



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

# Request for Quotation

RFQ NUMBER
DPS0931

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

VENDOR

\*709043812      304-949-4160  
 COMMUNICATION SERVICE INC  
 12403 MACCORKLE AVENUE  
  
 CHARLESTON WV 25315

SHIP TO

WEST VIRGINIA STATE POLICE  
  
 4124 KANAWHA TURNPIKE  
 SOUTH CHARLESTON, WV  
 25309      304-746-2141

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/02/2009				

BID OPENING DATE: **04/23/2009**      BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		725-74 Item# - Options -	\$11634.69 4097.89	\$11634.69 4097.89
<p>TWO-WAY RADIOS, PORTABLE</p> <p>OPEN-END CONTRACT TO PROVIDE VHF &amp; UHF DIGITAL TWO-WAY PORTABLE RADIOS FOR THE WEST VIRGINIA STATE POLICE PER THE SPECIFICATIONS.</p> <p>QUESTIONS: QUESTIONS SHALL BE SUBMITTED IN WRITING TO: JOHN ABBOTT, SR. BUYER - EMAILS PREFERRED, AND SHOULD BE SENT TO JOHN.H.ABBOTT@WV.GOV, NO LATER THAN 4/17/2009; 2:00 PM</p> <p>EXHIBIT 3</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON <u>4.29.09</u> AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p> <p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL</p>						

RECEIVED  
 2009 APR 29 PM 12:20  
 IN CHARGE  
 C. S. ...

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Lonna Martin</i>	TELEPHONE 304-949-4160	DATE 4-28-09	
TITLE <i>Office manager</i>	FEIN 55-0547641	ADDRESS CHANGES TO BE NOTED ABOVE	

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

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

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

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**INSTRUCTIONS TO BIDDERS**

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



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BID OPENING DATE: 04/23/2009      BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FERN	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 04/11/2001</p> <p>EXHIBIT 4</p> <p>LOCAL GOVERNMENT BODIES: UNLESS THE VENDOR INDICATES IN THE BID HIS REFUSAL TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO COUNTY, SCHOOL, MUNICIPAL AND OTHER LOCAL GOVERNMENT BODIES, THE BID SHALL EXTEND TO POLITICAL SUBDIVISIONS OF THE STATE OF WEST VIRGINIA. IF THE VENDOR DOES NOT WISH TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO ALL POLITICAL SUBDIVISIONS OF THE STATE, THE VENDOR MUST CLEARLY INDICATE SUCH REFUSAL IN HIS BID. SUCH REFUSAL SHALL NOT PREJUDICE THE AWARD OF THIS CONTRACT IN ANY MANNER.</p> <p>REV. 3/88</p> <p>PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING</p>						

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DATE PRINTED <b>04/02/2009</b>	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
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BID OPENING DATE: **04/23/2009**      BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION            PURCHASING DIVISION            BUILDING 15            2019 WASHINGTON STREET, EAST            CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER:      JOHN ABBOTT-----</p> <p>RFQ. NO.:      DPS0931-----</p> <p>BID OPENING DATE:      4/23/2009-----</p> <p>BID OPENING TIME:      1:30 PM-----</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p>						

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LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
				304-949-4164		
				CONTACT PERSON (PLEASE PRINT CLEARLY):		
				Donna Thaxton		
***** THIS IS THE END OF RFQ      DPS0931 ***** TOTAL:						<u>1634.69</u>

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
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## VHF and UHF PORTABLE DIGITAL RADIO SPECIFICATIONS

The West Virginia State Police, hereinafter agency is soliciting competitive bids to establish an open-end contract for the purchase of digital P-25 portable/handheld radio equipment and related accessories. The awarded contract(s) shall be available for use by this agency as well as all other entities of state government, and all counties and municipalities within the State Of West Virginia.

The agency has placed the digital P-25 portable/handheld radio equipment into two different tiers according to their performance capabilities and features of each unit. The two tiers will be referred to as Tier-1 and Tier-2 hereinafter and are outlined below. It should be noted the award of this contract may result in a split award between Tiers.

	Comply?	
	Yes	No
<b><u>TIER-1</u></b>		
<b>1. VHF Portable – P-25 Digital CAI ready – Trunking Capable with optional software</b>		
1.1. Radio shall be programmable for operation in the <b>136-174 MHz</b> band.	<u>X</u>	_____
1.2. Radio shall have a programmable output power of 2 to 5 watts.	<u>X</u>	_____
1.3. Radio duty cycle will be assumed to be 5/5/90 (5% transmit/5% receive/90% standby per TIA/EIA Specification 903).	<u>X</u>	_____
1.3.1. Battery life should be 10 hours or greater. NiMH or Lithium Ion batteries are acceptable. (Nickel Cadmium batteries are not acceptable.)	<u>X</u>	_____
1.3.2. A Rapid charge battery shall be provided, charging to full capacity in four hours or less.	<u>X</u>	_____
1.4. Digital Capabilities		
1.4.1. Radio shall be P-25 CAI compatible and operate on the West Virginia Department of Natural Resources system.	<u>X</u>	_____
1.4.2. Radio shall be capable of upgrade to P-25 Trunking capability.	<u>X</u>	_____
1.5. Unit shall be capable of receiving and transmitting on a minimum of 512 channels / 24 zones.	<u>X</u>	_____

		Comply?	
		Yes	No
1.5.1. P-25 Trunked Channelization			
1.5.1.1.	Talkgroups may be entered into the radio with multiple parameters (i.e. – Talkgroup 1 may be strapped secure and another entry of Talkgroup 1 may be strapped clear).	<u>  x  </u>	_____
1.5.1.2.	Radios in which a talkgroup may be entered and configured only one time are not acceptable.	<u>  x  </u>	_____
1.5.2. Conventional (Non-Trunked) Channelization			
1.5.2.1.	Each channel shall be individually programmable with regard to wideband /narrowband operation.	<u>  x  </u>	_____
1.5.2.2.	Radio shall have programmable encode and decode capability for both CTCSS tones and digital coded squelch with a minimum of one pair of tones, not necessarily the same, for each programmed channel.	<u>  x  </u>	_____
1.5.2.3.	There shall be no limitations in the radio with regard to what channels (frequencies) may be programmed into the radio within the authorized frequency split.	<u>  x  </u>	_____
1.6. Scanning			
1.6.1.	Radio shall be capable of using and storing user defined scan lists.	<u>  x  </u>	_____
1.6.2.	Scan lists may also be defined in programming software.	<u>  x  </u>	_____
1.6.2.1.	Predefined scan lists may be edited by the user utilizing buttons on the radio.	<u>  x  </u>	_____
1.6.2.2.	Scan lists shall be able to be established at the user/keypad level.	<u>  x  </u>	_____
1.6.2.3.	Scanning will be enabled and disabled by depressing no more than one button, one time.	<u>  x  </u>	_____



	Comply?	
	Yes	No
1.7. Display		
1.7.1. Radio shall have an alphanumeric display with a minimum of 2 rows of 12 characters.	<u>x</u>	<u>        </u>
1.7.2. Radio shall have a backlit display.	<u>x</u>	<u>        </u>
1.7.3. Radio shall have a battery status.	<u>x</u>	<u>        </u>
1.7.4. Radio shall have ID display capability.	<u>x</u>	<u>        </u>
1.8. Channel/Zone selection		
1.8.1. Channel selection will be by way of rotary knob to select a minimum of 16 channels.	<u>x</u>	<u>        </u>
1.8.2. Zone selection to allow access to more groups of frequencies will be via other controls or buttons.	<u>x</u>	<u>        </u>
1.9. Receiver audio stage shall be capable of a minimum of 250 milliwatts of audio from the internal speaker.	<u>x</u>	<u>        </u>
<b>2. UHF Portable – P-25 Digital Trunking ready</b>		
2.1. Radio shall be programmable for operation in the <b>403-470 MHz</b> band.	<u>        </u>	<u>x</u> NO BID
2.2. Radio shall have a programmable output power of 2 to 5 watts.	<u>        </u>	<u>x</u>
2.3. Radio duty cycle will be assumed to be 5/5/90 (5% transmit/5% receive/90% standby per TIA/EIA Specification 903).	<u>        </u>	<u>x</u>
2.3.1. Battery life should be 10 hours or greater. NiMH or Lithium Ion batteries are acceptable. (Nickel Cadmium batteries are not acceptable.)	<u>        </u>	<u>x</u>
2.3.2. A Rapid charge battery shall be provided, charging to full capacity in four hours or less.	<u>        </u>	<u>x</u>

	Comply?	
	Yes	No
2.4. Digital Capabilities		
2.4.1. Radio shall be P-25 Trunking capable and compatible with the WVIRP P-25 Trunked system.	_____	_____ x
2.4.2. Radio shall include P-25 CAI (Common Air Interface) compatibility.	_____	_____ x
2.5. Unit shall be capable of receiving and transmitting on a minimum of 512 channels / 24 zones.	_____	_____ x
2.5.1. P-25 Trunked Channelization		
2.5.1.1. Talkgroups may be entered into the radio with multiple parameters (i.e. – Talkgroup 1 may be strapped secure and another entry of Talkgroup 1 may be strapped clear).	_____	_____ x
2.5.1.2. Radios in which a talkgroup may be entered and configured only one time are not acceptable.	_____	_____ x
2.5.2. Conventional (Non-Trunked) Channelization		
2.5.2.1. Each channel shall be individually programmable with regard to wideband /narrowband operation.	_____	_____ x
2.5.2.2. Radio shall have programmable encode and decode capability for both CTCSS tones and digital coded squelch with a minimum of one pair of tones, not necessarily the same, for each programmed channel.	_____	_____ x
2.5.2.3. There shall be no limitations in the radio with regard to what channels (frequencies) may be programmed into the radio within the authorized frequency split.	_____	_____ x
2.6. Scanning		
2.6.1. Radio shall be capable of using and storing user defined scan lists.	_____	_____ x

	Comply?	
	Yes	No
2.6.2. Scan lists may also be defined in programming software.	_____	_____x
2.6.2.1. Predefined scan lists may be edited by the user utilizing buttons on the radio.	_____	_____x
2.6.2.2. Scan lists shall be able to be established at the user/keypad level.	_____	_____x
2.6.2.3. Scanning will be enabled and disabled by depressing no more than one button, one time.	_____	_____x
<b>2.7. Display</b>		
2.7.1. Radio shall have an alphanumeric display with a minimum of 2 rows of 12 characters.	_____	_____x
2.7.2. Radio shall have a backlit display.	_____	_____x
2.7.3. Radio shall have a battery status.	_____	_____x
2.7.4. Radio shall have ID display capability.	_____	_____x
<b>2.8. Channel/Zone selection</b>		
2.8.1. Channel selection will be by way of rotary knob to select at minimum of 16 channels.	_____	_____x
2.8.2. Zone selection to allow access more groups of frequencies will be via other controls or buttons.	_____	_____x
2.9. Receiver audio stage shall be capable of a minimum of 250 milliwatts of audio from the internal speaker.	_____	_____x
<b>2.10. Encryption</b>		
2.10.1. Any hardware necessary for AES encryption will be installed in the radio at time of purchase.	_____	_____x

	Comply?	
	Yes	No
2.10.2. AES encryption capability will be offered as a software option at time of purchase.	_____	_____x
2.10.3. AES encryption keys shall be able to be loaded utilizing a Motorola KVL 3000 Plus keyloader. A part number for appropriate cable shall be provided.	_____	_____x
2.10.4. Radio shall be capable of storing multiple AES encryption keys. The ability to store more than one key shall be considered to be part of AES encryption being in the radio.	_____	_____x

### 3. General Specifications

#### 3.1. Remote Microphone

3.1.1. A remote microphone with coiled cord shall be provided.	_____x	_____
3.1.1.1. The microphone cable shall be capable of extending a minimum of 24 inches.	_____x	_____
3.1.1.2. The microphone shall have a spring clip to allow it to be clipped to clothing.	_____x	_____
3.1.1.3. The remote microphone shall be available for individual purchase.	_____x	_____

#### 3.2. Charger

3.2.1. A desktop charger shall be provided to allow rapid charging from an 117V power source.	_____x	_____
3.2.1.1. This charger shall be equipped with indication of both charging and charger completion.	_____x	_____
3.2.1.2. This charger shall be capable of both a fast and trickle charge to return the battery to a fully charged condition in 4 hours or less.	_____x	_____
3.2.1.3. This unit should incorporate a built-in battery conditioner.	_____x	_____
3.2.1.4. The charger shall be available for individual purchase.	_____x	_____

Comply?  
Yes      No

3.3. Portable Radio Belt Loop

3.3.1. A black leather belt loop shall be provided with each portable purchased.   x   \_\_\_\_\_

3.3.2. The black leather belt loop shall be available for individual purchase, should additional belt loops be needed.   x   \_\_\_\_\_

3.4. Warranty

\* Exception 3.4.1. All equipment shall be warranted for a minimum period of 3 years, including parts and labor, and beginning when the equipment is first placed in service. \_\_\_\_\_   x  

3.4.2. All features that are placed in the radio by way of programming or feature encoding will remain for the life of the radio.   x   \_\_\_\_\_

3.4.3. Any lost feature information (i.e. # of channels, type of radio, etc) will be replaced (provided) at no charge for the life of the radio.   x   \_\_\_\_\_

\* Exception 3.4.4. The successful vendor shall provide pre-paid shipping labels to cover all shipping charges for any item needing to be returned for repair work during the warranty period. \_\_\_\_\_   x  

3.5. Service Manuals (Only for WV State Police purchases)

3.5.1. Schematics and complete service manuals will be available.   x   \_\_\_\_\_

3.5.2. An option shall be provided to purchase depot level services manuals in paper form.   x   \_\_\_\_\_

3.5.3. Electronic versions of depot level service manuals shall be provided at no cost to WV State Police upon the initial purchase under this contract. \_\_\_\_\_   x  

3.5.4. Any failure to comply will be grounds for disqualification of the bid, or cancellation of the contract.   x   \_\_\_\_\_

		Comply?	
		Yes	No
3.6. Programming Software and Equipment Firmware			
	3.6.1. An option shall be available to purchase Software, Cable and any interfaces necessary to program the radio.	<u>X</u>	<u>      </u>
	3.6.1.1. Programming cables shall utilize USB interface to computers.		
	Note: Any interfaces to Parallel or Serial ports shall cause disqualification of associated radios and options.	<u>X</u>	<u>      </u>
<i>* Exception</i>	3.6.1.2. Updates to software shall be provided at no additional charge via Internet account to allow continuous access updates.	<u>      </u>	<u>X</u>
	3.6.1.2.1. Short term access is not acceptable.	<u>      </u>	<u>X</u>
	3.6.1.2.2. Username, password, and website address shall be provided with bid and shall be part of the bid analysis and award.	<u>      </u>	<u>X</u>
	3.6.2. Radio firmware required to keep hardware current to P-25 standards shall be provided continuously during the life of the contract.	<u>X</u>	<u>      </u>
	3.6.2.1. Manufacturer shall provide internet access to this software/firmware.	<u>X</u>	<u>      </u>
	3.6.2.2. Updates to software shall be provided at no additional charge via Internet account to allow continuous access updates.	<u>      </u>	<u>X</u>
	3.6.2.2.1. Short term access is not acceptable.	<u>      </u>	<u>X</u>
	3.6.2.2.2. Username, password, and website address shall be provided with bid and shall be part of the bid analysis and award.	<u>      </u>	<u>X</u>

		Comply?	
		Yes	No
3.7.	Evaluation of bid		
3.7.1.	A working example of the equipment to be provided will be available for evaluation prior to award.	<u>  x  </u>	<u>      </u>
3.7.2.	Operating and repair manuals will be provided on each component delivered for evaluation.	<u>  x  </u>	<u>      </u>
3.7.3.	The documentation supplied by the accepted vendor will not be returned, and shall not be construed as being part of the manuals required in other parts of this specification.	<u>  x  </u>	<u>      </u>
3.7.4.	A working example of the equipment to be provided will be available for evaluation prior to award and for certification on the WVIRP system as required.	<u>  x  </u>	<u>      </u>
3.7.5.	Special / Promotional pricing offered by vendors for limited periods of time shall not be considered for bid award.	<u>  x  </u>	<u>      </u>
3.8.	Manufacturers modifications and dealer roles		
3.8.1.	Any modifications to equipment necessary to comply with specifications will be completed at factory/corporate locations and shall not be performed at field repair shops.	<u>  x  </u>	<u>      </u>
3.8.2.	Any local dealers representing manufacturers are expected to only provide support to the manufacturer and NOT warranty or provide modifications to equipment. (Warranty work shall be performed at corporate depot type repair facilities.)	<u>  x  </u>	<u>      </u>
3.8.3.	All bidders must provide written certification from manufacturers of their qualification to represent that manufacturer as an authorized vendor. Failure to comply will be grounds for disqualification.	<u>  x  </u>	<u>      </u>

	Comply?	
	Yes	No
<b>4. Options for Tier-1</b>		
4.1. Addition of P-25 Trunking for Tier-1 - Item #1	<u>x</u>	<u>      </u>
4.2. AES Encryption for Tier 1 - Item #2	<u>x</u>	<u>      </u>
4.3. Keyloader cable for use with Motorola KVL 3000 Plus	<u>x</u>	<u>      </u>
4.4. Programming Software	<u>x</u>	<u>      </u>
4.5. Programming Cable and any necessary interface	<u>x</u>	<u>      </u>
4.6. Additional Desktop Charger	<u>x</u>	<u>      </u>
4.7. Additional Lapel Microphone	<u>x</u>	<u>      </u>
4.8. Additional Portable Radio Belt Loop	<u>x</u>	<u>      </u>
4.9. Additional Battery identical to that originally provided	<u>x</u>	<u>      </u>
4.10. Additional year of warranty (Total of 4 years)	<u>x</u>	<u>      </u>
4.11. Additional year of warranty (Total of 5 years)	<u>x</u>	<u>      </u>



**TIER-2**

**1. VHF Portable – P-25 Digital CAI ready – Trunking Capable with optional software**

Comply?  
Yes      No

- |          |   |              |       |
|----------|---|--------------|-------|
| 1.1.     | Radio shall be programmable for operation in the <b>136-174 MHz</b> band.   | <u>  x  </u> | _____ |
| 1.2.     | Radio shall have a programmable output power of 2 to 4 watts.   | <u>  x  </u> | _____ |
| 1.3.     | Radio duty cycle will be assumed to be 5/5/90 (5% transmit/5% receive/90% standby per TIA/EIA Specification 903).   | <u>  x  </u> | _____ |
| 1.3.1.   | Battery life should be 10 hours or greater. NiMH or Lithium Ion batteries are acceptable. (Nickel Cadmium batteries are not acceptable.)                              | <u>  x  </u> | _____ |
| 1.3.2.   | A Rapid charge battery shall be provided, charging to full capacity in four hours or less.  | <u>  x  </u> | _____ |
| 1.4.     | Digital Capabilities  |              |       |
| 1.4.1.   | Radio shall be P-25 CAI compatible and operate on the West Virginia Department of Natural Resources system.   | <u>  x  </u> | _____ |
| 1.4.2.   | Radio shall be capable of upgrade to P-25 Trunking capability.  | <u>  x  </u> | _____ |
| 1.5.     | Unit shall be capable of receiving and transmitting on a minimum of 512 channels / 16 zones.  | <u>  x  </u> | _____ |
| 1.5.1.   | P-25 Trunked Channelization   |              |       |
| 1.5.1.1. | Talkgroups may be entered into the radio with multiple parameters (i.e. – Talkgroup 1 may be strapped secure and another entry of Talkgroup 1 may be strapped clear). | <u>  x  </u> | _____ |
| 1.5.1.2. | Radios in which a talkgroup may be entered and configured only one time are not acceptable.   | <u>  x  </u> | _____ |
| 1.5.2.   | Conventional (Non-Trunked) Channelization   |              |       |

		Comply?	
		Yes	No
1.5.2.1.	Each channel shall be individually programmable with regard to wideband /narrowband operation.	<u>x</u>	_____
1.5.2.2.	Radio shall have programmable encode and decode capability for both CTCSS tones and digital coded squelch with a minimum of one pair of tones, not necessarily the same, for each programmed channel.	<u>x</u>	_____
1.5.2.3.	There shall be no limitations in the radio with regard to what channels (frequencies) may be programmed into the radio within the authorized frequency split.	<u>x</u>	_____
1.6. Scanning			
1.6.1.	Radio shall be capable of using and storing user defined scan lists.	<u>x</u>	_____
1.6.2.	Scan lists may also be defined in programming software.	<u>x</u>	_____
1.6.2.1.	Predefined scan lists may be edited by the user utilizing buttons on the radio.	<u>x</u>	_____
1.6.2.2.	Scan lists shall be able to be established at the user/keypad level.	<u>x</u>	_____
1.6.2.3.	Scanning will be enabled and disabled by depressing no more than one button, one time.	<u>x</u>	_____
1.7. Display			
1.7.1.	Radio shall have an alphanumeric display with a minimum of 2 rows of 12 characters.	<u>x</u>	_____
1.7.2.	Radio shall have a backlit display.	<u>x</u>	_____
1.7.3.	Radio shall have a battery status.	<u>x</u>	_____
1.7.4.	Radio shall have ID display capability.	<u>x</u>	_____

		Comply?	
		Yes	No
1.8.	Channel/Zone selection		
1.8.1.	Channel selection will be by way of rotary knob to select at minimum of 16 channels.	<u>  x  </u>	<u>      </u>
1.8.2.	Zone selection to allow access more groups of frequencies will be via other controls or buttons.	<u>  x  </u>	<u>      </u>
1.9.	Receiver audio stage shall be capable of a minimum of 250 milliwatts of audio from the internal speaker.	<u>  x  </u>	<u>      </u>
<b>2. UHF Portable – P-25 Digital Trunking ready</b>			
2.1.	Radio shall be programmable for operation in the <b>403-470 MHz</b> band.	<u>      </u>	<u>      </u> NO BID
2.2.	Radio shall have a programmable output power of 2 to 4 watts.	<u>      </u>	<u>      </u>
2.3.	Radio duty cycle will be assumed to be 5/5/90 (5% transmit/5% receive/90% standby per TIA/EIA Specification 903).	<u>      </u>	<u>      </u>
2.3.1.	Battery life should be 10 hours or greater. NiMH or Lithium Ion batteries are acceptable. (Nickel Cadmium batteries are not acceptable.)	<u>      </u>	<u>      </u>
2.3.2.	A Rapid charge battery shall be provided, charging to full capacity in four hours or less.	<u>      </u>	<u>      </u>
2.4.	Digital Capabilities		
2.4.1.	Radio shall be P-25 Trunking capable and compatible with the WVIRP P-25 Trunked system.	<u>      </u>	<u>      </u>
2.4.2.	Radio shall include P-25 CAI (Common Air Interface) compatibility.	<u>      </u>	<u>      </u>
2.5.	Unit shall be capable of receiving and transmitting on a minimum of 512 channels / 16 zones.	<u>      </u>	<u>      </u>

		Comply?	
		Yes	No
2.5.1. P-25 Trunked Channelization			
2.5.1.1.	Talkgroups may be entered into the radio with multiple parameters (i.e. – Talkgroup 1 may be strapped secure and another entry of Talkgroup 1 may be strapped clear).	_____	_____
2.5.1.2.	Radios in which a talkgroup may be entered and configured only one time are not acceptable.	_____	_____
2.5.2. Conventional (Non-Trunked) Channelization			
2.5.2.1.	Each channel shall be individually programmable with regard to wideband /narrowband operation.	_____	_____
2.5.2.2.	Radio shall have programmable encode and decode capability for both CTCSS tones and digital coded squelch with a minimum of one pair of tones, not necessarily the same, for each programmed channel.	_____	_____
2.5.2.3.	There shall be no limitations in the radio with regard to what channels (frequencies) may be programmed into the radio within the authorized frequency split.	_____	_____
2.6. Scanning			
2.6.1.	Radio shall be capable of using and storing user defined scan lists.	_____	_____
2.6.2.	Scan lists may also be defined in programming software.	_____	_____
2.6.2.1.	Predefined scan lists may be edited by the user utilizing buttons on the radio.	_____	_____
2.6.2.2.	Scan lists shall be able to be established at the user/keypad level.	_____	_____
2.6.2.3.	Scanning will be enabled and disabled by depressing no more than one button, one time.	_____	_____

		Comply?	
		Yes	No
2.7.	Display		
2.7.1.	Radio shall have an alphanumeric display with a minimum of 2 rows of 12 characters.	_____	_____
2.7.2.	Radio shall have a backlit display.	_____	_____
2.7.3.	Radio shall have a battery status.	_____	_____
2.7.4.	Radio shall have ID display capability.	_____	_____
2.8.	Channel/Zone selection		
2.8.1.	Channel selection will be by way of rotary knob to select at minimum of 16 channels.	_____	_____
2.8.2.	Zone selection to allow access more groups of frequencies will be via other controls or buttons.	_____	_____
2.9.	Receiver audio stage shall be capable of a minimum of 250 milliwatts of audio from the internal speaker.	_____	_____
2.10.	Encryption		
2.10.1.	Any hardware necessary for AES encryption will be installed in the radio at time of purchase.	_____	_____
2.10.2.	AES encryption capability will be offered as a software option at time of purchase.	_____	_____
2.10.3.	AES encryption keys shall be able to be loaded utilizing a Motorola KVL 3000 Plus keyloader. A part number for appropriate cable shall be provided.	_____	_____
2.10.4.	Radio shall be capable of storing multiple AES encryption keys. The ability to store more than one key shall be considered to be part of AES encryption being in the radio.	_____	_____
<b>3. General Specifications</b>			
3.1.	Remote Microphone		
3.1.1.	A remote microphone with coiled cord shall be provided.	<u>  X  </u>	_____

		Comply?	
		Yes	No
3.1.1.1.	The microphone cable shall be capable of extending a minimum of 24 inches.	<u>  x  </u>	<u>      </u>
3.1.1.2.	The microphone shall have a spring clip to allow it to be clipped to clothing.	<u>  x  </u>	<u>      </u>
3.1.1.3.	The remote microphone shall be available for individual purchase.	<u>  x  </u>	<u>      </u>
<b>3.2. Charger</b>			
3.2.1.	A desktop charger shall be provided to allow rapid charging from an 117V power source.	<u>  x  </u>	<u>      </u>
3.2.1.1.	This charger shall be equipped with indication of 1) charging and 2) charger completion.	<u>  x  </u>	<u>      </u>
3.2.1.2.	This charger shall be capable of a fast and trickle charge to return the battery to a fully charged condition in 4 hours or less.	<u>  x  </u>	<u>      </u>
3.2.1.3.	This unit should incorporate a built-in battery conditioner.	<u>  x  </u>	<u>      </u>
3.2.1.4.	The charger shall be available for individual purchase.	<u>  x  </u>	<u>      </u>
<b>3.3. Portable Radio Belt Loop</b>			
3.3.1.	A black leather belt loop shall be provided with each portable purchased.	<u>  x  </u>	<u>      </u>
3.3.2.	The black leather belt loop shall be available for individual purchase, should additional belt loops be needed.	<u>  x  </u>	<u>      </u>
<b>3.4. Warranty</b>			
3.4.1.	All equipment shall be warranted for a minimum period of 3 years, including parts and labor, and beginning when the equipment is first placed in service.	<u>      </u>	<u>  x  </u>
3.4.2.	All features that are placed in the radio by way of programming or feature encoding will remain for the life of the radio.	<u>  x  </u>	<u>      </u>

	Comply?	
	Yes	No
3.4.3. Any lost feature information (i.e. # of channels, type of radio, etc) will be replaced (provided) at no charge for the life of the radio.	<u>  x  </u>	<u>      </u>
3.4.4. The successful vendor shall provide pre-paid shipping labels to cover all shipping charges for any item needing to be returned for repair work during the warranty period.	<u>      </u>	<u>  x  </u>
3.5. Service Manuals (Only for WV State Police purchases)		
3.5.1. Schematics and complete service manuals will be available.	<u>  x  </u>	<u>      </u>
3.5.2. An option shall be provided to purchase depot level services manuals in paper form.	<u>  x  </u>	<u>      </u>
3.5.3. Electronic versions depot level service manuals shall be provided at no cost to WV State Police upon initial purchase under this contract.	<u>      </u>	<u>  x  </u>
3.5.4. Any failure to comply will be grounds for disqualification of the bid, or cancellation of the contract.	<u>  x  </u>	<u>      </u>
3.6. Programming Software and Equipment Firmware		
3.6.1. An option shall be available to purchase Software, Cable and any interfaces necessary to program the radio.	<u>  x  </u>	<u>      </u>
3.6.1.1. Programming cables shall utilize USB interface to computers.		
Note: Any interfaces to Parallel or Serial ports shall cause disqualification of associated radios and options.	<u>  x  </u>	<u>      </u>
3.6.1.2. Updates to software shall be provided at no additional charge via Internet account to allow continuous access updates.	<u>      </u>	<u>  x  </u>
3.6.1.2.1. Short term access is not acceptable.	<u>      </u>	<u>  x  </u>
3.6.1.2.2. Username, password, and website	<u>      </u>	<u>  x  </u>

	Comply?	
	Yes	No
address shall be provided with bid and shall be part of the bid analysis and award.		
3.6.2. Radio firmware required to keep hardware current to P-25 standards shall be provided continuously during the life of the contract.	<u>  x  </u>	<u>      </u>
3.6.2.1. Manufacturer shall provide internet access to this software/firmware.	<u>  x  </u>	<u>      </u>
3.6.2.2. Updates to software shall be provided at no additional charge via Internet account to allow continuous access updates.	<u>      </u>	<u>  x  </u>
3.6.2.2.1. Short term access is not acceptable.	<u>      </u>	<u>  x  </u>
3.6.2.2.2. Username, password, and website address shall be provided with bid and shall be part of the bid analysis and award.	<u>      </u>	<u>  x  </u>
3.7. Evaluation of bid		
3.7.1. A working example of the equipment to be provided will be available for evaluation prior to award.	<u>  x  </u>	<u>      </u>
3.7.2. Operating and repair manuals will be provided on each component delivered for evaluation.	<u>  x  </u>	<u>      </u>
3.7.3. The documentation supplied by the accepted vendor will not be returned, and shall not be construed as being part of the manuals required in other parts of this specification.	<u>  x  </u>	<u>      </u>
3.7.4. A working example of the equipment to be provided will be available for evaluation prior to award and for certification on the WWRP system as required.	<u>  x  </u>	<u>      </u>
3.7.5. Special / Promotional pricing offered by vendors for limited periods of time shall not be considered for bid award.	<u>  x  </u>	<u>      </u>



	Comply?	
	Yes	No
3.8. Manufacturers modifications and dealer roles		
3.8.1. Any modifications to equipment necessary to comply with specifications will be completed at factory/corporate locations and shall not be performed at field repair shops.	<u>X</u>	_____
3.8.2. Any local dealers representing manufacturers are expected to only provide support to the manufacturer and NOT warranty or provide modifications to equipment. (Warranty work shall be performed at corporate depot type repair facilities.)	<u>X</u>	_____
3.8.3. All bidders must provide written certification from manufacturers of their qualification to represent that manufacturer as an authorized vendor. Failure to comply will be grounds for disqualification.	<u>X</u>	_____
<b>4. Options for TIER 2</b>		
4.1. Addition of P-25 Trunking for Tier 2 - Item #1	<u>X</u>	_____
4.2. AES Encryption for Tier 2 - Item #2	<u>X</u>	_____
4.3. Keyloader cable for use with Motorola KVL 3000 Plus	<u>X</u>	_____
4.4. Programming Software	<u>X</u>	_____
4.5. Programming Cable and any necessary interface	<u>X</u>	_____
4.6. Additional Desktop Charger	<u>X</u>	_____
4.7. Additional Lapel Microphone	<u>X</u>	_____
4.8. Additional Portable Radio Belt Loop	<u>X</u>	_____
4.9. Additional Battery identical to that originally provided	<u>X</u>	_____
4.10. Additional year of warranty (Total of 4 years)	<u>X</u>	_____
4.11. Additional year of warranty (Total of 5 years)	<u>X</u>	_____

VHF and UHF PORTABLE DIGITAL RADIO  
PRICE QUOTATION

TIER 1

Item #1 VHF Portable – P-25 CAI (P-25 Trunking optional) \$ 1634.69

Make: m/A Com Model: P 5450

Item #2 UHF Portable – P-25 Trunked (P-25 CAI included) \$ N/A

Make: \_\_\_\_\_ Model: \_\_\_\_\_

**Options for TIER 1**

Addition of P-25 Trunking for Item #1 \$ 1210.00  
AES Encryption for Item #2 \$ 1145.97  
Keyloader cable for use with Motorola KVL 3000 Plus \$ 128.08  
Programming Software \$ 2152.84  
Programming Cable and any necessary interface \$ 128.08  
Additional Desktop Charger \$ 80.89  
Additional Lapel Microphone \$ 91.00  
Additional Portable Radio Belt Loop \$ 23.59  
Additional Battery identical to what was provided \$ 67.41  
Additional year of warranty (Total of 4 years) \$ 108.00  
Additional year of warranty (Total of 5 years) \$ 108.00

**TOTAL BID FOR TIER-1 \$ \_\_\_\_\_**

Item #1 1634.69  
Options 4097.89

VHF and UHF PORTABLE DIGITAL RADIO  
PRICE QUOTATION (Cont.)

TIER 2

Item #1 VHF Portable – P-25 CAI \$ 1634.69  
(P-25 Trunking optional)

Make: M/A Com Model: P 5450

Item #2 UHF Portable – P-25 Trunked \$ N/A  
(P-25 CAI included)

Make: \_\_\_\_\_ Model: \_\_\_\_\_

**Options for TIER 2**

Addition of P-25 Trunking for Items #1	\$ <u>1210.00</u>
AES Encryption for Items #2	\$ <u>1145.97</u>
Keyloader cable for use with Motorola KVL 3000 Plus	\$ <u>128.08</u>
Programming Software	\$ <u>2152.84</u>
Programming Cable and any necessary interface	\$ <u>128.08</u>
Additional Desktop Charger	\$ <u>80.89</u>
Additional Lapel Microphone	\$ <u>91.00</u>
Additional Portable Radio Belt Loop	\$ <u>23.59</u>
Additional Battery identical to what was provided	\$ <u>67.41</u>
Additional year of warranty (Total of 4 years)	\$ <u>108.00</u>
Additional year of warranty (Total of 5 years)	\$ <u>108.00</u>

**TOTAL BID FOR TIER-2** \$ \_\_\_\_\_

	Item # 1	<u>1634.69</u>
<b>GRAND TOTAL</b>	Options	<u>4097.89</u>



221 Jefferson Ridge Parkway  
Lynchburg, VA 24501  
Telephone: (434) 455-6600  
[www.macom-wireless.com](http://www.macom-wireless.com)

April 29, 2009

West Virginia State Police

To Whom It May Concern:

This letter is to advise you that Communication Service Inc. is an authorized Tyco Electronics dealer and is authorized to sell and service Tyco Electronics products.

Sincerely,

A handwritten signature in cursive script that reads 'Scott Tschetter'.

Scott Tschetter  
Manager, Indirect Sales

# Communication Service, Inc.

12403 MacCorkle Avenue • Charleston, WV 25315  
304.949.4160 • 304.949.4164 fax

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April 28, 2009

West Virginia State Police  
4124 Kanawha Turnpike  
South Charleston, WV 25309

RE: DPS0931

We would like to take exceptions to the following items:

Item 3.5.3

Electronic versions of the service manuals are available to WV State Police, but there is a charge for this service

Item 3.6.1.2

Updates to software are available for the WV State Police, but there is a charge for this service.

The charge for the Tech Link Service/Software upgrade service is \$1541.00/per year.

Item 3.4.1

The equipment has a 2 year factory warranty on them. To add an additional year of warranty to the unit the cost will be \$ 108.00/per year

Item 3.4.4

Communication Service, Inc., will pick up radios that need to be repaired from the WVDPS detachment located in South Charleston, WV.

Item 3.8

Communication Service, Inc. is a M/A Com factory sales and service facility. Warranty repairs will be done at the factory in Lynchburg, VA.

***tyco***  

---

***Electronics***  
***M/A-COM***



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

# Request for Quotation

RFQ NUMBER  
**DPS0931**

PAGE  
**1**

ADDRESS CORRESPONDENCE TO ATTENTION OF:  
**JOHN ABBOTT**  
**304-558-2544**

VENDOR

**\*709043812      304-949-4160**  
**COMMUNICATION SERVICE INC**  
**12403 MACCORKLE AVENUE**  
  
**CHARLESTON WV 25315**

SHIP TO

**WEST VIRGINIA STATE POLICE**  
  
**4124 KANAWHA TURNPIKE**  
**SOUTH CHARLESTON, WV**  
**25309                      304-746-2141**

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/19/2009				

BID OPENING DATE: **04/29/2009**                      BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		725-74		
<p><b>ADDENDUM #01</b></p> <p>THIS ADDENDUM IS ISSUED TO ANSWER VENDOR QUESTIONS, PER THE ATTACHED DOCUMENTATION; AND EXTEND THE BID OPENING FROM 4/23/2009 TO 4/29/2009; 1:30 PM.</p> <p>REVISED BID OPENING: 4/29/2009; 1:30 PM</p> <p><b>TWO-WAY RADIOS, PORTABLE</b></p>						
<p>***** THIS IS THE END OF RFQ      DPS0931 ***** TOTAL: _____</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Alissa Hartman</i>	TELEPHONE 304-949-4160	DATE 4-28-09
TITLE <i>office manager</i>	FEIN 55-0547641	ADDRESS CHANGES TO BE NOTED ABOVE

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

### **ADDENDUM TO DPS0931**

This is in reference to a question regarding Item 1.4.1 “ states that the radio shall be P25 CAI compatible and operate on the West Virginia Department of Natural Resources system.” It was requested that our agency provide what technology/protocol the West Virginia Department of Natural Resources (WVDNR) is currently using.

I submit the following: Upon conferring with Mr. Dave Saffel, our agencies Chief Communications Engineer, I was informed that the WVDNR system is Motorola P-25 Common Air Interface (CAI). WVDNR has advised Mr. Saffel that the P-25 is NOT trunking compatible, thus it is a CAI.

Also to clarify 3.7.1 the WV State Police has the potential of purchasing 500 portable radios over the next 3 years depending on the availability of funding. We can order anywhere from 1 to 200 at one time. This contract will also be available for other state agencies, counties and municipalities to purchase from. We would expect the vendor to have a sample radio ready to ship the day of the bid opening. Radios are expected to be delivered 30 days upon the vendor receiving the order.

# P5400 Portables

## VHF, UHF

The P5400 portable is a digital two-way radio that provides

- Multi-Mode functionality
- Digital voice and IP data
- Optional AES encryption



P5450

P5470

The P5400 portable enhances the productivity and increases the efficiency of its users.

### Multiple Applications with One Radio

The P5400 uses a new high-speed digital signal processor and the latest RF components to support multiple applications in one package:

- Project 25 (P25) Digital Trunking
- P25 Digital Conventional
- ProVoice™ Digital Trunking
- Enhanced Digital Access Communications System (EDACS®) Trunking
- Complete Analog Conventional features

### Maximum RF Performance

The radio operates over the VHF band from 136 to 174 MHz and in the UHF band from either 378 to 430 or 440 to 512 MHz, and combines digital and analog operation in one radio. Such versatility maximizes interoperability.

- TIA-603 compliance – the highest analog RF performance
- TIA-102 Class-A compliance – the highest level of P25 RF

performance available on the market.

### High Performance in a Durable Package

The sturdy mechanical package of the P5400 provides high performance and reliable service.

- MIL-STD-810F durable – including 1-meter drop per TIA
- Programmable dual-position switch for flexible operation
- Tx/Rx LED and enhanced clarity LCD for more visible signaling (including features such as a battery-level gauge)
- At 13.6 ounces with Lithium-Ion battery, the lightest weight portable offered by M/A-COM
- Illuminated channel indicator for easy channel identification
- Intrinsically safe certification (pending)

### Software-Based Design for Customization

With the software-based design, the P5400 portable is readily configurable and easily expandable with software upgrades to meet customized needs.

- Stores up to 1,024 trunked system/group combinations and up to 512 conventional channels

- Stores 99 individual call numbers and 99 telephone numbers in memory
- ProFile™ offers easy over-the-air programming for efficient updates
- ProScan™ provides smooth, automatic roaming between sites
- Personality Lock prevents unauthorized users from programming radios or accessing the system.

### Radio TextLink Text Messages

With this option, users may receive, display, and respond to text messages sent from authorized users on the network. This feature improves real-time communications among first responders while also providing the capability to leave messages with users that are actively engaged in other critical activities.

### For More Information

For more information about this or any other M/A-COM product from Tyco Electronics Wireless Network Solutions, call toll free in the U.S. or Canada 800-368-3277. From outside the U.S. call +1-434-455-6403.



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Technical specifications are subject to change without notice. Product sales are subject to applicable U.S. export control laws.

### General Specifications

**P5400 Portables are available in 2 models:**

**P5470:** System Model with LCD and DTMF keypad

**P5450:** Scan Model with LCD and limited keypad

#### Dimensions (H x W x D):

(Without Knobs and Antenna)

With battery:

5.37 x 2.44 x 1.67 in.  
(136.5 x 62.0 x 42.5 mm)

#### Weight (with Battery):

Li-Ion: 13.6 oz (386g)

NiCd: 17.3 oz (490g)

NiMH: 18.3 oz (519g)

#### Input Voltage:

7.5 VDC (nominal)

#### Vibration:

5 G (per U.S. Forest Service)

#### Shock:

1 meter drop (per TIA-603B)

#### Battery Life (at 5% Tx, 5% Rx, and 90% standby):

NiCd: 8 hours (1600 mAh)

Li-Ion: 9 hours (2000 mAh)

NiMH: 11 hours (2400 mAh)

#### Operating Temperature Range:

NiCd: -22 to +140°F

(-30 to +60°C)

Li-Ion: +14 to +122°F

(-10 to +50°C)

NiMH: -4 to +122°F

(-20 to +50°C)

#### Relative Humidity:

90% @ 122°F (+50°C)

#### Altitude:

Operational: 15,000 ft (4,572 m)

In Transit: 50,000 ft (15,240 m)

#### Color (case):

Black

### Options and Accessories

Headset, earpiece, speaker microphones, PC programming software and cables, subminiature surveillance accessories, antennas, cases, straps, belt loops and swivel mounts, desk chargers, wall chargers, and vehicular chargers.

### Intrinsically Safe Options

To be provided upon receipt of Factory Mutual and CSA certifications.



### Transmitter

	VHF	UHF
Frequency Range (MHz):	136-174	378-430, 440-512
Rated RF Power (W):	0.5-5	0.5-4
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	±1.5	±1.5
Frequency Separation (MHz):	38 (full bandwidth)	52, 72 (full bandwidth)
Modulation Deviation (kHz):	5.0 (wideband), 2.5 (narrowband)	5.0 (wideband), 2.5 (narrowband)
FM Hum and Noise (Companion Receiver) (dB):	<-45 (wideband) <-39 (narrowband)	<-45 (wideband) <-39 (narrowband)
Spurious and Harmonics (dBm/dBc):	<-36/-73	<-36/-72
Audio Response (dB):	+1/-3	+1/-3
Audio Distortion:	<3% (1 kHz tone @ 3 kHz deviation (wideband)) <3% (1 kHz tone @ 1.5 kHz deviation (narrowband))	<3% (1 kHz tone @ 3 kHz deviation (wideband)) <3% (1 kHz tone @ 1.5 kHz deviation (narrowband))
Project 25 Modulation Fidelity (%):	<5	<5
Project 25 ACP (dBc):	>67	>67

### Receiver

	VHF	UHF
Frequency Range (MHz):	136-174	378-430, 440-512
Frequency Separation (MHz):	38 (full bandwidth)	52, 72 (full bandwidth)
Channel Spacing (kHz):	25 (wideband), 12.5 (narrowband)	25 (wideband), 12.5 (narrowband)
Frequency Stability (-30 to +60°C; +25°C Ref) (ppm):	±1.5	±1.5
Sensitivity (12 dB SINAD) (µV/dBm):	0.25/-119.0 (wideband), 0.25/-119.0 (narrowband)	0.25/-119.0 (wideband), 0.25/-119.0 (narrowband)
Selectivity @ 12.5 kHz (dB):	>60	>60
@ 15 kHz (dB):	>65	N/A
@ 25 kHz (dB):	>75	>73
Intermodulation (dB):	>75	>73
Spurious and Image Rejection (dB):	>75	>73
Rated Audio Output (mW):	500	500
Audio Distortion:	<3% @ rated power	<3% @ rated power
Project 25 Reference Sensitivity @ 5% BER (µV/dBm):	0.25/-119.0	0.25/-119.0
Project 25 Adjacent Channel Rejection (dB):	>60	>60

### Environmental Specifications

Standard	Parameter	Methods & Procedures
MIL-STD-810F*	Low Pressure	500.4/1,2
	High Temperature	501.4/1,2
	Low Temperature	502.4/1,2
	Temperature Shock	503.4/1
	Solar Radiation	505.4/2
	Blowing Rain	506.4/1
	Humidity	507.4
	Salt Fog	509.4
	Blowing Dust	510.4/1
	Vibration (Minimum Integrity)	514.5/1, Category 24
	Vibration (Basic Transportation)	514.5/1, Category 4
	Shock (Functional/Basic)	516.5/1
	Shock (Transit Drop)	516.5/4
	IEC 60529	Dust-tight, Water Jets
U.S. Forest Service	Vibration (10-60 Hz)	USDA LMR Standard, Section 2.15
TIA-603B	Shock (1 meter drop)	Paragraph 3.3.5.3

\*Also meets equivalent superseded MIL-STD-810C, -D, and -E.

### Digital Operation

Vocoding Method:	Improved MultiBand Excitation (IMBE™)
Data Rate:	9600 bps
Modulation:	GFSK for ProVoice, C4FM for P25

### Regulatory Data

Frequency Range (MHz)	RF Output (W)	Frequency Stability (ppm)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules	NTIA Certification Number
150-174	5	±1.5	OWDTR-0044-E	90	3636B-0044	RSS-119	JF-1209392
421-430	4	±1.5	OWDTR-0045-E	90	3636B-0045	RSS-119	JF-1209392
440-512	4	±1.5	OWDTR-0046-E	90	3636B-0046	RSS-119	JF-1209392

M/A-COM, Inc., P. O. Box 2000, Lynchburg, Virginia 24501, Phone: 800-368-3277

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## Tyco Electronics

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## P5400



### Overview

The P5400 portable operates on a variety of frequencies (800 MHz, VHF, and UHF) and can host multiple applications. Operating modes include M/A-COM's OpenSky® trunking, Project 25 trunked or conventional modes, Enhanced Digital Access Communications System (EDACS®) or ProVoice™ trunked modes, and analog conventional mode. With a full range of audio accessories, the highest RF specifications, and a durable housing, the P5400 portable family provides reliable communications with a range of features designed to excel in the challenging public safety environment.

The P5400 provides access to superior RF specifications and MIL-STD-810F environmental specifications in a resilient package. The portable is available in the Scan (P5450, partial keypad) model and System (P5470, full keypad) model, and has a variety of software options and accessories.

Ergonomic knobs and buttons, an enhanced clarity display, light weight, durable exterior, and a range of features make the P5400 an ideal choice for public safety critical communications users.

## **Design Features**

### *Ergonomically Designed Controls*

The knobs and buttons of the P5400 portables are designed to maximize ease of use, even when users are wearing gloves. The large push-to-talk (PTT) button, and talkgroup and volume knobs can be easily identified and operated by touch, avoiding the need to visually check the individual knobs. In addition, the talkgroup and volume knobs are specially shaped to minimize contact with items such as clothing and belt straps, thus reducing the risk of accidental switching. The central location of the recessed emergency button maintains accessibility in case of emergency while preventing accidental activation.

### *Large Speaker*

The large speaker is particularly useful in high-noise environments. Its high volume capabilities allow it to overcome background noise and emit clear sound.

### *Multifunctional Display*

The large 3-line alphanumeric liquid crystal display (LCD) supports system and group information, status icons, and menu operation. The display for the P5400 also includes a battery-level gauge. A backlight illuminates the display and the keypad for low-light environments. In addition, a cover minimizes the risk of damage to the LCD and increases its clarity.

### *Durability Standards*

The P5400 operates reliably even under the most adverse conditions. It meets the drop, temperature and pressure extremes, solar radiation, blowing rain, humidity, salt fog, blowing dust, and vibration requirements stated in MIL-STD-810F, TIA/EIA-603 1-meter drop test, IP-65 dust-tight and water jet requirements, as well as U.S. Forest Service vibration requirements.

### *Weight*

The P5400 is distinct in that it weighs only 13.6 ounces (Li-Ion battery). This is the lightest weight portable offered by M/A-COM.

## Control Functions

The P5400 portable radio features two rotary control knobs and an emergency button located on the top of the radio (Figure 1). The Push-To-Talk (PTT) button and two option buttons are mounted on the side (Figure 2).

### 1. ON/OFF/Volume Knob

Turns the radio on and off and adjusts audio listening level. Minimum volume levels may be programmed into the radio to prevent missed calls due to a low volume setting. The volume ranges from a minimum programmed level of zero (shown as OFF in the display) to a level of 31.

### 2. System/Group/Channel Knob

Selects systems or groups/channels (depending on programming) when rotated to one of its 16 positions. Included is a knob-stop ring to allow users with fewer groups/channels to restrict rotation to fewer than 16 positions.

### 3. Emergency/Home Button

The emergency button (Figure 1) is used to declare an emergency by pressing and holding it for a programmed duration. This centrally located large red button is recessed to prevent accidental activation. Alternatively, it can also be programmed as a “home button” which automatically selects a pre-programmed Group/System when pressed and held for a programmed duration.

### 4. PTT Button

The Push-To-Talk button (Figure 2) must be pressed to initiate a voice transmission.

### 5. Option Button 1

The first option button (Figure 2) is used to scroll UP through available menus or can be programmed as an option button.

### 6. Option Button 2

The second option button (Figure 2) is used to scroll DOWN through available menus or can be programmed as a clear/monitor button.

### 7. Tri-Color LED

The tri-color LED changes color to indicate transmitting/receiving status. The LED is visible from the top and front of the radio for clear signaling. For covert applications, the LED, display, keypad lights, and tones can all be disabled.

In EDACS/ProVoice, Conventional, and P25 trunked and conventional (ECP) modes, the LED colors indicate the following states:

- Green:** Receiving
- Red:** Transmitting unencrypted voice
- Orange:** Transmitting encrypted voice

In OpenSky mode only two radio states are reflected by the LED and the status they represent is as follows:

- Green:** Receiving
- Red:** Transmitting
- Orange:** If the LED is flashing rapidly, the radio is receiving an emergency call.

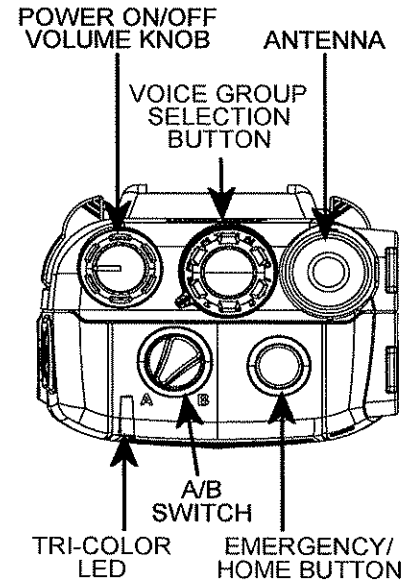


Figure 1 – Top View

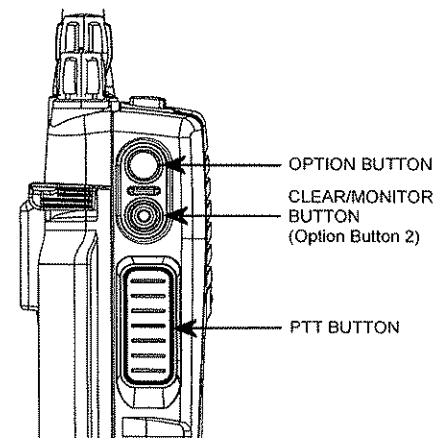





Figure 2 – Side View

The front-mounted keypad has 6 buttons on the P5450 model. The keys and their associated operation in OpenSky mode and EDACS/ProVoice, Conventional, and P25 trunked and conventional (ECP) mode are described below.

Key	OpenSky Mode	ECP Mode
 	Scrolls through available menu items.	Scrolls through available menu items.
	<p><b>Primary function:</b> Acts much as an "enter" button to activate a selection.</p> <p><b>Secondary function:</b> While in a "dwell display," press repeatedly to scroll through and view status display (on second line) for current profile, caller, received talkgroup, and channel.</p>	<p><b>Primary function:</b> Accesses the pre-stored menu. The menu can include high/low power setting, keypad lock, LCD contrast, and LCD and keypad backlighting, as well as many other menu items.</p> <p><b>Secondary function:</b> Activates a selected item within a list. After a menu list is accessed, scroll through the list using the STEP UP or STEP DOWN keys and then activate specific items with the MENU key. This is similar to an "Enter" key.</p>

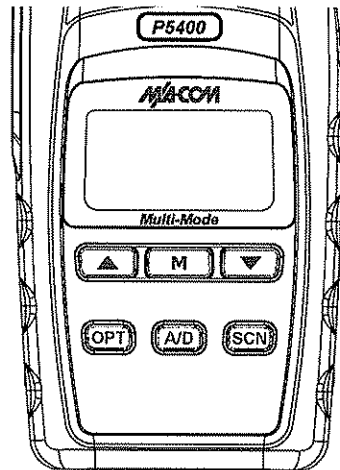





Figure 3 – Front Panel of P5450

Key	OpenSky Mode	ECP Mode
	Currently undefined.	Adds/deletes selected groups or channels from the SCAN list of the currently selected system.
	Currently undefined.	Turns the SCAN operation On and Off.
	Currently undefined.	Activates one of a number of programmable software options, selected during the PC programming. Programmable options include high/low transmitter power, talkaround, status/message as well as other options

The front-mounted panel has a DTMF keypad on the P5470 model. The keys and their associated operation in OpenSky mode and EDACS/ProVoice, Conventional, and P25 trunked and conventional (ECP) mode are described below.

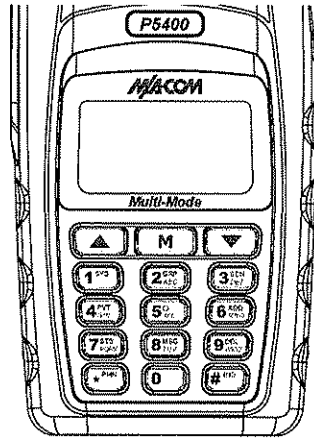










Figure 4 - Front Panel of P5470

Key	OpenSky Mode	ECP Mode
 	Scrolls through available menu items.	Scrolls through available menu items.
	<p><b>Primary function:</b> Acts much as an "enter" button to activate a selection.</p> <p><b>Secondary function:</b> While in a "dwell display," press repeatedly to scroll through and view status display (on second line) for current profile, caller, received talkgroup, and channel.</p>	<p><b>Primary function:</b> Accesses the pre-stored menu. The menu can include high/low power setting, keypad lock, LCD contrast, and LCD and keypad backlighting, as well as many other menu items.</p> <p><b>Secondary function:</b> Activates a selected item within a list. After a menu list is accessed, scroll through the list using the STEP UP or STEP DOWN keys and then activate specific items with the MENU key. This is similar to an "Enter" key.</p>
	<p><b>Primary function:</b> Keys used to place telephone interconnect and individual (unit-to-unit) calls. Functions as a telephone keypad.</p> <p><b>Secondary function:</b> Keys used to enter passwords for logging into the OpenSky network (if not pre-configured for automatic registration at power-up).</p>	<p><b>Primary function:</b> Selects a specific system. If the rotary knob is used to select the system and more than 16 systems are programmed in the radio, the  key is used to select additional banks (groupings) of systems.</p>
		<p><b>Primary function:</b> Selects a specific group.</p>
		<p><b>Primary function:</b> Turns the Scan operation ON and OFF.</p>
		<p><b>Primary function:</b> Enables or disables Private Mode for the system/group/channel displayed.</p>

Key	OpenSky Mode	ECP Mode
<b>6</b> ADD MNO	<b>Primary function:</b> Keys used to place telephone interconnect and individual (unit-to-unit) calls. Functions as a telephone keypad. <b>Secondary function:</b> Keys used to enter passwords for logging into the OpenSky network (if not pre-configured for automatic registration at power-up).	<b>Primary function:</b> Adds groups or channels from the currently selected system to the Scan list.
<b>7</b> STS PQRS		<b>Primary function:</b> Status key. Access to the status list (0-9). The Status key permits the transmission of a pre-programmed status message to an EDACS site.
<b>8</b> MSG TUV		<b>Primary function:</b> Message key. Access to the message list (0-9). The Message key permits the transmission of a pre-programmed message to an EDACS site.
<b>9</b> DEL WXYZ		<b>Primary function:</b> Deletes selected groups or channels of the currently selected system from the Scan list.
<b>1</b> STS <b>2</b> STS <b>3</b> STS <b>4</b> STS <b>5</b> STS <b>6</b> STS <b>7</b> STS <b>8</b> STS <b>9</b> DEL <b>0</b> * PHN   # IND		<b>Secondary function:</b> In EDACS mode the secondary function of these keys is much as a typical DTMF telephone pad 0-9, *, and # keys; and are used to place telephone interconnect and individual (unit-to-unit) calls. (See individual listings for primary functions.)
* PHN	<b>Primary function:</b> *Initiates log in, log out, selective call, telephone interconnect call, etc. Also acts as an escape button or a backspace that clears everything, not just the last digit/character.	<b>Primary function:</b> In EDACS mode, initiates telephone interconnect calls.
# IND	<b>Primary function:</b> #Used in conjunction with alpha-numeric keys for passwords and OpenSky functions.	<b>Primary function:</b> Initiates individual unit-to-unit calls.

### Indicators and Display Messages

The radio display is made up of 3 lines (see below). Lines 1 and 2 contain 8 alphanumeric character blocks and are used primarily to display system and group names. Line 1 also displays radio status messages. Line 3 is a radio status icon display showing such icons as “battery level” and “encrypted mode.” When the radio is in menu mode, all three lines are used to display menu options. If programmed, the display backlighting will illuminate upon power up or when radio controls are operated.

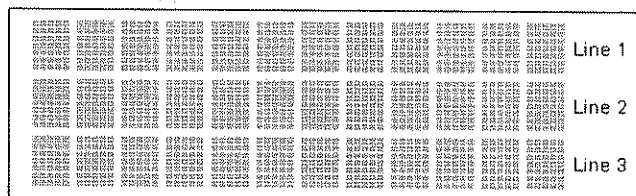


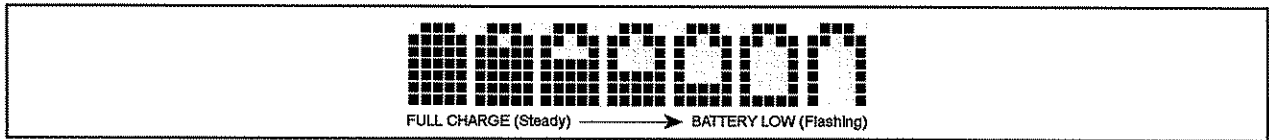


Figure 5 - Blank Radio Display

### Battery Icons

The battery icons illustrate approximate charge level only, based on battery voltage. The icons appear on the third line of the display as follows:




Icon	All Modes
	<b>Steady</b> – Battery charge indicator Appears in the 12 <sup>th</sup> position of the display (refer to Figure 6).
	<b>Flashing</b> – Low battery indicator (refer to Figure 6).








**Figure 6 - Battery Charge Indicator (Full Cycle)**

### Display Icons











Status icons are indicators which show the various operating characteristics of the radio. The icons show operating modes and conditions and appear on the third line of the display as follows:

Icon	OpenSky Mode
	<b>Steady</b> – Radio is data registered.
	<b>Steady</b> – Stealth mode is enabled (all tones and display backlight are disabled, voice is still heard).
	<b>V-TAC Connection Indicator</b> – Indicates the client is connected to a V-TAC.

Icon	ECP Mode
	<b>Steady</b> – "Busy" transmitting or receiving <b>Flashing</b> – Call queued
	<b>Steady</b> – Special call mode (individual or telephone)
	<b>Steady</b> – During all radio transmissions
	<b>Steady</b> – Transmit at low power <b>If icon is not visible</b> – Transmit at high power
	<b>Steady</b> – Indicates the current channel is set up as an analog channel

Icon	ECP Mode
------	----------



	<b>Steady</b> – Trunked system in Failsoft mode
	<b>Steady</b> – Group or channel in scan list
	<b>Steady</b> – Priority 2 group or channel
	<b>Steady</b> – Priority 1 group or channel
	<b>Steady (rotates clockwise)</b> – Scan mode is enabled <b>If icon is not visible</b> – Scan is disabled
	<b>Steady</b> – Transmitting in encrypted mode <b>Flashing</b> – Receiving an encrypted call
	<b>Steady</b> – Channel Guard is enabled <b>If icon is not visible</b> – Channel Guard is disabled
	<b>Steady</b> – Indicates the current channel is set up as a Project 25 (P25) channel
	<b>Steady</b> – Indicates the current channel is set up as a ProVoice channel. Appears in the 7 <sup>th</sup> position of the display.
	T99 Mode enabled. Appears in the 3 <sup>rd</sup> position of the display.

## **Operational Features**

The P5400 uses a new high-speed digital signal processor and the latest RF components to support multiple applications and operational features in one package:

- OpenSky Digital TDMA Trunking (800 MHz only)
- P25 Digital Trunking
- P25 Digital Conventional
- ProVoice Digital Trunking
- Enhanced Digital Access Communications System (EDACS) Trunking
- Conventional Analog communications (included with all models)

With its software-based design, the P5400 is readily configurable and easily expandable with software upgrades to offer additional operational features.

### *Multiple Frequency Bands*

The P5400 can transmit at 800 MHz, or over a VHF band from 136 to 174 MHz, or in the UHF band from either 378 to 430 or 440 to 512 MHz. and combines digital and analog operation in one radio. Such versatility maximizes interoperability.

### *Advanced OpenSky Trunking*

The P5400 supports the full range of OpenSky digital trunking features, including voice group calls, priority scanning, pre-emptive emergency calls, late call entry, and dynamic reconfiguration. It performs autonomous roaming for wide area applications. High-quality voice coding and robust audio components assure speech clarity even in noisy environments.

#### *Digital Voice Capable*

The P5400 can be programmed to support P25 CAI digital voice, ProVoice, and OpenSky trunked digital voice offerings.

#### *Emergency ID and Alarm*

Emergency ID allows the user to quickly summon assistance from the dispatcher and other group members by pressing the emergency button (recessed red button located on the top of the radio). Pressing this button transmits a unique unit ID with the emergency signal so that all radios in the talkgroup will receive the ID or alias of the unit initiating the emergency. This feature works in any trunked mode or P25 conventional mode.

#### *Data Capable*

The P5400's (800 MHz only) optional data feature allows the P5400 portable to be used in high-performance wireless data systems. For mobile data applications, the P5400 serves as an IP network node, providing end-to-end IP connectivity for an external portable computer connected to the radio's data port. The 19.2-kbps data airlink rate is a standard operating feature. Users can talk and send or receive data on the same channel at the same time with just one radio.

#### *Programmable Personality*

With the P5400, changing personalities is as simple as connecting to a personal computer. This arrangement offers the flexibility of programming system and radio parameters as requirements change without interchanging parts or opening the radio case.

#### *ProFile™ Over-the-Air Programming*

The radio personality, features, and operating software can all be updated over the air. ProFile over-the-air programming is available for OpenSky, EDACS, and P25 systems.

#### *High System/Group/Channel Capacity*

The P5400 can operate with up to 1,024 system/group combinations and with up to 512 conventional channels. Trunked systems/groups and conventional channels can be configured in many different ways to meet specific user needs.

#### *ProScan™ Wide Area Roaming*

The ProScan roaming option determines the site within the trunked network that will provide the user with the clearest and most reliable communications. ProScan makes roaming within a multi-site trunked network completely transparent to the user.

#### *Text Messaging*

With the Radio TextLink option, users may receive, display, and respond to text messages sent from authorized users on the ProVoice, EDACS, or P25 network. This feature improves real-time situation intelligence and communications among first responders while also providing the capability to leave messages with users who are actively engaged in other critical activities.

### *Status/Message*

This feature allows users to deliver short data messages on the control channel with the press of a single button.

### *EDACS Security Key (ESK) and P25 Personality Lock*

These features prevent unauthorized users from programming radios for use on the system and from accessing the system.

### *Trunked Scan*

This feature allows trunked system users to scan multiple talkgroups.

### *Unit Enable/Disable*

This capability allows a lost or stolen radio to be disabled to prevent unauthorized monitoring of or interference with radio communications.

### *Telephone Interconnect Calls and Individual Calls*

This feature enables the P5400 to initiate or receive telephone calls. In addition, the individual call feature (selective calling) allows individual addressing within the trunked system for unit-to-unit calls. The P5400 can store 99 individual call numbers and 99 telephone interconnect numbers in memory per system (up to maximum memory use).

### *Encrypted Communications*

The optional Advanced Encryption Standard (AES) is available for 800 MHz P5400 models only for maximum security. OpenSky operates the most advanced vocoder on a private wireless Intranet that provides maximum digital voice clarity. As an additional measure of security, P5470 radios may be password-protected, preventing unauthorized use.

## **Options and Accessories**

The P5400 and P5300 portables share the same accessories, making it easy for users to interchange them between radios.

- Multiple antenna options
- Nickel Cadmium, Nickel Metal Hydride, and Lithium Ion batteries
- Desk chargers – Single- and multi-unit and Tri-Chemistry desk chargers
- Carrying case (black leather and nylon available)
- Swivel mounts or belt clips
- Variety of speaker microphones
- Earpiece
- PC programming software and cables
- Data cable for connecting data devices or PCs to the radio

## **Conclusion**

The P5400 enhances the productivity and increases the efficiency of its users. The portable offers versatile configurations by combining the flexibility of a software-defined radio with a host of features and multiple operating modes. The P5400 provides dependable communications under adverse conditions, making the portable ideal for critical communications users.

*OpenSky and EDACS are registered trademarks of M/A-COM, Inc.  
ProVoice, ProScan, and ProFile are trademarks of M/A-COM, Inc.  
Issued 09/02/08*

STATE OF WEST VIRGINIA  
Purchasing Division**PURCHASING AFFIDAVIT****VENDOR OWING A DEBT TO THE STATE:**

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

**PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:**

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

**ANTITRUST:**

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

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

**LICENSING:**


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

**CONFIDENTIALITY:**

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

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

Vendor's Name: Communication Service, Inc.

Authorized Signature: 

Date: 4-28-09

# VENDOR PREFERENCE CERTIFICATE

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

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

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

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

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

Bidder: Communication Service, Inc. Signed: *Alexa Hayden*  
 Date: 4-28-09 Title: *Office Manager*

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