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Gatineau, Québec K1A 0S5  
Bid Fax: (819) 997-9776

**Revision to a Request for a Standing Offer**  
**Révision à une demande d'offre à commandes**  
National Individual Standing Offer (NISO)  
Offre à commandes individuelle nationale (OCIN)

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Offer remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'offre demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
Electrical & Electronics Products Division  
11 Laurier St./11, rue Laurier  
7B3, Place du Portage, Phase III  
Gatineau, Québec K1A 0S5

<b>Title - Sujet</b> VEHICLE SIREN/LIGHT CONTROLLER	
<b>Solicitation No. - N° de l'invitation</b> M7594-145034/A	<b>Date</b> 2015-01-23
<b>Client Reference No. - N° de référence du client</b> M7594-145034	<b>Amendment No. - N° modif.</b> 001
<b>File No. - N° de dossier</b> hn460.M7594-145034	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$HN-460-66393	
<b>Date of Original Request for Standing Offer</b> Date de la demande de l'offre à commandes originale 2014-12-18	
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2015-02-20</b>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Guertin, Benoit	<b>Buyer Id - Id de l'acheteur</b> hn460
<b>Telephone No. - N° de téléphone</b> (819) 956-4479 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Delivery Required - Livraison exigée</b>	
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	
<b>Security - Sécurité</b> This revision does not change the security requirements of the Offer. Cette révision ne change pas les besoins en matière de sécurité de la présente offre.	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Acknowledgement copy required</b>	<b>Yes - Oui</b>	<b>No - Non</b>
<b>Accusé de réception requis</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>The Offeror hereby acknowledges this revision to its Offer.</b> <b>Le proposant constate, par la présente, cette révision à son offre.</b>		
<b>Signature</b>	<b>Date</b>	
Name and title of person authorized to sign on behalf of offeror. (type or print) Nom et titre de la personne autorisée à signer au nom du proposant. (taper ou écrire en caractères d'imprimerie)		
<b>For the Minister - Pour le Ministre</b>		

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001

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This revision (1) seeks to extend the closing date to 2015/02/20, add a requirement for siren/light controllers for marked vehicles as well as make the following changes.

1) **At Part 1, 2. Summary**, delete in its entirety and replace with the following:

## **2. Summary**

The Royal Canadian Mounted Police (RCMP) has a requirement for a National Individual Standing Offer (NISO) for the supply and delivery of Integrated Siren and Light Control System (i.e. Control System) for use by the Royal Canadian Mounted Police (RCMP) throughout Canada on a variety of vehicle types for (a) unmarked and (b) marked applications, on an "as and when requested" basis, for a period of three (3) years from date of issuance with two (2) one -year extensions

A maximum of two (2) Standing Offers may be issued.

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), Canadian FT with Panama-Columbia-Peru and the Agreement on Internal Trade (AIT).

2) **At Part 3 - 1.5 Delivery**, delete in its entirety and replace with the following:

Item (a) Unmarked: Delivery is offered at \_\_\_\_\_ calendar days from receipt of a call-up against the Standing Offer.

Item (b) Marked: Delivery is offered at \_\_\_\_\_ calendar days from receipt of a call-up against the Standing Offer.

3) **At Part 4, 1. Evaluation Procedures** delete in its entirety and replace with the following:

## **Evaluation Procedures**

- a) Offers will be assessed in accordance with the entire requirement of the Request for Standing Offers including the technical and financial evaluation criteria.
- b) An evaluation team composed of representatives of Canada will evaluate the offers.

## **Evaluation Criteria**

All offers must be completed in full and provide all of the information requested in the RFSO document to enable full and complete evaluation.

### **1. Technical Evaluation**

#### **1.1 Mandatory Technical Criteria**

##### **1.1. A Unmarked**

The following Mandatory requirements must be submitted with the offer for evaluation

- Technical compliance (description of items in Annex "A", Appendix 1.0);
- Completed Appendix 1.a of Annex E

### 1.1. B Marked

The following Mandatory requirements must be submitted with the offer for evaluation

- Technical compliance (description of items in Annex "A", Appendix 2.0);
- Completed Appendix 2 of Annex E

### 1.2 Point Rated Technical Criteria (FOR ITEM A-UNMARKED ONLY)

Vendors who have met all of the mandatory criteria will have their technical offers evaluated against the point rated criteria as per Appendix 1b of Annex "E". There are a total of 75 points available.

## 1.3 Financial Evaluation

### 1.3.1 For (a) Unmarked ONLY

The respective value per point is obtained by dividing the price (item 8 of Annex "B", Appendix 1.0) of a given proposal by the total number of points earned for the rated requirements. If no points are awarded, one (1) will be given to allow the calculation. This approach values cost and technical factors equally.

### 1.3.2 Pricing Basis

#### 1.3.2.a Unmarked

The offeror must quote firm unit in Canadian dollars, Delivered Duty Paid (as per Annex C), Applicable Taxes extra, as applicable. Freight charges to destination and all applicable Custom duties and Excise taxes must be included. Prices are to be submitted under Annex B, Appendix 1

#### 1.3.2.b Marked

The offeror must quote firm unit in Canadian dollars, Delivered Duty Paid (as per Annex C), Applicable Taxes extra, as applicable. Freight charges to destination and all applicable Custom duties and Excise taxes must be included. Prices are to be submitted under Annex B, Appendix 2

### 1.3.3 Financial Capability

SACC Manual clause M9033T (2011-05-16) Financial Capability

## 2. Basis of Selection

**For (a) Unmarked** An offer must comply with the requirements of the Request for Standing Offer (RFSO) and meet all mandatory technical evaluation criteria to be declared responsive. The responsive offer with the lowest cost per point (calculated using item #8 of Annex B, Appendix 1) will be recommended for the issuance of a standing offer.

**For (b) Marked** An offer must comply with the requirements of the Request for Standing Offer (RFSO) and meet all mandatory technical evaluation criteria to be declared responsive. The responsive offer with the lowest unit price (calculated using item #10 of Annex B, Appendix 2) will be recommended for the issuance of a standing offer.

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**4) At Part 6, A Standing Offer, add the following:**

**12. Discontinued Products**

In the event that the specific item listed in the Standing Offer has been discontinued and the Contractor wishes to offer a substitute, the Contractor must submit to Public Works and Government Services Canada (PWGSC) the technical information necessary to demonstrate compliance with the statement of work. The Contractor must also provide confirmation from the manufacturer that the product has been discontinued. The substitute product cannot be purchased through the Standing Offer until authorized by PWGSC through a standing offer amendment subsequent to certification of acceptability by the Technical Authority.

**5) At Annex “A” – delete in its entirety and replace with Annex “A” attached hereto.**

**6) At Annex “B” – delete in its entirety and replace with Annex “B” attached hereto.**

**7) At Annex “E” – delete in its entirety and replace with Annex “E” attached hereto.**

**All other terms and conditions remain unchanged.**

## ANNEX “A” – STATEMENT OF WORK

### Appendix 1 - Unmarked

#### 1 Introduction

This Statement of Work (SOW) details the requirements for an Integrated Siren and Light Control System (i.e. Control System) for use by the Royal Canadian Mounted Police (RCMP) throughout Canada on a variety of vehicle types for unmarked applications. The estimated demand for these Control systems is 2200 units over 5 years. The Control System must include an electronic relay control, siren amplifier, and remote control head with an electronic keypad, switch panel and all other ancillary components. This SOW is intended to be part of the National Individual Standing Offer (NISO) to supply this Control System to a variety of RCMP vehicles throughout Canada. Delivery is on an as required basis to RCMP locations across Canada.

#### Scope and Background

This Control System would be used in those vehicles that require limited siren/light control functions with Public Address (PA) capability, in unmarked or special duty applications. This is not intended for marked vehicles or general duty. The remote (and mobile) control head portion of the system allows the user to store it covertly when not it use and use it discreetly when required. Combining the PA microphone with siren light controls increases efficiency and reduces clutter in the cab area of the vehicle. It is expected that a variety of speakers and speaker mounts may be required to install in the wide variety of applicable vehicle types and styles. This system is used for warning others of hazards, signaling violators to stop and requesting right of way on the roadways. The response must be in accordance with the following requirements with **clear identification by section and page number** of related documents in their offer of their demonstration of compliance

1.1 The technical parameters contained herein represent minimum performance requirements. Compliance to Industry Standards must not preclude compliance to more stringent RCMP Standards or requirements where applicable.

1.2 This Statement of Work is written with the intent of procuring standard production equipment of proven design and reliability. All proposed components of the electronic relay control, siren amplifier, electronic keypad and switch panel **must** be in current production and generally available on the market (no beta test components will be considered).

1.3 Only equipment which is tested under these parameters and accepted for use by the RCMP during the solicitation and evaluation process will be considered for purchase. Unless otherwise specified all requirements as detailed herein are mandatory and cannot be waived. Failure to meet mandatory requirements **will** result in disqualification.

## 2 Acronyms and Terminology - List of Terms

The following list of acronyms and solution definitions support this specification and must be considered as supplemental information if not referred to in the text.

2.1 System. The electronic relay control and siren amplifier unit which mounts outside of the cab area, traditionally located in the trunk. A part of the Integrated Siren and Light Control system.

2.2 Remote Control Head. Handheld electronic keypad and microphone used to control the System, traditionally easily hidden when not in use. A part of the Integrated Siren and Light Control system.

2.3 Integrated Siren and Light Control system or Control System. Both the Remote Control Head and the System as defined above.

## 3 Applicable Documents

The following document, of the issue in effect on the date of the Request for Standing Offer, forms a part of this specification. This section does not include documents cited in other sections of this specification or documents recommended for additional information or used as examples. In the event of a conflict, the requirements of this document must take precedence.

3.1.1 SAE Standard J-1849 *Emergency Vehicle Sirens*, current issue

## 4 General Requirements

The Mobile Integrated Siren and Light Control System provides a means to control siren, lighting, PA and other ancillary functions in RCMP unmarked vehicles. The Control System must include an electronic relay control, siren amplifier, and remote control head with an electronic keypad, switch panel, microphone and all other ancillary components.

### 4.1 General

- 4.1.1 The system including the control head must be capable of operating over normal vehicle voltage fluctuations of + 11 VDC to +15 VDC (Volts Direct Current)
- 4.1.2 The system including the control head **must** be capable of operating in a temperature range of -30°C to +60°C.
- 4.1.3 [Rated] [Substantiate] The system and its control head should remain operational (with no system lock up or memory loss/reset) after the supply voltage is varied rapidly and slowly repeatedly, from + 10.5 VDC to + 16 VDC. Three cycles of variation for rapid and slow variations should be tested.

- 4.1.4 [Rated] [Substantiate] The system **should** withstand reverse polarity application of the normal power source for a period of 60 seconds with no permanent damage (except replaceable fuse).
- 4.1.5 [Rated] [Substantiate] The system **should** withstand a short at the speaker output for a period of 60 seconds with no permanent damage (except to replaceable fuse).
- 4.1.6 The 'Stand-By state' or idle current draw for the system including the remote control head **must** not exceed 10 milliamperes, with backlight off .
- 4.1.7 The system **must** have a horn ring transfer feature allowing horn ring control of the siren tones.
- 4.1.8 The system **must** be able to rebroadcast the two way radio over the PA system.
- 4.1.9 The system **must** be rated for a minimum of two 100 watt speakers.
- 4.1.10 The system **must** be able to automatically 'kill' the siren when vehicle is put in park.
- 4.1.11 The system **must** optionally be able to be turned on and off via low current power input signal.

## **4.2 SAE J-1849**

Equipment **must** be compliant with the following performance standards as specified in the SAE Standard J-1849:

- 4.2.1 Section 5.1 and 6.1 Acoustic Test and Performance
- 4.2.2 Section 5.2 Vibration Testing
- 4.2.3 Section 5.3 Moisture Testing
- 4.2.4 Section 5.4 Corrosion Testing
- 4.2.5 Section 5.5 Dust Testing
- 4.2.6 Section 5.6 Radiated Emissions Test, Class 1 Vertical Polarization, Class 2 Horizontal Polarization
- 4.2.7 Section 5.7 Conducted Emissions Test, Class 4 Positive Lead, Class 4 Negative Lead
- 4.2.8 Section 5.8 Radiated Electromagnetic Immunity Test
- 4.2.9 Section 5.9 Durability Test
- 4.2.10 Section 5.10 Extreme Temperature Test
- 4.2.11 Vendor must provide the certification of SAE J-1849 compliance and a copy of the certification test results for above clauses demonstrating compliance.

## **4.3 Physical**

- 4.3.1 All of the system components must be contained in a lightweight, metallic housing suitable for mounting in the trunk compartment of a vehicle.

- 4.3.2 [Rated] [Substantiate] The housing enclosure **should** be able to withstand a drop of 36" onto a concrete floor without any permanent defects or fracture of the housing, and all of the components inside the housing **should** maintain their serviceability.
- 4.3.3 The physical size of the system **must** not exceed 8 cm H x 22 cm W x 20cm D. Size is exclusive of mounting bracket, control knobs and connectors (if applicable).
- 4.3.4 The system must include either a "L" brackets or 'U' bracket either part of or attachable to the system for mounting. The "L" bracket base must not extend more than 4cm from the base of the system. If "U" brackets are used thumb screws must be available for removing the unit in a confined space. This mounting configuration must be removable from the trunk tray by accessing the mounting brackets from the top of the enclosure.
- 4.3.5 The remote control head **must** be separate from the system. See 7.2 for cable requirements
- 4.3.6 The remote control head **must** be enclosed in a hardened high impact material housing. The physical size of the control head **must** not exceed 15cm H x 6 cm W x 3 cm D.
- 4.3.6.1 The keypad of the remote control must be made of a rubber membrane allowing backlighting and user selectable labels for identification. This does not apply to the Push to Talk (PTT) control for PA function.
- 4.3.7 [Rated] [Substantiate] The remote control head should withstand a drop of 36" onto a concrete floor, without any permanent defects or fractures of the housing and all of the components inside the housing should maintain their serviceability.

## **4.4 Radio Frequency Interference**

### **4.4.1 Radio Frequency Interference**

The police radio communications system is critical to RCMP operations, public and police officer safety. As such, it is imperative that any electronic devices installed or utilized in a police vehicle be designed such that any effects of radio frequency disturbances are eliminated or controlled so as not to interfere with police two-way radios or other sensitive electronic devices. If at any time "the product" is found to interfere with RCMP communications equipment or other systems throughout the period of the Standing Offer, then the Manufacturer will be given 60 calendar days to modify the product and correct the problem. Failure in doing so may result the Standing Offer and all undelivered call-ups being terminated.

Protection must be provided within the following Industry Canada radio frequency bands used for two-way radio communications:

- IC SRSP 500: 138 to 144 MHz and 148 to 174 MHz bands
- IC SRSP 501: 406 to 430 MHz and 450 to 470 MHz bands
- IC SRSP 502: 806 to 824 MHz and 851 to 869 MHz bands

- IC SRSP 511: 768 to 776 MHz and 798 to 806 MHz bands

#### 4.4.2 Radio Frequency Transmission Effects Protection

RCMP police vehicles utilize high powered mobile two-way radio transmitters as well as other transmitting communications devices. This high level of electromagnetic radio frequency energy has been known to affect the operation of electronics not designed with sufficient protection against external transmitting sources.

The system including the remote control head **must** be properly designed to eliminate the effects of radio frequency disturbances and provide protection for receivers used and/or installed in a vehicle from these disturbances. Any such disturbances will be noted in the evaluation of the bid (with the Pre-Award Sample Testing)

## 5 Control Functions

### 5.1 Power Output Control Switches

- 5.1.1 The remote control head must have three large push button switches near the top face of the remote control head capable of activating the following power outputs in the system at the current ratings indicated:

	<b>Function switch position</b>	<b>Current Capacity</b>
5.1.1.a	Off position.....	no output
5.1.1.b	Level 1.....	minimum 8 amperes
5.1.1.c	Level 2.....	minimum 8 amperes
5.1.1.d	Level 2 must also activate level 1 total output	minimum 16 amperes
5.1.1.e	Level 3.....	minimum 8 amperes
5.1.1.f	Level 3 must also activate level 1 and level 2 total output	minimum 24 amperes

Note: Level 1 is typically used for rear facing emergency lighting, Level 2 is typically used for forward facing emergency lighting and Level 3 typically includes both the previous two Levels plus Alternating Headbeam (i.e. Wig Wag) lighting.

- 5.1.2 A minimum of 5 additional auxiliary control switch relay outputs **must** be available each with its own pushbutton. Current capacity of these additional outputs **must** be rated a minimum 8 amperes each with the total capacity of the 5 outputs a minimum 40 amperes. This is outlined in the following Pushbutton Function example Table.

(End of page)

Pushbutton Function Example Table

Pushbutton Feature	Function	Pushbutton Activation type	Required electrical o/p	Minimum o/p current req.
HF/Standby	Put siren into handsfree mode. In this mode Wail is activated by either Horn Ring or Manual Button	Pushbutton on/off	+12V to trigger user supplied horn transfer relay	200mA Can be a dry relay contact arrangement
Manual	While HF is active, pressing this button (or horn ring) produces Wail. Subsequent presses cycles the tone between Wail and Yelp. While HF is inactive, will generate a tone that will ramp up to and sustain a pitch until button is released.	See to left.	-	-
Air Horn	Activates Air Horn tone	Momentary	-	-
Siren	Activates a Wail.	Pushbutton on/off	-	-
Radio	Transfers radio to siren speaker	Pushbutton on/off	-	-
Alley Lights	Side facing (L/R) warning lights Various left and right combinations possible with presses.	Pushbutton on/off	+12V on two separate outputs (Left and Right)	Min 8 Amp per separate outputs
Auxiliary Relay	Various purposes	Pushbutton on/off	+12V	Min 8 Amps
GO Light	GO light	Pushbutton on/off	+12V	Min 8 Amps
Fireball Light	Fireball Light	Pushbutton on/off	+12V	Min 8 Amps

These control functions **must** be capable of any of the following modes of activation:

5.1.2.a On/Off

5.1.2.b Momentary

5.1.3 [Rated] [Substantiate] All push button switches should give a tactile, audible and visual feedback as to its operation.

5.1.4 All active functions **must** be able to be de-activated with a simple one button action.

## **5.2 Audio Gain control**

- 5.2.1 An audio gain control for “PA” mode level adjustment must be available on the system without opening it or on the control head.
- 5.2.2 An audio gain control for “Radio Re-Broadcast” mode level adjustment must be available on the system without opening it or on control head.

## **5.3 Indicators and Illumination Control**

- 5.3.1 Non-glare backlight illumination of all keypad buttons must be provided.
- 5.3.2 Function selection **must** be indicated by a keypad light or alternative colour light to differentiate from standby (inactive) mode.
- 5.3.3 [Rated] [Substantiate] A method of dimming or disabling the illumination of all switches on the remote control head should be provided.

## **5.4 System Configuration**

- 5.4.1 The system operation must be programmable by the use of dip switches or computer download, to control siren tones, audio characteristics and system power modes
- 5.4.2 All system outputs (Section 5.1.1 and 5.1.2) **must** be selectable to activate by push button switch operating positions on the remote control head in a variety of combinations.
- 5.4.3 [Rated] [Substantiate] All system and output fuses should be easily accessible and replaceable from the outside of the system housing.
- 5.4.4 [Rated] [Substantiate] System must be customer reconfigurable for changes to be made if required by the RCMP authority, NVEC (National Vehicle Equipment Committee) of the RCMP. This allows changes to 5.4.1 and 5.4.2 by RCMP field personal under NVEC authority using a computer software download program.

## **5.5 Public Address (PA) control**

- 5.5.1 The remote control head must contain a microphone that is used for PA applications. The PA must be controlled with a Push-To-Talk (PTT) button on the side of the remote control head containing the microphone.
- 5.5.2 Activation of the PTT must provide “PA” output override of all siren tone functions.
- 5.5.3 PTT button must give solid tactile feedback to its operator and mode of operation.

# **6 Detailed Specification**

## **6.1 Siren/Amplifier**

- 6.1.1 The electronic siren function of the system must be capable of operating as described below in each of the following modes:

- 6.1.1.a “Air Horn” in which the system **must** produce a constant composite air horn sound. This momentary pushbutton activated tone **must** be capable of over-riding all other siren tones.
- 6.1.1.b “Manual” in which the system, with the siren in standby mode **must** produce a wail tone and ramp up in pitch towards maximum frequency until the pushbutton is released. After pushbutton release the wail tone **must** ramp down to the minimum frequency and stop. This momentary pushbutton activated function **must** be capable of over-riding all other siren tones. Max. and Min. frequency must comply to SAE J-1849 definition of Wail function.
- 6.1.1.c “Radio” in which the system **must** amplify the vehicles two-way radio audio. An audio input **must** be provided to permit the interface of a signal from a radio source.
- 6.1.1.d “P.A.” in which the system **must** amplify audio signals from the P.A. microphone described in Section 5.5 and 5.1.4.
- 6.1.1.e [Rated] [Substantiate] Siren operations **should** be suspended automatically when the vehicles automatic transmission is placed in park. This is an optional setting.
- 6.1.1.f [Rated] [Substantiate] Siren operations ( selecting between Wail and Yelp) **should** be controllable through the vehicles steering wheel horn pad/ring. This is an optional setting.
- 6.1.1.g [Rated] [Substantiate] Siren operation **should** be programmable to be automatically enabled in Level 3 (button 3) mode. This is an optional setting.

## **6.2 System Acoustic Performance**

The systems acoustic performance **must** be in conformance with the requirements and procedures of the SAE –J1849 standard for emergency vehicle sirens using a standard production speaker to be specified as outlined in Section 7.3. This portion of SAE-J1849 **must** be submitted with the Offer from an accredited test facility.

# **7 Accessories**

## **7.1 Remote control head bracket**

A remote control head bracket **must** be supplied to allow mounting in various locations within the vehicle.

## **7.2 Cabling**

- 7.2.1 A cable assembly, for connecting the primary input power to the system must be provided. The minimum length of cable must be 25 centimeters.
- 7.2.2 A cable assembly, for connecting the system to the remote control head **must** be provided. The minimum length of cable **must** be 6 meters.

- 7.2.2.a A portion of this cable assembly must be a coiled cable designed for easy storage when not in use and extends for easy use.
- 7.2.2.b A single plug in connector must be used for the system side of this cable.
- 7.2.3 A cable assembly, for connecting the system to the siren speaker, **must** be provided. The minimum length of cable **must** be 6 meters.
- 7.2.4 A cable assembly, for connecting auxiliary inputs and outputs to the system **must** be provided. The minimum length of cable **must** be 25 centimeters.

### **7.3 *Speaker Operation***

A variety of standard production speakers may be used with this system due to a wide variance of vehicle mounting options, vehicle type and space constraints. Specific manufacturer and model of speaker and mounting bracket **must** be specified in test results. See section 6.2 for test results of acoustic testing.

## **8 Maintenance**

Full descriptive information and pricing of any software, spare parts, programming adapters or cables, test apparatus including jigs, test adaptors or fixtures and extender boards, required to test or service the system, **must** be included in the Offer.

### **8.1 *Maintenance Schedule***

Provide a recommended schedule for any regular service and maintenance procedures, if applicable.

## **9 Manuals**

### **9.1 *General***

- 9.1.1 Equipment Installation/Maintenance/Operational manuals must be available and submitted in Offer. A French version of these manuals must be provided if available or RCMP must have the rights to translate and produce for RCMP purposes.
- 9.1.2 All printed manuals supplied **must** be of commercial print grade quality.

### **9.2 *Operators Manuals***

- 9.2.1 Operator manuals must be included with every unit.
- 9.2.2 The operator's manual **must** contain the following:
  - 9.2.2.a Functional description of all operator-accessible controls in pictorial and paragraph format.
  - 9.2.2.b Operating instructions and guidelines.

### **9.3 Equipment Installation/ Maintenance Information**

- 9.3.1 The installation/maintenance manual must be included with every unit and contain the following:
- 9.3.1.a Technical description of circuit operation
  - 9.3.1.b Internal and external cabling and interconnect diagrams
  - 9.3.1.c Complete parts list of all modules, replacement parts and components, programming cables including manufacturer part numbers and description
  - 9.3.1.d Troubleshooting or Symptom/solution guide
  - 9.3.1.e Installation and test procedures
  - 9.3.1.f System programming guidelines and available functions.
- 9.3.2 [Rated] [Substantiate] A software upload program should be available to allow a change in software configuration to the system in the field by RCMP personal, authorized by NVEC.
- 9.3.2.a [Rated] [Substantiate] This software upload program should run on any Windows XP or Vista or Windows 7 equipment .
  - 9.3.2.b [Rated] [Substantiate] The programming port from the computer should be an industry standard connection such as USB or similar so standard cables can be used.
  - 9.3.2.c A upload reprogramming guide must be included in the bid Response.

## **10 Maintenance Training Package**

- 10.1 A one day installation/ maintenance training package, suitable for individual or up to a maximum of eight person group, must be available upon request.
- 10.2 The supplier **must** be able to provide the training at any of the four RCMP Regional locations: Ottawa, Edmonton, Halifax and Chilliwack.
- 10.3 The vendor must provide a description of their training package which contains, at the very least, the following and specify if the training package is available on CD, webcourse or on-site:
- 10.3.1 Text material describing theory of operation.
  - 10.3.2 Text material outlining common faults, possible causes and the correction to the problem
  - 10.3.3 System wiring diagram.

## **11 Packaging and Delivery**

Cartons/containers used for shipment **must** be of suitable strength/material to protect the equipment during shipment and/or storage. Annex C lists shipping addresses for each division.

### ***11.1 External Labeling***

Each container must have labeling indicating original manufacturer's name, serial number, part numbers with revision (and/or manufacturing date) and industry standard bar code to allow inventorying and tracking of the product including its specific load of software.

### ***11.2 Product Labeling***

The system itself must have labeling indicating original manufacturer's name, serial number, part numbers with revision (and/or manufacturing date) to allow inventorying and tracking of the product including its specific load of software.

## **12 Quality Assurance/Warranty/Maintenance Support**

### ***12.1 Quality Assurance***

ISO 9001 Certification or Equivalent: The supplier must demonstrate that the Control System manufacturer is ISO 9001:2008 or equivalent.

### ***12.2 Warranty***

A warranty of minimum 36 months from date of purchase on all parts (including cables and connectors) and labour **must** be given.

12.2.1 A 48 hour turnaround time for replacement product is required.

12.2.2 At the RCMP discretion, maintenance and /or upgrades of the equipment and replacement of user replaceable or user/serviceable components **must** be performed by RCMP technical support staff without voiding the warranty.

12.2.3 The supplier is responsible to replace or repair the defective items at their expense including any shipping and handling/duty fees.

### ***12.3 Maintenance Support***

The supplier must have a minimum of two Canadian service centres; one located in the Atlantic portion of the country (Nova Scotia, New Brunswick, PEI or Newfoundland) and one located in the Western (west of Ontario) portion of the country. Contact information including addresses, service hours and contact names must be provided.

12.3.1 If the support being delivered by the supplier is not satisfactory to the RCMP, the RCMP reserves the right to receive support from the original manufacture at no extra cost.

**(End of page)**

## **ANNEX "A" – Statement of Requirement Appendix 2**

### **1.0 Introduction**

1.1 The RCMP has a requirement for a National Individual Standing Offer (NISO) to supply, deliver and configuration of an estimate of 1,800 complete Integrated Siren and Light Controller solution to be installed in various RCMP vehicles, throughout Canada. The Controller solution **MUST** include an electronic relay control, siren amplifier, and remote control head with an electronic keypad, switch panel to control the siren amplifier, all other ancillary components including a three year warranty (Parts/Labor), training package, and technical documentation. Delivery on an as required basis to RCMP locations across Canada.

1.2 This statement of work is to be read in conjunction with all other documentation in this package, and the Request for Standing Offer (RFSO) document.

1.3 This Purchase Standard is written with the intent of procuring standard production equipment of proven design and reliability.

1.4 Only equipment which is tested under these parameters and accepted for use by the RCMP during the solicitation and evaluation process will be considered for purchase. Unless otherwise specified all requirements as detailed herein are mandatory and cannot be waived. Failure to meet mandatory requirements **MUST** result in disqualification.

1.5 For the purpose of this specification, the definition of "system" will be the electronic relay control and siren amplifier unit which mounts in the trunk.

1.6 For the purpose of this specification, the definition of "remote control head" will be an electronic keypad/switch panel used to control the system.

1.7 As part of the technical evaluation to confirm a bidder's capability of meeting the technical requirements, a pre award sample will be required upon written notification from the Contracting Authority (volume production unit, no prototypes will be accepted). Only those bids that have met all the mandatory requirements may be contacted. The sample provided will be returned, however must not be part of any subsequent delivery to the RCMP.

### **2.0 Not Allocated**

### **3.0 Applicable Documents**

3.1 The following document, of the issue in effect on the date of the request for standing offer, forms a part of this specification. This section does not include documents cited in other sections of this specification or documents recommended for additional information or used as examples. In the event of a conflict, the requirements of this document must take precedence.

3.2 SAE Standard J-1849, current issue.

#### 4.0 **Requirements**

The NISO **MUST** supply and delivery the equipment identified for a complete Integrated Siren and Light Controller solution that will meet or succeed the requirements of the of this Statement of Work.

#### 4.1 **General**

4.1.1 The system **must** be capable of operating over normal vehicle voltage fluctuations of + 11 VDC to +15 VDC (Volts Direct Current) and a temperature range of -30°C to +60°C.

4.1.2 Equipment **must** be compliant with the following performance standards as specified in the SAE Standard J-1849 and demonstrated with supplied test results from a certified test facility.

4.1.2.a Section 5.1 Siren Acoustic Performance

Test

4.1.2.b Section 5.2 Vibration

Testing

4.1.2.c Section 5.3 Moisture

Testing

4.1.2.d Section 5.4 Corrosion

Testing

4.1.2.e Section 5.5 Dust

Testing

4.1.2.f Section 5.6 Radiated Emissions Test, Class 1 Vertical Polarization, Class 2

Horizontal  
Polarization

4.1.2.g Section 5.7 Conducted Emissions Test, Class 4 Positive Lead, Class 4 Negative

Lead

4.1.2.h Section 5.8 Radiated Electromagnetic Immunity  
Test

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4.1.2.i Section 5.9 Durability

Test

4.1.2.j Section 5.10 Extreme Temperature

Test

4.1.3 All of the system components **must** be contained in a single lightweight, metallic housing suitable for mounting in the trunk compartment of a vehicle.

4.1.4 The system may include “L” brackets either part of or attachable to the system body for mounting. The “L” bracket base must not extend more than 4cm from the base of the system. If U brackets are used thumb screws must be available for removing the unit in a confined space. This mounting configuration must be removable from the trunk tray by accessing the mounting brackets from the top of the enclosure.

4.1.5 The physical size of the system **must** be designed to fit within a space of 12L X 9D x 5W (inches) including accesses to remove and replace the unit. Size includes area required for wiring and connectors, mounting bracket, and ventilation.

4.1.6 The remote control head **must** be separate from the system.

4.1.7 The remote control head **must** be enclosed in a hardened high impact material housing.

The physical size of the control head **must** fit within existing standard dash mounting bracket opening. 6.65” L x 3.25” W (open ended) and mounting lip between 0.08” to 0.25”max. See Appendix D for drawing of mounting bracket. A vendor supplied adapter bracket is acceptable for mounting to the standard mounting bracket.

4.1.8 The system **must** have a horn ring transfer feature allowing horn ring control of siren tones.

4.1.9 The system including the remote control head **must** be properly designed to eliminate the effects of radio frequency disturbances and provide protection for receivers used and/or installed in a vehicle from these disturbances. Any such disturbances will be noted in the evaluation of the bid and if at any time throughout the period of the standing offer found to interfere with RCMP communications equipment, the supplier will be required to modify/correct the problem or the standing offer may be terminated. Protection **MUST** be provided within the following frequency ranges:

VHF - 138 to 144 MHz, 148 to 174  
MHz UHF - 403 to 430 MHz, 450 to  
470 MHz UHF - 806 to 960 MHz

4.1.10 The electronic siren function of the system **must** be capable of operating as described below:

4.1.10.a "Air Horn" in which the system **must** produce a constant composite air horn sound. This momentary pushbutton activated tone **must** be capable of overriding all other siren tones.

4.1.10.b "Manual" in which the system, with the siren in standby mode **must** produce a wail tone and ramp up in pitch towards maximum frequency until the pushbutton is released. After pushbutton release the wail tone **must** ramp down to the minimum frequency and stop. This momentary pushbutton activated function **must** be capable of overriding all other siren tones.

4.1.10.c "Radio" in which the system **must** amplify the vehicles two-way radio audio. An audio input **must** be provided to permit the interface of a signal from a radio source.

4.1.10.d "P.A." in which the system **must** amplify audio signals from the P.A. microphone described in Section 5.1.

4.1.11 With the system is installed as per manufacturer's instructions and the vehicle ignition switch turned off, current draw through the battery for the system including the remote control head **must** not exceed 50 milliamperes.

4.1.12 The system must have a computer interface that allows an external computer to control all functions listed in this document.

## 4.2 Control Functions

### 4.2.1 Power Output Control Switches

4.2.1. aThe remote control head **must** have a horizontal four-position progressive slide switch located on the left side of the panel face. This switch must be capable of activating the following power outputs in the system at the current ratings indicated:

	<b>Function switch position</b>	<b>Current Capacity</b>
4.2.1.a.i	Off position.....	no output
4.2.1.a.ii amperes	Level 1.....	minimum 27
4.2.1.a.iii amperes	Level 2.....	minimum 20
4.2.1.a.iv amperes	Level 2 must also activate level 1 .....	total output minimum 47
4.2.1.a.v amperes	Level 3.....	minimum 2

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4.2.1.a.vi      Level 3 must also activate level 1 and level 2... Total output minimum 50  
amperes

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**Siren Controller Slide Switch Function Table**

<b>Slide Switch Position</b>	<b>Activation</b>	<b>Device Current Requirement</b>	<b>Relay Output Current Requirement</b>	<b>Minimum Combined Current Output Requirement</b>
<b>Off</b>	No	-	-	
<b>Position 1</b>	Traffic Arrow , Alternating left side-right side pattern	Internal	#1, 28Amp	#1 ,28 Amp
	Rear Corner Strobes	6 Amp		
	All Roof lightbar rear lighting	12Amp		
	Spare	10 A		
<b>Position 2</b>	Position 1 lighting		#1, 28 Amp	#1 and # 2 48 Amp
	All roof lightbar front lighting	12Amp	#2, 20 Amp	
	Front corner strobes	6 Amp		
	Spare	2 Amp		
<b>Position 3</b>	Position 1 lighting		#1, 28 Amp	#1 ,#2 and #3 50 Amp
	Position 2 lighting		#2, 20 Amp	
	Alternating headlight flasher - Wig-Wags	500ma	#3, 2 Amp	
	Spare	1.5Amp		

**(End of page)**

4.2.1.b **Siren Controller Pushbutton Function Table**

<b>Pushbutton Feature</b>	<b>Function</b>	<b>Pushbutton Activation Type</b>	<b>Required Electrical output on activation</b>	<b>Minimum Output Current requirement</b>
Standby/ Backlight	Shuts off any siren features that have been activated/ Dimmer control for pushbutton backlighting	Momentary	-	-
Radio	Transfers two-way radio audio to siren speaker	Pushbutton On/Off Switch	-	-
Manual HF	Activates manual siren tone in standby mode pending horn ring activation . Horn ring activation will cycle through all siren tones including standby	Pushbutton On/Off Switch	+10.5 to +15 VDC individual output to trigger- user supplied horn transfer relay	200ma
Wail	Activates siren “Wail” tone	Pushbutton On/Off Switch	-	
Yelp	Activates siren “Yelp” tone	Pushbutton On/Off Switch	-	
Hi/Low	Activates siren “Piercer” tone	Pushbutton On/Off Switch	-	
Manual	Activates siren “Ramp up-stop” tone	Momentary	-	
Air Horn	Activates siren “Air Horn” tone and overrides any other active siren tone	Momentary	-	
TA Direction	Traffic arrow direction cycle Left, Right, Centre out, Off	Momentary	-	
TA Flash	Traffic arrow flash pattern cycle Available flash patterns, Off	Momentary	-	

Auxiliary Relay	Activates auxiliary user supplied relay driven device such as amber airport lamp, blue marker lamp, special detachment requirements...	Pushbutton On/Off Switch	+10.5 to +15 VDC individual output	200ma
-----------------	--	--------------------------	------------------------------------	-------

Rear Flash	Activates the red-blue traffic arrow end flashers	Pushbutton On/Off Switch	+10.5 to +15 VDC individual output	6 Amperes
Strobe Dimmer	Activates the dimmer function on power supplies for strobe front corner and roof lights	Pushbutton On/Off Switch	+10.5 to +15 VDC individual output	200ma
Takedown	Activates roof lightbar "Takedown lights"	Pushbutton On/Off Switch	+10.5 to +15 VDC individual output	8 Amperes
Left Alley	Activates roof lightbar drivers side alley light	Pushbutton On/Off Switch	+ 10.5 to + 15VDC individual output	4 Amperes
Right Alley	Activates roof lightbar passenger side alley light	Pushbutton On/Off Switch	+10.5 to +15 VDC individual output	4 Amperes
DRL Kill	Disables the headlights through an existing DRL relay	Pushbutton On/Off Switch	+10.5 to +15 VDC individual output	200ma
Gun Release	Unlocks the relay activated hinge mechanism of the shotgun mount	Security-8 second Timeout	+10.5 to +15VDC individual output	4 Amperes

4.2.1.c The system must have a minimum of 18 individual pushbutton control outputs excluding the primary outputs of the slide switch controller.

4.2.1.d The system must be configurable such that the 18 individual pushbutton controller outputs outlined in table 4.2.1.d are rated to meet the minimum output current requirements stated.

#### 4.2.2 Audio Gain control

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4.2.2.a An audio gain control for "PA" mode level adjustment **must** be available on the system.

#### 4.2.3 **Indicators and Illumination Control**

4.2.3.a Non-glare illumination of all control function indicators and keypad **must** be provided.

4.2.3.b Keypad button operated illumination intensity (dimmer control) **must** be provided.

#### 4.3 **System Configuration**

4.3.1 The system must be delivered to the RCMP preprogrammed in a configuration specific to RCMP requirements as outlined in 4.2.1, ready for operation.

4.3.2 The system **must** be customer reconfigurable for changes to be made if required by the RCMP authority, NCPB (National Contract Policing Branch) of the RCMP.

4.3.3 The system must provide a programming lockout feature to prevent unauthorized field programming such as local dealers, detachment garages, police officers from modifying the default RCMP NCPB configuration.

4.3.4 All system outputs **must** be selectable to activate with any of the three slide switch operating positions on the remote control head.

4.3.5 Suppliers **must** provide any programming software or programmers and any required programming hardware in the response documentation.

#### 4.4 **Traffic Arrow Control**

4.4.1 The system **must** be capable of controlling both a 6 and 8 lamp traffic arrow configurations with one output trigger per lamp (Non proprietary switching).

4.4.2 The system **must** be capable of operating a series of 6 or 8, 27 watt, 12 volt lamps in the patterns listed in Section 4.4.3 continuously.

4.4.3 Available warning patterns **must** include:

4.4.3.a Right directional sequence

4.4.3.b Left directional sequence

#### 4.4.3.c Center out directional sequence

#### 4.4.3.d Alternating left side-right side flash sequence

4.4.4 The system **must** have available an audible 'traffic arrow on' reminder alert feature. This feature is to be selectable in the system configuration software.

4.4.5 The system **must** have an LED display on the control head to simulate the selected warning pattern.

4.4.6 The system **must** be capable of being configured in such a way that the flash warning pattern listed in 4.4.3.d can be activated by the control head slide switch level 1, 2 and 3.

### 5.0 Accessories

#### 5.1 PA Microphone

5.1.1 A separate microphone extension cable with a panel mountable jack **must** be included to extend the microphone location a minimum of 6 meters from the system.

5.1.2 The microphone supplied **must** be equipped with a push-to-talk switch.

5.1.3 The microphone **must** utilize a rubber or neoprene coiled cord of a minimum extended length of 1 meter and suitable for all-weather mobile environments.

5.1.4 A microphone hang-up bracket **must** be supplied.

5.1.5 Activation of the press-to-talk switch on the microphone **must** provide "PA" output override of all siren tone functions.

#### 5.2 Siren Speaker

5.2.1 A speaker for mounting behind a grill or inside the engine compartment **must** be available with the unit offered.

5.2.2 The speaker provided with the system acoustic performance **must** be in conformance with the requirements and procedures of the SAE -J1849 standard for emergency vehicle sirens using a standard production speaker designed to operate with the siren system quoted.

5.2.3 The overall speaker dimensions, excluding the mounting bracket, **must** be no more than 16 cm H x 17 cm W x 8 cm D.

- 5.2.4 The speaker mounting brackets **must** fit the Ford Crown Victoria and the Chevy Impala and should accommodate the other models and makes of vehicles designed for police service.
- 5.2.5 The speaker **must** have the capability of sustained operation for 30 minutes at -30 C to +90 C at its rated power.
- 5.2.6 The speaker housing **must** be constructed of non- corrosive aluminum or high impact plastic.
- 5.3 **Cable Assemblies**
- 5.3.1 A cable assembly, for connecting the system to the remote control head **must** be provided. The minimum length of cable **must** be 6 meters.
- 5.3.2 A cable assembly, for connecting the system to the siren speaker, **must** be provided. The minimum length of cable **must** be 6 meters.
- 6.0 **Maintenance Package**
- 6.1 Full descriptive information and price of any software package, programming devices required to configure the system or specialized test apparatus including jigs, test adaptors or fixtures and extender boards required to test or service the system **must** be included in the Response Document. Pricing must be outlined in the response documentation.
- 7.0 **User Manuals**
- 7.1 User equipment Installation/Maintenance/Operational manuals **must** be submitted in the response documentation and for each unit purchased
- 7.2 All printed manuals supplied **must** be of commercial print grade quality.
- 8.0 **Service Manuals**
- 8.1 All service manuals must be submitted in response documentation and supplied as required. Service manuals must contain the following information:
- 8.1.a Schematic diagrams of all electronic circuit boards to allow a technician to perform board level repairs
- 8.1.b Internal and external cabling and interconnect diagrams

8.1.c Complete parts list of all modules, replacement parts and components

## 9.0 **Packaging and Delivery**

9.1 Cartons/containers used for shipment **must** be of suitable strength/material to protect the equipment during shipment and/or storage.

9.2 The system must have labeling indicating original manufacturer's name, serial number, part number with revision (and/or manufacturing date) to allow inventorying and tracking of the product including its specific load of software

9.2.1 Each container must have labeling as indicated in 9.2 with industry standard bar codes.

## 10.0 **Quality Assurance/Warranty/Maintenance Support**

10.1 The supplier **must** perform a pre-delivery test verifying proper operation of every system supplied to the RCMP. Response documents **must** include a description indicating the proposed test procedures to be performed prior to shipping and the means of certifying each unit. A failure rate of greater than 5% will be deemed unacceptable and terminate the contract.

10.2 The supplier must demonstrate that the manufacturer is ISO 9001:2000 or equivalent.

10.3 A warranty of minimum 3 years from the date of purchase on all parts (including cables and connectors) and labour must be provided.

10.3.1 A 48 hour turnaround time for replacement product is required.

10.3.2 At the RCMP discretion, maintenance and /or upgrades of the equipment and replacement of user replaceable or user/serviceable components **MUST** be performed by RCMP technical support staff without voiding the warranty.

10.3.3 The supplier is responsible to replace or repair the defective items at their expense including any shipping and handling/duty fees.

10.4 The supplier must have a minimum of two Canadian service centres; one located in the Eastern portion of the country and one located in the Western portion of the country. Contact information including addresses, service hours and contact names must be provided.

10.4.1 If the support being delivered by the supplier is not satisfactory to the RCMP, the RCMP reserves the right to receive support from the original manufacture at no extra cost.

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## 11 Maintenance Training Package

11.1 A one day installation/ maintenance training package, suitable for individual or up to a maximum of eight person group, must be available upon request.

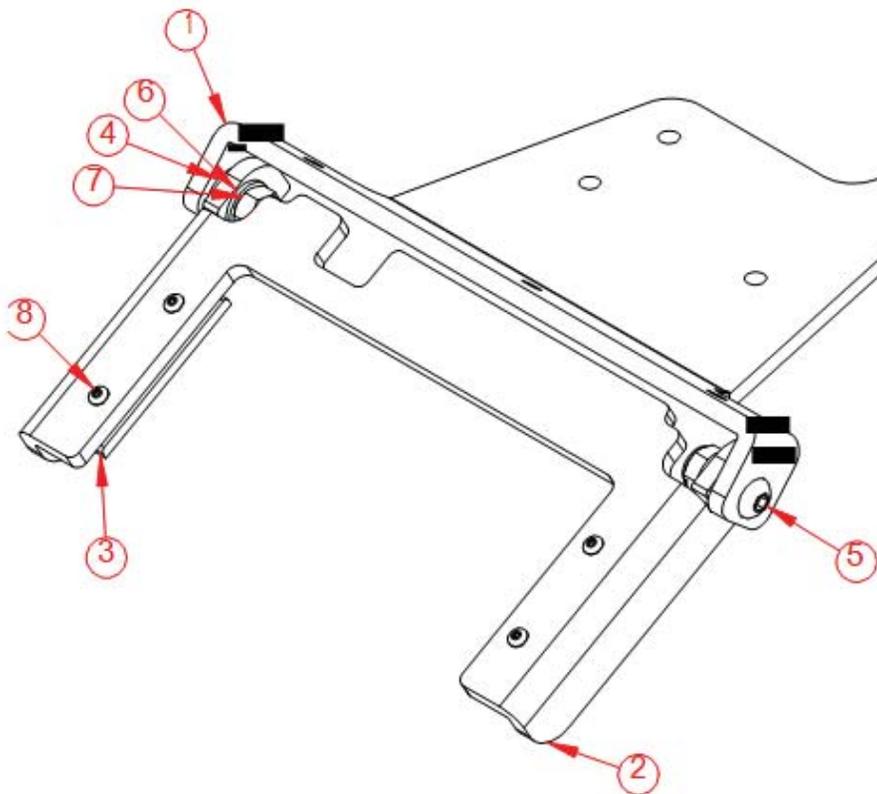
11.2 The supplier **must** be able to provide the training at the four RCMP Regional locations: Ottawa, Edmonton, Halifax and Chilliwack at no extra cost.

11.3 The vendor should provide a description of their training package which should contain the following and specify if the training package is available on CD, webcourse or on-site:

11.3.1 Text material describing theory of operation.

11.3.2 Text material outlining common faults, possible causes and the correction to the problem

11.3.3 System wiring diagram.



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## Annex "B" Price List

### Appendix 1.0 Unmarked

Item #	Description	Manufacturer	Model Number	Price if sold separately
1	Siren/Light Controller Amplifier kit			
2	Siren/Light Controller Amplifier			
3	Remote control head			
4	Remote control head cabling assembly			
5	Remote control head bracket			
6	Keypad Decals			
7	Power, Input, Output cabling assemblies			

Item #	Description	Price
8	Car Kit (Combines Items 1 to 7)	
9	Training Package	

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## Annex "B" Price List

### Appendix 2.0 - Marked

Item #	Description	Manufacturer	Model Number	Price
1	Remote control head			
2	Remote control head cabling Assembly			
3	Siren/light controller amplifier			
4	Siren/light controller cabling Assembly			
5	PA Microphone			
6	PA Microphone extension cable			
7	Programming Adapters			
8	Siren Speaker			
9	Siren Speaker mounting bracket			

Item #	Description	Price
10	Car Kit (Combines Items 1 to 9)	
11	Complete set service/maintenance Manual	
12	Complete set of programming Manual	
13	Maintenance Training Packaging	
14	Testing results and certification	
15	Quality Certification	

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## Annex “E” Evaluation Criteria

### Appendix 1.A Mandatory Criteria

ARTICLE	Description and Substantiation	Reference page
<b>4.0 General Requirements</b>		
4.1		
4.1.1		
4.1.2		
4.1.6		
4.1.7		
4.1.8		
4.1.9		
4.1.10		
4.1.11		
4.2		
4.2.1		
4.2.2		
4.2.3		
4.2.4		
4.2.5		
4.2.6		
4.2.7		
4.2.8		
4.2.9		
4.2.10		
4.2.11		
4.3		
4.3.1		
4.3.3		
4.3.4		
4.3.5		
4.3.6		
4.3.6.1		
4.4		
4.4.1		
4.4.2		
<b>5.0 Control Functions</b>		
5.1		
5.1.1		
5.1.1a		
5.1.1b		
5.1.1c		
5.1.1d		
5.1.1e		
5.1.1f		
5.1.2		
5.1.2a		
5.1.2b		
5.1.4		
5.2		

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5.2.1		
5.2.2		
5.3		
5.3.1		
5.3.2		
5.4		
5.4.1		
5.4.2		
5.5		
5.5.1		
5.5.2		
5.5.3		
<b>6.0 Detailed Specification</b>		
6.1		
6.1.1		
6.1.1.a		
6.1.1.b		
6.1.1.c		
6.1.1.d		
6.2		
<b>7.0 Accessories</b>		
7.1		
7.2		
7.2.1		
7.2.2		
7.2.2a		
7.2.2b		
7.2.3		
7.2.4		
7.3		
<b>8.0 Maintenance</b>		
8.1		
<b>9.0 Manuals</b>		
9.1		
9.1.1		
9.1.2		
9.2		
9.2.1		
9.2.2		
9.2.2.a		
9.2.2.b		
9.3		
9.3.1		

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9.3.1a		
9.3.1b		
9.3.1c		
9.3.1d		
9.3.1e		
9.3.1f		
9.3.2		
9.3.2.c		
<b>10.Maintenance Training</b>		
10.1		
10.2		
10.3		
10.3.1		
10.3.2		
10.3.3		
<b>11 Packaging &amp; Delivery</b>		
11.1		
11.2		
<b>12.QA/Warranty/Support</b>		
12.1		
12.1.1		
12.2		
12.2.1		
12.2.2		
12.2.3		
12.3		
12.3.1		

## Appendix 1.B Rated Criteria

The proposal with the lowest cost per technical point will be selected from among all proposals which passed all mandatory criteria. This approach values cost and technical factors equally. The respective value per point is obtained by dividing the price of a given proposal by the total number of points earned for the rated requirements. If no points are awarded, one (1) will be given to allow the calculation.

Detailed Requirement	Article #	Scoring	Bid Reference (page #)
The system and its control head should remain operational (with no system lock up or memory loss/reset) after the supply voltage is either rapidly or slowly varied repeatedly from + 10.5 VDC to + 16 VDC.	4.1.3	5 points awarded if system remains operational after voltage variations cycling.  0 points awarded if system is non-operational after voltage variations	
The system should withstand reverse polarity application of the normal power source for a period of 60 seconds with no permanent damage except replaceable fuses.	4.1.4	5 points awarded if system remains operational after voltage reversal.  0 points awarded if system is non-operational after voltage variations	
The system should withstand a short at the speaker output for a period of 60 seconds with no permanent damage except to replace fuse.	4.1.5	5 points awarded if system remains operational after speaker short.  0 points awarded if system is non-operational after voltage variations	
The housing enclosure <b>should</b> be able to withstand a drop of 36" onto a concrete floor without any permanent defects or fracture of the housing, and all of the components inside the housing <b>should</b> maintain their serviceability.	4.3.2	5 points awarded if housing passes this drop test.  0 points awarded if system does not pass this drop test	
The remote control head should withstand a drop of 36" onto a concrete floor, without any permanent defects or fractures of the housing and all of the components inside the housing should maintain their serviceability.	4.3.7	5 points awarded if remote control head passes this drop test.  0 points awarded if remote control head does not pass this drop test	

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All push button switches should give a tactile, audible and visual feedback as to its operation.	5.1.3	5 points awarded if all push buttons have a tactile, audible and visual feedback. 2 points awarded if only 2 of the 3 feedbacks are provided. 0 points awarded if less than 2 types of feedback are provided	
A method of diming or disabling the illumination of all switches on the remote control head should be provided.	5.3.3	5 points awarded if dimming or disabling illumination of all switches. 0 points awarded if no method is provided.	
All system and output fuses should be easily accessible and replaceable from the outside of the system housing.	5.4.3	5 points awarded if all fuses are accessible and replaceable from outside the housing  0 points awarded if fuses are not accessible and replaceable from outside the housing	
System must be customer reconfigurable for changes to be made if required by the RCMP authority, NVEC (National Vehicle Equipment Committee) of the RCMP.	5.4.4	5 points awarded if system is reconfigurable for changes by RCMP in the field by software download  0 points awarded if system is not reconfigurable for changes by RCMP field staff by software download	
Siren operation should be suspended automatically when the vehicles automatic transmission is placed in park	6.1.1.e	5 points awarded if park kill feature included  0 points awarded if no park kill feature.	
Siren operation should be controllable through the steering wheel horn ring	6.1.1.f	5 points awarded if siren tones can be cycled using the horn ring  0 points awarded if no horn ring siren cycling	
Siren operation should be programmable to be automatically enabled in Level 3 mode	6.1.1.g	5 points awarded if siren tones can be automatically enable when in Level 3 mode via programming.  0 points awarded if Level 3 siren enablement not programmable	
A software upload program should be available to allow a change in software to the system	9.3.2	5 points awarded if system can be upgraded via software upload program  0 points awarded if not field software programmable via upload program	
This software upload program should run on any Windows XP or Vista or 7 equipped computer	9.3.2.a	5 points awarded if system can be upgraded via Windows XP or Vista or 7 equipped computer  0 points awarded if not upgradable via a Windows XP or Vista or 7 equipped machine	
The programming port from the computer should be an industry standard connection such as USB or similar so a standard cable can be used	9.3.2.b	5 points awarded if USB or similar cables used for uploading  0 points awarded if not upgradable via USB or similar industry cables.	
		<b>75 Points Available</b>	<b>TOTAL</b>

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## ANNEX "E" – Evaluation Criteria

### Appendix 2 Mandatory Criteria

Article	Description & Substantiation	Reference
<b>1.0 Introduction</b>		
1.1		
1.2		
1.3		
1.4		
1.5		
1.6		
1.7		
<b>2.0 Not Allocated</b>		
<b>3.0 Documents</b>		
3.1		
3.2		
<b>4.0 Requirements</b>		
4.1.1		
4.1.2		
4.1.3		
4.1.4		
4.1.5		
4.1.6		
4.1.7		
4.1.8		
4.1.9		
4.1.10		
4.1.11		
4.1.12		
<b>4.2 Control Functions</b>		
4.2.1		
4.2.1.a		
4.2.1.b		
4.2.1.c		
4.2.1.c		
4.2.1.d		
<b>4.2.2 Audio Gain Control</b>		
4.2.2.a		
<b>4.2.3. Indicator Control</b>		
4.2.3.a		
4.2.3.b		

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<b>4.3 System Configuration</b>		
4.3.1		
4.3.2		
4.3.3		
4.3.4		
4.3.5		
<b>4.4 Traffic Arrow Control</b>		
4.4.1		
4.4.2		
4.4.3		
4.4.4		
4.4.5		
4.4.6		
<b>5.0 Accessories</b>		
<b>5.1 PA Microphone</b>		
5.1.1		
5.1.2		
5.1.3		
5.1.4		
5.1.5		
<b>5.2 Siren Speaker</b>		
5.2.1		
5.2.2		
5.2.3		
5.2.4		
5.2.5		
5.2.6		
<b>5.3 Cable Assemblies</b>		
5.3.1		
5.3.2		
<b>6.0 Maintenance</b>		
6.1		
<b>7.0 Manuals</b>		
7.1		
7.2		
<b>8.0 Service Manuals</b>		
8.1		

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<b>9.0 Packaging and Delivery</b>		
9.1		
9.2		
9.2.1		
<b>10.0 Quality/ Warranty</b>		
10.1		
10.2		
10.3		
10.3.1		
10.3.2		
10.3.3		
10.4		
10.4.1		
11.1		
11.2		
11.3		
11.3.1		
11.3.2		
11.3.3		