

**BID FORM**

MISSOURI DEPARTMENT OF TRANSPORTATION

GENERAL SERVICES

830 MoDOT DRIVE – P.O. BOX 270

JEFFERSON CITY, MO 65102

REQUEST NO.	1-080424AB		
DATE	April 10, 2008		
PAGE NO.	1	NO. OF PAGES	6

SEALED BIDS, SUBJECT TO THE ATTACHED CONDITIONS WILL BE RECEIVED AT THIS OFFICE UNTIL

**2:00 PM, LOCAL TIME, APRIL 24, 2008**

AND THEN PUBLICLY OPENED AND READ FOR FURNISHING THE FOLLOWING SUPPLIES OR SERVICES.

**QUOTATIONS TO BE BASED F.O.B. MISSOURI DEPARTMENT OF TRANSPORTATION**  
Submit net bid as cash discount stipulations will not be considered  
**JEFFERSON CITY, MISSOURI**

DEFINITE DELIVERY DATE MUST BE SHOWN. SIGN AND RETURN BEFORE TIME SET FOR OPENING. **ALL BIDS SHOULD BE EXTENDED AND TOTALED.**

**BUYER:** Amy Bailey

**BUYER TELEPHONE:** 573-522-6188

ITEM NO.	SUPPLIES OR SERVICES	MFG. NO. OR BRAND	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	<p>Contract for furnishing <b>“Traffic Classifier – WIM Unit”</b> for the period beginning on date of award and ending March 31, 2009.</p> <p><b>PLEASE SEE ATTACHED SPECIFICATION, PRICING PAGES AND DELIVERY REQUIREMENTS</b></p> <p><b>Note to Respondent:</b> A vendor must be in compliance with the laws regarding conducting business in the State of Missouri. The compliance to conduct business in the state shall include but may not be limited to: Registration of business name, vendors <b>MUST</b> submit a bid/proposal that correctly and accurately identifies the company name that is registered to do business in the State of Missouri. All vendors who are required to execute a contractual agreement <b>MUST</b> submit a copy of their certificate with the signed copy of the contract agreement before the purchasing department can proceed with MoDOT legal contract approval.</p>					

(SEE ATTACHED FOR CONDITIONS AND INSTRUCTIONS)

*In compliance with the above invitation for bids, and subject to all conditions thereof, the undersigned bidder agrees to furnish and deliver any or all the items on which prices were quoted within (SEE PRICING PAGES) days after receipt of formal purchase order.*

**Date:** \_\_\_\_\_

**Telephone No.:** \_\_\_\_\_

**Fax No.:** \_\_\_\_\_

**Federal I.D. No.** \_\_\_\_\_

**Firm Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**By (Signature):** \_\_\_\_\_

**Type/Print Name** \_\_\_\_\_

**Title:** \_\_\_\_\_

Is your firm MBE certified?  Yes  No

Is your firm WBE certified?  Yes  No

List all agencies your firm is currently certified with. \_\_\_\_\_

**PRICING PAGES**

**Pricing Page 1 of 1 – 1 pages with a total of 1 items**

**Contract for furnishing “Traffic Classifier – WIM Unit” for the period beginning on date of award and ending March 31, 2009.**

*Complete these pages and submit with the signed bid form.*

<b>Item #:</b>	<b>Description:</b>	<b>Mfg. No. or Brand</b>	<b>Qty:</b>	<b>Unit of Issue:</b>	<b>Unit Price:</b>	<b>Extended Total:</b>
1	ADR-3000 Plus Traffic Counter/Classifier W/ 19” Base Unit		4	EA		
2	ADR-WIM/3000 Board		4	EA		
3	High Power Loop boards (1 per unit) (SL-74P)		4	EA		
4	Additional PCMCIA Card		4	EA		
5	SRAM Card-Panasonic or Pretek <b>Minimum 2 meg ram</b>		4	EA		
<b>TOTAL:</b>						<b>\$</b>

**NO SUBSTITUTIONS WILL BE ACCEPTED**

**THE PURCHASE OF 4 OF EACH ITEM IS GUARANTEED PLEASE SEE FOLLOWING PAGE FOR ADDITIONAL PRICING FOR FUTURE PURCHASES:**

**ADDITIONAL PRICING PAGE – NO QUANTITIES GUARANTEED**

1	<b>ADR-3000 Plus Traffic Counter/Classifier W/ 19” Base Unit</b>		1-5	EA		
			6-10			
			11-15			
			16-20			
2	<b>ADR-WIM/3000 Board</b>		1-5	EA		
			6-10			
			11-15			
			16-20			
3	<b>High Power Loop boards (1 per unit) (SL-74P)</b>		1-5	EA		
			6-10			
			11-15			
			16-20			
4	<b>Additional PCMCIA Card</b>		1-5	EA		
			6-10			
			11-15			
			16-20			
5	<b>SRAM Card-Panasonic or Pretek Minimum 2 meg ram</b>		1-5	EA		
			6-10			
			11-15			
			16-20			

**BID SUBMITTAL:**

Your written bid must be mailed in *a sealed* envelope or box, or else delivered by hand or courier service (UPS, Federal Express, etc.) to be *received on or before the date and time specified on the front page of this bid document*, at the office of:

Ms. Amy Bailey  
Missouri Department of Transportation  
General Services - Procurement  
830 MoDOT Drive; P.O. Box 270  
Jefferson City, MO 65102

All documents must be sealed and the outermost wrapping should be clearly marked "**Bid for Traffic Classifier – WIM Unit**".

**PRICES AND QUANTITIES:**

Prices must remain firm for the entire contract period stated herein. The Missouri Department of Transportation reserves the right to increase or decrease quantities as needed. **NO QUANTITIES WILL BE GUARANTEED .**

**DELIVERY:**

Bids shall be quoted with delivery F.O.B Missouri Department of Transportation at Jefferson City, Missouri. Bidder agrees to furnish and deliver any or all the items on which prices were quoted within THIRTY (30) days after receipt of formal purchase order.

**AWARD:**

For the purpose of this bid, items will be awarded on an **ALL OR NONE** basis.

**COMPLIANCE WITH BID REQUIREMENTS:**

Failure to comply with the requirements published in this bid may result in the bid being subject to rejection. Product that does not meet specifications will cause all of the shipments to be returned at the bidders expense. *Failure to comply with the specification requirements may result in bid being subject to rejection.*

**VENDOR NAME REGISTRATION:**

On all bid documents, the bidder must use the firm name under which he/she is registered to do business in the state of Missouri. The bidder must ensure that his/her firm name is registered with the office of the Secretary of State. Failure to use the correct firm name on all bid documents will result in delaying the contract award.

**NON-EXCLUSIVITY:**

The Missouri Department of Transportation reserves the right to obtain like or similar products of this or other manufacturers when use of such products is deemed in the best interest of MoDOT.

**ADDITIONAL DOCUMENT SUBMITTAL REQUIREMENTS:**

For the bid to be considered the attachments "Preference in Purchasing Products" and "Missouri Domestic Products Procurement Act" must be submitted to this office prior to any contract being awarded for this bid.

# PREFERENCE IN PURCHASING PRODUCTS

DATE: \_\_\_\_\_

The bidders attention is directed to Section 34.076 RSMo 2000 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids/Quotations received will be evaluated on the basis of this legislation.

**All vendors submitting a bid/quotation must furnish ALL information requested below.**

**FOR CORPORATIONS:**

State in which incorporated: \_\_\_\_\_

**FOR OTHERS:**

State of domicile: \_\_\_\_\_

**FOR ALL VENDORS:**

List address of Missouri offices or places of business:

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**THIS SECTION MUST BE COMPLETED AND SIGNED:**

**FIRM NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**CITY:** \_\_\_\_\_ **STATE:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**BY (signature required):** \_\_\_\_\_

**Federal Tax I.D. #:** \_\_\_\_\_ **if no Federal Tax I.D. # - list Social Security #:** \_\_\_\_\_

NOTE: For bid/quotation to be considered, the "Preference in Purchasing Products" form must be on file in the General Services (Procurement) Division and must be dated in the current calendar year.

## MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT

The bidder’s attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34/359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding **and** prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract **and** to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you **must** complete this form as directed below.

**Failure to complete and return this document with this bid will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis. Please read the certification appearing below on this form.**

- [ ] If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the “United States” as defined in Section 34.350, RsMO, check the box at left.
  
- [ ] If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the “United States” as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:  


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- [ ] If any or all of the goods or products specified in the attached bid which the bidder proposes to supply to the State are **not** manufactured or produced in the “United States” as defined in Section 34.350, RsMO, then: (a) check the box at left; (b) list below, by item (or item number), the country other than the United States where each good or product is manufactured or produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the corresponding items (or item numbers) in the spaces provided.

Item (or item number)	Location Where Item Manufactured or Produced

(attach an additional sheet if necessary)

- [ ] The following specified goods or products cannot be manufactured or produced in the United States in sufficient quantities or in time to meet the contract specifications. Items (or item numbers): \_\_\_\_\_  

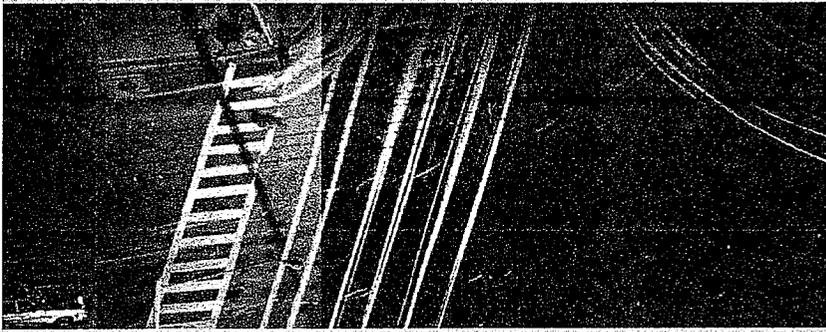

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- [ ] The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers): \_\_\_\_\_  


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### CERTIFICATION

**By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document is true, correct and complete, and may be relied upon by the State in determining the bidders qualifications under and in compliance with the Missouri Domestic Products Procurement Act.**

**The bidder’s failure to complete and return this document with the bid as directed above will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis pursuant to Section 34.353.3(2), RsMO.**



# ADR-3000 PLUS™

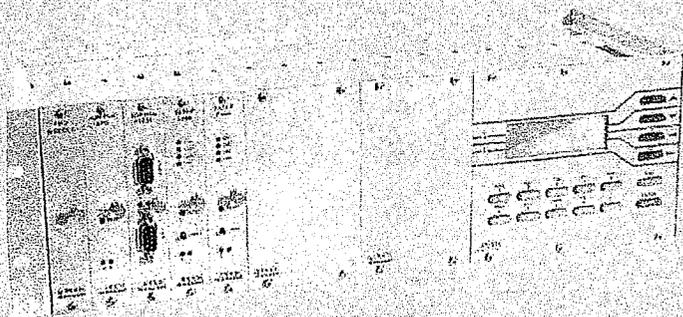
## TRAFFIC COUNTER/CLASSIFIER

### DATA COLLECTION

The Peek ADR-3000 Plus provides optimal functionality as a permanent site unit. The basic unit provides a CPU module, a Power Management Unit (PMU) with a battery, an eight-input piezo sensor module, an eight-input loop sensor module, and a communications port with full 19,200 baud telemetry facilities. With the various options, the ADR-3000 Plus can count up to 64, or classify up to 32 lanes of traffic, including up to 24 WIM sensor inputs.

Several exclusive features have been incorporated into the ADR-3000 Plus. The CPU electronics are fitted with a replaceable socket mounted fuse, protecting against an accidental power reversal, and subsequent damage. Front panel mounted LED's indicate a successful start up of the microprocessor by blinking twice during the boot cycle. LEDs also warn of system fault conditions and indicate the communications port activity and status. Additionally, a reset switch that is mounted on the front panel of the ADR-3000 Plus can be used to re-start the CPU. This provides an easy method of restarting a unit during diagnostics, similar to cycling power off and on.

Each unit can perform up to eight studies, plus generate per-vehicle records, with up to 356 bins of data. This could include, for example, classification by speed, by lane, and volume. The type, configuration, and format of data to be collected can be custom programmed or selected from menu-driven choices. Available data types include per-vehicle records, per-lane data, binned vehicle classification by axle, speed, length, gap, or headway, or almost any combination of these classifications. Vehicles can also be classified according to either a Scheme "F" or a user-defined classification scheme.



19" Unit

### FEATURES

- ▶ Permanent rack mounted traffic counter/classifier/WIM.
- ▶ Simple to set up and operate.
- ▶ 2 MB onboard memory.
- ▶ Multilane operation.
- ▶ PCMCIA memory option - for additional storage.
- ▶ Up to 64 inputs with a variety of sensor options.
- ▶ Scheme "F" or user-defined classification scheme.
- ▶ High-speed communications and telemetry.
- ▶ U.S. standard or metric units.
- ▶ Optional integrated control panel with LCD readout.
- ▶ Solar power options.
- ▶ Battery "sentinel"
- ▶ Auto daylight savings time.

### OPERATIONAL CHARACTERISTICS

The Peek ADR-3000 Plus is a modular multilane vehicular traffic counter/classifier that can be set up and operated either remotely via telemetry or directly in the field via a computer with appropriate software. The optional front panel mounted keypad and display provides autonomous local control. Setup and operational performance of the Peek ADR-3000 Plus is enhanced for simple and reliable field traffic data collection. Easy to use menus allow configuration flexibility. Optional setup files are available which help reduce confusion and operator errors. Collected data is held secure from unintentional erasure or loss.

### QUALITY ASSURANCE TESTING

Each unit is individually tested for correct operation during a computer controlled environmental chamber test cycle, based on the NEMA TS2 standards. All input circuits have been designed and tested to the NEMA TS2 standards for surge (lightning) protection.



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## PHYSICAL DESCRIPTION

The Peek ADR-3000 Plus is an instrument rack-based unit, expandable by function with individual plug-in modules. Available to fit standard EIA 19" or Type 170 enclosures, the Peek ADR-3000 Plus may also be shelf or panel mounted. Electrical connections (external) are via rear mounted terminal strips for sensor inputs. Communications are supported via an RS232-C DB-9 connector. Plug-in modules can consist of power supply, central processing unit, communications, control panel, memory, loop sensors, piezo sensors, contact closure inputs, analog to digital inputs or a combination of these for a particular application. Individual plug-in modules are Eurocard in size with DIN standard connectors. Typical module width is 1 inch.

Power options include 115 VAC, 6 or 12 VDC, solar power and operational battery-backup as necessary. An internally supported hardware real time clock maintains time and date, regardless of unit power, for up to ten years.

## PEEK ADR-3000 PLUS SUPPORTIVE SOFTWARE

Of importance to the user of modern counters/classifiers is the operating and reporting software, which supports, controls and formats the resultant data. A user-friendly Windows™ software package is available to complement the Peek ADR-3000 Plus. This software is the Traffic Operations Processing Software (TOPS) program, which is available from Peek Traffic.

The TOPS program provides multi-file processing, stores data files into a single database for easy file sharing among TOPS users, allows for edit and preview of reports before printing, provides for both ADR and 241 data processing protocols, enables remote or local setup of Peek ADR units and collection of data by direct manual connection or by the added functionality of automatic telemetry polling of field sites via modem connection (auto polling and weigh-in-motion support are add-in options). The TOPS program reads all files and generates a suite of daily, weekly and monthly reports. A user-definable classification function, within the program, provides the ability to customize classification and to transfer the new scheme to the Peek ADR-3000 Plus. Processed data may be exported to various other software packages.

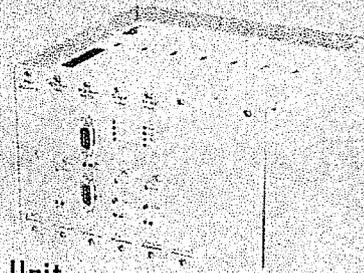
## TWO YEAR LIMITED WARRANTY

Peek Traffic warrants this product against manufacturing defects in materials and workmanship for two years from date of shipment from Peek Traffic. Specific contracts and regional laws may vary or alter these terms.

## SPECIFICATIONS

Characteristic	Description
Dimensions	5.25"H x 10" to 19"W x 9.35"D (135mm x 255-480mm x 240mm)
Weight	Less than 15 pounds (<6.8kg)
Temperature	-40°F to +165°F (-40°C to +74°C) T
Display (optional)	20 digits x 4 line LCD.
Inputs	24 sensor inputs of various types allowed, optionally up to 64.
Count rate	200 counts, per second, per input.
Interval	▶ 1, 2, 5, 6, 10, 15, 30 and 60 minutes. ▶ 2, 3, 6, 12 and 24 hours, real-time. ▶ Four daily peak periods available.
Microprocessor	Intel 80C186
Capacity	Approx. 3,280 days of volume data.
Accuracy	±1 count per record per sensed input.
Communications	Selectable RS232 serial baud rates between 300 and 19,200 (115200 baud-optional) via UL and CSA approved female socket, with up to 5 ports available.
Options	▶ Solar power. ▶ Front panel keypad and display. ▶ Up to 8 sensor input modules, or 64 inputs, which can be a combination of loop, piezo, or contact closure inputs.

10" Unit



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Please contact Peek Traffic for customer inquiries about any of the company's Traffic Control, Data Collection, Enforcement, Detection, or Tolling products. To learn how Peek Traffic is making the world a safer place to travel, visit the Peek Traffic web site at <http://www.peak-traffic.com>.

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ROADWAY INFORMATION MANAGEMENT

# ADR-WIM™

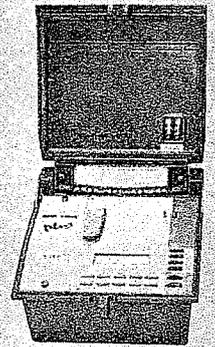
## PIEZO WEIGH-IN-MOTION FOR ADR-1000/2000/3000 UNITS

### DATA COLLECTION

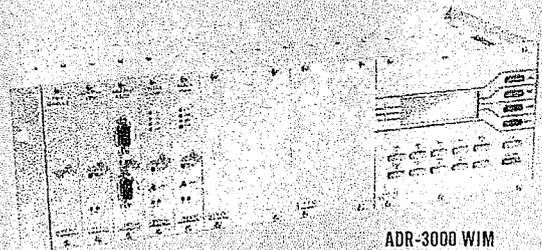
The technically advanced multi-channel ADR-WIM card can be installed in the ADR-1000/2000/3000, semi-permanent or permanent configurations. Installing a WIM card enables the ADRs to weigh heavy commercial vehicles at high speeds while retaining the full functionality and ease of use of the ADR-1000/2000/3000 series of counters/classifiers. Using one or two simply installed subsurface piezoelectric weighing sensors (with optional secondary sensors), the following types of data can be accurately collected: arrival time, vehicle speed and classification, gross vehicle weight, road surface temperature, volumetric flow, individual axle weights and spacings, overload indications, Equivalent Single Axle Loadings (ESALs), gap and headway, and per vehicle records. When short-term data is required, temporary stick-down sensors may be installed for cost-effective surveys. Site monitoring includes a four-lane capability on the ADR1000/2000 or an eight-lane capability on the ADR-3000 range. Data storage is provided by internal memory or removable PCMCIA cards of up to 8 MB capacity. Sites are generally battery powered, but solar or line power backup extends monitoring time indefinitely. The RS232 port, when connected to a PC, reports real time data for alarm analysis.



ADR-1000



ADR-2000



ADR-3000 WIM  
19" EIA (170) Instrument Rack

### SYSTEM FLEXIBILITY

The use of simply installed plug-in modules allows flexible installation of multiline configurations to suit specific site demands and provides ease of expansion during manufacture or at a later date. Any existing ADR-1000/2000/3000 can be upgraded in the field or shop for WIM operations. The upgrade is simple and cost-effective at most sites. Plug-in WIM modules, easy to connect wire harnesses and flash loaded firmware are the major components required for the upgrade.



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INTELLIGENCE FROM QUIXOTE

## FEATURES

- ▶ Up to 8 lane simultaneous operation.
- ▶ Programmable vehicle classification schemes.
- ▶ Per vehicle WIM - alarm output.
- ▶ On-scale sensors.
- ▶ Solar rechargeable battery operation.
- ▶ Dynamic auto-calibration.
- ▶ Road temperature sensing.
- ▶ User-friendly setup via PC, data card or keyboard.
- ▶ Accepts PCMCIA memory cards up to 8 MB.
- ▶ High speed telemetry communication.
- ▶ Compatible with lineas quartz sensor.

## SPECIFICATIONS

<b>Weight</b>	Portable ADR-2000-WIM recorder: Typically 17.6 pounds (8 kg) with battery Permanent ADR-3000-WIM rack recorder: Typically less than 15 pounds (7 kg)
<b>Size</b>	ADR-2000 P-WIM: 6.5"H x 9.5"W x 13"D (162 x 242 x 332 mm) ADR-3000 P-WIM: 5.25"H x 10" to 19"W x 9.35"D (135 x 225 to 480 x 240 mm)
<b>Temperature</b>	-40°F to +165°F (-40°C to +74°C)
<b>Display (optional)</b>	20 digit x 4 line liquid crystal display and keypad
<b>Inputs</b>	ADR-1000-WIM: Up to 8 weigh-in-motion inputs ADR-2000-WIM: Up to 16 weigh-in-motion inputs, temperature input ADR-3000-WIM: Sensor card inputs (in multiples of eight) of various type allowed, up to 24 weigh-in-motion inputs, temperature input
<b>Time Intervals</b>	1, 2, 5, 6, 10, 15, 30 and 60 minutes 2, 3, 6, 12 and 24 hours, real time Four daily peak periods available

<b>Microprocessor</b>	Intel 80C186
<b>Data Capacity</b>	Expandable up to 8 MB
<b>Accuracy</b>	Better than 90% confidence on gross weight, exceeds the ASTM standard
<b>Options</b>	<b>ADR-1000-WIM:</b> <ul style="list-style-type: none"> <li>▶ Up to 4 lanes of WIM</li> <li>▶ Solar power</li> <li>▶ PCMCIA memory card up to 8 MB</li> <li>▶ FHWA/ECC or custom classification tables</li> </ul> <b>ADR-2000-WIM:</b> <ul style="list-style-type: none"> <li>▶ Up to 4 lanes of WIM</li> <li>▶ Solar power</li> <li>▶ PCMCIA memory card up to 8 MB</li> <li>▶ FHWA/ECC or custom classification tables</li> </ul> <b>ADR-3000-WIM:</b> <ul style="list-style-type: none"> <li>▶ Up to 8 lanes of WIM</li> <li>▶ Solar power</li> <li>▶ Front panel keyboard and display</li> <li>▶ Battery backup</li> <li>▶ PCMCIA memory card up to 8 MB</li> </ul>

## TOPS DATA ANALYSIS SOFTWARE

With an additional WIM processing module for the TOPS Software package, WIM data from the ADR-1000, ADR-2000, and ADR-3000 WIM recorders can be processed. With any of these units data in per vehicle (PVR) mode can be presented as well as a variety of different PVR reports. Data export to Excel compatible worksheets aids in fast and professional graphical display of data. The Data Explorer module helps provide easy identification of required data, and functions permit site data to be selected, listed, deleted, and/or stored. An unlimited number of sites can be maintained by TOPS, and with the addition of automatic telemetry, it lowers the cost of data retrieval.

## TWO YEAR LIMITED WARRANTY

Peek Traffic Corporation warrants this product against manufacturing defects in materials and workmanship for two years from date of shipment from Peek. Specific contracts and regional laws may vary or alter these terms.



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Specifications are subject to change without notice to reflect improvement and upgrades.

## Chapter 17 SL-58P Loop Detector

### GENERAL DESCRIPTION

The Sarasota SL-58P is a low current eight channel modular inductive vehicle detector designed primarily for traffic data monitoring applications, using the 'EURO card' printed circuit board outline. The detector uses channel scanning techniques which permit freedom from cross channel interference from the eight channels within a detector. The detector uses the patented MT detection technique which has also been used in the Peek Traffic range of group 3 and group 5 detectors. One of the major advantages of the MT detection technique is that the loop scanning period is consistent and substantially independent of the loop inductance. The detector therefore has very good performance when parameters such as speed, occupancy, and headway are being measured. Automatic tuning on 'power up' or reset allows detector operation in 2 seconds. Both power up and reset clear any detect and fault outputs already set in the detector. Software controls allow each channel sensitivity and Hysteresis to be adjusted while the detector is working, although a change in a setting will cause the detector to reset. An individual channel can be 'switched off'. With a 'channel off' the associated road loop will not be energized. Particular features of the SL58P are its low current requirement and stable operation with full presence time capability. The detector has an asynchronous communication port which allows an interrogating computer to read the detector internal data.

### SPECIFICATION

Supply: 4.75 to 20 vdc nominal 8 mA (8 chan) in wait 1.92 mA, at stop 0.24 mA

Operating Temperature Range: -40 to +80 C

Loop Parameters:

Inductance Tuning Range: 40 to 600 uH

Minimum Resistance to earth: >10 meg ohms at 500 V, Recommended 100 meg ohms at 500 V.

Series Resistance: <10 ohms

Output: Serial communications of time stamped loop on and loop off events plus system status messages.

Scan rate 3.5mS, 7mS, 14 mS.

If 0.05 sensitivity is set on any channel, then scan rate doubles.

Response Times: Operate and Release Delays 56 mS or 112mS ± accuracy

If 0.05 sensitivity is set on any channel, then all channel accuracy times double

Lightning & Transient Protection: Zener diode and flash over protection for over voltage on loop dissipated to chassis ground per CALTRANS and NEMA specifications.

Failsafe on Fault:

1. Open or short circuit loop: The channel led will go into detect condition while the loop fault condition exists, and the fault output led will light (if enabled by push button). The fault output will be held as long as the fault exists.
2. Automatic retune of a channel occurs if the loop inductance changes by a nominal +/-18% of its initial start up inductance. This will cause the detect led to go into detect during the retune and give a fault output. The fault condition will be held for one second after the fault condition has been cleared.

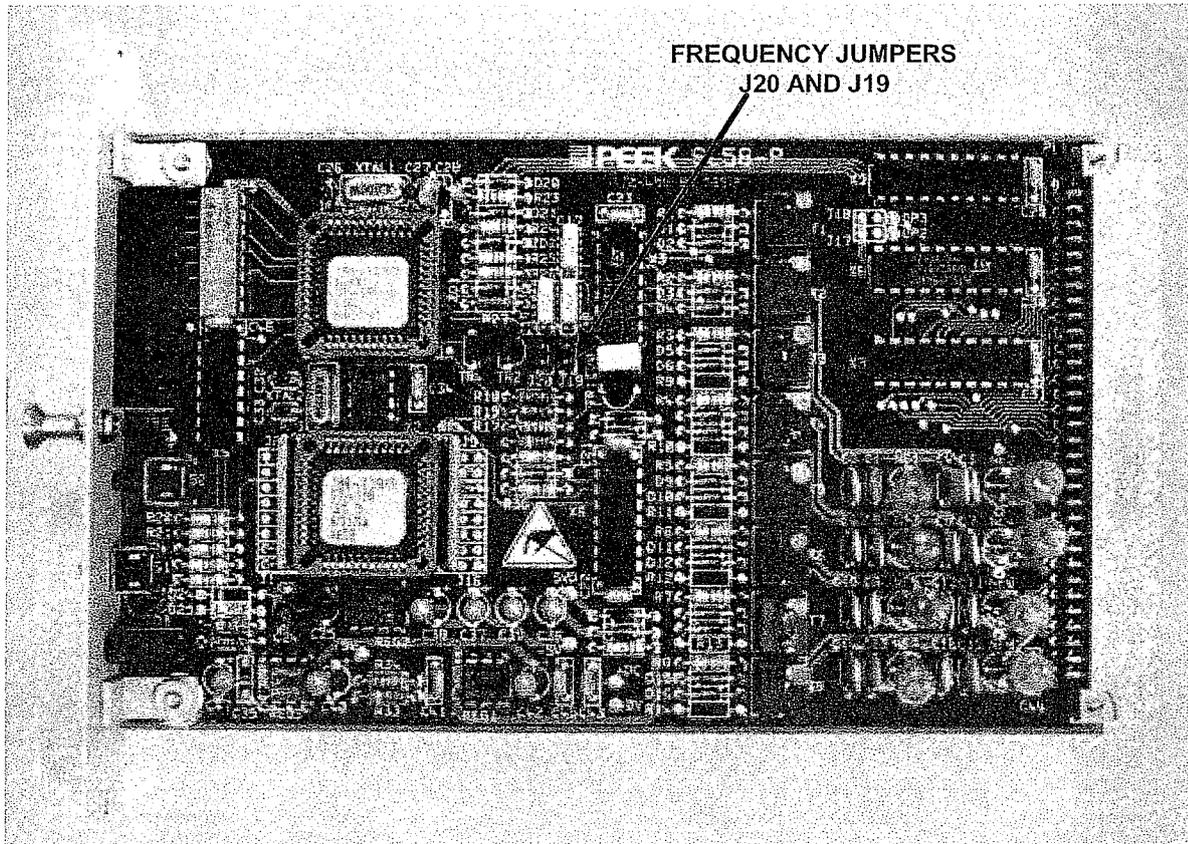
### OPERATING INSTRUCTIONS

Note: THE POWER SUPPLY TO ALL DETECTORS IN A RACK MUST BE SWITCHED OFF WHILE ANY DETECTOR IS BEING INSTALLED OR REMOVED FROM THE RACK.

1. With ONE multiple channel detector the FREQUENCY jumpers can normally have any setting as the channels of the detector are individually activated.
2. Speed measurement :- Both channels should be set to the same sensitivity (in the range 0.1 to 1.0%) and the speed measuring pair of channels must be adjacent.
3. Where ROAD LOOPS IN CLOSE PROXIMITY ARE CONNECTED TO DIFFERENT DETECTORS then channel separation may be necessary. The frequency modes should be different and with as much separation as available.
4. Set SENSITIVITY and HYSTERESIS as required using software or ADR control panel.

## SL-58P Loop Detector

5. "Power up" or press RESET to initiate automatic tuning. This will take a nominal 2 secs during which the DETECT leds will illuminate.
6. Observe detection of vehicles on the DETECT leds.



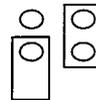
High Frequency  
J20 J19  
(Default)



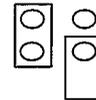
Medium High Frequency  
J20 J19



Medium Low Frequency  
J20 J19



Low Frequency  
J20 J19



On the SL-58P there are two jumpers available to set the frequency of loop operation, labeled as J19 and J20 on the printed circuit board. Normally no setting is necessary due to the scanning nature of the detector which eliminates interference or crosstalk between the eight loops connected to one SL-58P. Even when several SL-58P detectors are used in the same unit or rack, interaction between loops is normally not a problem. If interference is noted as occurring between loops which are physically close to each other in the road, and which are connected to separate SL58P detectors, frequency separation may be necessary. With three SL-58P detectors in a unit or rack, each with road loops in close proximity in the road, the middle (road loop) detector should have a different frequency setting to the outside two road loop connected detectors.

Loops which are installed in concrete roads reinforced with steel are artificially lower in inductance and operate at a higher frequency. To counter act the effect of the steel, a low frequency setting should be used.

### LOOP BOARD HYSTERESIS SETTINGS

Additional PCMCIA Card, this card is used for expanded memory storage capabilities.

SRAM card – Panasonic or Pretek

Missouri Highways and Transportation Commission  
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

**STANDARD SOLICITATION PROVISIONS**

- a. The Missouri Department of Transportation (MoDOT) reserves the right to reject any or all bids/quotes/proposals, and to accept or reject any items thereon, and to waive technicalities. In case of error in the extension of prices in the bid/quote/proposal, unit prices will govern.
- b. All bids/quotes/proposals must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
- c. By virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown, within the State of Missouri.
- d. Time of delivery is a part of the consideration and, if not otherwise stated in the solicitation documents, must be stated in definite terms by the Bidder/Offeror and must be adhered to. If time varies on different items, the Bidder/Offeror shall so state.
- e. If providing bids/quotes/proposals for commodities, the Bidder/Offeror will state brand or make on each item. If bidding or proposing other than the make, model or brand specified, the manufacturer's name, model number or catalog number must be given.
- f. **For bids/proposals of \$25,000 or more**, no bids/proposals by telephone, telegram or telefax will be accepted.
- g. The date specified for the returning of bids/quotes/proposals is a firm deadline and all bids/quotes/proposals must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting proposals. All proposals arriving at the designated office after the deadline specified will be rejected.

**GENERAL TERMS AND CONDITIONS**

**General Performance**

- a. This work is to be performed under the general supervision and direction of the Missouri Department of Transportation (MoDOT) and, if awarded any portion of the work, the Contractor agrees to furnish at his own expense all labor and equipment required to complete the work, it being expressly understood that this solicitation is for completed work based upon the price(s) specified and is not a solicitation for rental of equipment or employment of labor by MoDOT, and MoDOT is to have no direction or control over the employees used by the Contractor in performance of the work.

**Deliveries**

- a. Unless otherwise specified on the solicitation documents or purchase order, suppliers shall give at least 24 hours advance notice of each delivery. Delivery will only be received between the hours of 8:00 a.m. to 3:00 p.m., Monday through Friday. Material arriving after 3:00 p.m. will not be unloaded until the following workday. No material will be received on Saturday, Sunday or state holidays.
- b. If the prices bid herein include the delivery cost of the material, the Contractor agrees to pay all transportation charges on the material as FOB - Destination. Freight costs must be included in the unit price bid and not listed as a separate line item.
- c. Any demurrage is to be paid by the Contractor direct to the railroad or carrier.

**Nondiscrimination**

- a. The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. All solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of the Contractor's obligations under this contract and the Regulations, will be relative to nondiscrimination on the grounds of race, color, or national origin.
  - 1) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MoDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
    - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
    - ii. cancellation, termination or suspension of the contract, in whole or in part.

**Contract/Purchase Order**

- a. By submitting a bid/quote/proposal, the Bidder/Offeror agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's proposal and/or submitted pricing, and (3) the MHTC's acceptance of the proposal and/or bid by purchase order or post-award contract.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized purchase order and/or notice to proceed.
- d. The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the MHTC, by a modified purchase order prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

**Subcontracting**

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MoDOT. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MoDOT and accompanied by documentation showing that the organization which will perform the work is particularly experienced and

Missouri Highways and Transportation Commission  
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

equipped for such work.

- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.
- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

**Invoicing and Payment**

- a. MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Federal Excise Tax Exemption Certificate will be furnished to the successful Bidder/Offeror upon request.
- b. Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- c. Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- d. The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the Contractor's expense.
- e. The MHTC reserves the right to purchase goods and services using the state-purchasing card.

**Applicable Laws and Regulations**

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MoDOT a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
  - 1) Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MoDOT a copy of their current Transient Employer Certificate from the Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
- c. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.

**Executive Order**

- a. The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6<sup>th</sup>) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.
  - 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
  - 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
  - 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

**Preferences**

- a. In the evaluation of bids/quotes/proposals, preferences shall be applied in accordance with Chapter 34 RSMo. Contractors should apply the same preferences in selecting subcontractors.
- b. By virtue of statutory authority, RSMo. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.
  - 1) If attached, the document entitled "**PREFERENCE IN PURCHASING PRODUCTS**" should be completed and returned with the solicitation documents.
  - 2) If attached, the document entitled "**MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT**" should be completed and returned with the solicitation documents. **Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more.**
- c. In the event of a tie of low bids, the MHTC reserves the right to establish the method to be used in determining the award

Missouri Highways and Transportation Commission  
Standard Bid/Proposal Provisions, General Terms and Conditions and Special Terms and Conditions

**Remedies and Rights**

- a. No provision in the contract shall be construed, expressly or implied, as a waiver by the MHTC of any existing or future right and/or remedy available by law in the event of any claim by the MHTC of the Contractor's default or breach of contract.
- b. The Contractor agrees and understands that the contract shall constitute an assignment by the Contractor to the MHTC of all rights, title and interest in and to all causes of action that the Contractor may have under the antitrust laws of the United States or State of Missouri for which causes of action have accrued or will accrue as the result of or in relation to the particular equipment, supplies, and/or services purchased or produced by the Contractor in the fulfillment of the contract with the MHTC.
- c. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request MoDOT to enter into such litigation to protect the interests of the MHTC, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**Cancellation of Contract**

- a. The MHTC may cancel the contract at any time for a material breach of contractual obligations or for convenience by providing the Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.
- b. If the MHTC cancels the contract for breach, the MHTC reserves the right to obtain the equipment, supplies, and/or services to be provided pursuant to the contract from other sources and upon such terms and in such manner as the MHTC deems appropriate and charge the Contractor for any additional costs incurred thereby.

**Bankruptcy or Insolvency**

- a. Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntary or involuntary, or upon the appointment of a receiver, trustee, or assigned the benefit or creditors, the Contractor must notify MoDOT immediately. Upon learning of any such actions, the MHTC reserves the right, at its sole discretion, to either cancel the contract or affirm the contract and hold the Contractor responsible for damages.

**Inventions, Patents, and Copyrights**

- a. The Contractor shall defend, protect, and hold harmless the MHTC, its officers, agents, and employees against all suits of law or in equity resulting from patent and copyright infringement concerning the Contractor's performance or products produced under the terms of the contract.

**Inspection and Acceptance**

- a. No equipment, supplies, and/or services received by MoDOT pursuant to a contract shall be deemed accepted until MoDOT has had reasonable opportunity to inspect said equipment, supplies, and/or services.
- b. All equipment, supplies, and/or services which do not comply with the specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the Contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
- c. The MHTC reserves the right to return any such rejected shipment at the Contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received.
- d. The MHTC's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the MHTC may have.

**Warranty**

- a. The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by MoDOT, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.
- b. Such warranty shall survive delivery and shall not be deemed waived either by reason of the MHTC's acceptance of or payment for said equipment, supplies, and/or services.

**Status of Independent Contractor**

- a. The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

**Indemnification**

- a. The Offeror shall defend, indemnify and hold harmless the Commission, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Offeror's performance of its obligations under this Agreement.