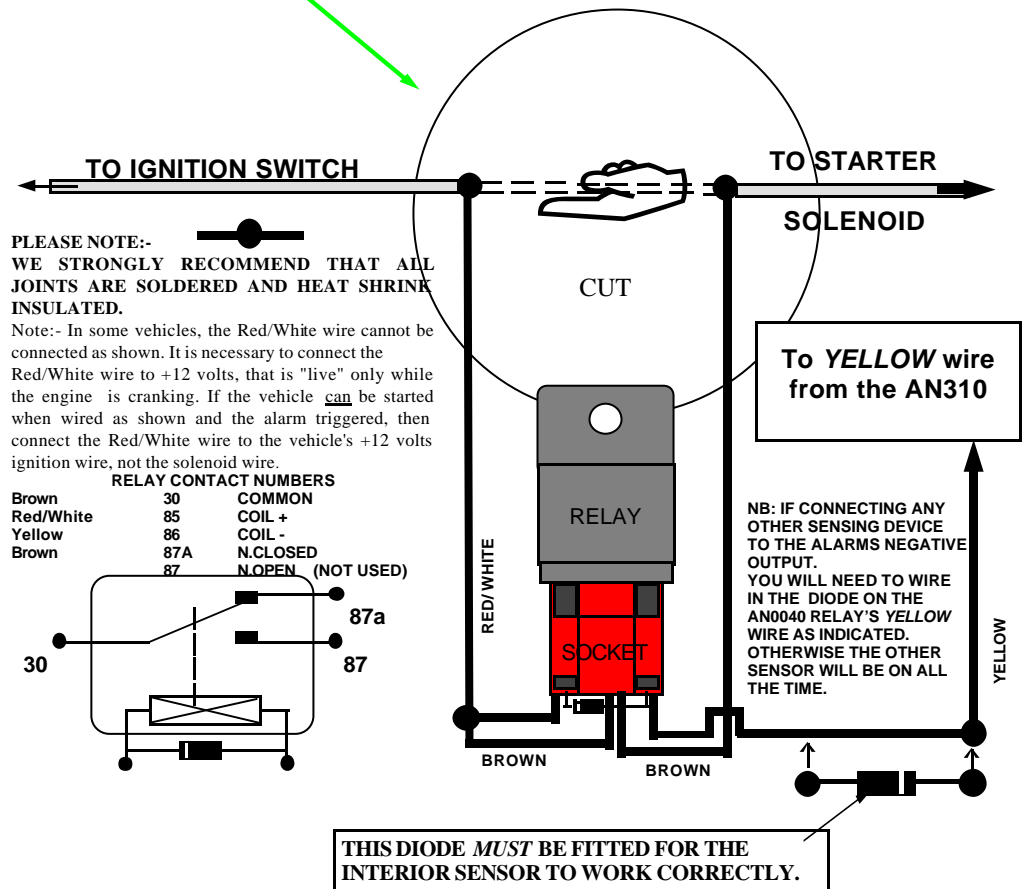
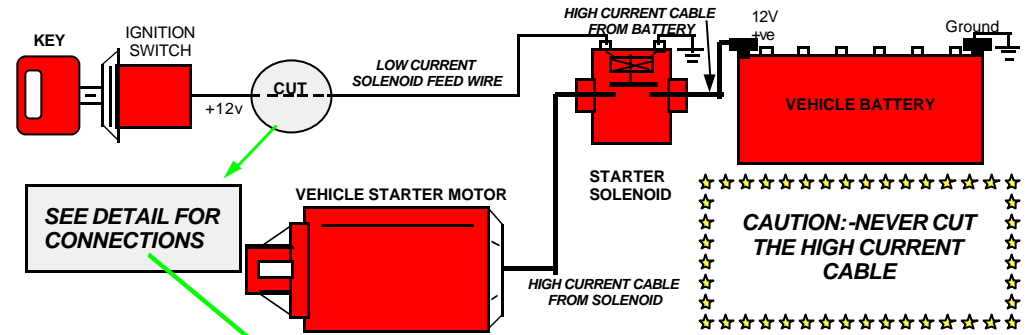
EXTERIOR / INTERIOR ZONE ADJUST turn clockwise to increase sensitivity.

It is best practice to adjust the exterior zone to the desired level and then proceed to adjust the interior zone. It is important that the Interior zone is smaller than the exterior zone. If the LED on the Microwave illuminates orange, the interior zone is larger than the exterior zone and further adjustment is required.

Movement within the range of the external sensor field will trigger the warning message or beeper but **will NOT trigger the full alarm**. If the interior sensor field is violated, the full alarm will be activated immediately.

NOTE : Both switches are required to be in the operate position at all times.

IMMOBILISER RELAY AN312, AN313 & AN314



PLEASE NOTE:- WE STRONGLY RECOMMEND THAT ALL JOINTS ARE SOLDERED AND HEAT SHRINK INSULATED.

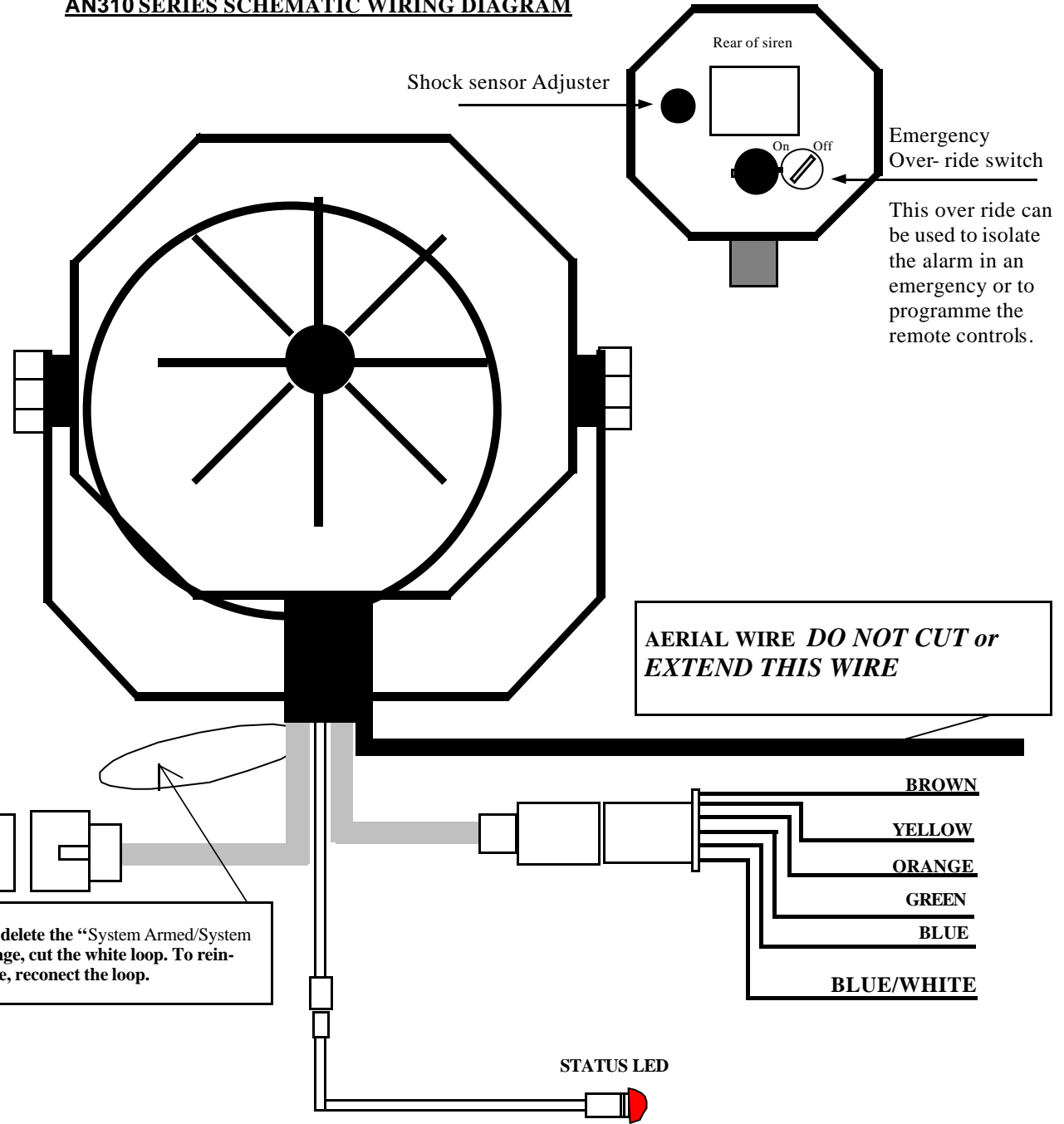
Note:- In some vehicles, the Red/White wire cannot be connected as shown. It is necessary to connect the Red/White wire to +12 volts, that is "live" only while the engine is cranking. If the vehicle can be started when wired as shown and the alarm triggered, then connect the Red/White wire to the vehicle's +12 volts ignition wire, not the solenoid wire.

RELAY CONTACT NUMBERS		
Brown	30	COMMON
Red/White	85	COIL +
Yellow	86	COIL -
Brown	87A	N.CLOSED
	87	N.OPEN (NOT USED)

NB: IF CONNECTING ANY OTHER SENSING DEVICE TO THE ALARMS NEGATIVE OUTPUT. YOU WILL NEED TO WIRE IN THE DIODE ON THE AN0040 RELAY'S YELLOW WIRE AS INDICATED. OTHERWISE THE OTHER SENSOR WILL BE ON ALL THE TIME.

Wire Colour	Connect To ...	Description
Red	Fuse for Interior Light	12v Positive Input
Black	Good Chassis Earth	12v Negative Input
Grey #1	Left Hand Indicator	12v Indicator Output
Grey #2	Right Hand Indicator	12v Indicator Output
Brown	Bonnet/Boot Switch and/or Interior Sensor Trigger (Blue on Ultrasonics or Dual Zone Microwave)	12 v Negative Instant Trigger Input
Yellow	Yellow on immobiliser via diode (AN312, 313, 314) also to Black on Dual Zone Microwave (AN314 only) and Black/White on Central Locking Interface (AN0012).	12v 500mA Negative Output when the alarm is ARMED
Orange	Pager and/or Internal Siren	12v 300mA Negative Output when the alarm is SOUNDING
Blue	Lock on Vehicle	12v Negative when alarm is ARMED
Green	Unlock on Vehicle	12v Negative when alarm is DISARMED
Blue/White	Talk pin on Talk/Off/Beep Switch	12v Negative Warn Away Input

AN310 SERIES SCHEMATIC WIRING DIAGRAM



NOTE
THE RED WIRE MUST BE CONNECTED TO THE FUSE THAT PROTECTS THE INTERIOR LIGHT FOR THE CURRENT SENSE TO OPERATE.