



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
ABCA20

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
SHELLY MURRAY 304-558-8801

VENDOR

*916100158 01 801-953-6700
 MPRI A DIVISION OF L3 SERVICES
 2961 WEST CALIFORNIA AVE
 SALT LAKE CITY UT 84104

SHIP TO

ALCOHOL BEVERAGE CONTROL
 COMMISSION
 322 70TH STREET, S.E.
 CHARLESTON, WV
 25304-2900 558-2487

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
08/19/2009				
BID OPENING DATE: 09/24/2009		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		035-47	\$133,500.00	\$133,500.00
<p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA ALCOHOL BEVERAGE CONTROL ADMINISTRATION, IS SOLICITING BIDS FOR AN ALCOHOL DRIVING SIMULATOR PER THE ATTACHED SPECIFICATIONS.</p> <p>TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING TO SHELLY MURRAY IN THE WEST VIRGINIA PURCHASING DIVISION VIA MAIL AT THE ADDRESS SHOWN AT THE TOP OF THIS RFQ, VIA FAX AT 304-558-4115, OR VIA EMAIL AT SHELLY.L.MURRAY@WV.GOV. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 09/09/2009 AT THE CLOSE OF BUSINESS. ALL TECHNICAL QUESTIONS RECEIVED, IF ANY, WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE.</p> <p>QUESTIONS CONCERNING THE ACTUAL PROCESS BY WHICH A VENDOR MAY SUBMIT A BID TO THE STATE OF WEST VIRGINIA ARE NOT CONSIDERED TO BE TECHNICAL QUESTIONS AND MAY BE SUBMITTED AT ANY TIME PRIOR TO THE RFQ OPENING AND IN ANY FORMAT.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p>						

RECEIVED

2009 SEP 22 A 10:17

PURCHASING DIVISION
STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Kathy Dobick</i>	TELEPHONE 703-664-2788	DATE 21 Sep 09
TITLE VP, Contracting & Proc	FEIN 95-2588754	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



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 Department of Administration
 Purchasing Division
 2019 Washington Street East
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 304-558-8801**

VENDOR

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BID OPENING DATE: **09/24/2009** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: SHELLY MURRAY</p> <p>RFQ. NO.: ABCA20</p> <p>BID OPENING DATE: 09/24/2009</p> <p>BID OPENING TIME: 1:30 PM</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: ATTN: Mike Flavin - 801-983-9901</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE *Kathy Dobick* TELEPHONE **703-664-2788** DATE **21 Sep 09**

TITLE **VP, Contracting & Proc** FEIN **95-2588754** ADDRESS CHANGES TO BE NOTED ABOVE

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CONTACT PERSON (PLEASE PRINT CLEARLY):						

Mike Flavin, Director of Municipal Sales						
Cell (801) 953-6700						
Office (801) 303-5666						
***** THIS IS THE END OF RFQ ABCA20 ***** TOTAL:						<u>\$133,500.00</u>

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE *Kathy Dobick* TELEPHONE 703-664-2788 DATE 21 Sep 09

TITLE VP, Contracting & Proc FEIN 95-2588754 ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

Request for Quotation

West Virginia Alcohol Beverage Control Administration

Alcohol Driving Simulator

Requisition Number: ABCA20

1.0 Scope and Classification:

- 1.1 Scope: The specifications are intended to cover all requirements for the design, purchase, training and installation of a driving simulator.
- 1.2 Scope of work: The simulator package will involve the building of the simulator, development of custom DUI scenarios, installation of software, and the installation of the simulator in trailer provided by the WV ABCA.

2.0 Specifications:

- 2.1 Successful bidder, hereafter "Installer" shall deliver a complete driving simulator with all software, provide related lesson plans, instructional materials, installation, labor, supervision, insurance, and planning necessary to provide the following:
 - 2.1.1 A driving simulator that will mimic the operation of a vehicle equipped with automatic transmission and that will allow for the manipulation of handling to mimic weather, road conditions, and driving at different levels of intoxication.
 - 2.1.2 Driver Compartment:
 - 2.1.2.1 The driving compartment will provide an adjustable driver's seat with seatbelt.
 - 2.1.2.2 The driving compartment will provide a steering column with a shifter, hazard light button, headlight knob, ignition and turn signals.
 - 2.1.2.3 The driving compartment will provide a dashboard with an instrument panel containing a speedometer, fuel gauge, temperature and oil gauge.
 - 2.1.2.4 The driving compartment will provide a front windshield monitor that will allow for input of visual driving conditions controlled by the provided software.
 - 2.1.2.5 The driving compartment will provide a right and left side window (the window will be installed at a slightly forward angle) that will allow for input of visual driving conditions controlled by the provided software.

2.1.2.6 The driving compartment will provide an accelerator pedal, brake pedal and emergency brake that simulate the operation of a real vehicle.

2.1.2.7 The driving compartment will be mounted on shock casters to allow for easy movement of the system.

2.1.3 Sound System:

2.1.3.1 The simulator will be equipped with speakers that will create surround sound.

2.1.3.2 The simulator sounds will mimic vehicle operation sounds heard within the cab of an actual vehicle.

- a) Engine sounds
- b) Transmission sounds
- c) Acceleration sounds
- d) Braking sounds

2.1.3.3 The simulator will mimic exterior road noises heard within the cab of an actual vehicle.

- a) Road surface (gravel, blacktop and dirt)
- b) Potholes
- c) Railroad tracks
- d) Speed bumps and curb contact

2.1.3.4 The Simulator will mimic exterior noises heard within the cab of an actual vehicle.

- a) Collisions
- b) Weather (wind, rain, thunder and ice)
- c) Emergency vehicle sirens
- d) Passing vehicles
- e) Car horns

2.1.4 Simulator Vehicle Control Programming:

2.1.4.1 The simulator will be equipped with a device that will cause the steering wheel to shake and vibrate mimicking the feel and the operation of an actual vehicle involved in the following situations.

- a) Collision
- b) Road surfaces
- c) Snow and ice
- d) Braking
- e) Skidding
- f) Rough roads and bumps

2.1.4.2 The simulator steering and braking will be controlled

by the programming software to allow for the following:

- a) Adjustment of reaction time to mimic the effects of higher BAC.
- b) Adjustment of reaction time to mimic the effects of adverse weather conditions.

2.1.5 Simulator Software:

- 2.1.5.1 The simulator software will allow the instructor to control the BAC level input which will affect the handling of the simulator controls.
- 2.1.5.2 The simulator software will allow the instructor to control the weather conditions experienced by the driver.
- 2.1.5.3 The simulator software will allow the instructor to change the lighting condition from daytime, nighttime, fog, rain or snow.
- 2.1.5.4 The simulator software will allow the instructor to control the driving terrain from mountainous to flat.
- 2.1.5.5 The simulator software will allow the instructor to control the driving environment from urban to rural.
- 2.1.5.6 The simulator software will be customized to reflect interstates, highways and streets found throughout West Virginia within the various DUI scenarios.
- 2.1.5.7 The simulator software will be programmed to allow for playback of a driving session upon completion of said session.
- 2.1.5.8 The simulator software will be designed to allow for future changes to programming by the manufacture at the request of the WV ABCA.
- 2.1.5.9 The simulator software will allow for upgrades and the additions of other simulator software, such as; emergency vehicle driver training if the agency desires to add this or like programs at a later date.

2.1.6 Instructor's Control Console:

- 2.1.6.1 The simulator will have an instructor's control console that will allow the instructor to enter scenarios and control external parameters, such as; weather, lighting conditions and BAC levels.
- 2.1.6.2 The simulator's instructor's control console will allow an instructor to convey radio dispatches to the driver.

- 2.1.6.3 The simulator's instructor's control console will allow the instructor to view the vehicles operation while the scenarios are in progress.
- 2.1.7 Shipping of Simulator:
- 2.1.7.1 The Installer will be responsible for shipping of the simulator to the WV ABCA.
- 2.1.7.2 The simulator shall be shipped to the following location:
WVABCA
500 River Road
Hub Industrial Park
Nitro, WV 25143
- 2.1.7.3 It shall be the responsibility of the installer to ensure that the simulator arrives at said location with no defects, damages and is in perfect working order.
- 2.1.8 Training and Instruction:
- 2.1.8.1 The Installer will provide sixteen (16) hours of training and instructions to a maximum of 10 employees.
- 2.1.8.2 The WV ABCA will provide the Installer with a list of the designated personnel to be trained prior to said training:
- 2.1.8.3 The installer will provide the training in Charleston, WV at a location provided by the WV ABCA.
- 2.1.9 Warranty:
- 2.1.9.1 The installer will provide a 1 year warranty on the simulator.
- 2.1.9.2 The Installer's warranty shall cover any and all repair(s) of the simulator and replacement(s) of any and all defective parts.
- 2.1.9.3 The installer will be responsible for any costs associated with repairs, such as; travel costs and shipping costs.
- 2.1.9.4 The Installer will be responsible for making any and all software or hardware upgrades.
- 2.1.9.5 The Installer will provide for over the phone technical support.
- 2.1.10 Extended Warranty:
- 2.1.10.1 The Installer will submit a pricing for an additional extended warranty.
- 2.1.10.2 The extended warranty will be broken down into a yearly fee for the duration of 2 years of extended coverage.
- 2.1.10.3 The extended warranty will provide for the repair of the simulator and any and all costs associated with such repairs, such

as; travel costs and shipping costs.

2.1.10.4 The extended warranty will include making any and all software or hardware upgrades.

2.1.10.5 The extended warranty will provide for over the phone technical support.

3.0 Acceptance and Testing Requirements:

3.1 The Installer shall meet the following stipulations prior to delivery of and payment for the simulator:

3.1.1.1 The Installer shall be a registered vendor with the State of West Virginia.

3.1.1.2 The Installer shall demonstrate that all simulator components, hardware, software and scenarios are in operational order.

3.1.1.3 The Installer will remain available to work through and troubleshoot any and all problems with the simulator and related simulator components, hardware, software and scenarios.

4.0 Delivery:

4.1 The Installer shall deliver the simulator and all related components, hardware, software and scenarios in no more than thirty (30) days upon award.

5.0 Billing:

5.1 The Installer shall divide the billing into separate categories, such as; simulator station, scenario software, customized software, instructor's control console, extended warranty and handling to accommodate for the WV ABCA's reimbursement from grant sources.

West Virginia Alcohol Beverage Control Administration
Alcohol Driving Simulator
ABCA20 Bid Schedule

Please list the pricing for all components of the simulator listed below:

Quantity	Description	Total Cost	
1	Driver Simulator Station	\$ 94,250.00	
1	Surround Sound System	\$ 0.00	
1	Driver's compartment with instruments and dashboard	\$ 0.00	
1	Simulator Software	\$ 7,500.00	
1	Custom Simulator Software	\$ 9,800.00	
1	Instructor's Control Console	\$ 3,750.00	
1	Shipping and Handling	\$ 3,250.00	
1	16 Hours of Training and Instruction	\$ Included	MPRI offers 22 hours of Training & Instruction
1	Extended two (2) year warranty	\$ 10,000.00	(\$5,000.00 per year, per simulator)
1	Installation in WV ABCA Trailer	\$ 5,000.00	(On site installation)
	TOTAL	\$133,500.00	

Vendor: MPRI, a Division of L-3 Services, Inc.

Signature: Kathy Sobuck

Date: 21 Sep 09

Rev. 09/08

State of West Virginia
VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
 Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3. **Application is made for 2.5% resident vendor preference for the reason checked:**
 Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4. **Application is made for 5% resident vendor preference for the reason checked:**
 Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6. **Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:**
 Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (*West Virginia Code*, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: MPRI, a Div of L-3 Services, Inc. Signed: Kathy Doback
 Date: 21 Sep 09 Title: VP, Contracting and Procurement

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code*. The vendor must make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the *West Virginia Code* and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the *West Virginia Code* may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: MPRI, a Division of L-3 Services, Inc.

Authorized Signature: *Kathy Sobick* Date: 21 Sep 09



TRAINING SYSTEMS GROUP
SIMULATIONS
2961 WEST CALIFORNIA AVENUE
SALT LAKE CITY UTAH 84104
PHONE: 801.953.9900 • FAX: 801.953.9901

18 September 2009

Shelly Murray
West Virginia Alcohol Beverage Control Administration
322 70th Street SE
Charleston West Virginia 25304

SUBJECT: MOBILE DRIVING SIMULATION SYSTEM BID NO. 09-092

MPRI Training Systems Group Simulations is pleased to provide you with this proposal for driving simulators for the West Virginia Alcohol Beverage Control Administration. Our simulators are best in class and are used by national and local government law-enforcement personnel throughout the United States. The proposal delivered with this letter meets all the training requirements of the invitation for bid.

MPRI Simulations Group looks forward to working with the government of West Virginia. If you require additional information or discussion, please contact me.

Sincerely,

Mike Flavin
Director of Municipal Sales
801.953.6700
michael.flavin@L-3com.com



Compliance Matrix

West Virginia Alcohol Beverage Control Administration
 Alcohol Driving Simulator
 Requisition Number: ARCA20

RFP section	Requirement	Compliance
1.0 Scope and Classification:		
1.1 Scope:	The specifications are intended to cover all requirements for the design, purchase, training and installation of a driving simulator.	
1.2 Scope of work:	The simulator package will involve the building of the simulator, development of custom DUI scenarios, installation of software, and the installation of the simulator in trailer provided by the WV ABCA.	comply
2.0 Specifications:		
2.1	Successful bidder, hereafter "Installer" shall deliver a complete driving simulator with all software, provide related lesson plans, instructional materials, installation, labor, supervision, insurance, and planning necessary to provide the following:	comply
2.1.1	A driving simulator that will mimic the operation of a vehicle equipped with automatic transmission and that will allow for the manipulation of handling to mimic weather, road conditions, and driving at different levels of intoxication.	comply
2.1.2 Driver Compartment:		
2.1.2.1	The driving compartment will provide an adjustable driver's seat with seatbelt.	comply
2.1.2.2	The driving compartment will provide a steering column with a shifter, hazard light button, headlight knob, ignition and turn signals.	comply
2.1.2.3	The driving compartment will provide a dashboard with an instrument panel containing a speedometer, fuel gauge, temperature and oil gauge.	comply
2.1.2.4	The driving compartment will provide a front windshield monitor that will allow for input of visual driving conditions controlled by the provided software.	comply
2.1.2.5	The driving compartment will provide a right and left side window (the window will be installed at a slightly forward angle) that will allow for input of visual driving conditions controlled by the provided software.	comply
2.1.2.6	The driving compartment will provide an accelerator pedal, brake pedal and emergency brake that simulate the operation of a real vehicle.	comply
2.1.2.7	The driving compartment will be mounted on shock casters to allow for easy movement of the system.	comply
2.1.3 Sound System:		
2.1.3.1	The simulator will be equipped with speakers that will create surround sound.	comply
2.1.3.2	The simulator sounds will mimic vehicle operation sounds heard within the cab of an actual vehicle.	comply
	a) Engine sounds	comply
	b) Transmission sounds	comply

RFP section	Requirement	Compliance
	c) Acceleration sounds	comply
	d) Braking sounds	comply
2.1.3.3	The simulator will mimic exterior road noises heard within the cab of an actual vehicle.	comply
	a) Road surface (gravel, blacktop and dirt)	comply
	b) Potholes	comply
	c) Railroad tracks	comply
	d) Speed bumps and curb contact	comply
2.1.3.4	The Simulator will mimic exterior noises heard within the cab of an actual vehicle.	comply
	a) Collisions	comply
	b) Weather (wind, rain, thunder and ice)	comply
	c) Emergency vehicle sirens	comply
	d) Passing vehicles	comply
	e) Car horns	comply
2.1.4	Simulator Vehicle Control Programming:	comply
2.1.4.1	The simulator will be equipped with a device that will cause the steering wheel to shake and vibrate mimicking the feel and the operation of an actual vehicle involved in the following situations.	comply
	a) Collision	comply
	b) Road surfaces	comply
	c) Snow and ice	comply
	d) Braking	comply
	e) Skidding	comply
	f) Rough roads and bumps	comply
2.1.4.2	The simulator steering and braking will be controlled by the programming software to allow for the following:	comply
	a) Adjustment of reaction time to mimic the effects of higher BAC.	comply
	b) Adjustment of reaction time to mimic the effects of adverse weather conditions.	comply
2.1.5	Simulator Software:	
2.1.5.1	The simulator software will allow the instructor to control the BAC level input which will affect the handling of the simulator controls:	comply
2.1.5.2	The simulator software will allow the instructor to control the weather conditions experienced by the driver.	comply
2.1.5.3	The simulator software will allow the instructor to change the lighting condition from daytime, nighttime, fog, rain or snow.	comply

RFP section	Requirement	Compliance
2.1.5.4	The simulator software will allow the instructor to control the driving terrain from mountainous to flat.	comply
2.1.5.5	The simulator software will allow the instructor to control the driving environment from urban to rural.	comply
2.1.5.6	The simulator software will be customized to reflect interstates, highways and streets found throughout West Virginia within the various DUI scenarios.	comply
2.1.5.7	The simulator software will be programmed to allow for playback of a driving session upon completion of said session.	comply
2.1.5.8	The simulator software will be designed to allow for future changes to programming by the manufacture at the request of the WVABCA.	comply
2.1.5.9	The simulator software will allow for upgrades and the additions of other simulator software, such as; emergency vehicle driver training if the agency desires to add this or like programs at a later date.	comply
2.1.6 Instructor's Control Console:		
2.1.6.1	The simulator will have an instructor's control console that will allow the instructor to enter scenarios and control external parameters, such as; weather, lighting conditions and BAC levels.	comply
2.1.6.2	The simulators instructor's control console will allow an instructor to convey radio dispatches to the driver.	comply
2.1.6.3	The simulator's instructor's control console will allow the instructor to view the vehicles operation while the scenarios are in progress.	comply
2.1.7 Shipping of Simulator:		
2.1.7.1	The Installer will be responsible for shipping of the simulator to the WV ABCA.	comply
2.1.7.2	The simulator shall be shipped to the following location: WVABCA 500 River Road Hub Industrial Park Nitro, WV 25143	comply
2.1.7.3	It shall be the responsibility of the Installer to insure that the simulator arrives at said location with no defects, damages and is in perfect working order.	comply
2.1.8 Training and Instruction:		
2.1.8.1	The Installer will provide sixteen (16) hours of training and Instructions to a maximum of 10 employees.	exceed; MPRI offers 22 hours or 2.5 days of training
2.1.8.2	The WV ABCA will provide the Installer with a list of the designated personnel to be trained prior to said training.	comply
2.1.8.3	The installer will provide the training in Charleston, WV at a location provided by the WV ABCA.	comply
2.1.9 Warranty:		
2.1.9.1	The installer will provide a 1 year warranty on the simulator.	comply
2.1.9.2	The Installers warranty shall cover any and all repair(s) of the simulator and replacement(s) of any and all defective parts.	comply

RFP section	Requirement	Compliance
2.1.9.3	The Installer will be responsible for any costs associated with repairs, such as; travel costs and shipping costs.	comply
2.1.9.4	The installer will be responsible for making any and all software or hardware upgrades.	comply
2.1.9.5	The Installer will provide for over the phone technical support.	comply
2.1.10 Extended Warranty:		
2.1.10.1	The Installer will submit a pricing for an additional extended warranty.	comply
2.1.10.2	The extended warranty will be broken down into a yearly fee for the duration of 2 years of extended coverage.	comply
2.1.10.3	The extended warranty will provide for the repair of the simulator and any and all costs associated with such repairs, such as; travel costs and shipping costs.	comply
2.1.10.4	The extended warranty will include making any and all software or hardware upgrades.	comply
2.1.10.5	The extended warranty will provide for over the phone technical support. '	comply
3.0 Acceptance and Testing Requirements:		
3.1	The Installer shall meet the following stipulations prior to delivery of and payment for the simulator:	comply
3.1.1.1	The Installer shall be a registered vendor with the State of West Virginia.	comply
3.1.1.2	The Installer shall demonstrate that all simulator components, hardware, software and scenarios are in operational order.	comply
3.1.1.3	The Installer will remain available to work through and troubleshoot any and all problems with the simulator and related simulator components, hardware, software and scenarios.	comply
4.0 Delivery:		
4.1	The Installer shall deliver the simulator and all related components, hardware, software and scenarios in no more than thirty (30) days upon award.	comply
5.0 Billing:		
5.1	The Installer shall divide the billing into separate categories, such as; simulator station, scenario software, customized software, instructor's control console, extended warranty and handling to accommodate for the WV ABCA's reimbursement from grant sources.	comply

09-MF-0116B
RFP ABCA20



PROPOSAL & TECHNICAL DESCRIPTION—

PatrolSim™ IV Driving Simulator

Attn: Shelly Murray
West Virginia Alcohol Beverage
Control Administration
322 70th Street SE
Charleston, WV 25304
304-558-8801

MPRI a Division of L-3 Services, Inc.
2961 West California Ave.
Salt Lake City, Utah
USA 84104

Phone 801-983-9900
Fax 801-983-9901

www.mpri.com



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1 Contract Overview

The contract resulting from this proposal shall not be binding upon MPRI a Division of L-3 Services, Inc. ("MPRI") until executed and returned by MPRI's authorized representative. If a copy of this customer executed Proposal is not returned within ten days of the date of **West Virginia Alcohol Beverage Control Administration** execution of this Proposal, such Proposal shall be deemed null and void.

Acceptance of the above terms represents a contract between the Client and MPRI. Any changes to the above referenced terms must be made in writing and accepted by MPRI in writing.

MPRI driver division has an uncompromising commitment to the highest standards of ethics and integrity, conforming without exception or equivocation to both the letter and the spirit of the law.

Respectfully Submitted,

**Michael Flavin
Director Municipal Sales
MPRI a Division of L-3 Services, Inc.**

ACCEPTED BY:

Signature

Name:

Title:

Organization:

Date:

Tax ID #:

ACCEPTED BY:

Signature

Name:

Title:

Organization:

Date:

**MPRI a Division of L-3
Services, Inc.**

**West Virginia Alcohol Beverage
Control Administration
MPRI PatrolSim™**

1.1 Simulation Equipment Pricing

Customer: West Virginia Alcohol Beverage
Control Administration

Customer Location: Charleston, WV

Delivery: Within 30 days after receipt of order and acceptance by MPRI of
Client's purchase order (Contingent on factory lead times at the time
of the order) per RFP guidelines.

Shipment / Insurance: Shipment F.O.B. Destination / Client's Responsibility upon
Acceptance.

Terms and Conditions: Refer to Terms and Conditions.

Pricing Valid Through: 11/18/2009

Simulation Equipment				
Qty	Description	Units	Unit Price	Total Price
1	PatrolSim™ PS IV Driver Training Simulator(s) with: EVP Scenario Package, and Skills Range.	Each	\$ 94,250	\$ 94,250
1	Operator console (OpCon) plus accessories.	Each	\$ 3,750	\$ 3,750
1	VON Radio.	Each	included	included
1	Rabbit station (at OpCon).	Each	included	included
1	Shipping and handling.	Each	\$ 3,250	\$ 3,250
1	Installation. No charge if coincident with training.	Each	included	included
1	Scenario Studio software & training (customer site).	Each	included	included
1	Product training at customer site for up to 4-6 attendees. No charge if conducted at MPRI.	Each	included	included
1	One-year full service warranty.	Each	included	included
Options				
0	Replay Studio.	Each	\$ 15,000	\$ -
0	Omni Sim™ package including TranSim™ VS IV driving station and standard software.(Fire Insert)	Each	\$ 35,000	\$ -
1	Custom DUI scenarios--To be designed by the customer and MPRI--Package of 5 scenarios	Each	\$ 4,900	\$ 4,900
1	Custom DUI scenarios--To be designed by the customer and MPRI--Package of 5 scenarios	Each	\$ 4,900	\$ 4,900
0	Fully self contained 24 ft trailer. Trailer shipping to customer site is not included into the price	Each	\$46,500	\$0
1	Mobile installation per MPRI specifications at the customers site	Each	\$ 5,000	\$ 5,000
1	EVP 2 scenario package.	Each	\$ 5,000	\$ -
0	EMS package including scenarios.	Each	\$ 5,000	\$ -
0	PIT Manuever package including scenarios.	Each	\$ 5,000	\$ -
1	EVOC 101 software with Lesson Plan (Straight Through Intersections) (Simulator Software)	Each	\$ 4,900	\$ 4,900
1	EVOC 101 software with Lesson Plan (Straight Through Intersections) (Simulator Software)	Each	\$ 2,600	\$ 2,600
0	Custom logo graphics.	Each	\$ 2,500	\$ -
0	Custom vehicle dynamics model.	Each	\$ 5,000	\$ -
0	Fire Truck package including scenarios.	Each	\$ 5,000	\$ -
0	Snowplow vehicle package including scenarios.	Each	\$ 5,000	\$ -
Full Service Warranty Extensions				
0	One (1) year extension per simulator.	Year	\$ 5,000	\$ -
0	Two (2) year extension per simulator.	Year	\$ 10,000	\$ 10,000
0	Three (3) year extension per simulator.	Year	\$ 15,000	\$ -
Total Price Before Sales Tax *				\$ 133,550
<i>* Invoice sent will reflect Country, State and/or County taxes that are applicable.</i>				

West Virginia Alcohol Beverage
Control Administration
MPRI PatrolSim™

1.2 Terms and Conditions

This Proposal is subject to the following terms and conditions:

1. Contract Formation:

If this instrument is a quotation, whether or not responsive to a request from **West Virginia Alcohol Beverage Control Administration** (hereinafter "Client"), it constitutes the offer of MPRI a Division of L-3 Services, Inc. (hereinafter "MPRI") to the Client, and becomes a binding contract under the terms and conditions set forth herein when the Client accepts it. However, any such acceptance shall be valid only if made within thirty days of the date of this instrument or such other time period specified herein. If this instrument is an acknowledgment, it constitutes MPRI's acceptance of the Client's order, subject, however, to the terms and conditions set forth herein. Upon the creation of a contract, this instrument will recite the entire agreement between the parties with respect to the goods, equipment or services being purchased, and shall supersede any other agreement, writing or understanding whether made before or after the date of this instrument. MPRI's contractual obligations are expressly limited to the terms contained herein. The inclusion of any different or additional terms in any other instrument is objected to, and performance by MPRI shall occur with the express understanding that only the terms and conditions recited herein shall control.

2. Payment Terms:

- a. All payments are to be paid to MPRI and submitted to the following address:
MPRI a Division of L-3 Services, Inc., 1320 Braddock Place, ATTN: Finance, Alexandria, VA 22314-1694.
- b. Payments may also be wired directly to:
Bank Name: JP Morgan Chase Bank, N.A.
Bank Address: Chicago, IL
ABA (ACH): 071000013
Routing (Domestic Wire): 021000021
Swift (Intl): CHASUS33
Beneficiary: MPRI
Account #: 11-00437.
- c. All payments are to be made in U.S. dollars and without expense to MPRI.
- d. Client agrees to pay any expenses incurred in collecting any unpaid balance of the purchase price, or in recovering possession of goods including reasonable attorney's fees.
- e. Full payment shall be received net 30 days from shipment.

3. Packing and Shipping:

- a. Packing and shipment shall be in accordance with good commercial practice.
- b. MPRI will ship to client's broker at U.S. border. Where applicable, client is responsible for broker fees and all other arrangements necessary to have product delivered to customer site.

4. Delivery and Title:

- a. Title must pass at the time of shipment from MPRI, which is also the time the Client becomes obligated for their payment liability to MPRI.
- b. Under no circumstances shall MPRI have any liability whatsoever for delays, loss of use, or for any indirect or consequential damages arising from any delay or loss of use.
- c. MPRI shall not be responsible for the failure to perform any obligation arising hereunder due to events beyond its control. These events shall include, but are not limited to, fire, storm, flood, earthquake, explosion, accidents, acts of public enemy, sabotage, strikes,

**West Virginia Alcohol Beverage
Control Administration
MPRI PatrolSim™**

labor disputes, labor shortages, work stoppages, transportation embargoes or delays, failure or shortage of materials or machinery used by MPRI in the manufacture of the goods supplied hereunder, acts of God, failure of suppliers or subcontractors, to satisfactorily meet scheduled deliveries, and acts or regulations or priorities of the Federal, State, or local government or branches or agents thereof, government contracts or shipments to purchasers to fulfill government contracts.

- d. No claim for shortage in packaging shall be allowed unless reported to MPRI, in writing, within ten days after receipt of goods.

5. Patents, Copyrights, Trade Secrets and Other Intellectual Property:

- a. *The Client shall not receive, as a result of the sale of goods hereunder, any right or license of any kind under any patent or copyright or with respect to any trade secret or other intellectual property owned or controlled by MPRI or under which MPRI may be licensed, except that the Client may use the technology or software and visual databases for their own internal use only. **Software and visual databases are restricted to use only on MPRI delivered systems, and may not be distributed to or utilized on other systems at Client's facility, or to other parties except as facilitated and approved by MPRI in writing.***

6. Limitation of Liability:

- a. Neither party shall be liable to the other pursuant to this Agreement for any amounts representing loss of profits, loss of business or indirect, consequential, exemplary, or punitive damages of the other party.

7. Mutual Indemnification:

- a. MPRI agrees, to the fullest extent permitted by law, to indemnify and hold harmless Client from and against any liabilities, damages, and costs (including reasonable attorneys fees and cost of defense) arising out of the death or bodily injury to any person or the destruction or damage to any property, to the extent caused, during performance of services under this Agreement, by the negligent acts, errors and omissions of MPRI or anyone for whom MPRI is legally responsible, [subject to the limitations set forth in the Limitation of Liability article of this Agreement]. This indemnification expressly disclaims any liability on the part of MPRI to Client for claims against Client that arise from circumstances or events, or acts or omissions to act by Client's customers, outside of the time during which such customers receive training on MPRI's simulators.
- b. The Client agrees, to the fullest extent permitted by law to indemnify and hold harmless MPRI, its officers, directors, principals, and employees, from any liabilities, damages, and costs (including reasonable attorneys fees and cost of defense) to the extent caused by the negligent acts, errors or omissions of Client, Client's contractors, Client or anyone for whom Client is legally responsible.

8. Information, Data and Design:

- a. Any proposals, prints, brochures, drawings, designs, data or other information furnished to the Client by MPRI before, after, or contemporaneously with the execution of this Contract shall remain the property of MPRI, shall be used by the Client solely for its own internal purposes and not to the detriment of MPRI's competitive position, and shall be kept confidential by Client using the same standard of care that it uses with respect to its own proprietary information, but in no event less than a reasonable standard of care. When given, all such proposals, performance and production projections, prints, brochures, drawings, designs, data and other information are based on MPRI's knowledge and understanding, but are, in all events, estimates only and are not guaranteed or warranted in any respect. Any design information provided by MPRI shall

not constitute an assumption of design responsibility unless otherwise expressly assumed by MPRI in writing. MPRI's technology, software, and visual databases contain production and design concepts and technologies proprietary to MPRI and its suppliers. Client agrees not to reverse-engineer for others or its own use or disclose to other parties any concepts and techniques revealed to it through the use or evaluation of MPRI's systems.

9. Cancellation of Contract:

- a. Under no circumstances may the Client cancel his obligations under this Contract. Any attempt to do so will entitle MPRI, at its sole discretion, to either (a) recover all direct, indirect, and consequential damages arising by reason of such attempted cancellation, or retain as liquidated damages any Client deposit made under this Contract.

10. Applicable Law:

- a. In the event of a dispute regarding any terms or conditions contained herein, the parties agree that the laws of the Commonwealth of Virginia will control.

11. Assignments:

- a. The Client shall not delegate or assign any of its rights, duties, or responsibilities in and to this Contract or any interest arising hereunder without the prior written consent of MPRI.

12. Waivers:

- a. Waiver by MPRI of any breach of any provisions in this Contract, or its failure to exercise any right shall not be construed as a waiver of any other breach, or a waiver to exercise any other right.

13. Default:

- a. If the Client fails to pay any invoice when due, or fails to accept shipments as scheduled, or any representation or warranty made by Client in connection herewith is false or misleading in any material respect, MPRI may, at its option and without prejudice to other remedies, either defer further shipments until the default is corrected or cancel MPRI's remaining obligations under this Contract.

14. Client represents and warrants that:

- a. Client is not and shall not be, and no person who owns a controlling interest in or otherwise controls Client is or shall be, (i) listed on the Specially Designated Nationals and Blocked Persons List maintained by the Office of Foreign Assets Control ("**OFAC**"), Department of the Treasury, and/or on any other similar list maintained by OFAC pursuant to any authorizing statute, Executive Order or regulation (collectively, "**OFAC Laws and Regulations**"), (ii) a "Designated National" as defined in the Cuban Assets Control Regulations, 31 C.F.R. Part 515, (iii) a person designated under Section 1(b), (c) or (d) of Executive Order No. 13224 (September 23, 2001), any related enabling legislation or any other similar Executive Orders (collectively, the "**Executive Orders**"), provided however, that none of the foregoing shall apply to any person or entity to the extent that his or its interest is in or through a U.S. Publicly-Traded Entity; and Client is in compliance with all OFAC Laws and Regulations, Executive Orders and related government guidance;
- b. Neither Client nor any holder of a direct or indirect interest in Client (i) is under investigation by any governmental authority for, or has been charged with, or convicted of, money laundering (18 U.S.C. Sections 1956 and 1957), or drug trafficking, terrorist-related activities or other money laundering predicate crimes or a violation of the Bank Secrecy Act laws (31 U.S.C. Sections 5311, et. seq.), (ii) has been assessed civil penalties under these or related laws (collectively, "**Anti-Money Laundering Laws**"), or

(iii) has had any of its funds seized or forfeited in an action under Anti-Money Laundering Laws.

- c. Client will make or cause to be made, all payments to MPRI by check or wire transfer drawn on a U.S. bank account in the name of Client or of a third party approved in writing in advance by MPRI;
- d. Client's tax identification number and organization number, if applicable, are as set forth under its signature block on the signature page. All evidence of identity provided by Client to MPRI is genuine, and all related information is accurate.
- e. The person who executed the offer, which this instrument accepts, or who will execute the Client's acceptance of the offer contained in this instrument, has duly executed the relevant documents on behalf of the Client, and is duly authorized to so act.

15. Disclosure:

- a. Client consents to the disclosure to U.S. regulators and law enforcement authorities by MPRI or any of its affiliates or agents of such information about Client that MPRI reasonably deems necessary or appropriate to comply with applicable U.S. Anti-Money Laundering Laws and anti-terrorists laws and regulations and OFAC Law and Regulations.

16. Compliance with U.S. Export Regulations:

- a. The Client is hereby placed on notice that the technical data or hardware furnished with this quotation/Contract may relate to articles controlled by the US Government for export and may, therefore, be subject to export licensing requirements and limitations on disclosure or shipment to foreign nationals under U.S. Law. Federal, criminal and civil penalties may result from any violation of these export provisions. Client indemnifies MPRI from any breach of such requirements and laws following Client's receipt of export controlled data or hardware.

1.3 Full Service Warranty

FULL SERVICE WARRANTY CONTRACT

MPRI a Division of L-3 Services, Inc. ("MPRI"), with its headquarters located at 1320 Braddock Place, Alexandria, VA 22314-1694 and **West Virginia Alcohol Beverage Control Administration** ("Client") enter into this Full Service Warranty Contract (the "Contract") for the support of MPRI's Simulator products (referred to collectively as "Product" herein) beginning on the Coverage Start Date set forth below.

Subject to the terms and conditions of this Contract, MPRI agrees to provide the following support services with respect to MPRI's Simulator Products contained herein:

- o Repair or replacement of defective parts & components.
- o The costs for shipping parts out and bringing them back from the Client's location.
- o On-Site field service support for labor and repairs.
- o Toll Free Customer Service Phone Support 24 hrs a day, 7 days a week (1-800-595-5740).
- o Remote diagnostics via modem (Client must provide voice and modem phone lines at the simulator).
- o Software and hardware updates are included as defined in paragraph 5.

In consideration of the mutual agreement as set out in this Contract, the parties hereby agree as follows.

1. **Price of the Full Service Warranty Agreement:**

- Year (1) one – included with purchase of simulator
- Year (2) two – \$5,000 per simulator per year
- Year (3) three – \$5,000 per simulator per year
- Year (4) four - \$5,000 per simulator per year

If extended warranty is not purchased coincident with simulator purchase, warranty for the following year must be paid no later than thirty (30) days prior to the expiration of the current commitment.

2. **Coverage Start and Expiration Dates:** Coverage starts on the installation date and expires <<fill in the number of years>> years (up to a maximum of 4 years) after the installation date.
3. **Requesting Service and Service Hours:** To request service, Client shall call **1-800-595-5740**, 24 hours a day, seven days a week.
4. **Trouble Shooting and Repair:** When Client calls MPRI regarding a technical problem with their simulator, the Client and Customer Service technician will troubleshoot the problem. It is the responsibility of the Client to maintain a data (modem) and voice phone line at the simulator(s) to diagnose the problem. Once the simulator has been diagnosed over the phone and the failure determined, MPRI will ship replacement part(s). When the part(s) are received, the Client will call MPRI Customer Service (800-595-5740) to receive telephone assistance to repair of their simulator. This process enables the simulator to be repaired as quickly as possible.

If the simulator is not repairable by the Client with the assistance of the MPRI technician via telephone, then MPRI will schedule a Field Service Engineer to visit the Client's site to repair and service the simulator within 10 days. MPRI shall bear all travel-related costs (e.g., airfare, rental car, gas, lodging and

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meals) it incurs with respect to this Contract. On-site service will be provided during Normal Business Hours at Client's address. MPRI will determine the need for the on-site visit.

If the Client requests Emergency Service, defined as service provided at the Client's location within less than 10 days of the Client's request, Client agrees to pay an Emergency Service Fee to MPRI. If Emergency Service is requested within ninety (90) days of product installation, Priority Service will be provided within one (1) week and the emergency service fee waived.

After the simulator has been repaired, the Client will return the defective part(s) and any other unused part(s) within ten (10) business days to MPRI using the instructions and return shipping labels provided. If the part(s) are not received at MPRI within ten (10) business days after the problem has been resolved, the Client will be billed for the cost of the part(s).

Carry-in Service - Periodically, Client's Product may need to be removed and repaired at a MPRI authorized repair center, in which case, Client is responsible for delivering the product to and from the MPRI authorized repair center. If "carry-in" service is required or requested by Client, Client is responsible for delivering its product to and from the authorized repair center.

5. **Moving Your Covered Product to a New Location in the USA:** Client may change its service address at any time by notifying MPRI in writing at the address set forth above. Damage incurred by moving Client's covered product is not covered under this Contract, unless the move is managed by MPRI. Cost of an MPRI-managed move is not covered under this contract.
6. **Updates:** Software and hardware updates will be defined by MPRI. These updates will be provided free of charge to the Client.
7. **Upgrades:** Software and Hardware upgrades will be defined by MPRI. These upgrades will be available for purchase and installation upon request and are subject to availability.
8. **Service Contract Cancellation:**
MPRI may cancel this Contract if any of the Client's obligations, agreements or promises contained in this Contract are breached, in which case, Client will be refunded a pro-rata amount of the Contract price, less (1) the Administrative Fee, and (2) the costs incurred by MPRI in making any repairs and/or rendering any service pursuant to this Contract, and (3) any other costs or expenses incurred by MPRI on account of such breach.
9. **Service Contract Limitations:**
 - a. **Renewals** - MPRI is not obligated to renew this Contract.
 - b. **Non-Original Manufacturer and Re-Manufactured Parts** - Genuine factory parts will be used whenever possible, however, only MPRI authorized use of non-original manufacturer and re-manufactured parts is allowed under this Contract.
 - c. **Limitation of Liability** - To the extent permitted by applicable law, the liability of MPRI, if any, for any allegedly defective covered Product or part(s) shall be limited to repair or replacement of the Product or part(s) at MPRI's option. **However, if MPRI, at its sole discretion, determines that a Product, which it is otherwise required to be repaired or replaced pursuant to this Contract, is not repairable or replaceable (which includes when the Product or parts are no longer available), then MPRI shall either provide Client with a similar product (on terms and conditions acceptable to Client and MPRI) to replace the defective Product, or give Client the right to cancel this Contract and receive, as Client's sole and exclusive remedy, a pro-rata refund of the purchase price of this Contract (with no deduction for any Administrative Fee or for repairs already rendered by MPRI). In any event, to the extent permitted by applicable law, the maximum liability of MPRI, if any, for damages relating to**

or resulting from any defective covered Product or part(s) or MPRI's failure to perform its obligations under this Contract with respect to such Product or part(s) shall be an amount equal to your purchase price for such Product or part. **IN NO EVENT SHALL MPRI BE LIABLE FOR ANY LOSS OF PROFITS OR REVENUE RESULTING FROM ANY DEFECT OR MALFUNCTION OF THE PRODUCT OR LOSS OF USE THEREOF. TO THE EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT WILL MPRI BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES RELATING DIRECTLY OR INDIRECTLY TO THE PRODUCT OR THIS CONTRACT OR ANY ACTION TAKEN IN CONNECTION THEREWITH. AS OF THE COVERAGE START DATE, THE WARRANTIES AND REMEDIES PROVIDED TO CLIENT UNDER THIS CONTRACT IS THE ONLY WARRANTIES AND REMEDIES WITH RESPECT TO THE COVERED PRODUCT. ALL OTHER WARRANTIES AND REMEDIES, WHETHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR CONFORMANCE TO CLIENT'S SPECIFICATIONS ARE HEREBY EXCLUDED AND DISCLAIMED.**

10. What is NOT Covered Under This Contract:

- a. Repair or replacement of Product(s) or parts upon Client's noncompliance with any part of this agreement.
- b. Coverage, components, products or items not specifically listed herein, or Products whose serial numbers have been removed or altered.
- c. Any loss, damage or failure of any components or peripherals not installed by MPRI, an authorized representative of MPRI or under the direction of MPRI.
- d. Any loss, damage or failure resulting from improper use, storage or operation.
- e. Consumer replaceable items, including but not limited to batteries, tapes, ribbons, bulbs, air filters, fuses, belts, etc.
- f. Loss, damage or failure resulting from unauthorized repairs, additions, or modifications performed by Client or third parties.
- g. Any loss, damage or failure of the cabinet, housing, case or frame of the Product or any non-operating part, such as any plastic or decorative parts masks, or glass.
- h. Any loss, damage or failure caused by conditions beyond MPRI's control, such as normal wear and tear, inadequate plumbing, wiring or electrical/power supply, power surge, rust, corrosion, infestation, negligence, abuse, misuse, theft, vandalism, acts of God, environmental conditions (e.g., fire, floods, sand, dirt, windstorm, hail, earthquake, or exposure to weather conditions), failure to follow MPRI's recommended maintenance, leaking batteries, excessive humidity or dampness.
- i. Any loss, damage or failure of any software (other than software manufactured by MPRI).
- j. Service outside of the United States and Canada is not covered. Coverage outside the US and Canada is limited to telephone support ONLY; replacement parts, shipping, taxes, duties, etc are not covered under the provisions of this contract's

11. Your Promises and Assurances: In order for this Contract to remain in full force and effect during its term, Client promises and assures to: (1) fully cooperate with MPRI, MPRI technicians and authorized representatives during diagnosis and repair of the Product, (2) make the Product accessible to MPRI; (3) provide a non-threatening and safe environment for MPRI's on-site technicians, (4) provide the presence of a responsible person during the service, (5) Report any problem or defect associated with the Product promptly upon Client's discovery of such defect or problem to the customer service department. (1-800-595-5740), (6) return, at MPRI's expense, failed part(s) within 10 business days, and (7) maintain in good operating condition (at Client site) the telecommunication (Voice and Modem Phone) lines/equipment required by MPRI for compatibility with the telecommunication equipment and software at MPRI's facility for support under this Contract.

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12. **Governing Law; Attorneys' Fees:** This Contract shall be governed by and construed by the laws of the Commonwealth of Virginia. This Contract is articulated in and governed by the English language.

13. **General:**

a. **Entire Agreement.** *This Contract constitutes the entire agreement and understanding between the Client and MPRI with respect to the subject matter of this Contract. No variation or modification to this Contract or any waiver of any of its provisions or conditions shall be valid unless in writing and signed by an authorized representative of each Party. In the event there is any variance between the terms of any order submitted by the Client and the terms and conditions of this Contract, the terms and conditions of this Contract shall prevail.*

b. **Notices.** Any notices or consents permitted or required pursuant to this Contract will be in writing and shall be delivered by one of the following methods; (i) in person, (ii) by first class, certified mail, (iii) by commercial courier, or (iv) by facsimile transmission to the other party at the address set forth on the cover page of this Contract or such substitute address as either party may specify for itself by written notice. The notice will be deemed to have been given when received. All notices and communications between the parties concerning anything relating to this Contract or its subject matter shall be in the English language.

c. **Headings.** Section and paragraph headings used herein are for convenience only and shall not be used to affect, broaden or limit this Contract.

d. **Unenforceable Provisions.** If any term or provision of this Contract shall be found to be illegal or unenforceable, then notwithstanding, this Contract shall remain in full force and effect, and such term or provision will be stricken, provided that in such event the parties agree to negotiate in good faith substitute enforceable provisions which most nearly effect the parties' intent in entering into this Contract.

e. **Relationship.** Neither Party is the partner, joint venture, agent or representative of the other Party. The Client is an independent contractor. There is no employment relationship between the Parties. Neither party has the authority to make representations or warranties or incur any obligations or liabilities on behalf of the other party. Neither party shall make any representation to a third party inconsistent with this paragraph.

f. **Construction.** This Contract represents the wording selected to define this Contract and no rule of strict construction shall apply against either party. Whenever the context reasonably permits, the singular shall include the plural, the plural shall include the singular, and the whole shall include any part thereof.

g. **Assignment.** The Client shall not delegate or assign any of its rights, duties, or responsibilities in and to this Contract or any interest arising hereunder without the prior written consent of MPRI.

h. **Successors.** This Contract shall be binding upon and inure to the benefit of the successors and approved assignees of either party.

i. **Confidentiality of Contract.** Except in connection with an assignment permitted pursuant to g. above, Client shall not disclose any terms or conditions of this Contract relating to price or fees to any third party or transfer a copy of this Contract to any third party.

j. **Force Majeure.** MPRI shall not be responsible for a default, delay or failure to perform hereunder if such default, delay or failure to perform is due to causes beyond MPRI's control, including, but not limited to, labor disputes, civil disturbances, actions or inactions of governmental authorities, epidemics, war, embargoes, fire, acts of God, or default of common carrier or supplier.

14. **Maintenance Agreement:**

At the end of this Full Service Warranty Contract, Client has the option to purchase a Full Service Warranty extension or Maintenance Agreement for one (1) additional year. The renewal contract must be purchased thirty (30) days or more prior to warranty expiration. If this Contract has lapsed in accordance with the Contract, Client agrees to pay an evaluation fee to assess the condition of the simulator and to conduct repairs to attempt bringing it up to full operating condition. However, MPRI shall not be obligated to reinstate coverage.

2 PatrolSim™ Technical Description

2.1 Introduction

The PatrolSim™ IV driving simulator provides the features and functionality required to support basic and advanced driver training through the practice of improving critical driving skills and decision making. The PatrolSim™ IV comes complete and ready for training with its driver compartment, reconfigurable instrument panel, high-resolution display system, driver controls, and software.

1024x768 pixel resolution, highest possible using plasma displays.

Highest update & refresh rate available in the industry.

Certified to appropriate safety (CSA US) & electrical emissions (FCC) standards.

Over 100 moving vehicles & pedestrians, industry best.

High fidelity vehicle dynamics models validated using actual vehicle performance.

Reconfigurable LCD glass dash and touch panel.

- High component reliability
- due to stress testing (over 1,000,000 cycles).

2.2 Software

The PatrolSim™ runs on MPRI's proven driving simulation software platform while maximizing use of commercial and non-developmental software programs. The Microsoft Windows XP operating system is used for both the simulator and instructor station. The advantages of utilizing Microsoft Windows XP include:

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- Flexibility – Windows XP provides a built in security system which can be integrated with existing IT infrastructure.
- Maintainability – IT personnel already familiar with Windows can provide maintenance for the system as software updates are routinely provided by Microsoft.
- Reusability – computers utilized by the PatrolSim™ are interchangeable with standard desktop computers. Third party software programs can easily be loaded to enhance the capabilities of the simulator and IS station.
- Minimized life-cycle support costs – the PatrolSim™ software is forward compatible with future versions of Microsoft Windows.
- Automatic detection of hardware and prompts for input media – hardware can be upgraded with standard PC components. Windows provides automatic detection and driver configuration.

In addition to Microsoft Windows XP, the PatrolSim™ utilizes Microsoft SQL Server for student data management and PC Anywhere for remote diagnostics.

2.3 Overall Hardware and Frame Specification

Specification	Description
Size	116 inches wide, 63 inches deep and 80 inches high
Weight	Each simulator weighs approximately 1100 pounds.
Shroud	The simulator frame includes a shroud to manage ambient light.
Casters/Floor locks/ optional trailer mounting	Frame mounted on shock-mount casters to allow the system to be moved easily while reducing vibration. Floor locks included keeping frame from moving. Air ride mounts are optional in a mobile (trailer) configuration.
Power Requirements	20 Amp, 115 VAC Service required for each simulator. Additional 20 Amp 115 VAC required for the OpCon /Instructor Station.
Operating Environment	Office Environment: 50 deg F to 95 deg F, 0 to 85% Relative Humidity non-condensing. Recommended operating temperature of 60 deg F to 70 deg F. 10,000 BTU/Hr required.
Minimum Room and Door Size	Minimum room size (10 ft by 10 ft by 8 ft high). Minimum door width is 36 inch, with 36-inch double doors (72 inch wide) recommended.

2.4 Driver Compartment

The compact, ergonomic design of the PatrolSim's™ driver compartment has become the standard upon which all other driving simulators are compared. The PatrolSim™ accurately simulates the physical and functional characteristics found in existing police vehicle driver compartments. The instruments and equipment are located in the same relative position as in typical law enforcement vehicles. The PatrolSim™ IV driver compartment is designed to ensure safety, provide comfort, and maximize the training experience. The Items present in the driver simulator compartment not critical for training are presented in mock up form.

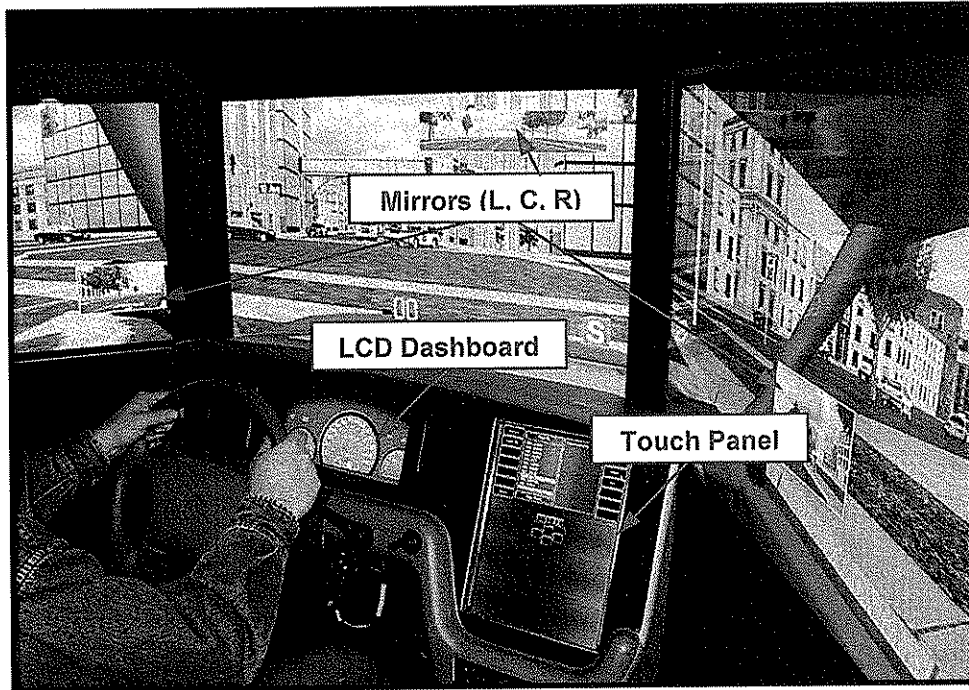


Figure 1 - Simulator Driver Compartment. The driver simulator compartment and dashboard replicates the ergonomics of a real police cruiser. Inset mirrors are placed in the correct locations and are adjustable by the driver. The LCD dashboard and touch panel displays provide accurate renderings of gauges and controls.

2.4.1 Enclosure and Frame

The entire PatrolSim™ frame and enclosure are constructed using ruggedized/steel components and construction techniques. Only the highest-grade materials are used in the construction of our products.

2.4.2 Seat

A leatherette driver seat designed after a late model car seat is provided. The seat has front-back and lumbar adjustment, accommodating a wide variety of drivers. The seat is equipped with an integrated lap-shoulder belt, with buckled/unbuckled indication at the instructor station and on the dash.

2.4.3 Pedals

An accelerator, brake (including simulated ABS), and emergency brake are included. All pedals replicate actual car pedals in location, size, and action.

2.4.4 Steering and Transmission

The steering column is based on a late-model car and incorporates the following features.

- Force loaded steering provides real-time feedback.

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- Fully equipped with turn-signal lever and automatic transmission, hi/lo headlight control and ignition switch.
- The steering column provides tilt capability.
- Four additional switches that can be used to pan the left or right display. Panning shifts the image, allowing the driver to check blind spots (similar to looking over your shoulder).

2.4.5 Instruments and Equipment

The MPRI team has integrated computer screens that can be quickly and easily modified to replicate any existing or future dashboard configuration. Switching from one dashboard configuration to another does not require any of the extra tools, storage capacity, loose bolts, or headaches common with conventional hardwired dashboards. To change the dashboard configuration, the instructor simply selects the vehicle to drive. The photo realistic, fully functional, and accurately positioned dash instrumentation is automatically displayed the touch screen panel, conveniently located to the driver's right (see Figure 8), is easily programmed with any required or custom buttons, dials, warning indicators, and controls. The computer-generated instrumentation is fully functional, looks and operates like real switches, and can be arranged with very little effort or expense. Because of this feature, the PatrolSim™ dashboard can be updated to match the latest vehicles available from major manufacturers.

Dashboard:

- Dashboard mold is based on actual car measurements.
- Two air blowers located on each side of the steering wheel to circulate air to the driver.
- Emergency Stop button: deactivates power to the entire system.
- Glass Dash (LCD panel) provides full instrumentation, including: Speedometer, fuel, temperature, and oil gauges. The glass dashes are so realistic that many customers have said they thought the LCD readout was in fact a real dash.
- Numerous glass dash boards are simulated, including: Crown Victoria (shown below), Impala (shown below), Fire Truck, Ambulance, and Truck/SUV.
- The appropriate dash is automatically loaded to match the vehicle selected.
- Creating dashboards to replicate additional/new vehicles can be completed in weeks, allowing for future customization as needed.

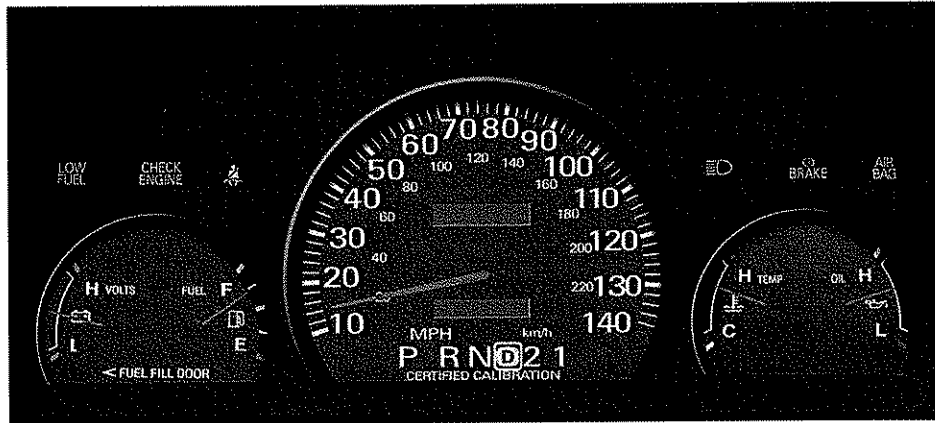


Figure 2 – Crown Victoria Dash. Actual Crown Victoria instrument cluster used on the PatrolSim™.

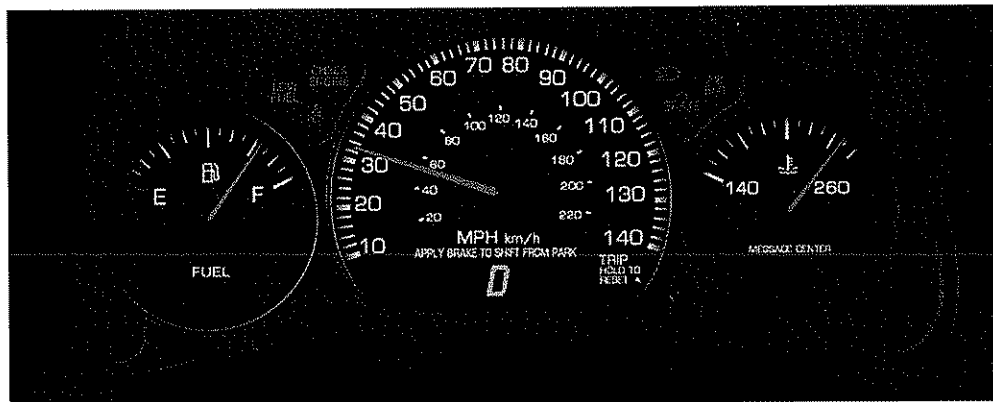


Figure 3 – Impala Dash. Actual Impala instrument cluster. The correct instrument cluster image is automatically loaded based on the vehicle selected for the driving exercise.

2.4.6 Radio Console (Touch Screen)

The radio console houses the radio communication system, siren, and light bar controls. Communication with the instructor station and other simulators is provided through a hand held CB-style microphone attached to the center radio console (headsets included).

2.4.7 Touch Panel

The touch panel located on the dash provides the instructor functionality to operate the simulator from the driver station. The touch panel also provides mirror controls, and can easily be customized for additional vehicle control modules (i.e. fire engine siren control). The ability to load scenarios from the touch panel can be password protected by the instructor.

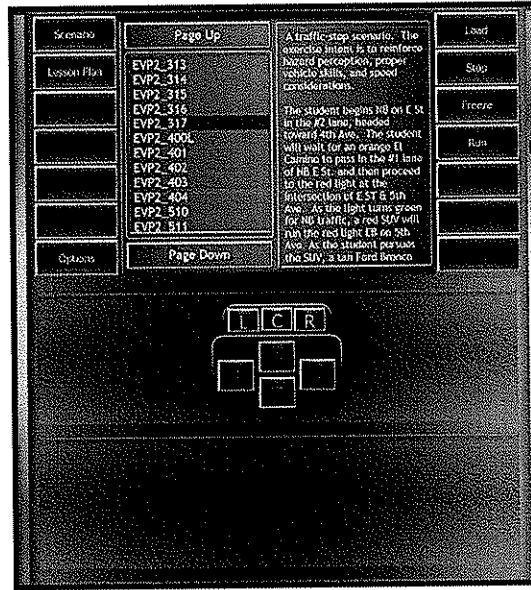


Figure 4 – Touch Panel with Adjustable Mirror Control. The touch panel provides mirror control for the driver and allows the instructor to load driving lesson plans and scenarios from the driver compartment.

2.4.8 Siren Control

The siren controls may be operated from the Code 3 unit included in the console. Fully functional wig wag emergency lights are included, as well as take down and alley lights.

2.4.9 Emergency Stop

An emergency stop button is located inside the driver's compartment (left of the dashboard), providing immediate deactivation of the simulator in the event of an emergency (an emergency stop is also provided at the instructor station).

2.5 Visual System

The visual system is comprised of the image generator (IG), and monitors. The visual system description is as follows:

Feature	Description
Number of Channels	3 channel (16 x 9 aspect ratio monitors)
Eye Distance to Screen	32 to 40 inches (adjustable depending on seat position)
Horizontal Field of View (FOV)	180° at 34" eye-point, slew able to 270°
Vertical FOV	37° (adjustable)
Scene Edge Matching	3 side by side monitors
Rear View Mirrors	Driver's side, center and right side insets

2.5.1 Image Generators (IG)

The IG is the computer that creates the real-time interactive image the driver sees out of the window. MPRI reserves the right to substitute the IG described herein with one of equal or better performance at no additional cost to the Client.

Feature	Description
Image Generator	PC based
Update Rate	Fastest available. Equal to Refresh Rate.
Refresh Rate	Highest that is commercially available in modern displays.
Resolution	1024 × 768 XGA
Polygons	> 40,000 per channel (>120,000 for the system)
Photo Texture	Yes
Time of Day	Day, dusk, night
Illumination	Headlights, taillights, directional and wig wag lights, EVO, Left and Right Alley lights and Overhead Takedown lights
Weather Effects	Fog, haze, rain, snow, ice
Transparency	Yes
Color	32 bit
Other Moving Vehicles/Objects	Over 60 with rotating wheels, a total of 127 objects available in addition to "own vehicle" per driving station

Due to the extreme rate of price/performance improvement in the PC market, MPRI reserves the right to substitute equal or better components with no change in the proposed price.

2.5.2 Monitors

The PatrolSim™ IV is designed around off-the-shelf commercial gas-plasma monitors. These monitors provide a bright, sharp image at an economic price. The monitor configuration consists of three 42" or greater, diagonal wide-aspect ratio (16 × 9) monitors with an XGA-compatible resolution or greater, Green Star Compliant.

2.6 Audio and Vibration System

Sounds are computer generated from recordings of actual in-cab sounds. These audio signals are played back to the driver in real-time at the actual sound levels experienced in the real vehicle.

2.6.1 Surround Sound Speaker System

A complete surround sound speaker system is included to provide high quality and realistic sound queuing. A tactile transducer (TST) is included for simulating low frequencies and road vibration.

2.6.2 Realistic Auditory Cues

Vehicle Dynamics

- Audio cues and sound files are taken from actual recordings inside the patrol car.
- Vehicle sounds change based on road surface, transmission load and vehicle speed and the engine sound is specific to the type of vehicle being driven
- Vehicle tire sounds change from scrub to chirp and finally squeal based on vehicle speed and road condition. This feedback is necessary to practice high-speed maneuvers and maintain control of the vehicle in the simulator.
- Audible cues for vehicle-to-vehicle contact, necessary for PIT maneuver training
- ABS feedback and sound is provided through the automatic brake system (ABS)
- Wind and cab noise relative to vehicle speed
- Subwoofer (tactile transducer) simulates road vibration in the driver's seat

Terrain

- Sounds associated with road type - asphalt, gravel, and dirt road
- Railroad tracks and cross-bucks
- Potholes, stop-sticks, and curb contact

Exterior Occurrences

- Rain and thunder sounds
- Collision sounds (three levels of sounds for different collisions)
- Pedestrian collision sound
- Engine sound is specific to each scenario vehicle
- Twelve unique horn sounds
- Three specific siren sounds

Three Dimensional Surround Sound

- Directional sound capabilities provide students the ability to quickly locate objects, determine the direction, type and/or threat (gun shots, horns, screams) of sounds within the driving environment (figure 2) - up to 64 simultaneous sounds
- Utilizing the "Doppler Effect", the sounds from moving objects increase in pitch as they get closer, then decrease as they move further away, helping the student determine the distance and direction of moving objects
- Sounds are tied to the position of each object or vehicle in the scene
- User can quickly incorporate their own custom audio cues and effects with WAV and MP3 file formats
- Audio system utilizes six speakers, which provides 5.1 surround sound



Figure 5 - Three-Dimensional Surround Sound: The PatrolSim™ provides three-dimensional surround sound, enabling the driver to determine the location of the sound. This is critical for driver training as traffic and pedestrian sound cues are needed to help the driver make appropriate decisions.

2.6.3 Vibration

The PatrolSim™ IV includes a tactile transducer to partially simulate road vibration and steering wheel feel that provides natural tactile stimuli (bandwidth >20 Hz, amplitude correlation with tire/roadway interaction and engine operation, and fully synchronous and complementary with audio signals).

2.6.4 Radio Communication System

The PatrolSim™ provides a multi-channel, two-way, simulated radio communication system with dispatch and car-to-car capabilities. The radio system can be configured to be communicated between one to four simulators and utilizes a standard TCP/IP connection to transmit a voice signal. Transmission quality is approximately 8 – 11 kHz, which is equivalent to most radio and cell phones.

2.7 Sim Commander

Sim Commander: Available on the right touch screen of the “glass dash.” Using the Sim Commander the student can select a lesson plan, load a scenario, and commence driving:

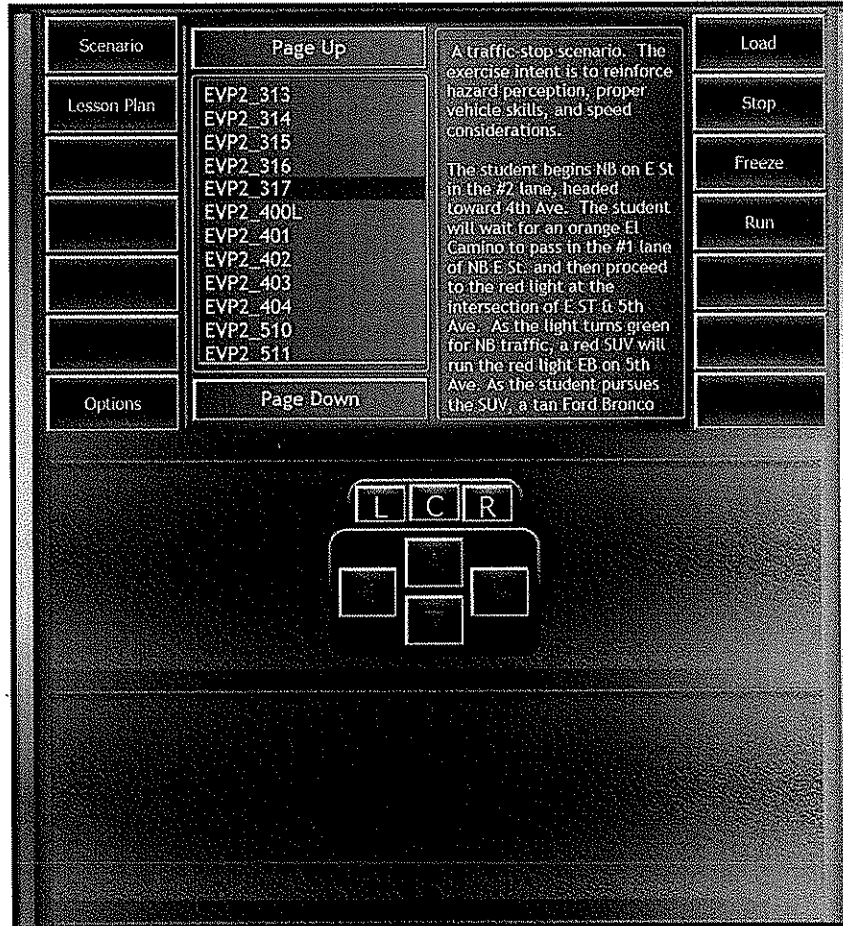


Figure 6 – Sim Commander.

2.8 Reliability, Availability, and Maintainability

The PatrolSim™ is designed and built to be highly reliable and available for training in excess of 10 hours per day, 5 days per week. Major mechanical components of the system are bench tested in a Highly Accelerated Life Test (HALT) environment. The minimum requirements for the tests are 10 years at a 20-hour day duty cycle with a 98% confidence interval. This equates to over 1,000,000 cycles.

Additional shake/vibration and environmental testing have been performed successfully on the PatrolSim™ products. This ensures the PatrolSim™ can be transported and moved without damaging the system. Several of our customers routinely load the simulators into trailers to provide a mobile training environment.

Shock mounts are utilized to protect sensitive components and data from damage. The mounts absorb forces that would normally be delivered to components when the system is transported or rolled. The PatrolSim™ has been designed with light-weight metallic doors with industrial grade locks for quick access and security for maintenance personnel.

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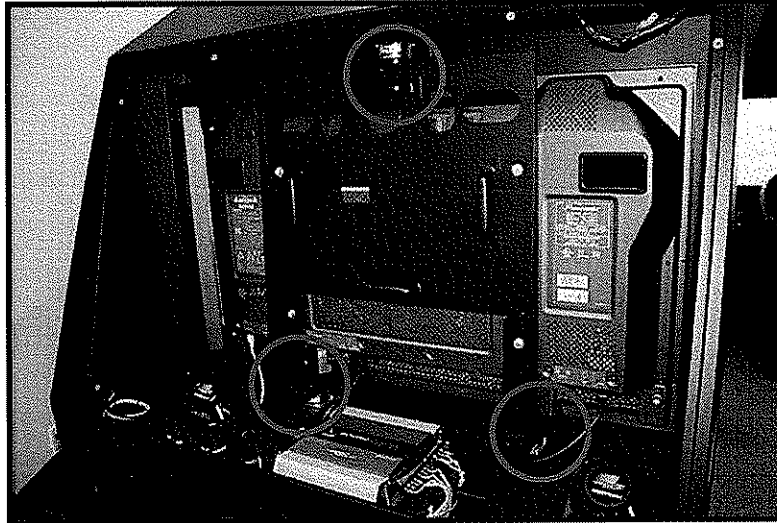


Figure 7 – Shock mounted plasma displays provide protection for the most expensive component in the simulator.

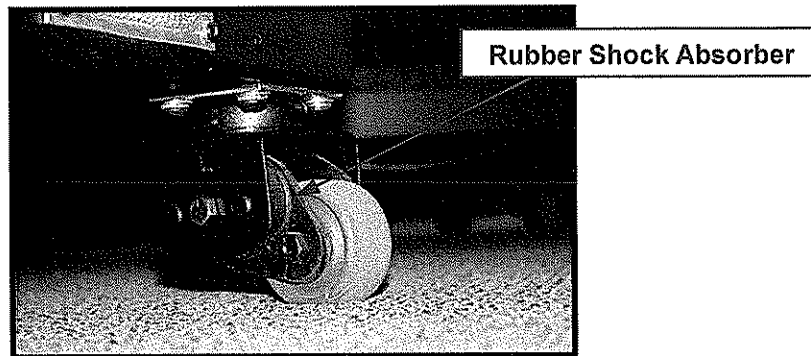


Figure 8 – Shock mounted casters absorb shock delivered to the system during transportation or when rolling from one location to another.

The system has been designed for maximum maintainability and ease of repair. Simulator computers can be removed easily with thumbscrews.

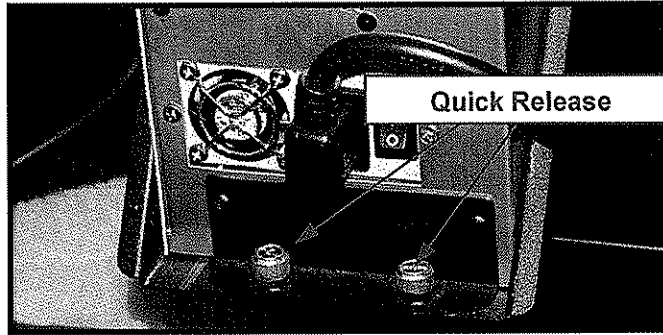


Figure 9 – Quick Release Thumb Screws

Maintenance access panels have been designed with a keyed quick entry latch. Panels are easily removed and replaced and are light weight aluminum.



FIGURE 11 - Rear panel latch provide easy access with their locking latch mechanism.



FIGURE 10 – Solid panels are designed with lightweight material, allowing ease of installation and removal.

2.8.1 FCC Compliance – Electrical and Electronics Emissions

The PatrolSim™ IV is designed to comply with applicable FCC requirements with certification pending. By achieving FCC Certification, we self declare the PatrolSim™ IV's conformance to FCC emissions standards. PatrolSim™ IV will not interfere with other electrical/communication devices in you location, for example communications equipment in a dispatch center. The testing also ensures that other electrical devices will not interfere with the safe operation of the simulator.

2.8.2 CSA US Compliance – Electrical and Electronics Safety

The PatrolSim™ IV has been certified by CSA and bears the CSA US Mark

- The 'C' and 'US' indicators adjacent to the CSA Mark signify that the product has been evaluated to the applicable CSA and ANSI/UL Standards, for use in Canada and the U.S., respectively. This 'US' indicator includes products eligible to bear the 'NRTL' indicator. NRTL, i.e. National Recognized Testing Laboratory, is a designation granted by the U.S. Occupational Safety and

Health Administration (OSHA) to laboratories that have been recognized to perform certification to U.S. Standards.

- In the U.S., CSA International is accredited by the Occupational Health and Safety Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL). Generally speaking, all OSHA accredited laboratories conduct their tests against the same sets of U.S. standards and codes, regardless of who authors or publishes them.

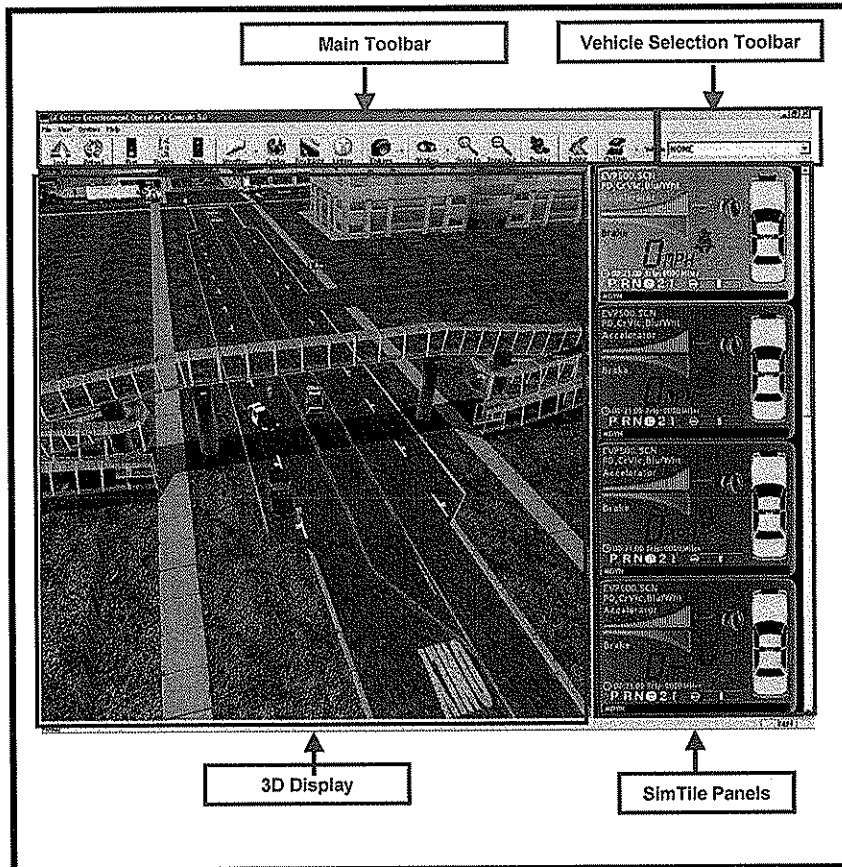
2.9 Instructor Operator's Console (OpCon)

The Instructor Operator's Console (OpCon) is a state-of-the-art graphical simulation control system. This easy-to-use, icon-based system with pull down menus, provides tremendous capabilities in the hands of the Instructors. The instructor station lets one person control the simulator by combining all of the required information displays and control buttons into one graphical user interface (GUI). This feature rich-console is second to none in interaction and control of the driving simulations experience with multiple drivers. Scenarios are loaded in 30 seconds or less.

2.9.1 OpCon 3D System Control Screen

From the OpCon, the instructor has complete control and visibility of the training experience. The OpCon is separated into four sections:

- Main Toolbar
- Vehicle Selection Toolbar
- 3D Display
- SimTile Panels



Main Toolbar: This toolbar is used to load scenario, select vehicles and assign drivers. It also contains controls that will interact with the driver in real-time. It is icon based and extremely easy to learn and use, and very intuitive.

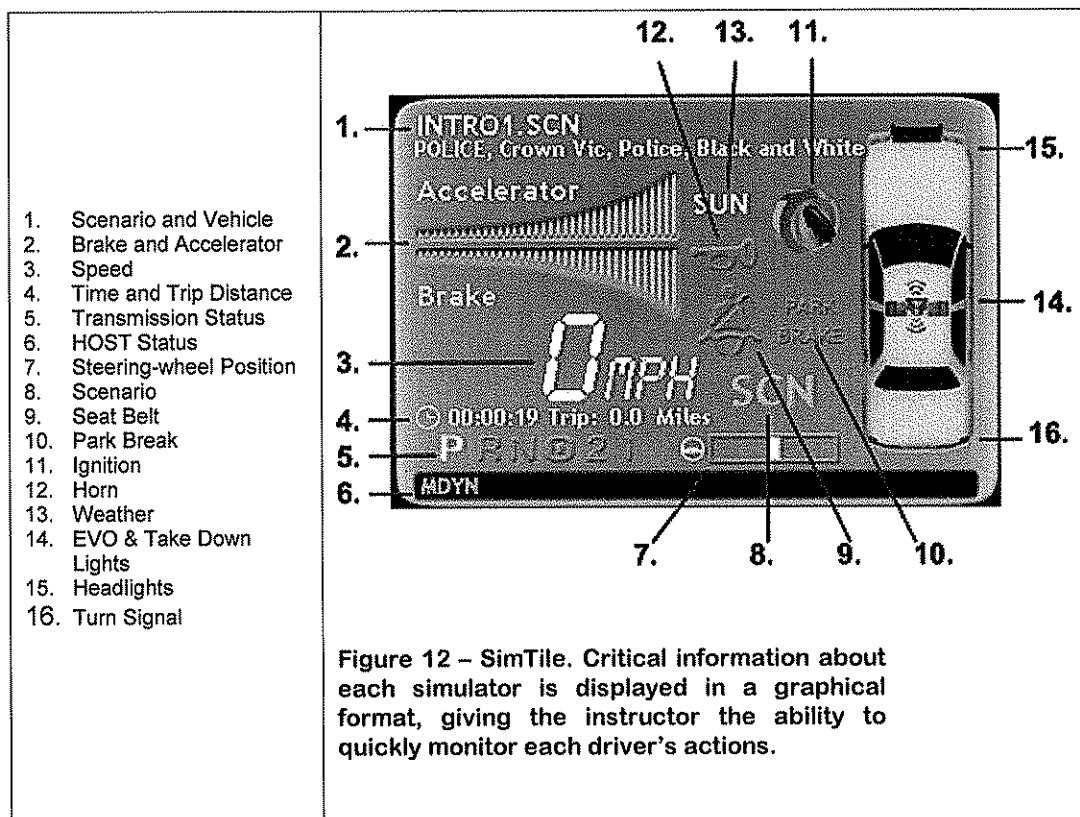
Vehicle Selection Toolbar: This toolbar allows the instructor to identify the student's position and proximity to any other vehicles, object or pedestrian in the scenario.

3D display: The 3D Display provides a real-time view of the selected vehicle. The operator can select from a number of viewing angles and zoom in and out at each position.

SimTile Panel: The SimTile displays vehicle status information and allows the instructor to select which simulator is observed in the 3D view.

2.9.2 SimTile

The SimTile holds a collection of information indicators that provide a means to view the driver input and vehicle status for a selected simulator in real time. When all simulators are active (in a network environment), the information for the last selected simulator is highlighted.



2.9.3 Replay

The Replay toolbar enables the instructor to review training results. The replay window enables the instructor to view the training exercise from a top down view. Replay files can be saved for playback on an external station.

Playback can be viewed from multiple eye points including driver, third person, and multiple birds' eye views. The playback control window enables the instructor to pause, resume, rewind, and fast forward the replay. The instructor may also click on a scoring violation to go directly to that point in the replay, or use the slider control to quickly move through the replay.

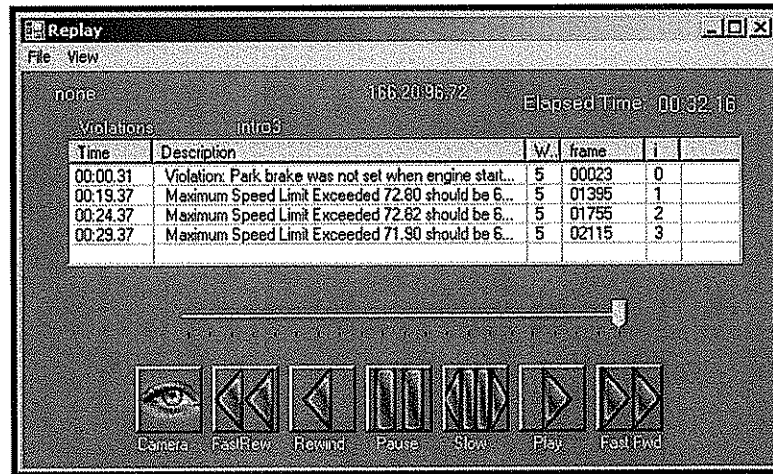


FIGURE 13 – REPLAY CONTROLWINDOW. The replay control window shows violations, provides a slider bar to quickly move to any point in the scenario and allows the instructor to change viewing (camera) angle, while providing complete control over the playback.

The playback of any recording recreates all of the original training exercise cues including audio, visual, and vehicle state. After playback of an exercise, the instructor can continue/restart the scenario or load a new exercise.

- The instructor has the option to activate the replay mode at any time during or prior to exiting the scenario.
- The replay can pause (freeze) the scenario during the training session and resume training from the point where the scenario was frozen.
- When the scenario is paused (frozen), the instructor can playback the scenario using the Replay mode, exit the scenario, provide student performance analysis, print student performance analysis, and unfreeze.

2.9.4 Variable Light Conditions

The simulator provides a full range of day, dusk and night capabilities. Each setting enables a new sky model to provide the appropriate visual effect.

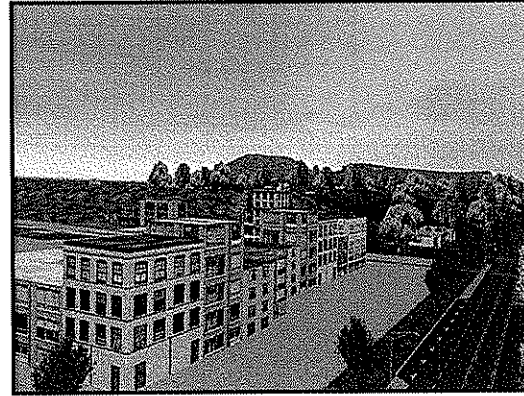


Figure 14 - Day and Dusk/Dawn Conditions. Appropriate brightness levels and sky models add to the clarity of the visual scene.

2.9.5 Weather Effects and Variable Road Conditions

The simulator provides a full range of weather controls of varying density. Weather effects/road conditions can be controlled in real-time by the Instructor or scripted into scenarios. Environmental conditions can be modified in real-time and include the following options:

- **Rain:** Selections are: Very Light Rain, Light Rain, Medium Rain, and Heavy Rain.
- **Snow:** Selections are: Very Light Snow, Light Snow, Medium Snow, and Heavy Snow.
- **Ice:** Selections are: NO Ice or Ice Level's 1 through 5.
- **Fog:** Selections are: Very Light Fog, Light Fog, Medium Fog, Heavy Fog.
- **Wind:** The operator uses the wind-active Enable/Disable indicator to enable or disable wind at any time. Wind in the simulation is comprised of three parts: Wind speed (MPH), Heading (the direction in degrees), Gusts, speed, and frequency (speed/frequency, number of gusts per second)

2.9.6 Vehicle Malfunction Simulation

The PatrolSim™ OpCon can recreate vehicle failures including tire, brake, and engine failures, and emergency conditions including intersection conflicts, sudden stops, and pursuit.

These failures and conditions can be pre-programmed in a driving scenario or selected by the instructor during a training exercise from the drop down menus on the OpCon. Driver performance violations in response to malfunctions and emergency conditions are recorded.

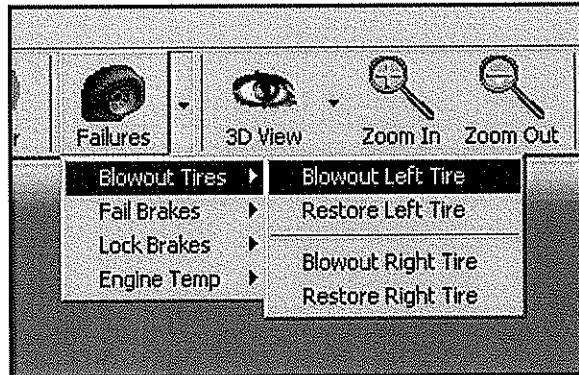


Figure 15 - Selecting a Vehicle Failure. Vehicle failures can easily be inserted into a training exercise from the IS pull down menus.

2.9.7 Communication System

The instructor station houses the radio communication center (VON) that can simulate a dispatch call center through the Dispatch Control Panel. The Dispatch application display located on the instructor station monitor allows the operator to update radio communications and interact with one or multiple simulator pods depending on the training mission

2.9.8 Multiple Unit Operations from Single Instructor Station (OpCon)

The Instructor Station provides real-time instructor interaction and control with 1-4 simulators simultaneously. Four simulators can be controlled from the instructor station while operating networked scenarios or individual scenarios.

2.10 Instructor Controlled Decoy Vehicle Capability

The Training Interdiction Device (Rabbit-Station) is an interactive driver station positioned at the OpCon. The Rabbit-Station provides the trainer with the ability to operate as an "own cab" from the instructor station. The instructor can take control of any moving entity in the scene: vehicle, animal, pedestrian, etc.

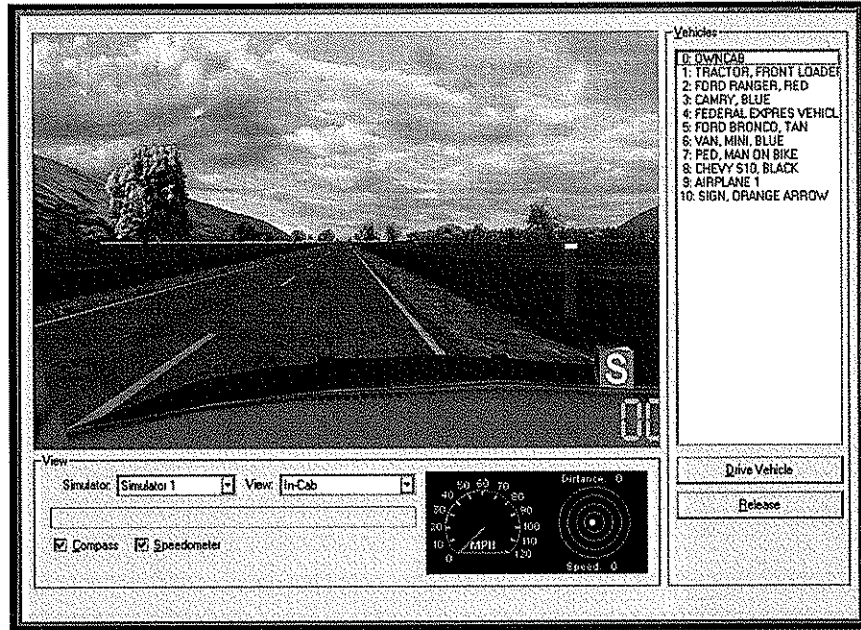


Figure 16 – Rabbit Window. The Rabbit window allows the instructor to select a scenario vehicle and drive the vehicle with an included steering wheel.

The driver/trainer of the Rabbit-Station in a scenario will be able to see and interact with the trainee driving a scenario-controlled-vehicle. The Rabbit-Station adds a level of real-time interactive capability to the instructor station for a driver/trainer to interdict with a student trainee during a training exercise. The Rabbit-Station steering wheel can easily control vehicle behaviors including speed, lane position, parking position, forward direction, rules of the road, and aggressiveness. Top-level radar display of the Rabbit-Station vehicle is used for navigational and interaction purposes.

2.11 Visual System Simulation

In addition to providing leading edge high-resolution plasma display technology, the PatrolSim™ visual system's software and visual textures are designed to provide the best driving simulation graphics available. This is required to ensure sharp and clear visual images that improve driver comfort by reducing eyestrain and providing a truly immersive and realistic driving experience. It is important to note that all images in this document are taken directly from PatrolSim™ scenarios and database environments. This includes the ability to identify street signs and coordinates, license plates, and view distances without blur. Figure 19 demonstrates the superior graphics of the PatrolSim™.



Figure 17 - Visual Simulation. High-resolution graphics provide the ability to read license plates, read building and road signs, and view car interiors through transparent windows.

2.12 Visual Driving Environments

MPRI visual driving environments incorporate are-state-of-the-art graphics with a rich list of features. These features have been developed based upon the needs of those operating in the law enforcement communities.

- Accurate road markings.
- Takedown and alley lights on own vehicle.
- Overhead traffic lights
- Railroad crossing with flashing cross-bucks, animated crossing arm and active train.
- Vehicles with doors that open.
- Dark night scenes with limited visibility.
- Walking pedestrian models of men, women, teens, and children.
- Animated animals with walking motion.
- Roads with uneven (partially paved) driving surfaces.
- Roads with gravel surfaces.
- Narrow single lane bridge.
- Steep inclines and declines.
- Full control of traffic light timing. (Control timing for red, yellow and green light states.)
- Accurate representation of side rearview mirrors. (Correct size and position relative to driver.)
- High detailed road surfaces.

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- Roads with hills and valleys.
- Roads with overhead pedestrian crosswalk.
- Potholes of various sizes that can be randomly place in the road.
- Large moving vehicles in scenarios with one or more trailers.
- Multiple billboards that can be modified with customer specific images.
- Flashing arrow board for construction zones.
- Construction worker with active stop and slow sign.
- Animated smoke and fire to be placed at any position in the database.
- Large set of scripting commands to control scenario vehicles, pedestrians, animals, environment, audio, etc.
- Animated runner with gun
- Animated shooter
- Bullet holes in driver's windows
- Construction vehicles

2.13 Suburban Driving Environment

The Suburban driving environment includes approximately ten miles of multiple lane roads. This highly detailed city environment provides a tremendous amount of training opportunity.

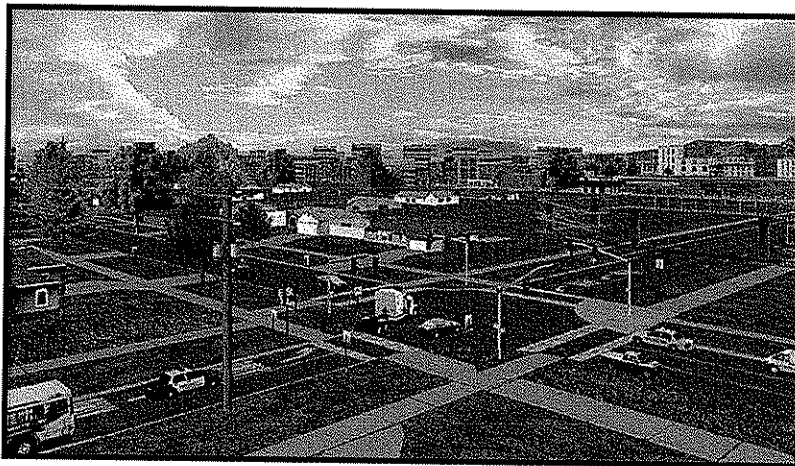


Figure 18 – Suburban Environment. Actual screen shot of a four way intersection and stop lights in the Urban Environment.

The following lists features that are included in the urban database:

- | | |
|-----------------------------------|------------------------------|
| • Walk/don't walk indicators. | • Operational traffic lights |
| • Overhead pedestrian crosswalks. | • Stop signs |
| • Speed and caution signs | • Street signs |
| • Gas stations | • Large parking lots |
| • Police Station | • Neighborhoods |
| • Malls | • Civic centers |
| • Residential areas | • Parking meters |
| • Open areas | • School (with school zones) |

- Fire station
- Uneven (partially paved) roads
- High income residential area
- Steep inclines and declines
- Canyon area
- Gravel roads
- Narrow single lane bridge
- Railroad Crossing with animated cross buck

2.14 Rural Driving Environment

The Rural driving environment includes over 30 miles of narrow two-lane roads, small roadside villages, farms, hilly roads hiding oncoming traffic, blind corners, and branching "Y" type roads with appropriate signage.



Figure 19 - Rural Environment with narrow two lane road, hills, and farm areas.

2.15 Freeway Driving Environment

The freeway database includes approximately 23 miles of two- and three-lane roads with overpasses, on ramps, off ramps, canyons, truck runaway lanes, 6% grades, a rest area, and all of the appropriate signage.



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2.16 Mountain Driving Environment

The mountainous environment has 18 miles of winding lane mountain roads and several miles of forest trails. The mountain environment has steep drop offs, bridges, switchback curves, tunnels, and runaway truck ramps.

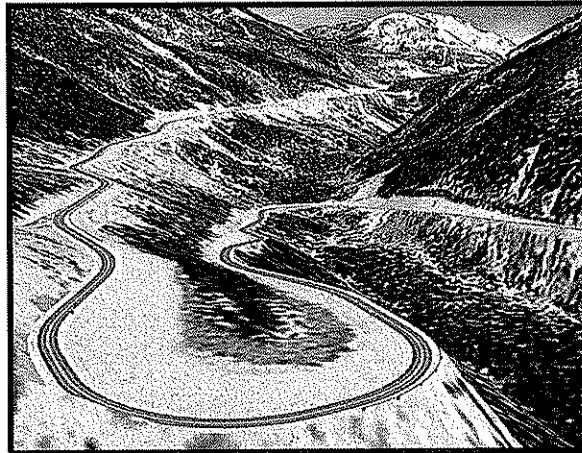


Figure 20 - Mountainous Environment. Actual screen shot from the Mountainous Environment modeled from geo-specific data.

2.17 Skills Range

The Skills Range contains areas to test driver's response time and vehicle handling skills. It includes cone slalom course and "quick decision" making area utilizing traffic lights.

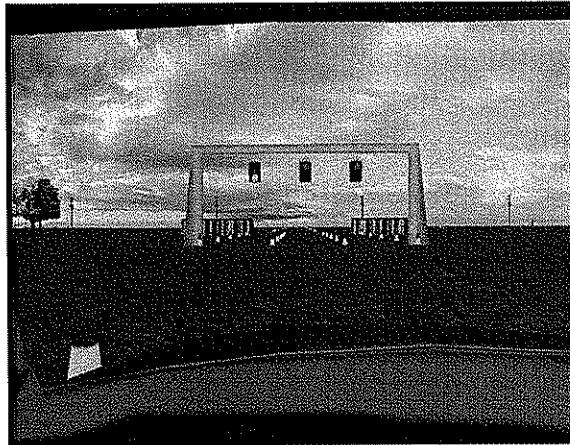


Figure 21 – Skills Range. The skills range provides a slalom course and traffic lights to practice vehicle handling skills.

2.18 Skid Pad Range (Optional)

The skid pad database is used to train skid avoidance and skid recovery skills. It simulates a large area covered with water. The driver enters the water-covered area at high speeds and attempts to prevent loss of control of the vehicle.

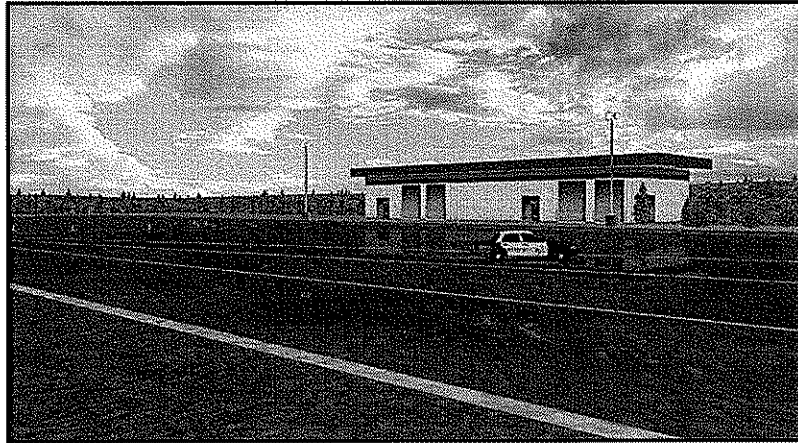


Figure 22 – Skid Pad. The skid pad provides a water-covered area for practicing vehicle-handling skills on slick driving conditions.

2.19 Own Cab Vehicles Including Drive Type

MPRI provides a variety of own cab vehicles from many shapes and sizes. These vehicles are rear wheel drive, front wheel drive, or four-wheel drive.

Vehicle	Drive Type
Police, Sheriff, Highway Patrol (Included)	
Police – CrownVic, black & white	Rear Wheel
Police – CrownVic, blue & white	Rear Wheel
Police – CrownVic, white	Rear Wheel
Police – Impala, white	Front Wheel
Highway Patrol – CrownVic, white	Rear Wheel
Highway Patrol – CrownVic, blue & white	Rear Wheel
Highway Patrol – CrownVic, black & white	Rear Wheel
Sheriff – CrownVic, blue & white	Rear Wheel
Sheriff – CrownVic, blue & white	Rear Wheel
Sheriff – CrownVic, white	Rear Wheel
Swat Command Vehicle	Rear Wheel
Swat Step Van	Rear Wheel
Swat Support Vehicle	Rear Wheel
Ford Explorer Black/White	Four Wheel
Bus	
Courtesy Shuttle	Rear Wheel
Emergency	
Ambulance	Rear Wheel
Fire Truck – Red	Rear Wheel
Fire Truck – Yellow	Rear Wheel
Fire Truck – Black top	Rear Wheel
Ford Explorer Paramedic	Four Wheel
Van	
Step Van automatic	Rear Wheel
White Full-Size van	Rear Wheel
White Minivan	Rear Wheel
Car	
High Performance Sedan – Black	Rear Wheel
Ford Taurus – White	Rear Wheel
Toyota Camry – Blue	Front Wheel
Crown Victoria – Blue	Rear Wheel
Municipal	
Dump truck – 6 wheel	Rear Wheel
Dump truck – 10 wheel	Rear Wheel
Garbage Truck – 10 wheel	Rear Wheel
Small Truck	
Ford Ranger – blue	Rear Wheel

2.19.1 Police Own Cab Vehicles



White Highway Patrol



Black & White Highway Patrol



Blue & White Highway Patrol



White Police



Black & White Police



Blue & White Police



White Sheriff



Black & White Sheriff



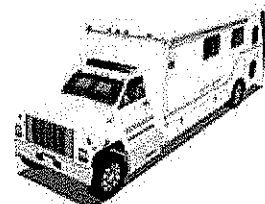
Blue & White Sheriff



SWAT Step Van



SWAT Support Vehicle



SWAT Command Vehicle



Police Explorer

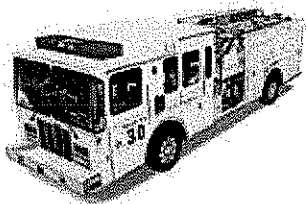
Each own cab vehicle includes an interior (mask) specific to that vehicle, as show below:

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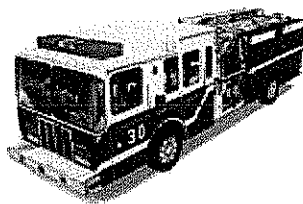


Figure 23 – Impala Vehicle Interior

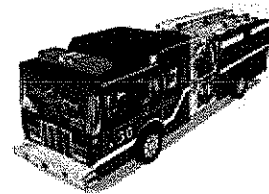
2.19.2 Emergency Own Cab Vehicles



Yellow Fire Engine



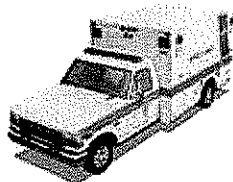
Red Fire Engine



Red Fire Engine - Black top

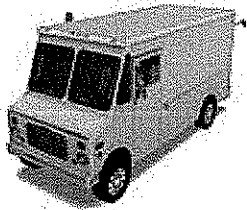


Paramedic Vehicle



Ambulance

2.19.3 Vans Own Cab Vehicles



White Step Van (auto)

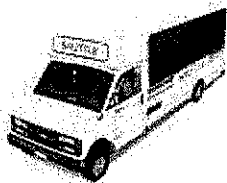


White Van #1



White Van #2

2.19.4 Bus Own Cab Vehicles



Shuttle Bus

2.19.5 Sedans/Truck Own Cab Vehicles



Blue Crown Vic



Blue Camry

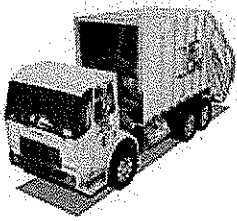


White Sedan

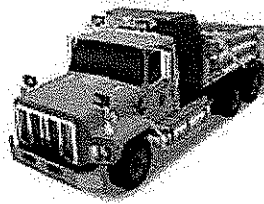


Black Sedan

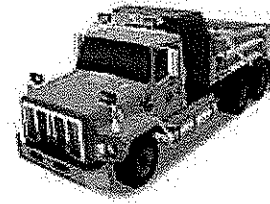
2.19.6 Municipal Own Cab Vehicles



Dump Truck



Dump Truck (10 Wheel)



Dump Truck (6 Wheel)

2.19.7 Vehicle Dynamics

The PatrolSim's™ vehicle dynamics provide the high level of fidelity required for law enforcement driver training. The dynamics are based on the physical characteristics of the simulated vehicle and are based on actual manufacturer specifications. Tire and road surfaces are accurately modeled to provide proper road feedback and interaction. Numerous items in the vehicle dynamics are easily controlled and adjusted from the instructor station. Several modes are simulated, including normal operation, malfunctions, emergency conditions, vehicle motion, speed, transmission selection, and environment surface/conditions.

High Fidelity Vehicle Dynamics

The vehicle dynamics models utilized have the sophistication to represent real vehicle behavior offering over 21 degrees of freedom (vehicle systems affecting handling/performance). The high number of degrees of freedom provides the ability to 1) more effectively use vehicle manufacturer/OEM data directly in modeling subsystems, and 2) provide a high degree of realistic behavior of vehicle models. Each tire/wheel/suspension point, steering wheel, engine/drive train, and chassis is modeled.

Dynamics Based on Vehicle's Physical Characteristics

The PatrolSim™ provides vehicle dynamics models that are modular and adjustable representations of the actual vehicle's subsystems. The tire patch model provides interaction with the road surface to simulate actual skids, tire envelopment over objects, and road hazards. The accurate tire-road model interaction with dynamic forces allow a full spectrum of tire reactions which provides a driver the ability to feel a variety of forces/sensations through the steering wheel as the wheels hit, roll-into, or roll-over a specific object. The tire patch model characterizes Society of Automotive Engineers (SAE) standard functions, including:

- Normal force vs. vertical displacement vs. tire pressure
- Lateral-slip vs. slip-angle vs. normal force
- Longitudinal force vs. rolling slip vs. normal force
- Composite vector limits on total reaction force vs. normal force

Automobile and tire manufacturers have supplied the high fidelity tire force model data. MPRI tire models are measured at five points per tire footprint.

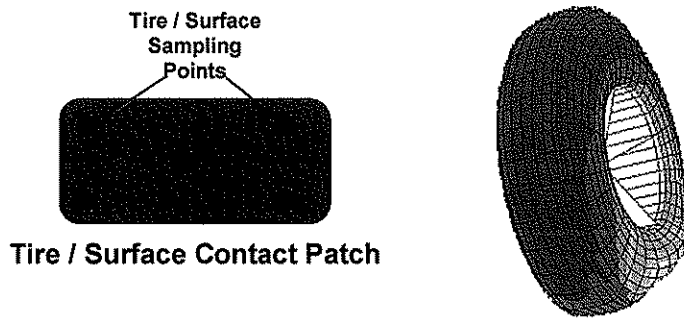


Figure 24 - High Resolution Tire Models. High-resolution tire models sample 5 points on each tire and their interaction with the road surface. This sampling provides accurate tire/road interaction and simulates how a tire compresses (envelops) when driving over objects and curbs.

Vehicle Dynamics Adjustment

For specific training exercises, instructors may wish to slightly alter the default manufacturing vehicle dynamics. Several vehicle dynamics adjustments can be made to the simulator from the instructor station including:

- Steering Feedback (more/less feedback)
- Steering Ratio (smaller/larger turning radius)
- Engine (more/less powerful)
- Brakes (stop faster/slower) (***Brake tension can also be adjusted in hardware***)
- Friction (more/less grip)
- Cab Load (more/less load)

Vehicle Dynamics Modes Simulated

The PatrolSim™ operates across a wide range of performance modes consisting of several vehicles and environmental factors according to vehicle manufacturers' specifications.

- **Normal Operation:** The default vehicle dynamics setting is normal operation.
- **Malfunctions and Emergency Conditions:** Vehicle dynamics malfunctions and emergency conditions include tire blowout, failed brakes, locked brakes and overheated engine.
- **Vehicle Motion:** Vehicle suspension and motion are accurately simulated using vehicle manufacturer's data. Visual cues are provided to the student by the displayed vehicle's hood raising or lowering in concert with vehicle's acceleration and braking factors.
- **Speed:** Acceleration and speed are accurately simulated based on the precise vehicle models incorporating actual vehicle engine specifications.
- **Transmission Selection:** Transmissions are modeled in each vehicle's dynamics model according to the actual manufacturing specifications.
- **Environment Surface/Conditions:** Environment surface conditions change appropriately with rain, snow, and ice.

2.20 Scenario Builder

Creating scenarios has never been easier. The new PatrolSim™ Scenario Builder has a 3D interface which makes creating and editing scenarios simple and straight forward. The instructor / scenario developer can populate a scenario with a few simple clicks.

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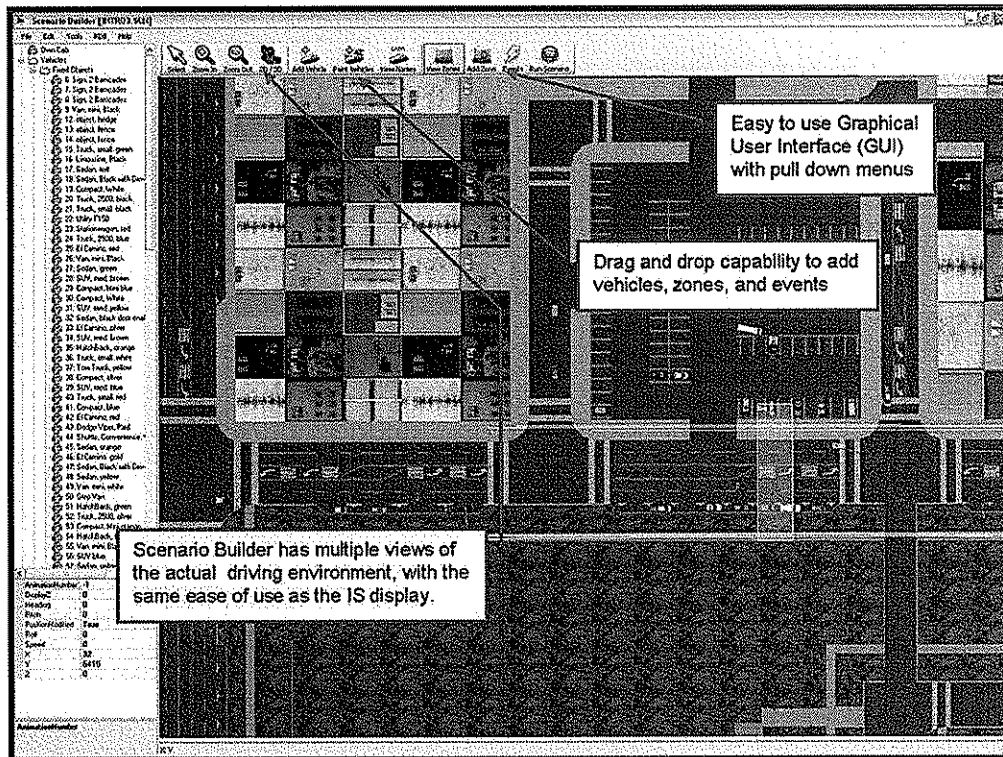


Figure 25 - Scenario Builder. The new Scenario Builder was built based on feedback law enforcement customers providing a simple drag and drop interface, allowing new scenarios to be developed in minutes.

2.20.1 Scenario Components

The following library of scenario components provides the instructor with an extensive amount of flexibility when creating new and modifying existing scenario.

Moving Vehicles – 161 Total

Man on Bike	1	Van	10
Bus	3	Airplane	2
Car	59	Railroad engine	1
Construction	3	Railroad cars	5
Emergency	5	Semi (bobtail)	8
Limousine	1	Semi (with trailer)	10
Military	4	Shuttle	1
Motorcycle	1	Snow covered	8
Municipal	1	SUV	8
Pickup – Large	2	Truck	3
Pickup – Small	6	Utility	6
Police	13		

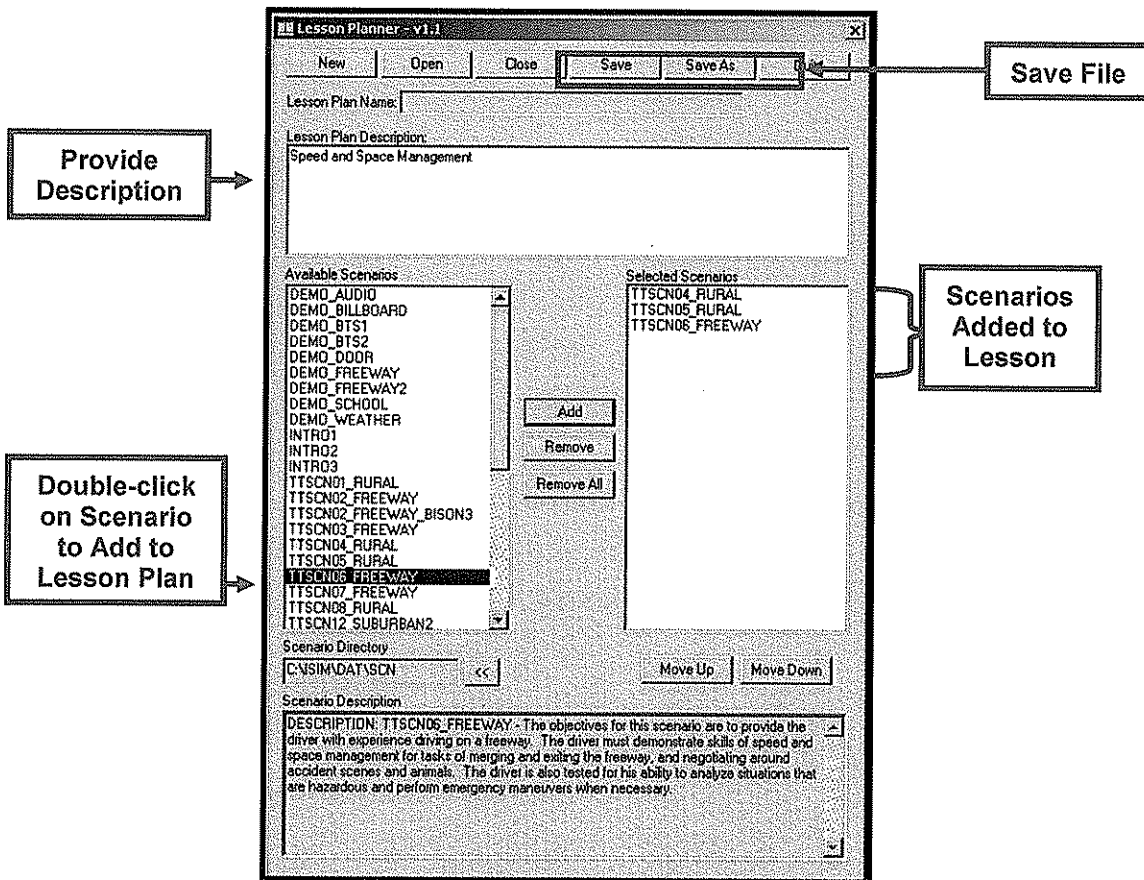
Fixed Objects – 16 Total

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Airplane Crash	2	Pipe	1
Loading dock	1	Vegetation	3
Dumpster	1	Cone	1
Fence	1	Post	1
Log	1	Parked trailer	1
Pallet	3		
Dynamic Road Features – 4 Total			
Pothole	2	Stop sticks	1
Manhole cover	1		
Signal Effects – 5 Total			
Animated water stream	1	Smoke	3
Fire	1		
Signs – 41 Total			
Deer crossing	1	School zone signs	3
Construction	6	Speed limit signs	6
Direction	5	Stop signs	5
Loading dock numbers	8	Yield	1
No turn on Red	1	Flashing Railroad w/ animated cross buck	1
Custom Signs (User Defined) – 10 Total			
Animated Pedestrians – 35 Total			
Teen	4	Shooter	1
Youth	1	Runner with gun	1
Adult Man	10	Police	8
Adult Woman	9	Construction man with animated stop/slow sign	1
Fixed Pedestrians – 14 Total			
Child	2	Adult Woman	4
Group	3	Teen	1
Adult Man	4		
Animals – 8 Total			
Buck	2	Dog	1
Cow	2	Skunk	1
Doe	2		

2.21 Lesson Plan Editor

The Lesson Plan Editor loads the Lesson Planner, which allows for the creation of a new lesson plan or the modification of an already created lesson plan. Lesson plans are saved as *.LPL files.



3 Options

3.1 OmniSim

The PatrolSim™ platform supports reconfiguration using slide-in driver compartment cabs. Modular reconfiguration capability includes a sedan core (seat, steering wheel, pedals and dash) and a truck core (seat, steering wheel, pedals and dash).

3.2 EVOC-101™

In addition to driver's performance scoring, MPRI also offers AST's EVOC-101 software. EVOC-101™ simulator software package is a self contained, simulator-run, Emergency Vehicle Operations training program developed to improve and measure a driver's tactical decision making skills. In order to meet the needs and training requirements of the EVOC community, AST has listened, observed, and engineered a training curriculum to make simulation-based training more practical and performance driven. AST's program requires students to prioritize their vehicle handling and emergency task activities while actually experiencing critical segments of emergency response and pursuit operations.

Benefits

EVOC-101 offers the following benefits:

- Can be delivered in separate mini-lessons if operators or instructors have limited availability.
- Limits liability by demonstrating that the operator knows how to implement proper procedures in an emergency driving environment.
- Teaches operators how to prioritize activities in a multi-task emergency response driving environment.
- Establishes correct basic procedures, and refreshes perishable skills in a safe and efficient training environment.
- Provides an assessment of the operator's ability to comply with basic EVOC protocols.

Lesson Plan

This course will guide the student through a fundamental, step-by-step experience on how to approach, enter, and negotiate intersections. The Straight-Through Intersection Analysis course takes approximately 1 hour to complete its 15 progressively complex driving scenarios and 2 test scenarios. Field tests with the Utah DPS* have demonstrated an average student improvement of 300% based on critical errors involving vehicle speed and position control.

Learning Objectives

- Proper seating position and the proper placement of the feet and hands for the efficient operation of an emergency vehicle.
- The following four stages of intersection negotiation:
 - Approach Stage

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- Assessment Stage
- Clearing Stage
- Avoidance Stage
- How to prioritize tasks such as use of two-way radio, emergency equipment, turn signals, and reading the speedometer during an emergency response or pursuit.
- How to place his/her vehicle in the best possible position on the roadway to get the best view, allow others to see him/her, and provide the safest approach to an intersection.
- How to identify existing and potential hazards and predict their movements by using the SIPDE concept.
- How to make the correct decisions and take the appropriate course of action, using the SIPDE concept, to safely negotiate an intersection during an emergency response.
- How to move away from an intersection safely.

3.3 Custom Logo Graphics

Provides customers the opportunity to display their vehicles to include custom stripping on their vehicles.

3.4 PIT Maneuver

Numerous pursuit scenarios have been developed to train drivers in the very complex and dangerous area of high-speed pursuit. The PIT maneuver is a significant skill that drivers can train and master using the simulator.

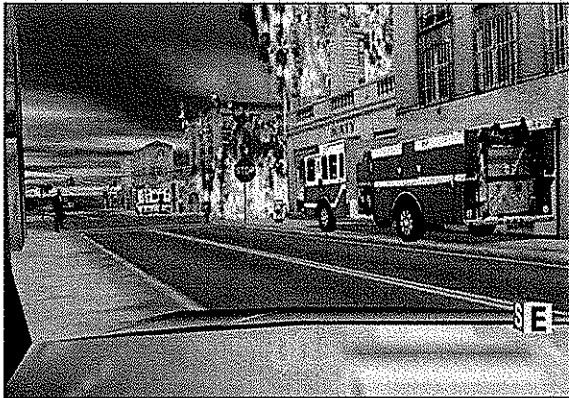
3.5 EVP 2 Scenario Package

30 Additional emergency response scenarios are available with the system. Scenarios have been co-designed with Clark County Fire Department and other agencies.

3.6 Skid Pad Database

Simulator provides skid pad database for training skid control.

3.7 Fire Package



3.7.1 The Virtual Dashboard

This Virtual Dashboard includes both a Center Panel (glass dash), and the SimCommander Panel with touch controls to the right of the driver. The FireSim has a Virtual Dashboard (glass dash and SimCommander). This glass dash is directly in front of the driver and consists of flat a monitor that displays the gauges and controls in their correct location, size, and perception. This Virtual Dashboard also integrates into the display a touch sensitive area, to the right of the driver, which is used to provide fingertip controls for typical switches and controls within the cab (Sim Commander). The center panel, glass dash displays a number of functioning gauges including speedometer, tachometer, oil pressure, oil temperature, battery voltage, and fuel. It also contains a warning light sub panel.

The SimCommander Panel with its touch screen allows the instructor or the driver to control the basic functions of the VS IV. There are three operating modes:

- 1) **Scenario** used to load scenarios
- 2) **Drive** used to start the scenario and display other functioning gauges and switches including:
 - Automatic Transmission, trans. position selector and position display
 - Pump Status Lights
 - Pumps
 - Primary air pressure,
 - Secondary air pressure, if needed
 - Water temperature (engine).

3.7.2 Fire Package Defined

The Standard Fire Package for the FireSim includes several combinations that can be driven as OwnCab. Each scenario was developed within a specific visual driving environment, including but not limited to rural, freeway, city/residential, mountain pass, and emergency environments.

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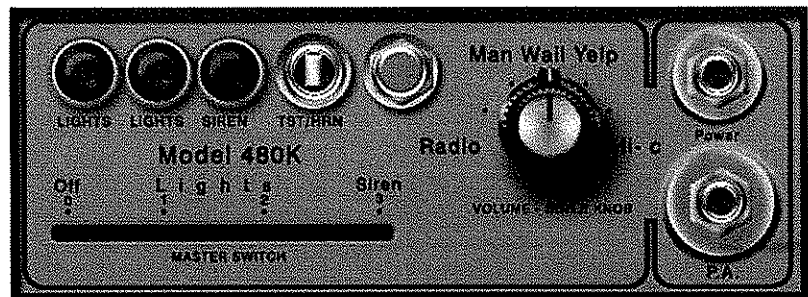
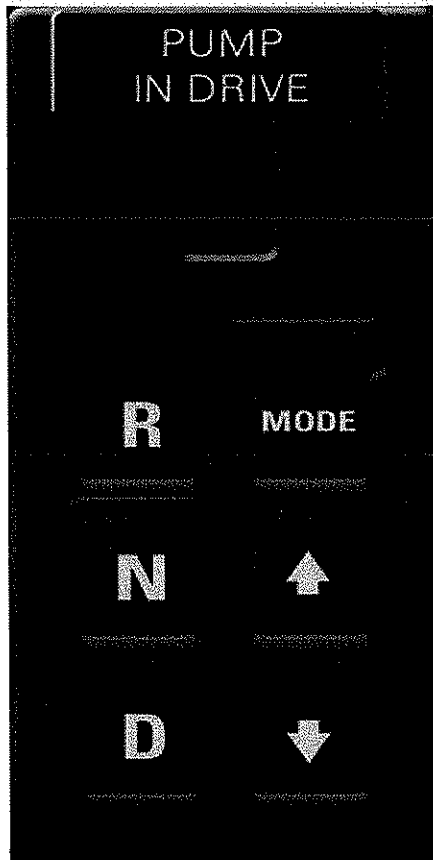
The standard fire package is designed to enhance the skills of experienced drivers and to train entry-level drivers.

The TranSim VS IV fire simulator system provides multiple terrain environments that include: suburban, freeway, rural, and an off road visual driving environment.

The following list details the databases included in the FireSim:

Database	Description	Road Miles
Suburban/city	Suburban city driving. Includes multiple lane roads with operational traffic lights, stop signs, speed and caution signs, street signs, gas station, large parking lot, police station, neighborhoods, malls, civic centers, crosswalks, residential, commercial properties, and open areas. Also includes an extended canyon area to the north terminating at a railroad station. Features new residential area with large homes, narrow bridge and railroad crossing at steep angle to road. Small warehouse with loading dock, connected to large parking area. Used for backing exercises.	More than 20
Freeway	Divided Freeway includes mountain area, runaway ramps, on/off ramps and rest area. (Road Miles based on both directions – approx. 23 miles one direction. Plus side roads and ramps.)	More than 40
Freeway w/Snow	Same as freeway but in a snow environment.	More than 40
Rural	Two lane rural driving. Includes narrow 2-lane roads, winding lanes, small roadside villages, farms, hilly roads hiding oncoming traffic, blind intersections, and branching "Y" type roads, with appropriate signage.	More than 30

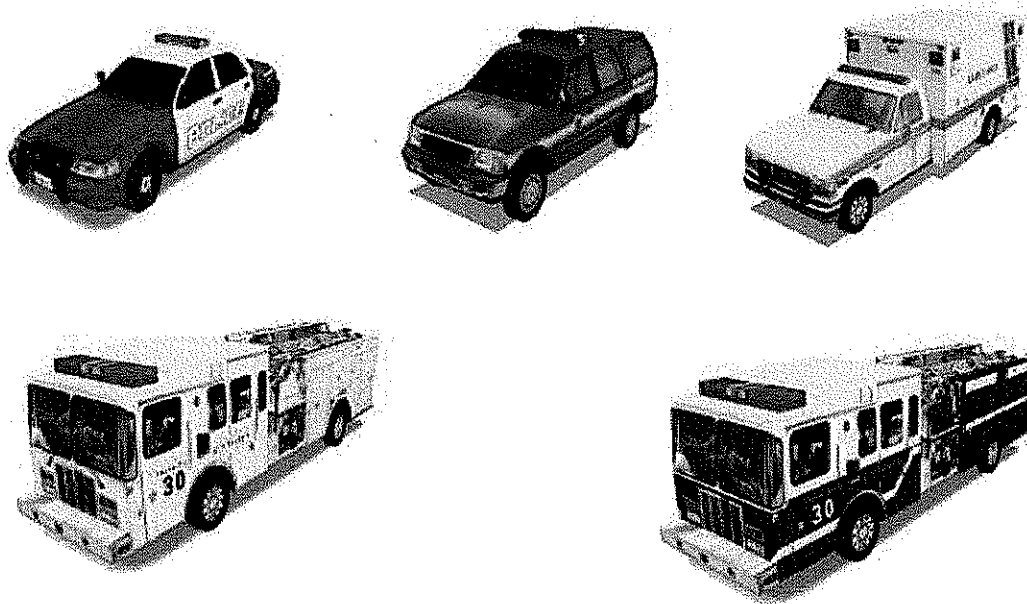
Pump Drive on Glass Dash



Siren on Glass Dash

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MPRI PatrolSim™

3.7.3 Fire Package Vehicles



3.8 Situational Display

Allows customer patch into the center screen and show simulator footage on a separate display.

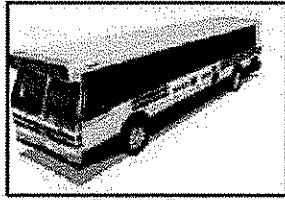
3.9 Manual Transmission Package

This option is available to further transmission requirements.

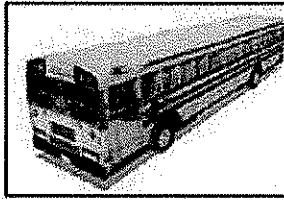
3.10 Trucking-Bus Vehicle Package

The Trucking-Bus vehicle package contains 4 vehicles:

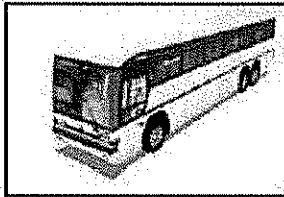
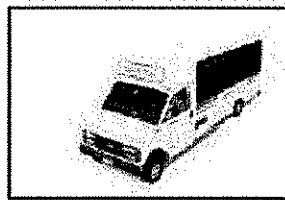
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Transit Bus



School Bus

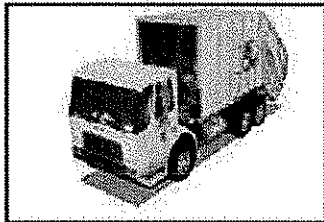


Motor Coach

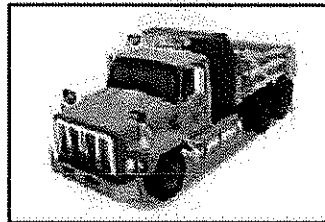
These vehicles can be driven as the Own Cab in the standard trucking scenarios installed on the TranSim VS IV.

3.10.1 Trucking-Municipal Vehicle Package

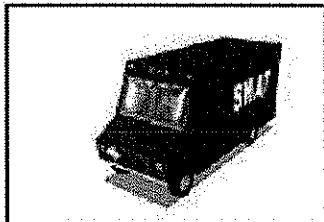
The Trucking-Municipal vehicle package contains 4 vehicles:



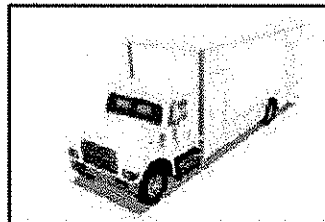
Dump Truck



Dump Truck (10 Wheel)



SWAT Step Van



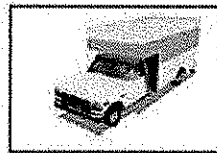
SWAT Support Vehicle

These vehicles can be driven as the Own Cab in the standard trucking scenarios installed on the TranSim VS IV in the OmniSim configuration.

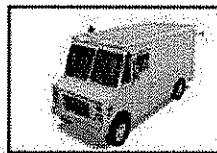
3.10.2 Trucking-Delivery Vehicle Package

The Trucking-Delivery vehicle package contains 14 vehicles:

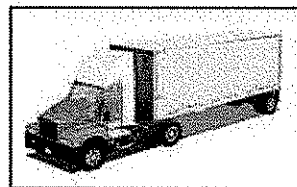
- Moving Truck
- Step van 5 speed Manual
- Step Van automatic
- Tractor with Single pup trailer, Automatic
- Tractor with Double trailer, Automatic
- Tractor with Triple trailer Automatic
- Tractor with Single pup trailer, CM390 – 7 Speed
- Tractor with Double trailer, CM390 – 7 Speed
- Tractor with Triple trailer, CM390 – 7 Speed
- Tractor with Single pup trailer, CM390 – 9 Speed
- Tractor with Double trailer, CM390 – 9 Speed
- Tractor with Triple trailer, CM390 – 9 Speed
- Tractor with Double trailer, DT430 – 9 Speed
- Tractor only, Automatic



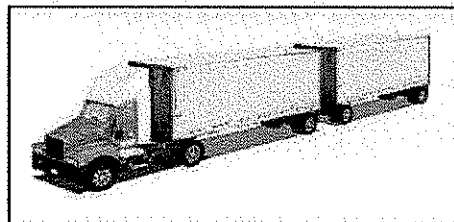
Moving Van (auto)



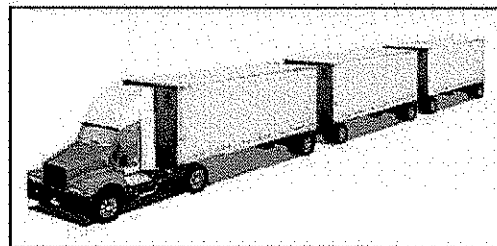
White Step Van (Auto, 6 speed)



28' Single (Auto, 7 Speed, 9 Speed)



28' Double (Auto, 7 Speed, 9 Speed)

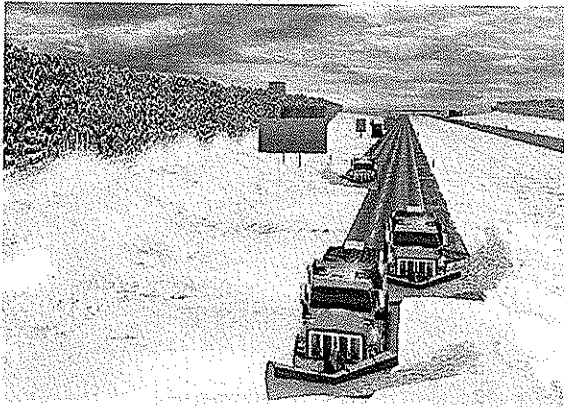


28' Triple (Auto, 7 Speed, 9 Speed, 10 Speed)

These vehicles can be driven as the Own Cab in the standard trucking scenarios installed on the PatrolSim™.

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3.11 Snowplow Vehicle Package



The Snowplow Package for the PatrolSim™ includes eight training scenarios and ten vehicle combinations. The scenarios include two introductory, four intermediate, and two advanced scenarios in either a snowy freeway or mountain-driving environment. The snow is visually cleared from the road by the snowplow allowing the driver to check his progress. Two separate drivers can drive the advanced scenarios at the same time in separate simulators for coordination and communications training between the lead- and following-driver.

The vehicle combinations included with the package are shown in the table below:

Automatic Transmission:	13-Speed Manual Transmission:
Snowplow all blades up	Snowplow all blades up
Snowplow front blade angled right	Snowplow front blade angled right
Snowplow front blade angled left	Snowplow front blade angled left
Snowplow front and wing blades angled right	Snowplow front and wing blades angled right
Snowplow front and wing blades angled left	Snowplow front and wing blades angled left

3.12 42' Wells Cargo Trailer Package (Optional Package)

22,500 lbs GVWR

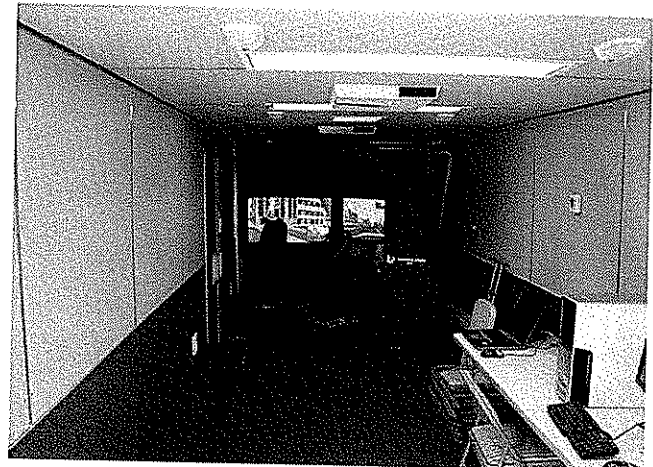
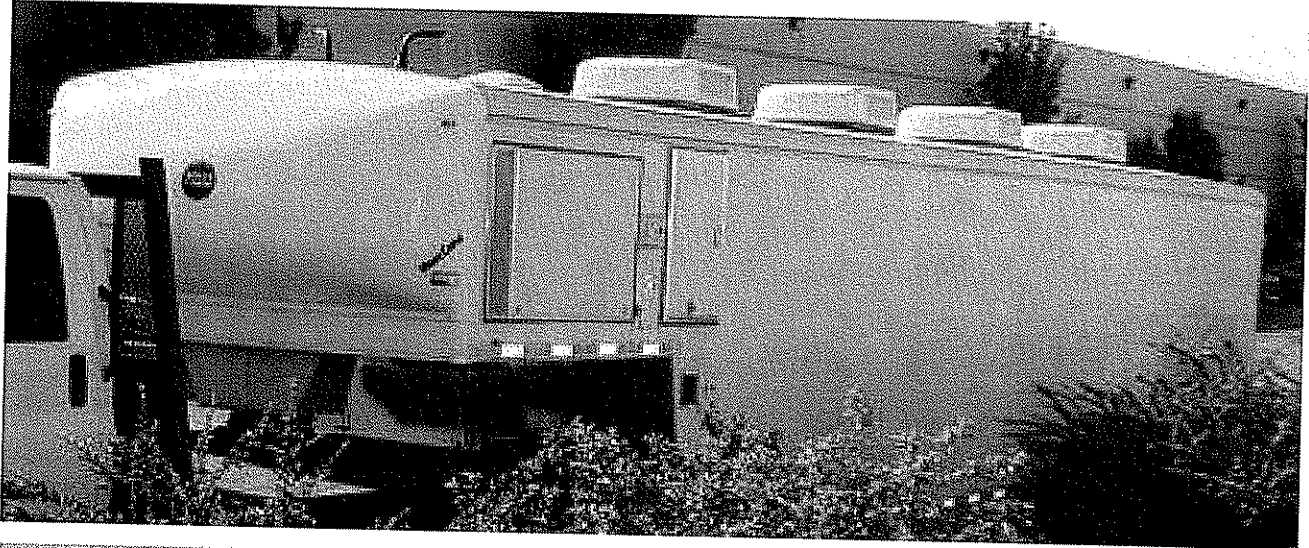


- 42' CompacVan Wide Body.
- 2 Each - Recessed Interior Step.
- Heavy Duty Rear Cornerpost Jacks – 3,000 Static Load Capacity.
- Reverse Beavertail on Rear 4'.
- 2 & 5/16" Adjustable Ball Coupler Hitch.
- Hydraulic Two-Leg Landing Gear.
- Tandem Two-Speed Landing Gear Assembly.
- 8" x 3" Rectangular Steel Tube Mainrails w/ Equal Height 'C' Section Crossmembers w/ Square Outriggers & Steel Side Plates.
- 3 Each - 6,000 lb, 102"W, 10 Degree Up Torflex Axle w/ 12" x 2" Electric Brakes, E/Z Lube & 8 on 6.5 Hubs and Drums w/ Wells Cargo Weather Resistant Wiring Package.
- 6 Each - ST235/80R16 Load Range 'D' Radial Tires Mounted on an 8-Bolt Vented Mod Aluminum Wheel.
- Chassis Fully Undercoated w/ Corrosion Preventative Compound.
- 7'6" Inside Height, 84 & 3/4"W Vertical Posts on 16" Centers in Rear 34' of Trailer.
- 2 Each - Generator Compartments w/ Fuel Doors.
- 2 Each - 36"W x 80"H Pre-Framed Radius C/S Entry Door RH Hinge w/ Screen, Integrated Dead-Bolt and Flush Lock – Starting (1 ea) 5'0" & 22'3" from Rear Corner Post.
- 2 Each - 24"W x 42"H (R.O.) Heavy Duty Pre-Framed Access Door w/ Keyed Flush Lock (Clear Opening 34"W x 34"H) (1 ea) RH and LH Hinge for R/S and C/S Wall Installation, Starting Both 34'0" from Rear Corner Post.
- Double Rear Doors w/ Steel Strap Hinges and Aluminum Anti-Rack Cam Bar Lock, Door Opening: 90 & 3/4"W x 81"H.
- 3/4" Exterior Grade Plywood Floor, Exterior Surface Undercoated, Interior Surface Painted Gray.
- Carpeted Floor and 3' Up Sidewalls w/ 26 oz Dark Gray Olefin Carpet.
- Foil Ray Floor Insulation.
- 3/8" Gray Vinyl Plywood Interior Sidewall Liner, Lined Top 4' of Sides and Ends.
- 1 & 5/8" Fiberglass Sidewall Insulation, R5 Value.

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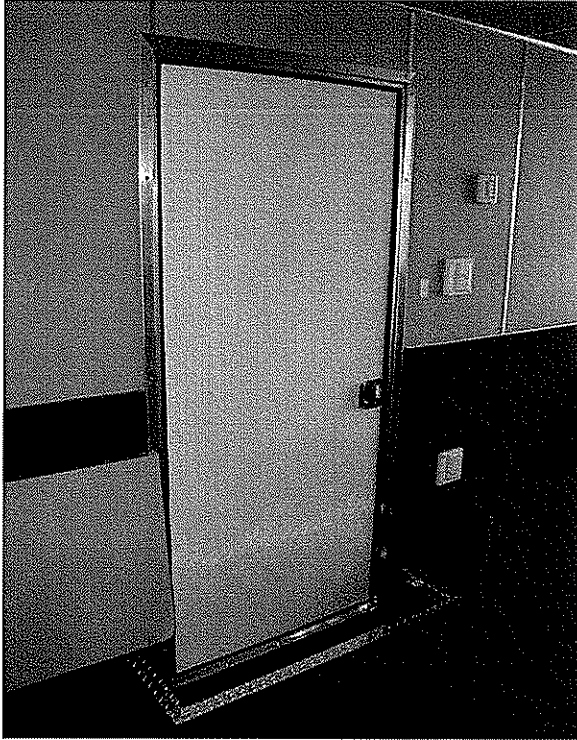
- Full Width Flat Ceiling Lined w/ 1/4" Gray Vinyl Covered Plywood (Reduces Headroom by 6").
- 7" Ceiling Insulation.
- Partition Wall – No Door, Separated Upper 8' Deck from Rear 34'.
- 18"D x 24"W x 72" Storage Compartment w/ Two Shelves, Laminated sides and Two Full Height Doors – Located on R/S Wall: Starting 10' to Rear of Step Deck Wall, Going to Rear.
- 8 Each - 12 Volt Dome Light w/ Optic Lens.
- 4 Each - 3-Way, 12 Volt Wall Switch – Located (1 ea) at Each Man Door to Control Dome Lights in Rear Compartment. Located (1 ea) at Each Upper Deck Access Door to Control Lights in Upper Deck.
- 2 Each - 50 Amp Automatic Transfer Switch Wired to Generator and 50 Amp Service Panel w/ 25' Shoreline.
- 2 Each - 50 Amp, 120V/240V 16 Circuit Service Panel w/ 50 Amp Main Breaker, 25' Shoreline, and Locking Cable Hatch – Installed on C/S Wall 54" Off Floor.
- 8 Each - 15 Amp, 120 Volt Duplex Wall Receptacles.
- 4' Double Fluorescent Light Fixture, Centered Length-Wise in Upper Deck.
- 4 Each - 4' 2 Tube Recessed Fluorescent Light Fixture.
- 4 Each - 3-Way Wall Switch for 120 Volt Electric – Installed (1 ea) at Each Man Door and Two Upper Deck Access Doors to Control 120V Lights in Compartments.
- 2 Each - Exterior Weatherproof Single, Swivel Flood Light Fixture on GFI Breaker, Installed on Interior R/S Wall.
- 2 Each - Interior Wall Switch for 120 Volt Electric - (1 ea) for Each Spot Light, Located Near Each Spotlight.
- 2 Each - Kool-o-Matic, 120 Volt Variable Speed, 295/1045 CFM Roof Mounted Exhaust Fan w/ Wall Switch – Starting (1 ea) 8'6" and 27'0" from Rear Wall, Center.
- CAT 5 Network Installation w/ Four Terminals and One Terminal Block.
- 4 Each - 120 Volt, 13,500 BTU Roof Mounted Air Conditioners w/ 5,600 BTU Heat Strip, Center (1 ea) 6'0", 14'0", 22'0" & 30'0" from Rear Wall.
- 4 Each - 1,000 Watt, 120 Volt 4' Long Baseboard Heater w/ Thermostat.
- Wall-Mount Thermostat Control for all A/C-Heat Strip Functions w/ One Central Control (Includes Remote Sensors, Air Distribution Boxes, and Electronic Control Kits).
- 0.040 Prefinished White Smooth Exterior Aluminum Installed Vertically 3m BONDED to Vertical Posts
- 14" X 14" Screened Translucent Roof Vent – Located in Upper Deck.
- A & E Weather Pro 21, 20' Electric Awning – Located on C/S Wall, Starts 8'6" from Rear Corner Post.
- Wide Body Nose Cone.
- 2 Each - L.E.D. Wraparound Tail Light w/Integrated Side Rear Marker Light.
- Wells Cargo L.E.D. Safety Package – Consists of L.E.D. Clearance Lights in Place of Standard Clearance Lights. Clearance Lights on Rear Roof Cap used as High Profile Brake Light and Side-Mounted Clearance Lights as Turn Indicators.
- S.A.E. Color Coded 12 Volt Electrical System, D.O.T. Required Exterior Lighting Package.
- D.O.T. 'A' Frame Mounted 22 Amp Hour UI Series Battery, Breakaway Switch, Aluminum Mounting Bracket, Cover, Battery "Charge" Indicator, and Diode Isolation. Battery Acid Included.
- 8', 12 volt Electrical Pigtail w/ 2 Seven-Way Connectors.
- D.O.T. Required Conspicuity Tape Installed on Both Sides and Rear of Trailer.
- 2 Each - 12.0 KW Onan Commercial Quiet Diesel Generator Package – 110 Volt w/ 25' Remote Harness – 2-Year Warranty. Includes: Steel-Lined Generator Compartment, Remote Start w/ Hour Meter, Fuel Compartment w/ Access Door, 2 Six-Gallon Portable Steel Fuel Tanks, Fuel Gauges, Exterior Generator Door, 100 Amp Deep Cycle Battery Mounted Inside Compartment and Charging System.

- Fuel Storage Compartment w/ Access Doors and 30-Gallon Diesel Fuel Tank and Pump Mounted Between Landing Gear As Low As Possible. Installed Fuel Fill Pipe and Gauge Out to R/S – Plumbed to Both Gensets w/ Return Lines.
- Custom Generator Exhaust System, Routed Through Generator Compartment and Exhausted Through Roof.
- Comprehensive 6-Year “Never Look Back” Warranty Program.



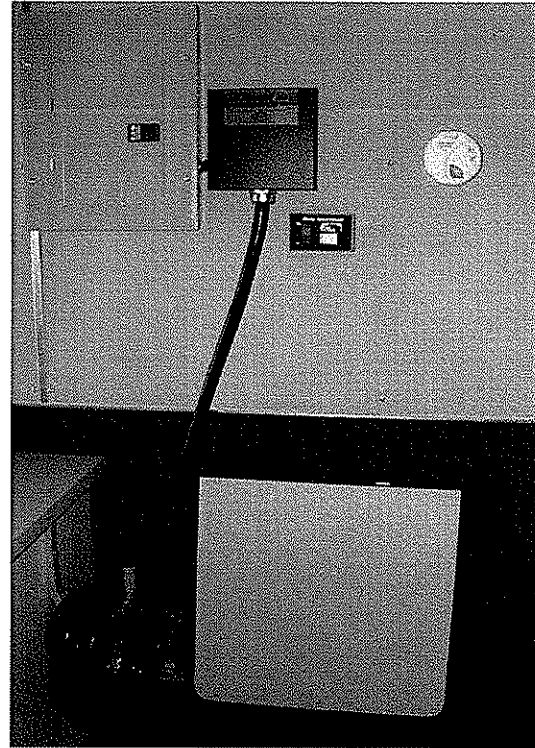
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Forward Simulator

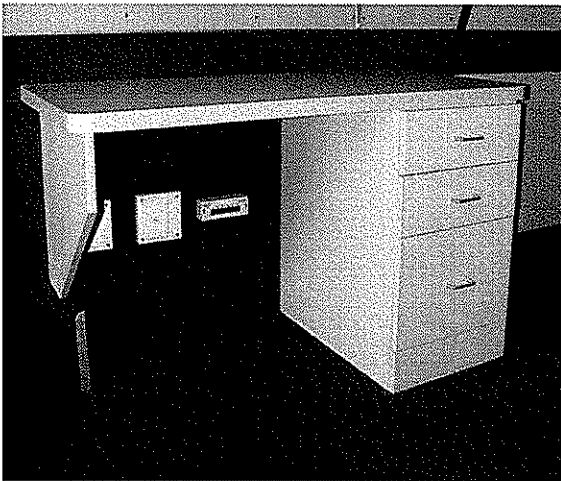


Entrv Door w/ Well

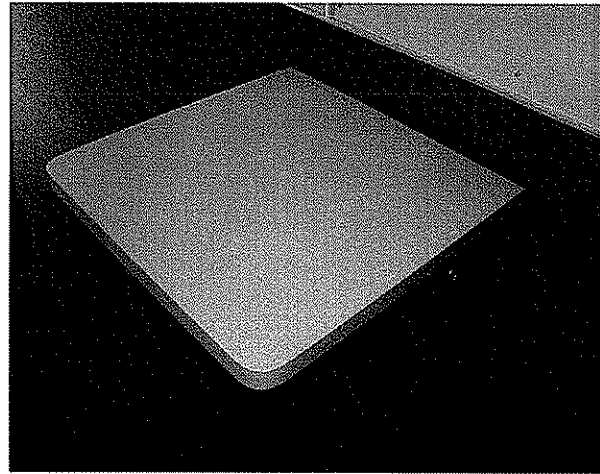
Rear Simulator



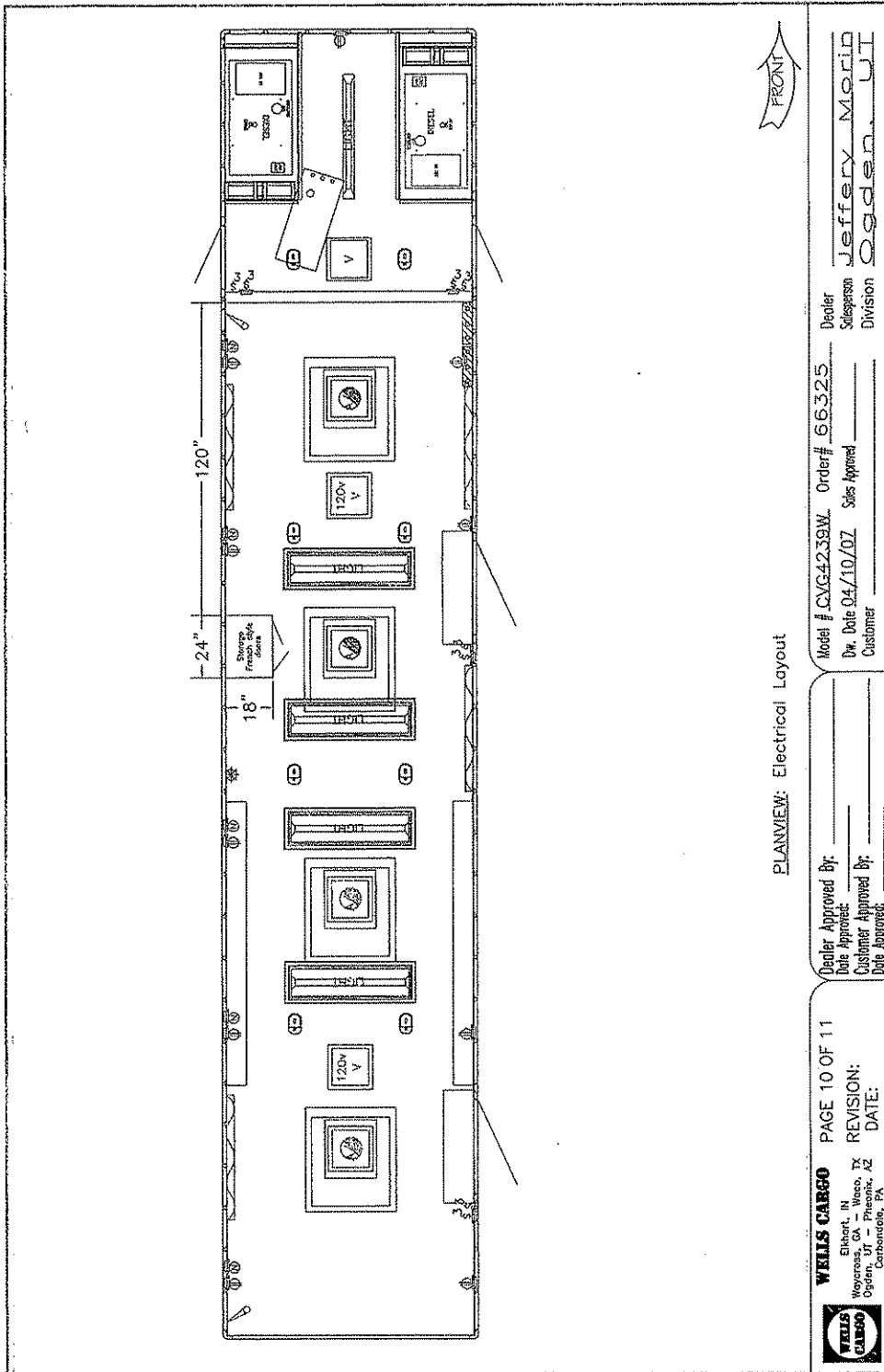
Power Panel



Operator Console



Collapsible Table



42' Trailer Drawing

PLANVIEW: Electrical Layout

Model # CYG423SW Order # 66325 Dealer Jeffery Morin
 Dn. Date 04/10/07 Sales Approval _____ Salesperson _____
 Customer _____ Division Ogden, UT

Dealer Approved By: _____
 Date Approved: _____
 Customer Approved By: _____
 Date Approved: _____

WELLS CABCO PAGE 10 OF 11
 REVISION: _____
 DATE: _____

WELLS CABCO
 Elkhart, IN
 Waco, TX
 Waycross, GA
 Ogden, UT
 Phoenix, AZ
 Conshohocken, PA



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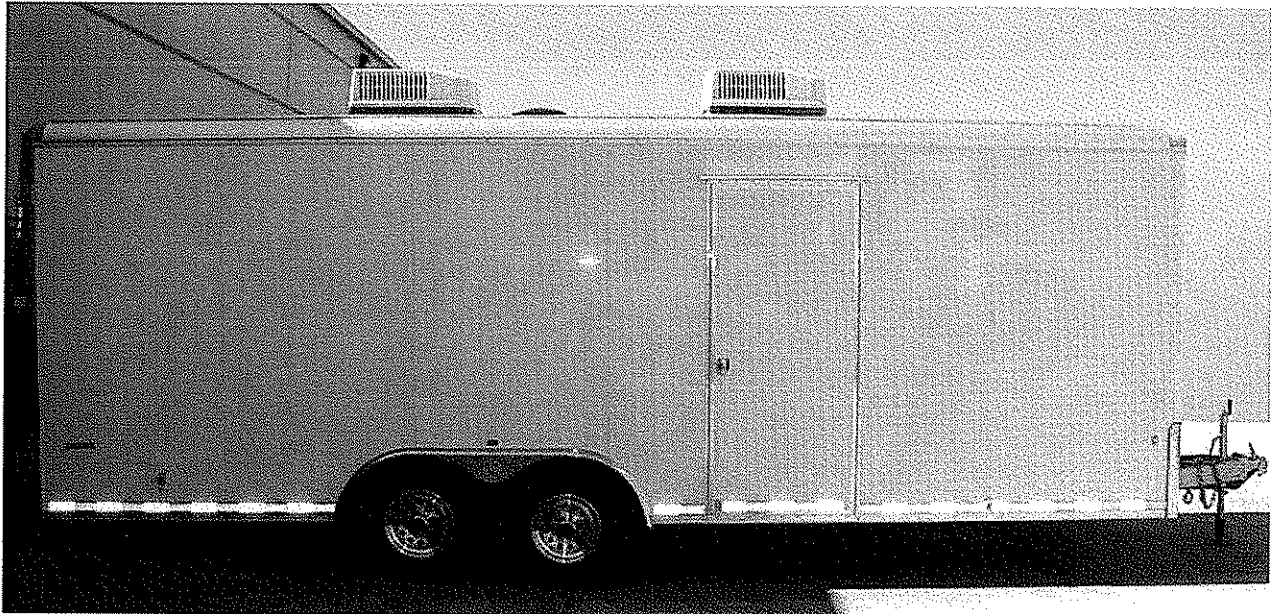
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3.13 24' Wells Cargo Trailer Package (Optional Package)

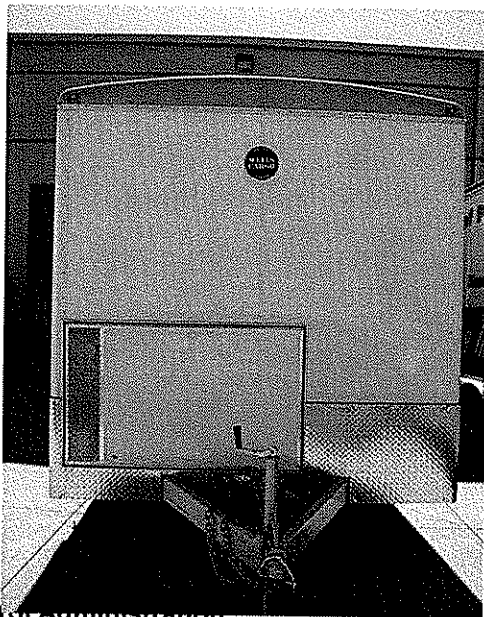
13,200 lbs GVWR



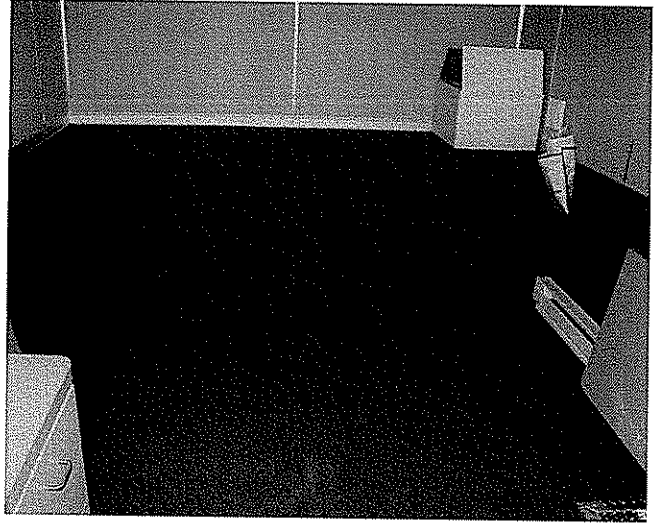
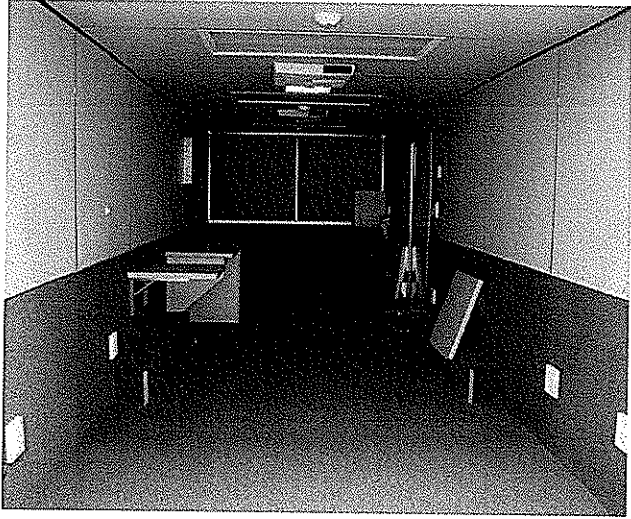
- 24' Express Wagon Wide Body.
- Base Model – EW2425W – 98 & 1/4" Body Width
- Heavy Duty Rear Cornerpost Jacks – 3,000 Static Load Capacity.
- Recessed Interior Step.
- Three-Piece 'A' Frame Included.
- 2 & 5/16" Adjustable Height Coupler w/ 4" Adjustment (14,000 lbs GVWR).
- 2 Each - D.O.T. Compliant 5/16" Safety Chain w/ Clevis Safety Slip Hook and Latch.
- 8" x 3" Rectangular Steel Tube Mainrails w/ Equal Height 'C' Section Crossmembers w/ Square Outriggers & Steel Side Plates.
- 2 Each - 6,000 lb, 102"W, 10 Degree Up Torflex Axle w/ 12" x 2" Electric Brakes, E/Z Lube & 8 on 6.5 Hubs and Drums w/ Wells Cargo Weather Resistant Wiring Package.
- 4 Each - ST235/80R16 Load Range 'D' Radial Tires Mounted on an 8-Bolt Vented Mod Aluminum Wheel.
- Chassis Fully Undercoated w/ Corrosion Preventative Compound.
- 7'6" Inside Height, 84 & 3/4"W Vertical Posts on 16" Centers.
- Generator Compartment w/ Fuel Door.
- 36"W x 78"H Pre-Framed Entry Door, RH Hinge w/ Integrated Dead Bolt and Flush Lock. Aluminum Exterior w/ white Smooth Fiberglass Interior Door Opening.
- Double Rear Doors w/ Steel Strap Hinges and Aluminum Anti-Rack Cam Bar Lock, Door Opening: 90 & 3/4"W x 81"H.
- 3/4" Exterior Grade Plywood Floor, Exterior Surface Undercoated, Interior Surface Painted Gray.
- Foil Ray Floor Insulation.
- Carpeted Floor and 3' Up Sidewalls and Rear Doors w/ 26 oz Dark Gray Olefin Carpet.
- 1/4" Gray Vinyl Plywood Interior Sidewall Liner.
- 1 & 5/8" Fiberglass Sidewall Insulation, R5 Value.
- Full Width Flat Ceiling Lined w/ 1/4" Gray Vinyl Covered Plywood (Reduces Headroom by 6").

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- 7" Ceiling Insulation.
- 4 Each - 12 Volt Dome Light w/ Optic Lens.
- 2 Each - 3-Way, 12 Volt Wall Switch.
- 50 Amp Automatic Transfer Switch Wired to Generator and 50 Amp Service Panel w/ 25' Shoreline.
- 50 Amp, 120V/240V 16 Circuit Service Panel w/ 50 Amp Main Breaker, 25'Shoreline, and Locking Cable Hatch.
- 4 Each - 15 Amp, 120 Volt Duplex Wall Receptacles.
- 2 Each - 20 Amp, 120 Volt Duplex Wall Receptacles.
- 3 Each - 4' Four Tube Recessed Fluorescent Light Fixture w/ Diffuser Cover.
- 2 Each - 3-Way Wall Switch for 120 Volt Electric.
- Kool-o-Matic, 120 Volt Variable Speed Exhaust Fan.
- CAT 5 Network Installation w/ Four Terminals and One Terminal Block.
- 2 Each - 120 Volt, 13,500 BTU Roof Mounted Air Conditioners w/ 5,600 BTU Heat Strip.
- 1,000 Watt, 120 Volt 4' Long Baseboard Heater w/ Thermostat.
- Wall-Mount Thermostat Control for A/C units w/ One Central Control (Includes Remote Sensors, Air Distribution Boxes, and Electronic Control Kits).
- 0.040 Prefinished White Smooth Exterior Aluminum Installed Vertically 3m BONDED to Vertical Posts
- 2 Each - L.E.D. Wraparound Tail Light w/Integrated Side Rear Marker Light.
- Wells Cargo L.E.D. Safety Package – Consists of L.E.D. Clearance Lights in Place of Standard Clearance Lights. Clearance Lights on Rear Roof Cap used as High Profile Brake Light and Side-Mounted Clearance Lights as Turn Indicators.
- S.A.E. Color Coded 12 Volt Electrical System, D.O.T. Required Exterior Lighting Package.
- D.O.T. 'A' Frame Mounted 22 Amp Hour UI Series Battery, Breakaway Switch, Aluminum Mounting Bracket, Cover, Battery "Charge" Indicator, and Diode Isolation. Battery Acid Included.
- Seven-Way Trailer End Connectors.
- D.O.T. Required Conspicuity Tape Installed on Both Sides and Rear of Trailer.
- 12.0 KW Onan Commercial Quite Diesel Generator Package – 110 Volt w/ 25' Remote Harness – 2-Year Warranty. Includes: Steel-Lined Generator Compartment, Remote Start w/ Hour Meter, Fuel Compartment w/ Access Door, 2 Six-Gallon Portable Steel Fuel Tanks, Fuel Gauges, Exterior Generator Door, 100 Amp Deep Cycle Battery Mounted Inside Compartment and Charging System.
- 26 Gallon Diesel Fuel Tank with Fill Neck, Cabinet and Gauge
- Comprehensive 6-Year "Never Look Back" Warranty Program.



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4 Client Responsibilities

The Client is responsible to provide a suitable space for the simulator(s) and maintain that space and the condition of the simulators for the life of the simulator(s).

4.1 Receiving and Storage of the Simulator System(s)

The Client must inspect the simulator systems upon receipt and notify MPRI of any damage to the simulator or its container.

The Client must store the simulator, until it can be installed, in a safe location where it is protected from the weather or any other factor that might damage the simulator.

4.2 Facility

The Client is responsible to provide a suitable facility to house the simulator system(s) with the following requirements:

4.3 Access to the Simulator Room

The Client will move the simulator systems components from the storage site to the simulator room under the guidance of a MPRI Service Technician. The Client will provide access to the simulator room by the appropriate means such as ramps, elevator, forklift, etc.

The minimum access to the simulator room is shown below:

Simulator	Minimum Access
PatrolSim™ IV Line	72" wide x 84" high

Only a qualified MPRI Service Technician is authorized to disassemble the simulator to accommodate limited access to the simulator room.

4.4 Floor Space and Loading

The floor space and loading required for each simulator type is shown in the table below:

Simulator	Minimum Floor Space per Simulator	Floor Loading per Simulator, lbs (Kg)
PatrolSim™ IV Line	10' x 10' x 8' high	1,500 (682)

4.5 Electrical Power

The electrical power required for each simulator type and OpCon is shown in the table below:

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Simulator	Circuits	Amps	Volts	Frequency, Hz
PatrolSim™ IV Line	1	20	115	60
OpCon	1	15	115	50/60

The above power requirements do not include power for room lights, HVAC, and any other power required by the Client.

4.6 HVAC

The room the simulator is housed in should be maintained between 65 and 72°F. The heat load required for each simulator type is shown in the table below:

Simulator	Heat Load Per Simulator, BTU per Hour
PatrolSim™ IV Line	12,000

4.7 Installation Information

Prior to scheduling a MPRI Field Service Technician to install the equipment, the Client must fill out and return the Installation Information form. This form is available from MPRI at the time the order is placed.