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**AES-IntelliTRAK**

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**AES•7555-RT**

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**GPS Based  
Vehicle Tracking Unit**

**2-WAY RF SUBSCRIBER UNIT &  
GPS TRACKING UNIT  
VERSION 2.50  
INSTALLATION & OPERATION MANUAL**

**AES IntelliNet®**

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**SEE ALSO:  
MANUALS FOR  
VLS TRACKER  
SERVER & CLIENT**

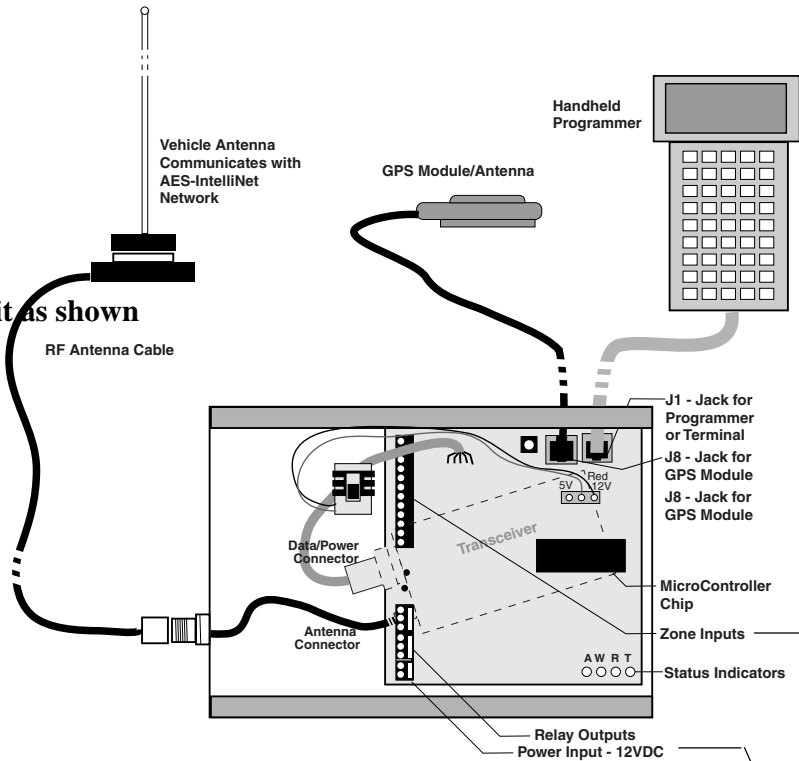
### 7555-RT Subscriber Unit SPECIFICATIONS

Power Requirements:	13.8VDC, 0.5A continuous, 1.5A peak. Direct connection to Switched 12V vehicle power system is recommended. <b>Input must be fused.</b>
Discrete Inputs / Zones:	8 Zone inputs, Normally Open Zone 1 - Panic; Zone 2, Lock Sensor Input When the input senses an alarm, the zone number and unit ID are reported to the central station. The default setting is N.O. inputs on all zones (see "Programming").
Zone Restorals:	Zones are programmed to report "restorals" - when a zone in alarm is restored to a non-alarm state.
Local Radio:	Data Transceiver; 2-5 Watts, UHF or VHF
Antennas:	External Vehicle Antenna for 2-Way "local" radio system; 5db minimum External GPS / Satellite Receiving Antenna Module

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# 7555 Data Transceiver - Assembly and Wiring Diagrams

• Assemble 7555 Unit as shown

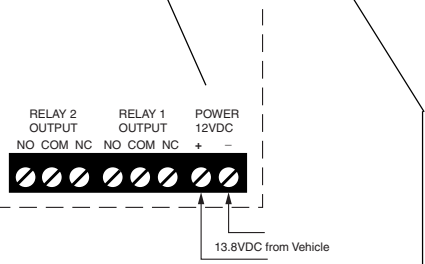


## POWER INPUT

The 7555 unit runs on 13.8 VDC supplied by the vehicle.

## RELAY OUTPUTS

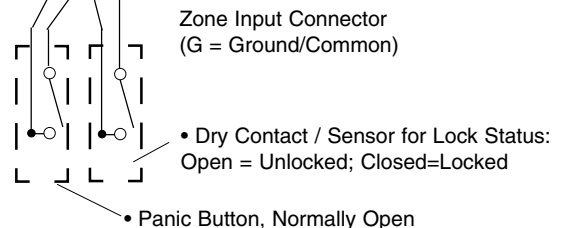
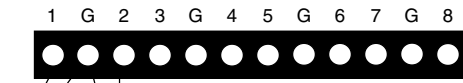
There are 2 isolated relay outputs which can be remotely controlled or locally activated. See Programming section for more details.



## ZONE INPUTS

There are 8 discrete zone inputs on the 7555 smart controller board. All are programmed for Normally Open operation. Whenever a zone is tripped, it is reported to the central station. When the zone returns to normal, a restoral message is reported to the central station.

- Zone 1: Panic Input**
- Zone 2: Lock Status (for night / not moving mode)**
- Zones 3 -8: Any Normally Open Input**



## Installation

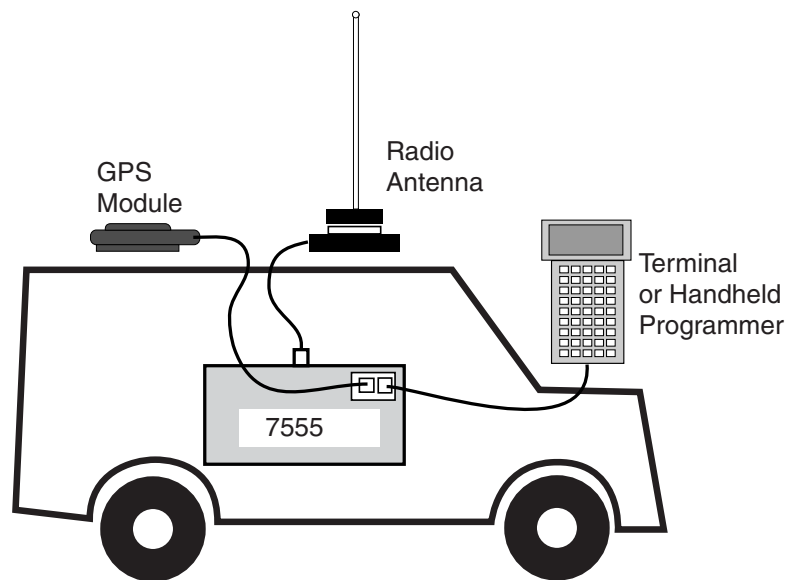
- **Install the 7555 Vehicle Tracking Unit**

Choose a secure, dry location for the 7555 inside the vehicle. The unit should be located away from extremes of heat or cold. It should be hidden if possible. The unit must be attached to a suitable, strong surface using proper fasteners.

Suggested locations: Trunk; under seat; under dashboard. In choosing a location, remember that you need wire access for antennas, power, the handheld programmer or terminal, and future maintenance. Shock mounting is recommended. Pre-cut holes are provided on the case for wiring access.

- **Install the radio antenna** with appropriate hardware on the roof or rear deck of the vehicle. The antenna should be mounted on a metal surface for maximum gain. Tighten all connectors completely.

- **Install the GPS module** on the roof or rear deck of the vehicle. The rear deck or dashboard may also work. The module should be mounted for maximum view of the sky: the broader the view of the sky, the better the performance. Mount the device with appropriate fasteners and/or adhesives. Connect the cable to J8, the jack for the GPS Module.



## Programming

(Refer to diagrams pages 3-4)

**IMPORTANT NOTE:** You must notify the central station operators of activity on this account to avoid the chance of false alarm.

- Connect the radio network antenna and GPS satellite module (see page 3). **DO NOT** operate the transceiver without the antenna attached. Be sure that the GPS module is positioned under open sky for the initial power up and programming sequence.
- Connect handheld programmer to controller board at J1 (see diagrams).
- Connect power to the unit: (Observe polarity! - Red=Positive, Black=Negative).
  - Connect 12-14VDC vehicle power to unit.

After power is connected, **push Reset Button for a fresh reset**. The reset button is located on the "smart" controller board, next to the connector J1 where the programmer is connected (see diagrams on page 3).

In a few seconds, these messages appears on the handheld programmer:

SELFTEST - PASS	SelfTest Report - (For Error Messages in Appendix)
7555 [rev#] VLS	Firmware Revision # / Date
ID#: [##-##-##] (c) YYYY AES	ID Number for this Unit, Copyright / Date
GPS Params Read	States that GPS Parameters have been read

If the message reads SELFTEST - PASS, you may proceed to the "Programming the Subscriber Unit" section. Note that the current ID# for this unit is displayed, as well as the software version and date.

If the messages reads SELFTEST - FAIL [Error Code], retry the procedure by pushing the controller RESET button (see diagram). Error Codes are listed in the appendices of this manual.

Errors reported during the self test may be the result of transient conditions caused during a cold power up or by power interruptions during a programming procedure. Pushing the RESET button clears many of these problems.

Repeat the procedure if necessary. If the unit consistently fails, it must be serviced.

**PROGRAMMING** (continued)

Having passed the SELFTEST procedure, you are now ready to program the subscriber unit. Previously programmed information is stored in nonvolatile memory, so the settings are not lost during a power down or failure condition.

• **ESCAPE/ ABORT FEATURE:** press the ESC escape key on the programmer to abort an operation at any time. NOTE: If you started to enter data and then press Escape, you may lose the data that was stored there. In this event, repeat the programming procedure.

• **TIMEOUT/SAFEGUARD FEATURE:** During programming, you have one minute to complete a function procedure. If more than one minute passes, the procedure is aborted. The message appears: TIMEOUT.

**Procedure: SETUP UNIT [CTRL]+[F1]**

The initial unit setup must be done with the handheld programmer.

NOTE: Entering new data with this function will overwrite (erase) any previously stored information. Pushing the ENTER key without entering new data saves the previously stored information.

**Procedure:**

- The programmer should be connected to J1 and the power should be on.
- Push the RESET button, wait till the SELFTEST PASS message appears.
- To start, push Programmer keys **(CTRL)+(F1)** (hold down the Control and the F1 keys at the same time).

The following message appears:

```

SETUP UNIT  - OLD:   NEW
ENTER ID#- (1234):  _____
  
```

← Previously stored "old" data;  
← Enter new data here

To keep previously stored ID#, simply push ENTER. To change the ID#, enter the 4 digit identification number for this unit using any of the 16 hex numerals, and then push ENTER. **The ID number must be unique, DIFFERENT from all other ID numbers in your network.**

After entering the ID number, the following message appears:

```

CPHR CODE - (XXXX):  _____
  
```

← For security, stored data is not shown;  
← Enter the correct code here, then [ENTER]

Unit must be programmed with the cipher code (also called a "dealer code") for your network. Enter the 4 digit code as assigned by the system administrator, then push enter. **The Cipher code number must be THE SAME as for all units in the network.**

CONTINUED ON NEXT PAGE ->

**Procedure: SETUP UNIT [CTRL]+[F1] - continued**

Next, the following messages appears:

```
Terminal Port Use
Now [GPS Info] [Msging]
Swt to [Msging] [GPS] Y/N: _
```

```
Relay Control
Now [Remote Control] [Local]
Swt to [Local] [Remote Control] Y/N:_
```

```
Terminal Type
Now [HH Programmer] [ANSI]
Swt to [ANSI] {HHPrng} Y/N
```

```
Reset GPS Parms _ [Y/N]
```

**Explanation:**

Sets the Port to Show GPS Data or Text Messages  
"Now" shows current setting (either GPS or Messaging)  
Enter "Y" to switch to the alternate setting

Sets the Relays for Local or Remote Control  
"Now" shows current setting (either Remote or Local)  
Enter "Y" to switch to the alternate setting  
("Local" setting engages relay when vehicle exceeds parameters set in VLS Tracker software. )

Sets the Port for use with Handheld Prog. or ANSI terminal  
"Now" shows current setting (HH Progrm or ANSI)  
Enter "Y" to switch to the alternate setting

Resets the GPS parameters stored in this unit. Enter "Y" to reset the parameters, or "N" to leave as is.

One of the following messages appear, depending if changes were made:

```
No HiEEPROM Change
-or-
Writing HiEEPROM

OK
```

Indicates if there are any changes, and if so shows that the changes are being written to the memory. Once complete, the OK message appears.

## Set CHECK-IN TIME and REPORTING DELAY PERIOD [CTRL]+[F2]

The Check-In Time is the interval between supervisory signals to the central station. The allowable range is 5 minutes to 24 hours. Short check-in times offer more supervision, but create more radio traffic.

**When Programmed for Check-In times of 23 Hours, 50 Minutes or Less:** The unit checks in according to programmed interval that you specify. It reports: Position; Velocity; Altitude; Bearing (direction and degree) at the time of the check-in.

**When Programmed for Check-In times of 23 Hours, 51 Minutes or Greater:** The unit is in "logging" mode, where it logs 30 positions. Logging entries are made depending on speed and distance travelled. It reports whenever the 30 positions buffer is full, or if the vehicle moves and then stops for more than 20 minutes. Or, it reports after a period of 24 hours has elapsed.

**Notes:** Frequent check-ins provide the maximum amount of information, but create more network traffic. For non-emergency applications, set the check in for 24 Hours 00 Minutes, which is "logging mode": this transmits data only data when the car is moving. More frequent check-ins should be reserved for high security users.

**The Reporting Delay** period limits the rate at which alarms are reported from this unit. The default value is 10 seconds, the range is 0 to 330 seconds. This function allows the unit accumulate alarm data between transmissions for optimum system performance.

### Procedure:

- The programmer should be connected to J1 and the power should be on.
- Push the RESET button, wait till the SELFTEST PASS message appears.
- To start, push Programmer keys (CTRL)+(F2) (hold down the Control and the F2 keys at the same time).

The following message appears:

CHKIN TIME--OLD: NEW

ENTER HRS----HH: \_\_\_ [0-24] (HH = Previously programmed hours)

To change the time, enter data into the Hours field (to leave data unchanged, push [ENTER])

ENTER MINS---MM: \_\_\_ [0-60] (MM = Previously programmed minutes)

To change the time, enter data into the Minutes field (to leave data unchanged, push [ENTER])

**NOTE: DO NOT EXCEED A TIME OF 24 HOURS, 00 MINUTES**

NTR RPT DLY-NNN: \_\_\_\_ [0-330] [seconds] (NNN= Previously programmed Delay)

Enter a number of seconds to allow between reporting of alarms; the range is 0 to 330; the default is 10 seconds.

If data has been entered correctly, the following message appears:

OK



**Other Programming Functions:**

**IMPORTANT - Many programming items are marked "DO NOT USE". Do not use the functions except with the help of a qualified AES technician.**

<b>CTRL-F3</b>	<b>SETUP ZONES - DO NOT USE</b>
<b>CTRL-F4</b>	<b>SET MODES / SRCH TIMESTA - DO NOT USE</b>
<b>CTRL-F5</b>	<b>RESET RAM - DO NOT USE</b>
<b>CNTL-P</b>	<b>TOGGLES PORT TO GPS or MESSAGING</b>
<b>F2</b>	<b>PACKET TIME TO LIVE - DO NOT USE</b>
<b>F5</b>	<b>SEND TEXT MESSAGE</b>
<b>SHIFT-F1</b>	<b>RECEIVE MONITOR ON/OFF *</b>
<b>SHIFT-F2</b>	<b>TRANSMIT MONITOR ON/OFF *</b>
<b>SHIFT-F3</b>	<b>MONITOR ALL ON/OFF *</b>
<b>SHIFT-F4</b>	<b>STATUS CHECK - See section on Status Check, under Initializing the Unit</b>
<b>SHIFT-F5</b>	<b>KEY TRANSMITTER - Use for testing field strength</b>

## INITIALIZING THE 7555 SUBSCRIBER UNIT

Having passed the self test and programmed the unit, you are now ready to introduce it to the radio network. It is assumed that an AES•IntelliNet central station is actively monitoring the network and can respond to the new subscriber unit as it comes on line.

**IMPORTANT:** You must notify the central station operators of activity on this account to avoid the chance of false alarm. If possible have an operator at the central station watching for incoming data. Check-ins, alarms and GPS signals are viewed using AES Net7K software at the central receiver.

- The Programmer should be connected to J1 as described earlier.
- Connect the antenna to the transceiver (if you have not already done so). Do not operate transceiver without the antenna connected!
- Connect the controller-to-transceiver cable.
- Connect both battery and primary power (if it is not yet connected) . The power indicator should be on.
- Push the Reset button on the controller board (see diagram page 3).

In a few seconds, these messages appears on the handheld programmer:

SELFTEST - PASS	SelfTest Report - (For Fail Message, see page 6)
7555 [rev#] VLS	Firmware Revision # / Date
ID#: [###] (c) YYYY AES	ID Number for this Unit, Copyright / Date
GPS Parms Read	

(If an "Fail" error message is displayed, push the reset button. If an error message continues to appear, see appendix for possible solutions.)

When the unit goes on the air, it queries the surrounding subscriber units to establish the best route(s) to link with the central station. The status lights indicate the process:

- RX (RECEIVE), TX (TRANSMIT) and WA (WAIT) lights will all come on briefly, testing the LED's.
- RX comes on during loop back test (a self test);
- TX comes on sending a "Receiver Not in Service" message - a standard power up event;
- AL + WA will blink at different but steady rates
- TX comes on again as unit transmits a "Request for Reply" from other units
- WA stops flashing after about 30 seconds **IF** one or more other units reply to the "Request", (otherwise the WA continues to flash, indicating the unit is not on the network);
- TX comes on again (if WA stops flashing) to send first "Check-In";
- AL blinks at a steady rate, indicating a normal condition.

When the unit receives a valid acknowledgment, the WA light will turn off. This indicates that the subscriber unit is now connected to the network.

A flashing WA (WAIT) light (blinking at a steady rate) indicates that the subscriber has not established itself into the network. Check antenna and all cables; be sure that correct Cipher (dealer) code has been programmed in to the unit.

The next step is to perform a status check.

continued ->

**STATUS CHECK:** Push Programmer keys (**SHIFT**) + (**F4**)**Purpose:** Performs a quick diagnostic check.

- Connect the programmer to J1. Be sure that radio and antenna are connected, and power is on.
- Push the Reset Button.
- After SELFTTEST-PASS message appears, press programmer keys SHIFT+F4 (hold down the Shift key and then press the F4 key). The following message appears:

```
GPS [ver#] 7555RT
ID#: [NNNN] (C)[YYYY] AES
RT1: [NNNN] LEVEL: [ NNN]
STAT: [NNN] NETCON: [ N ]
```

**Explanation of Status Check Terms:**

**GPS / REV# / 7555RT / C(DATE) AES** - identify the version of firmware, product type, manufacturer and copyright date.

**ID#:** 4 digit ID number programmed into this unit.

**RT1:** refers to the “first route” or primary route in the routing table. The 4 digit number is the subscriber unit ID of the next hop to the central station. If the unit is communicating directly with the central station, the 1ST RT is 0000 - the central station ID number. If the subscriber is using intermediate units to communicate, the RT1 number is the ID number of first subscriber on the message route.

**LEVEL:** refers to the subscriber unit “level” or “link layer”, which tells you how many “hops” the message packet must make to get to the central station. In general, if the number is 1, then this unit is communicating directly with the central station. If the number is 2, the unit relays its message through one other subscriber unit to reach the central station. If the number is 3, the message goes through 2 other subscribers ... and so on. Also, the level number of subscriber with a weak signal to the unit on the top of its routing list will be incremented by one (1). A unit level = 255 indicates that unit is not on network.

**Dynamic Routing Table:** Each subscriber unit maintains a list of many alternate routes. Routes are prioritized according to signal strength and NETCON ratings. This function is dynamic, and is updated constantly.

**NetCon:** is a rating number that indicates the “NETwork CONnectivity” quality of a particular unit on a scale of 0 to 7, 0 being best.

**DISPLAY GPS LOCATION DATA:** Push Programmer keys (**CTRL**) + (**P**)**Purpose:** Displays the current GPS location data.

- Connect the programmer to J1. Be sure that, radio, GPS module and antennas are connected.
- Press programmer keys SHIFT+F4 (hold down the Shift key and then press the F4 key). The following message appears:

```
{Latitude] N/S 00:00.0000 Sats 00
[Longitude]E/W 000:00.0000 DOP 50
HH:MM:SS [UTC] F0 DD/MM/YY
SOG COG
```

Explanation: Latitude / Longitude read in degrees:minutes

Sats = # of Satellites visible (more is better) DOP = Dilution of Precision - (lower is better)

Time= UTC; F= Fix Type, 0=no fix; 1 = fix found

SOG = Speed Over Ground (knots); COG = Course Over Ground (Bearing/Heading)

## OTHER FUNCTIONS

### DEFAULT RESET Push Programmer keys (CTRL)+(F5)

The Default (Master) Reset function can be used to reset programmed values to their default settings. **The ID# and Cipher (dealer) code are not changed. Use this function only if you wish to reset all parameters.** Power must be on, connect the programmer to J1.

- Press the RESET button.
- Press programmer keys CTRL+F5 (hold down the Control key and then press F5 key).
- The following message appears:

```
RESET RAM? <Your Response:>
            (Y) (Enter) for YES, or
            (N) (Enter) for NO
```

If you answer (Y) Yes, all VLS program parameters will be reset to their default values. The unit then goes through its normal “reset” routine. The following message appears:

```
SELFTEST - PASS                SelfTest Report - (For Fail Message, see appendix)
7555 [rev#] VLS                Firmware Revision # / Date
ID#: [##-##-##] (c) YYYY AES   ID Number for this Unit, Copyright / Date
GPS Parms Read
```

The default reset restores program parameters to their default values:

```
CHECK IN TIME:                24 Hours 00 Minutes
REPORT DELAY:                 10 Seconds
UNIT ID #:                     NOT Changed by Default Reset
CIPHER CODE:                   NOT Changed by Default Reset
```

## APPENDIX A

### 7555-RT SPECIFICATIONS

#### STATUS INDICATORS

**RX** - indicates radio receive (*not* GPS receiver)

**TX** - indicates radio transmit

**WA** - Steady On = Waiting for acknowledgment of last transmission;  
Blinking = Not on Network; Steady Off = Normal

**AL** - Alert / troubleshooting indicator, "blink" codes as follows:

- ·     ·     steady blink - system OK;
- ··     short-short blink - power input low
- ·-     short-long blink - an input zone is in alarm;
- · -  · · -   short-short-long blink, power input low and zone in alarm;
- Steady           no blink - Selftest failure (other than low batt)

#### CONNECTIONS

**J1**     **Serial Port** - connects to programmer or ANSI terminal / PC

**J8**     **GPS Data Port** - connects to GPS unit

#### Input / Outputs

**Power Input:** This unit operates on 13.8VDC

**Zone Inputs:** 8 Zone Input Connector Block

Zone 1 is Panic

Zone 2 is Input for Lock/Alarm Status

Zones 6-8 are available for user functions

All zones are Normally Open

"G" terminals indicate Ground

**Relay Outputs:** 2 Form C relays are provided

#### CONTROLS

**S1**           **Reset Switch** - initializes controller

#### SPECIFICATIONS

**SIZE:**           Approx 2"H x 12"L\* x 7" W ; 5 cm x 30.5 cm x 17.7 cm

*not including connectors, cables*

**WEIGHT:**       Approx 3 pounds (1.3 kilograms)

**RADIO:**        UHF or VHF

Typical Radio Output Power: 2 or 5 Watts

**VOLTAGE:**     13.8VDC nominal; uses vehicle power supply

**CURRENT:**     500ma standby; 1.5A transmit (2W transmitter)

**OPERATING TEMPERATURE RANGE:** 0° to 50° C

**STORAGE TEMPERATURE RANGE:** -10° to 60° C

**RELATIVE HUMIDITY RANGE:** 0 to 85% RHC, Non Condensing

## APPENDIX B

### 7555-RT GPS Tracking Unit

#### Events Reported to the Central Receiver as Zones/Event

(Version 2 and higher)

All zones are Normally Open

Zone	Function	Description
1	Panic	Sends Alarm on zone 1 Sends GPS data every 15 seconds for 10 minutes Sends Restoral when finished
2	Lock Sensor	Connect to dry contact/relay; connect as follows to lock or alarm system: Closed = Car is locked or alarm is armed; car not expected to move Open = Car is unlocked or alarm is disarmed; car is expected to move. If car is locked or alarm is armed (i.e. zone 2 is closed), AND the vehicle is moved, then an alarm is sent on zone 2; GPS data also sent.
3 - 8	Alarm Triggers	May be connected to any other sensor as needed.
25	Velocity Alarm*	Programmed via Tracker software. If the vehicle exceeds a programmed velocity, and alarm is sent. When vehicle speed returns to normal, a restoral is sent.
26	Moving Violation*	Programmed via Tracker software. If vehicle is moving during a restricted time period, and alarm is sent.
27-32	GIS Region Violation, 1-6*	Programmed via Tracker software. If vehicle moves outside of any of 6 programmable boundaries, an alarm is sent on the associated zone.

\* Refer to Tracker Software Manual for more information.

\* When relay is programmed for "local", the relay is activated whenever an alarm is caused by one of these events: ie. the vehicle is moving too fast, at the wrong time or in the wrong area. See Tracker Software for more information.

## APPENDIX C

### ERROR CODES

An [Error Code] is listed when the unit fails the self test. Some may be correctable on site. Check that all IC's are seated properly in their sockets - on rare occasions they may come loose in shipment.

Message: **01 Power input is low.**

Procedure: Push RESET button, see if unit will pass self test; If the unit fails and reports the same message, replace battery and/or check main power voltage.

Message: **02 Random Access Memory (RAM) data corrupt;** may be caused by initial power up, or by power interruption during a programming procedure.

Procedure: Push RESET button, check if unit will pass self test; If unit passes, please note that it must now be reprogrammed (see next section). If unit fails, memory may be damaged and require service.

Message: **03 Self test detects both problems 01 and 02 above.**

Procedure: Follow procedures described in 01 and 02 above.

Message: **80 Loopback Test Failure,** common on initial power up

Procedure: Push RESET button, unit will likely pass self test; If the unit fails repeatedly and consistently reports the same message, contact factory for service.

## AES LIMITED OWNER WARRANTY

We warrant AES products to be free from defects in material and workmanship for one (1) full year from date of purchase.

At no cost to the original purchaser for parts or labor, AES will repair or replace any part or parts which are judged defective under the terms of this Warranty.

Defective products must be returned to AES directly, provided they are properly packed, postage prepaid. Or exchange may be made through any authorized direct factory representative for any products which are judged defective under the terms of this Warranty.

This Warranty is in lieu of all other Warranties expressed or implied and of all other obligations or liabilities on the part of AES. This Warranty does not apply to any product or any part thereof which has been repaired or altered outside our factory in any way to affect its stability or reliability, or which has been subjected to misuse, negligence or accident, or which has had the serial number effaced or removed. Neither shall this Warranty apply to any product which has not been installed, applied or used in strict accordance with our instructions.

AES Corporation cannot be aware of, or responsible, for the differing values of property to be protected by its alarm reporting systems. The above Warranty is given in lieu of all other Warranties, either expressed or implied, including a Warranty of fitness for a particular purpose, and manufacturer shall not be liable for any defect, incidental or consequential, loss or damage arising out of the failure of the product to operate.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



**SERVICE PROCEDURE:** Authorized repair service is furnished only by AES Corporation.

Contact AES Corporation at 978-535-7310 (fax 978-535-7313) to receive a Return Authorization Number. Have the AES part number and serial number ready. Repack equipment in original or equivalent packaging. Inside the box, please include a contact name, telephone number, address and a brief description of the reason for return.

Ship items freight-prepaid to:

Repair Services, RA# \_\_\_\_\_ (call for Return Authorization number)  
AES Corporation, 285 Newbury Street, Peabody, Massachusetts 01960 USA

### • FCC COMPLIANCE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna;
- Increase the separation between the equipment and the receiver;
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected;
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications to this equipment not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### • CANADIAN COMPLIANCE

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of Industry Canada.

Cet appareil numérique respecte les limites de bruits radio électriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictés par l'Industrie Canada.