



## Specialist Surveillance Vehicles

# SPECIALIST

SURVEILLANCE



# VEHICLES

**Technical Surveillance Equipment Limited (TSE)** are a company backed by over 45 years experience in Technical Intelligence techniques and equipment.

**TSE** work exclusively on behalf of authorised Government Security Departments and Law Enforcement Agencies. As a result of many years of "active service" for clients worldwide, **TSE's** assistance is highly sought after.

**TSE** will individually design surveillance vehicles to your exact requirements, meeting with you at all the major milestones during the design and integration process to ensure that each vehicle not only meets your current needs, but also can be upgraded in line with future technological developments.

No two surveillance vehicles are alike. These vehicles are especially designed to meet individual requirements, such as vehicle type, finish, operational usage, equipment for integration etc.

Whatever you are looking for, from a very basic surveillance, command or communications vehicle to a complete mobile command and control centre, **TSE** can provide a complete design and integration service.

**TSE** manufacture a wide range of vehicle to suit every operation built to exacting standards and specifications;

- ✦ General surveillance vans
- ✦ Command surveillance vehicles
- ✦ Counter Terrorist vehicles
- ✦ Remotely controlled surveillance vehicles
- ✦ Direction Finding
- ✦ Communications
- ✦ Surveillance Vehicle Kits
- ✦ Specialist Audio Vans
- ✦ Communication Monitoring vehicles



## Some examples of the equipment installed in our Specialist surveillance vehicles.

For perfect concealment and long range observation the **TSE** Periscope is fitted to the vehicle combining the **TSE S321** Ultra Low Light Camera and 30x Zoom Lens long range observation is achieved



Periscope fully extended



Periscope with Ultra Low Light camera



The main control and recording equipment are housed in our custom built rack unit, to allow, smooth operation and ease of maintenance

Climate control inside the vehicle is very important, **TSE** have developed a low noise air conditioning system that will maintain a cool environment for equipment and operator, during the operational period. It can maintain an 18°C interior with a 30°C exterior temperature



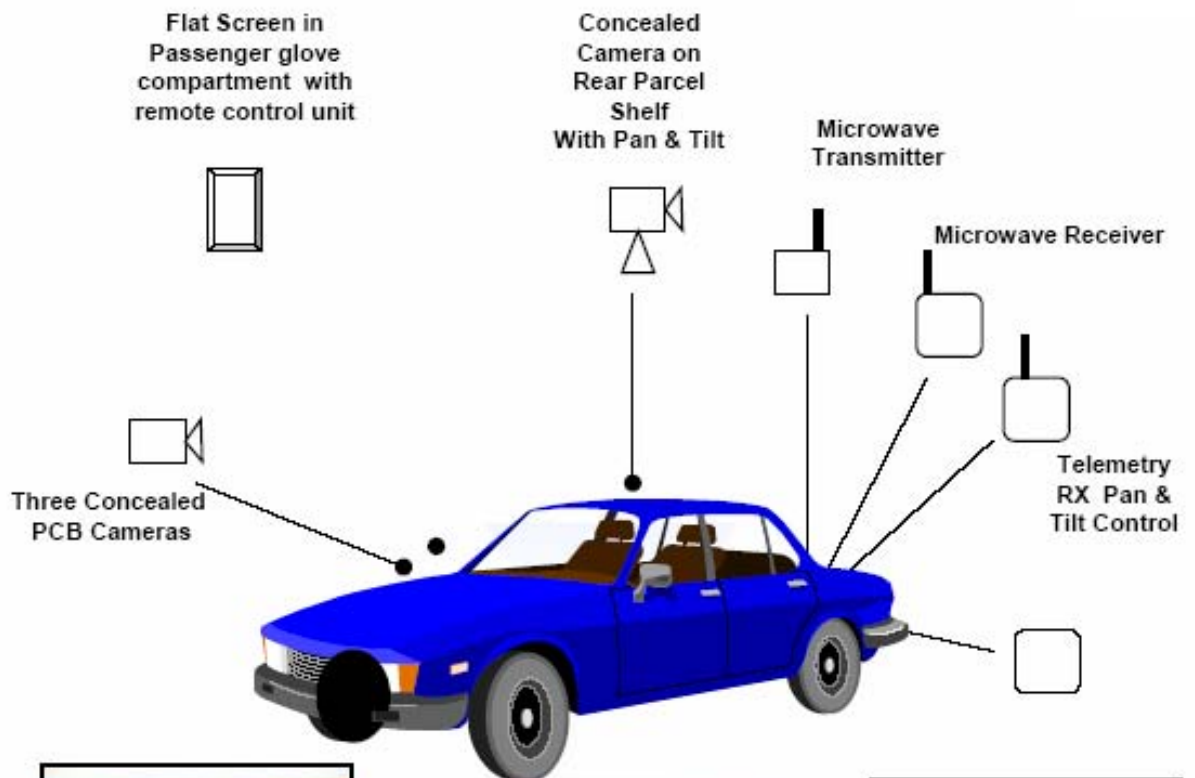
Covert antenna systems are installed to allow the operators to communicate, monitor, receive audio & video transmissions, transmit GSM or other signals easily and without detection



## Some examples of our vehicle interiors



## Remote Surveillance Vehicle System



Vehicle Unit



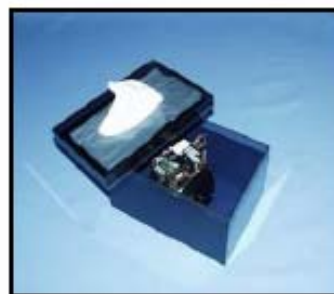
Receiver Unit



Installation



Pan & Tilt Camera Unit  
Concealed in Head Rest



Pan & Tilt Camera Unit  
Concealed in Tissue Box



Fixed Headrest Camera

## Section 1) TSE 7 Series - SURVEILLANCE VEHICLE SPECIFICATIONS

### Item Description

- 01 **TSE-7000 Command, Communications & Surveillance Vehicle Conversion**  
Includes Toyota, Ford, GMC, or Mercedes cargo van, & delivery to Country  
*Other vehicles available to suit client's requirements.*

#### Vehicle conversion overview;

- Includes Floor, walls, and front bulkhead, ceiling framing; minimum of 50mm polar fibre insulation. + Underside where possible. Insides of the van have 85 percent ECM screening in the operational compartment.
- Equipment counters and cabinets. Carpeting, Formica finishing, wiring in steel & flexible conduit and junction boxes are provided.
- The interior lighting package includes (overhead florescent light, flexible gooseneck lights, red under counter lights, and ceiling aircraft style lights) with all necessary equipment and installation.
- Deadbolt locks on surveillance compartment doors
- Air exchange system
- Bench seat with 2 seatbelts (Fitted when space allows)
- Storage pockets
- Fixed front bulkhead wall with sliding entry and exit door, side door window disguises with video viewing ports, IR one-way removable Plexiglass inserts and lens boot.
- Main operator's control panel, this panel to control all surveillance equipment and systems of the operational compartment. This panel will also monitor the battery status and current draw of the operating equipment.

**Qty Description**

**Auxiliary power system to include:**

- 05 Four or Five AGM deep cycle batteries battery box, 160 amp power isolator and relay, Charger/Inverter 25-12, 130 amp gel cell pulsed battery charger, power control panel with engine kill switch, 220vac mains power supply.
- 01 TSE-880HT Freon Compressor Powered Hot Temperature Air Conditioner.
  - The TSE-880HT Freon Compressor Powered Air Conditioner powered by its own D-8 gel cell batteries and a Heart FMD-25-12ES inverter/Charger will cool the operational area after arrival, producing 8,000 BTU's. This unit is designed to cool at least a 600 cubic ft of operational compartment for a period that may be 10-12 hrs depending on how often the unit is cycling on & off. The main control panel is located on the front of the unit for easy control settings of the fan speed and thermostat. This unit is equipped with a 725 watt heating element to heat the operational area.
- 01 Captains chair with swing-up armrests, adjustable back, 360-degree swivel base.
- 01 Inverter / Charger system 25-12, 1000 watt 12-vdc to 220-vac 2500VA inverter & 130-pulsed amp Battery Charger with remote control battery status digital display indicator with push button selection.
- 01 TSE 55001 IR Viewing Port Panels  
The Passenger side, Rear cargo doors and Drivers side window shall have IR Plexiglas viewing insert panels installed. These panels can be installed or removed in seconds via Velcro attachments on the window pads and IR panels. These panels allow the operator to see in all directions that the windows allow providing additional officer safety.
- 01 Multi purpose fire extinguisher.

**Equipment Installation**

**Video PAL Standard (Unless NTSC Specified by client)**

- 01 Retractable video scope with hand controller and mirror defog fan
- 01 TSE S-321 Low Light Colour / Black & White CCD Camera
- 01 Computar 16 to 160mm motorised lens @ F1.8
- 01 Computar 10-300mm motorised auto iris lens
- 01 2x Video lens extender.
- 01 Pan & Tilt head with hand held remote controller
- 02 LCD Flat screen 15" colour monitors
- 02 Sanyo, 2/6/12/24 Hour Time-Lapse recorder, 12vdc
- 02 TSE wall mount brackets for the Bogen Magic Arms
- 01 Four way composite video switcher.
- 01 LCD TIF Monitor 6.0" LCD monitor will be installed to view the vehicle security cameras. 12vdc powered.



**Qty Description**

**Audio**

- 01 Integrated Audio Distribution System  
Four audio inputs, three selectable outputs, via audio interface to all installed audio & video recorders audio channel(s).  
QE10 audio filter to enhance audio inputs  
Audio selector for exterior microphones  
Intercom system front to rear with PTT & manual switching
- 01 Amplified speakers & Headphones
- 02 PMD-221 three head audio recorders with 12-4.9vdc converter.
- 03 R-8500 multi band synthesised receiver with roof mounted dual band cellular look alike antenna. 150-174-800 MHz. (Can be fitted into roof rack system)

**Communications**

- 04 Tactical VHF Transceivers (Client supplied)
- 05 Tactical UHF Transceiver (Client supplied)
- 01 Tactical HF Transceiver (Client supplied)

*Note: All transceivers will be operated from the rear compartment only*

**Security**

- 06 Vehicle alarm system with Ignition cut out
- 07 Video & audio vehicle perimeter observation system with quad switch
- 08 Remote horn signalling (Dependant on vehicle selected)

**Antennas**

- 09 Covert Ladder Roof Rack 4 antenna system (Subject to radio equipment to be installed)
- 10 GSM Cell phone roof/wing mounted antenna
- 11 Transceiver antenna (depending on vehicle & frequency – covert mounted)
- 12 Video Patch antennas fitted to front and rear of vehicle

**Optional Antennas**

- 01 HF Antenna covert antenna mounted in PVC pipe antenna system (fitted to ladder rack, can be removable if required).
- 01 HF Antenna mount fitted to vehicle wing/roof/bumper
- 01 GPS antenna roof mounted
- 01 Combined GPS / GSM low profile flat 3dB gain antenna roof mounted

## TSE- 7000 Specifications

- **Delivery / Acceptance**

Delivery will take place at TSE's facility. This location allows our technicians to correct any final check out problems that may develop prior to the training class or installation of any customer provided equipment that may want to add at the time of delivery.

*All travel, food and lodging expenses are the responsibility of the purchaser.*

- **Training**

TSE will train (4) Department or Agency operators for two weeks in the maintenance and operation of the surveillance platform.

The training will take place at Headquarters and consist of classroom and hands on techniques in the equipment's capabilities and the real world placement of the platform.

The instructor for this training is knowledgeable in the platform equipment and capabilities. TSE will provide all materials required for training.

- **Vehicle Shipment**

TSE will be responsible for the sea-freight shipping of the vehicle to the client's premises for the training and testing of the equipment. Airfreight can be used subject to additional costs being paid by the client.

- **Special Note**

The customer may delete or add any equipment from the list above and supply department equipment for installation. TSE may make a nominal charge for the installation of the client supplied equipment and power cables necessary for connection.

Customer supplied equipment is not covered by the TSE warranty and is the responsibility of the customer for all or any service repair.

- **Warranty**

TSE warrants our surveillance platform for a period of (2) years against any defects that may occur from our workmanship. This warranty includes parts and labour only, and TSE reserves the right to reject warranty work based on damage created by the customer's misuse of the surveillance platform.

## TSE-7000 Surveillance Van – Main Specifications

- **Surveillance Compartment**

The **TSE-7000** basic surveillance van represents a new era in Mobile Surveillance Platforms!

The **TSE-7000** is constructed from high quality materials and built by craftsmen with over 30 years of experience in vehicle design.

All TSE surveillance platform designing is engineered with AutoCAD and manufacturing is produced at TSE's Production and Training facility.

On premise manufacturing provides strict 24-hour security, maintaining Confidentially of the customers platform designs and appearance.

- **Surveillance Compartment, Framing, Insulation, Finish and Floor**

The van floors walls and ceiling are filled with a minimum of 50 to 75 mm of polar insulation. The sub floor shall be constructed with 12mm AC grade plywood. The flooring shall be secured to the floor framing every 300mm with self-taping screws. The sub floor shall be covered with automotive carpeting, which conforms to EU TUV and US standards for (Flammability of Interior Materials, Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Buses) and of the Federal Motor Vehicle Safety Standards and Procedures. US Dept. of Transportation (DOT HS805-674 revised April 1985). All exposed and unfinished edges will be bound or have carpet mouldings installed. The ceiling and walls are covered with heather grey fabric to add a third dimension to the materials interiors appearance.

- **Bulkhead Partition with Lockable Sliding Door**

The **TSE-7000** comes with a disguised front bulkhead that is fitted into the ceiling and floor framing of the van for added strength to the vehicle. The bulkhead has a sliding pocket door hidden within its frame. This door has a sliding video viewing port with a second added IR sliding glass to allow a black and white camera to shoot through and maintain light tight. The sliding door has a one inch keyed dead bolt lock assembly at the bottom of the door. The lock is keyed from the driver's side and an easy to turn knob on the operational side.

## TSE – 7000 Specifications

- **Command Console**

All wiring is encased in conduit wherever possible and connected to electrical boxes with the approved connectors. The steel conduit and boxes minimise the RFI *and* EMI interference generated by tactical radios or DC to AC inverters when required. All wiring is multi-stranded and sized for maximum equipment load capability. All audio carrying cables are 100% shielded listed cables to ensure quality audio.

The battery cables are 1100 multi-strand battery cable, designed to carry any amperage load requirement that the operational compartment requires

The 12-vdc battery power is controlled through a high quality on/off bus switch. The switch allows power to flow from the battery to the main control panel.

The main on/off switch is located next to the side cargo doors; this switch controls all power to the surveillance operational compartment.

The main system control panel individually operates the equipment within the module. Each item or group of items is switched and circuit protected from the panel. A green LED indicator light is mounted on the switch, when illuminated indicates that power is supplied to the equipment selected.

The main control panel controls, and circuit protects, 16 separate items or groups of equipment.

The main control panel has one (1) 12 vdc digital voltmeter with backlight. One (1) 12-vdc digital amp meter with backlight and one (1) 24-hour clock with battery back up.

- **Wall Mounted Power Source**

Four (4) 12-vdc cigarette power outlets and 220V AC outlets are placed throughout the rear operational compartment for additional equipment requirements.



## TSE-7000 Specifications

- **Command Console Desk and Storage Cabinet**

The main equipment rack will house all of the rack-mounted electronics such as. The audio recorders, video recorders, and other video/audio options that may be required.

The main control panel is installed on the driver's side, work counter wall above the desk area. LCD Flat video screens are wall or desk mounted.

The panel is within the reach of the operator at all times, the main control panel controls all of the equipment functions in the operational compartment at an arms length.

- **Climate Control**

TSE provides a low noise inverter battery powered air conditioning system, allowing hot and cold air into the surveillance compartment.

The system is controlled from three switches allowing the operator to operate the high/low fan speeds, system operation or cooling system power ON/OFF.

- **Passenger Side Bench Seat/Storage Area**

The van is equipped with a bench seat located on the passenger side adjacent to the side cargo doors. The bench has 80mm thick cushions for optimal operator comfort. The lower section of the bench is storage for equipment.

- **Special Window Treatment**

The van is designed with up to five (5) disguised window-viewing ports, (dependant on vehicle selected). Infra Red 780-nano meter glass allows the operator to view out through the red tint glass. The view to the operator's eye will appear to be light red in colour. A black and white camera will see everything crystal clear. On a bright sunny day some colour cameras will display the picture in a light brown or orange colour. Typically, most standard colour cameras can not see through infra red glass, i.e., your colour camera will be used with your retractable video scope, or when you remove the Velcro attached IR glass viewing port.

All of the window blackout pads have 150x 200mm fold down ports that open to allow for viewing through the van clear exterior glass window to facilitate special video needs.

## TSE – 7000 Specifications

- **Special Window Treatment (cont'd)**

The front bulkhead doors sliding window measures approximately 150mm high x 200mm long. This window allows the operator to video through the front cab area.

The rear door window viewing ports size is approximately 150mm high x 200mm long, creating optimum video viewing and recording from the rear door windows.

A TSE camera wall mount bracket is located at each window video viewing port. This bracket allows the operator to install a Manfronto Magic Arm at that video port and position a camera of choice in place.

Windows will be tinted at a 15% rate, with 2x neutral density film.

- **Rear Compartment Seating**

A primary operator's seat shall be installed at the knee opening area of the main console cabinet, which will provide the operators with access to all equipment and controls without moving from his seat.

The Custom operators seat is contoured for long term sitting, adjustable back, swing up arm rests, 360 degrees swivel chair base with recline and forward/reverse functions allowing full adjustment.

The second seat supplied for a second operator shall be a padded jump type seat, which will fixed to the front bulkhead by the side sliding door.

- **Lighting**

Three (3) 450mm flexible gooseneck lights with interchangeable red or clear lenses. These lights can be switched on and off from the fixture or main control panel.

One (1) 450mm 12-vdc ceiling mounted two-bulb fluorescent light. This light can be switched on and off from the fixture or the main control panel.

Three or Six (3 or 6) aircraft style ceiling lights, controlled from the light and main control panel. Blue and Red in colour for operations at night.

One (1) under the counter red light switched at the light or main control panel.

## TSE –7000 Specifications

- **Air Circulation System**

The air circulation system is capable of providing a quick change of air and shall be installed in the rear compartment. The fresh air is brought in from the drivers cab air vents and the DC brush less fan is installed in the front bulkhead wall behind the passenger's seat at the floor. Exhaust fans are mounted within the rear doors and side doors on these fans also provide window defogging for the rear cargo doors. The exhausted air from the operational compartment is finally vented through the sound dampened baffled floor vents next to the rear cargo doors on each side.

The side cargo doors have a sound dampening fans installed within them to help minimise window fogging. These fans are silent running and hidden from view.

The 12vdc brush less fan motor is designed to emit no *RFI* or *EMI* interference utilising TSE suppression designs.

The van has approximately 200 cubic ft of interior operational space. TSE has installed a 110-CFM (cubic feet per minute) fresh air intake fan to help insure optimal fresh air exchange.

- **Battery System**

TSE has taken the mystique out of the extra batteries, which are required to operate the equipment and systems installed within the surveillance compartments of our platforms. We simply install the very best batteries on the market today!

Some manufactures tout the "cranking amps" of the battery they provide. This data has absolutely no relevance to the way you will use your auxiliary battery power since it only relates to how much power is being supplied to the engine starter when cranking an engine.

Your needs are completely different. You want to know how long can you stay on a target location with a constant and continuous load on the battery. This term is called "**Reserve Capacity Minutes.**"

With a continuous load of 8 amps from (1) maintenance free AGM battery you will have approximately 30 hours of operating time. The TSE equipment load averages 8 to 10 amps continuous draw, which will allow you to be on location longer than you will want to be!

## TSE – 7000 Specifications

- **Battery System (cont'd)**

Four (4) AGM High Capacity Gel Cell rack mounted in a steel battery cabinet or concealed under the bench seating or rack unit.

Absolutely no maintenance required 100% Gel construction, no liquids.

Rapid recharge rate. Recharges substantially faster at normal rate of charge and will not be damaged if a higher rate of charge is applied.

100% recovery from deep discharge, even if left for uncharged for a month.

Exceptional power output.

Power increases to 115% of rated capacity after use of battery begins.

Extremely low self-discharge rate, less than 2% per month at room temperature.

No dangerous or corrosive gas vapours during operation or recharging use.

Leak proof construction

Five (5) year limited warranty from the factory

- **Charging System**

The TSE-6000 van is equipped with a 10, 50 amp pulsed input charger / inverter. This charger utilises a pulsed input charging for maximum charging capacity.

A remote control charger & inverter status panel is also provided. The overall electrical system is fused with a fast action one at a time fuse.

The pulsed input charger will not over charge the battery and will allow the charger to be plugged in for continuous duty.

The charger can be charge up to 2 battery banks at the same time. This allows for a second battery if required.

Located in the front grill is a male 16amp 220vac plug, which allows the operator to plug in heavy-duty extension cable to supply power to the charger. The cable is stored behind the front grill and remains out of sight until used for charging.



## TSE– 7000 Specifications

- **Charging System (cont'd)**

A 7.5 metre, 16amp three-conductor heavy-duty extension lead is provided.

Dependant on the number of batteries and the vehicle involved, the vehicle's charging system will charge the rear battery(s) only while the vehicle's engine is running. Once the vehicles engines is turned off the vehicle's battery is automatically disconnected from the rear battery system. This ensures that the vehicle's battery will be able to start the engine at any time.

- **Inverter**

A 1000-watt DC to AC crystal controlled power inverter shall be provided for the purpose of operating the rear auxiliary 725-watt Ceramic Heater. The inverter shall maintain a constant 220vac at 50 Hz with a frequency deviation not to exceed .001 Hz with remote function control and display panel.

- **Surveillance Periscope**

One "Retractable Videoscope" is provided with a Multi functional hand held scope controller with:

- ⊕ Zoom in & out
- ⊕ Focus in & out control with a variable speed control
- ⊕ 360 Degree rotation with variable speed control
- ⊕ Upper mirror motor control for up & down
- ⊕ Lower Mirror Control, Manuel adjustment from knob on front panel
- ⊕ Retractable Turret *up & down* motor control
- ⊕ Quick cable connector for motorised powered video lenses
- ⊕ Defog mirror fan
- ⊕ Optical quality front surface mirrors.
- ⊕ Camera and lens quick release ¼w tripod screw allows for change out in 30 seconds

- **Video Input Switcher**

One (1) low loss video switcher, which distributes the video signal to be necessary video recording equipment with the push of a button.

## TSE – 7000 Specifications

- **Video Recording Port Panels**

Three (3) low loss 100% shielded video cables will be linked to the video switcher:

- One (1) cable for the driver side camera viewing port
- One (1) cable for the bulkhead door and passenger side door camera viewing ports.
- One (1) cable for the retractable Videoscope in the ceiling

Video patch panels are located at both the front and rear areas with BNC connectors for easy input of the video signal. At each patch panel is a two-pin power plug for camera power. TSE provides the power and video cable for each video port. The video patch panels are labelled for easy identification.

- **Surveillance Camera and Lens**

One (2) TSE –S321 CCD low light colour camera, 8mlux standard & 2mlux with four field integration, 480 TV lines of resolution.

One (1) 16 to 160mm motorised video lenses shall be provided. The lens will be pre-wired to connect directly to the retractable Videoscope.

One (1) 10 to 300mm motorised video lens shall be provided. The lens will be pre-wired to connect directly to the retractable Videoscope.

- **Surveillance Monitor**

Two (2) LCD TFT 15" colour monitors, 12vdc. Multi Standard with remote control

- **Video Cassette Recorder**

Two (2) Sanyo VHS time lapse recorder with built-in time date generator.  
Time Lapse Modes: 2/6/12/24 Hours, 12vdc

- **Main Auxiliary Patch Panel**

One (1) BNC video Input Jack  
One (1) BNC video Output jack  
One (1) RCA audio Input jack  
One (1) RCA audio Output jack

## TSE – 7000 Specifications

- **Integrated Audio System**

The TSE Audio Distribution System is a standard feature in our surveillance platforms and has the following functions:

- Four (4) audio inputs for:

- Specialist Intelligence Receiver
- Scanner Receiver
- Future Auxiliary Audio Inputs
- Future Auxiliary Audio Inputs

- Three (3) selectable audio outputs, which permit routing of any audio, input signals to:

- Audio Cassette Recorders
- Video Cassette Recorders
- External Auxiliary Speakers
- Auxiliary Audio Outputs

- Audio interface permits the audio outputs to be routed to the audio tracks of all connected recorders'.

**TSE – 7000            Vehicle Specifications**

The vehicle and its specifications described herein will be furnished and converted into a specialised surveillance platform. The vehicle will carry a Full Factory Warranty. Vehicle specifications may vary, state regulations and options.

- VEHICLE:**                    GMC, Toyota Hi Ace, Ford Transit, Mercedes Sprinter Special Export Version II (Bad Roads) or Mercedes Vito Or other van selected by the client.  
Current model year one-ton cargo van.
- ENGINE:**                    As fitted
- TRANSMISSION:**        OEM manual gearbox.
- STEERING:**                OEM Power steering assist.
- BRAKES:**                    OEM Power Brakes
- ENGINE COOLING SYSTEM:**    OEM Heavy Duty radiator and water pump.
- HEAVY DUTY SUSPENSION:**    OEM Heavy duty suspension package  
OEM rear suspension package  
OEM Heavy duty shock absorbers
- FUEL TANK:**                OEM Standard tank.
- AIR CONDITIONING:**        OEM Factory Air Conditioning, High Capacity, and Manual Controls. Front & Rear operation
- ENGINE BATTERY:**        OEM Factory standard maintenance free 72-ampere hour, 650 cold cranking amps.
- ALTERNATOR:**            OEM 130 amps or factory fitted
- INSTRUMENT PANEL:**    OEM Standard Fuel, Amp, Oil, and Water Temperature Gauges.
- HORN:**                        OEM Factory supplied.



### TSE-7000 Vehicle Specifications

<b>DOORS:</b>	With and without side windows optional. Rear doors standard windows fitted
<b>CIGARETTE LIGHTER:</b>	OEM Factory supplied
<b>WINDSHIELD WIPERS:</b>	OEM Factory High/Low speed, manual control.
<b>TYRES:</b>	OEM as Factory supplied or specials as option
<b>VEHICLE GLASS:</b>	OEM Fixed glass on side and rear doors, Tinted windshield & Cab doors.
<b>RADIO:</b>	OEM standard AM/FM Radio
<b>FRONT CAB SEATS:</b>	OEM Standard bucket seats colour matched to cab interior.
<b>SEAT BELTS:</b>	OEM Standard 3 point seat belts. Shoulder & waste harness.
<b>MIRRORS:</b>	OEM Standard
<b>SUNVISORS:</b>	OEM Standard
<b>GRILL &amp; BUMPERS:</b>	OEM standard painted grill & bumpers, front & rear
<b>WHEEL COVERS:</b>	OEM standard wheel covers
<b>HEATER &amp; DEMISTER:</b>	OEM standard heavy-duty heater & de-mister with fresh air intake
<b>PAINT COLOR:</b>	OEM Standard manufactures colours, <u>Customers choice.</u>
<b>RUST PROTECTION:</b>	The vehicle shall be undercoated to provide protection against rust and corrosion.

## TSE – 7000 Specifications

### Conversion and Equipment Summary

1. Current model Van as described in the vehicle specifications on pages 14 & 15
2. Surveillance conversion includes Floor, walls, front bulkhead, ceiling framing, and minimum of 50mm Polar insulation and equipment counters and cabinets. The Carpeting, Formica finishing, wiring in steel flexible conduit and junction boxes are provided. The interior lighting package includes (overhead florescent light, flexible gooseneck lights, red under counter lights, and ceiling aircraft style lights) with all necessary equipment and installation.
3. Auxiliary power system to include: Four AGM deep cycle batteries battery box, 160 amp Vanner isolator and relay, 50 amp gel cell pulsed battery charger, power control panel with engine kill switch, 220vac shore power indicator light.
4. Fixed front bulkhead wall with sliding entry and exit door, side door window disguises with video viewing ports, IR one-way removable Plexiglas inserts and lens boot.
5. One Main operator's control panel, this panel to control all surveillance equipment and systems of the operational compartment. This panel will also monitor the battery status and current draw of the operating equipment.
6. One Low Noise Air Conditioning System
7. One Captain's chair with swing-up armrests, adjustable back, 360-degree swivel base.
8. One, 1000 watt 12-vdc to 220-vac inverter & 50 amp Battery Charger with remote control battery status digital display indicator with push button selection.
9. One (2) Colour Black & White CCD low light camera
10. One (1) Retractable video scope with hand controller and mirror defog fan.
11. One (1) 16 to 160mm motorised video TV lens @ F1.8
12. One (1) 10 to 300mm motorised video TV lens

## TSE – 7000 Specifications

### Conversion and Equipment Summary Cont....

13. One (1) 2x Video Lens extender.
14. Two (2) LCD TFT 15" colour monitor, 12vdc.
15. Two (2) Sanyo, 2/6/12/24 Hour time-lapse recorder, 12vdc
16. Two (2) TSE wall mount brackets for the Manfronto Magic Arms.
17. One (1) four way composite video switcher.
18. One (1) R8500 Scanning Receiver
19. One (1) 1.5kg Multi purpose fire extinguisher
20. One (1) Tactical VHF Transceivers – Client supplied
21. One (1) Tactical UHF Transceiver – Client supplied
22. One (1) Tactical HF Transceiver – Client supplied
23. One (1) Covert Antenna System

### TSE – 7000 SURVEILLANCE VAN

- **Self-contained:** Fully operational disguised Command Control & surveillance van.
- **Easy to Operate:** Minimal amount of training required before the van Can be utilised by your operators.
- **Climate Control:** "Comfort For All Seasons" Air Conditioning and Optional heat.
- **Easily Installed:** Blends into any location without compromise.
- **Disguised Viewing:** Video and Photographic Viewing Ports.
- **Deep Cycle Battery:** "Maintenance, Vapour & Corrosion Free"
- **Antennas:** Polarised For Increased Clarity and Reception.
- **Easy Exit and Entry:** Swing-out rear doors.

**Built with Operator Safety in mind!**

## Section 1) TSE 7000 – OPTIONAL EQUIPMENT

The following Optional Equipment can be fitted into the vehicle at additional cost.

The quantities indicated are the maximum number that can be easily installed, should additional items be required please contact TSE to ensure there is enough power to operate all the equipment installed in the vehicle.

Item	Qty	Description
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### Video

01	01	Sony 2100SD Colour printer mounted at the command console work area and fully integrated into the platforms video system. (50) 3"x5" Prints per pack.
02	01	Maxi Beam 880 nanometre IR spotlight with remote & tripod base
03	01	TSE RV 2000A Video Audio Diversity Receiver
04	02	Microwave antennas to cover the range 350-450 MHz & 1.2 – 1.8 GHz
05	01	Cosmicar 12-240mm Auto Iris Zoom Lens, F1-1.6
06	01	Raymax 50x 21-1050mm Auto Iris Zoom Lens

### Communications

07	01	GSM cell phone plus data link
08	01	Provide space and install cabling and power for Clients Specialist Receiver

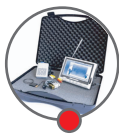
### Computer

09	01	Laptop Computer
10	01	Data transmission system using GSM, ISDN, PSTN, Data Transceivers, Inmarsat.
11	01	Intelligence database

### Monitoring

12	01	GA 900 GSM Monitoring System, covering 900 & 1800 MHz systems, complete with; integrated vehicle installation kit, EB200 Miniport Receiver and direction finding antennas.
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If you would like further Information about ELAMAN,  
or would like to discuss a specific requirement or project, please contact us at:

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