



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 FOR ATTENTION OF)  
**JOHN ABBOTT  
304-558-2544**

RFQ COPY  
TYPE NAME/ADDRESS HERE  
*EF Johnson Technologies  
1440 Corporate Drive  
Irving, TX 75038*

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

DATE PRINTED <b>04/02/2009</b>	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
BID OPENING DATE: <b>04/23/2009</b>		BID OPENING TIME <b>01:30PM</b>		

LINE	QUANTITY	UOP	QTY NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		725-74		
<p><b>TWO-WAY RADIOS, PORTABLE</b></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 ..... 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 28 A 9:51  
PURCHASING DIVISION  
STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE *M* **Massoud Safavi** TELEPHONE **972-819-0700** DATE **4-22-09**

TITLE **C00** FEIN **41-0736849** 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



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
2

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

RFQ COPY  
 TYPE NAME/ADDRESS HERE  
*EF Johnson Technologies*  
*1440 Corporate Drive*  
*Irving, TX 75038*

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

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
04/02/2009				
BID OPENING DATE: 04/23/2009		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOM	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	TITLE	TELEPHONE	DATE
<i>[Signature]</i>	CDD	972-819-0700	4-27-09
FEDERAL ID NUMBER (FEIN)		ADDRESS CHANGES TO BE NOTED ABOVE	
41-0736849			

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



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  
**3**

ADDRESS: CORRESPONDENCE TO ATTENTION OF  
**JOHN ABBOTT  
304-558-2566**

RFQ COPY

TYPE NAME/ADDRESS HERE  
*EF Johnson Technologies  
1440 Corporate Drive  
Irving, TX 75038*

RFQ COPY

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

DATE PRINTED <b>04/02/2009</b>	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
BID OPENING DATE: <b>04/23/2009</b>	BID OPENING TIME <b>01:30PM</b>			

LINE	QUANTITY	UOP	QTY NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
<p><b>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</b></p> <p><b>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.</b></p> <p>REV. 04/11/2001</p> <p>EXHIBIT 4</p> <p><b>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.</b></p> <p>REV. 3/88</p> <p><b>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</b></p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE *W* **Massoud Safadi** TELEPHONE **972-819-0708** DATE **4-27-09**

TITLE **COO** FEIN **41-0736849** ADDRESS CHANGES TO BE NOTED ABOVE

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



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  
**4**

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

RFQ COPY  
 TYPE NAME/ADDRESS HERE  
*EF Johnson Technologies*  
*1440 Corporate Drive*  
*Irving, TX 75038*

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

DATE PRINTED	TERMS OF SALE	SHIP/MA	FOR	FREIGHT TERMS
04/02/2009				

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

LINE	QUANTITY	UOF	CA 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>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>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>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE *M* **Massoud Satavi** TELEPHONE **972-819-0700** DATE **4-27-09**

TITLE **COO** FEIN **41-0236849** ADDRESS CHANGES TO BE NOTED ABOVE

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



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  
**5**

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

RFQ COPY  
TYPE NAME/ADDRESS HERE  
*EF Johnson Technologies  
1440 Corporate Drive  
Irving, Tx 75038*

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

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

LINE	QUANTITY	UOP	QA NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
CONTACT PERSON (PLEASE PRINT CLEARLY):						
-----						
***** THIS IS THE END OF RFQ    DPS0931 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE *M. Massoud Satavi* TELEPHONE **972-819-0708** DATE **4-27-09**

TITLE **COO** FEIN **41-0736849** ADDRESS CHANGES TO BE NOTED ABOVE

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

**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
<u><b>TIER-1</b></u>		
<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 136-174 MHz 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
<b>1.5.1. P-25 Trunked Channelization</b>			
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>	_____
<b>1.5.2. Conventional (Non-Trunked) Channelization</b>			
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>	_____
<b>1.6. Scanning</b>			
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
<b>1.7. Display</b>			
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> _____	_____
<b>1.8. Channel/Zone selection</b>			
1.8.1.	Channel selection will be by way of rotary knob to select a minimum of 16 channels.	<u>X</u> _____	_____
1.8.2.	Zone selection to allow access to more groups of frequencies will be via other controls or buttons.	<u>X</u> _____	_____
1.9.	Receiver audio stage shall be capable of a minimum of 250 milliwatts of audio from the internal speaker.	<u>X</u> _____	_____
<b>2. UHF Portable – P-25 Digital Trunking ready</b>			
2.1.	Radio shall be programmable for operation in the 403-470 MHz band.	<u>X</u> _____	_____
2.2.	Radio shall have a programmable output power of 2 to 5 watts.	_____	<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>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>X</u> _____	_____
2.3.2.	A Rapid charge battery shall be provided, charging to full capacity in four hours or less.	<u>X</u> _____	_____

		Comply?	
		Yes	No
<b>2.4. Digital Capabilities</b>			
2.4.1.	Radio shall be P-25 Trunking capable and compatible with the WVIRP P-25 Trunked system.	<u>X</u>	_____
2.4.2.	Radio shall include P-25 CAI (Common Air Interface) compatibility.	<u>X</u>	_____
2.5.	Unit shall be capable of receiving and transmitting on a minimum of 512 channels / 24 zones.	<u>X</u>	_____
<b>2.5.1. P-25 Trunked Channelization</b>			
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).	<u>X</u>	_____
2.5.1.2.	Radios in which a talkgroup may be entered and configured only one time are not acceptable.	<u>X</u>	_____
<b>2.5.2. Conventional (Non-Trunked) Channelization</b>			
2.5.2.1.	Each channel shall be individually programmable with regard to wideband /narrowband operation.	<u>X</u>	_____
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.	<u>X</u>	_____
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.	<u>X</u>	_____
<b>2.6. Scanning</b>			
2.6.1.	Radio shall be capable of using and storing user defined scan lists.	<u>X</u>	_____

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

- |   | Comply?  |       |
|---|----------|-------|
|   | Yes      | No    |
| 2.10.2. AES encryption capability will be offered as a software option at time of purchase.   | <u>X</u> | _____ |
| 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.                         | <u>X</u> | _____ |
| 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. | <u>X</u> | _____ |

**3. General Specifications**

**3.1. Remote Microphone**

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

**3.2. Charger**

- |   |          |       |
|---|----------|-------|
| 3.2.1. A desktop charger shall be provided to allow rapid charging from an 117V power source.   | <u>X</u> | _____ |
| 3.2.1.1. This charger shall be equipped with indication of both charging and charger completion.  | <u>X</u> | _____ |
| 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. | <u>X</u> | _____ |
| 3.2.1.3. This unit should incorporate a built-in battery conditioner.   | <u>X</u> | _____ |
| 3.2.1.4. The charger shall be available for individual purchase.  | <u>X</u> | _____ |

	Comply?	
	Yes	No
<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>	_____
3.3.2. The black leather belt loop shall be available for individual purchase, should additional belt loops be needed.	<u>X</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>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>	_____
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>	_____
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>X</u>	_____
<b>3.5. Service Manuals (Only for WV State Police purchases)</b>		
3.5.1. Schematics and complete service manuals will be available.	<u>X</u>	_____
3.5.2. An option shall be provided to purchase depot level services manuals in paper form.	<u>X</u>	_____
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.	<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>	_____

		Comply?	
		Yes	No
<b>3.6. Programming Software and Equipment Firmware</b>			
3.6.1.	An option shall be available to purchase Software, Cable and any interfaces necessary to program the radio.	<u>X</u>	_____
3.6.1.1.	Programming cables shall utilize USB interface to computers.	<u>X</u>	_____
	Note: Any interfaces to Parallel or Serial ports shall cause disqualification of associated radios and options.	<u>X</u>	_____
3.6.1.2.	Updates to software shall be provided at no additional charge via Internet account to allow continuous access updates.	<u>X</u>	_____
3.6.1.2.1.	Short term access is not acceptable.	<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>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>	_____
3.6.2.1.	Manufacturer shall provide internet access to this software/firmware.	<u>X</u>	_____
3.6.2.2.	Updates to software shall be provided at no additional charge via Internet account to allow continuous access updates.	<u>X</u>	_____
3.6.2.2.1.	Short term access is not acceptable.	<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>X</u>	_____

	Comply?	
	Yes	No
<b>3.7. Evaluation of bid</b>		
3.7.1. A working example of the equipment to be provided will be available for evaluation prior to award.	<u>X</u>	_____
3.7.2. Operating and repair manuals will be provided on each component delivered for evaluation.	<u>X</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>	_____
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>	_____
3.7.5. Special / Promotional pricing offered by vendors for limited periods of time shall not be considered for bid award.	<u>X</u>	_____
<b>3.8. Manufacturers modifications and dealer roles</b>		
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>	_____

4. Options for Tier-1

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



**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 136-174 MHz band. X \_\_\_\_\_

1.2. Radio shall have a programmable output power of 2 to 4 watts. X \_\_\_\_\_

1.3. Radio duty cycle will be assumed to be 5/5/90 (5% transmit/5% receive/90% standby per TIA/EIA Specification 903). X \_\_\_\_\_

1.3.1. Battery life should be 10 hours or greater. NiMH or Lithium Ion batteries are acceptable. (Nickel Cadmium batteries are not acceptable.) X \_\_\_\_\_

1.3.2. A Rapid charge battery shall be provided, charging to full capacity in four hours or less. X \_\_\_\_\_

**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. X \_\_\_\_\_

1.4.2. Radio shall be capable of upgrade to P-25 Trunking capability. X \_\_\_\_\_

1.5. Unit shall be capable of receiving and transmitting on a minimum of 512 channels / 16 zones. X \_\_\_\_\_

**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). X \_\_\_\_\_

1.5.1.2. Radios in which a talkgroup may be entered and configured only one time are not acceptable. X \_\_\_\_\_

**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>	_____
1.8.2.	Zone selection to allow access more groups of frequencies will be via other controls or buttons.	<u>X</u>	_____
1.9.	Receiver audio stage shall be capable of a minimum of 250 milliwatts of audio from the internal speaker.	<u>X</u>	_____
<b>2.</b>	<b>UHF Portable – P-25 Digital Trunking ready</b>		
2.1.	Radio shall be programmable for operation in the 403-470 MHz band.	<u>X</u>	_____
2.2.	Radio shall have a programmable output power of 2 to 4 watts.	<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>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>X</u>	_____
2.3.2.	A Rapid charge battery shall be provided, charging to full capacity in four hours or less.	<u>X</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>X</u>	_____
2.4.2.	Radio shall include P-25 CAI (Common Air Interface) compatibility.	<u>X</u>	_____
2.5.	Unit shall be capable of receiving and transmitting on a minimum of 512 channels / 16 zones.	<u>X</u>	_____

		Comply?	
		Yes	No
<b>2.5.1. P-25 Trunked Channelization</b>			
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).	<u>X</u>	_____
2.5.1.2.	Radios in which a talkgroup may be entered and configured only one time are not acceptable.	<u>X</u>	_____
<b>2.5.2. Conventional (Non-Trunked) Channelization</b>			
2.5.2.1.	Each channel shall be individually programmable with regard to wideband /narrowband operation.	<u>X</u>	_____
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.	<u>X</u>	_____
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.	<u>X</u>	_____
<b>2.6. Scanning</b>			
2.6.1.	Radio shall be capable of using and storing user defined scan lists.	<u>X</u>	_____
2.6.2.	Scan lists may also be defined in programming software.	<u>X</u>	_____
2.6.2.1.	Predefined scan lists may be edited by the user utilizing buttons on the radio.	<u>X</u>	_____
2.6.2.2.	Scan lists shall be able to be established at the user/keypad level.	<u>X</u>	_____
2.6.2.3.	Scanning will be enabled and disabled by depressing no more than one button, one time.	<u>X</u>	_____

		Comply?	
		Yes	No
<b>2.7. Display</b>			
2.7.1.	Radio shall have an alphanumeric display with a minimum of 2 rows of 12 characters.	<u>      </u>	<u>  X  </u>
2.7.2.	Radio shall have a backlit display.	<u>  X  </u>	<u>      </u>
2.7.3.	Radio shall have a battery status.	<u>  X  </u>	<u>      </u>
2.7.4.	Radio shall have ID display capability.	<u>  X  </u>	<u>      </u>
<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.	<u>  X  </u>	<u>      </u>
2.8.2.	Zone selection to allow access more groups of frequencies will be via other controls or buttons.	<u>  X  </u>	<u>      </u>
2.9.	Receiver audio stage shall be capable of a minimum of 250 milliwatts of audio from the internal speaker.	<u>  X  </u>	<u>      </u>
<b>2.10. Encryption</b>			
2.10.1.	Any hardware necessary for AES encryption will be installed in the radio at time of purchase.	<u>  X  </u>	<u>      </u>
2.10.2.	AES encryption capability will be offered as a software option at time of purchase.	<u>  X  </u>	<u>      </u>
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.	<u>  X  </u>	<u>      </u>
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.	<u>  X  </u>	<u>      </u>
<b>3. General Specifications</b>			
<b>3.1. Remote Microphone</b>			
3.1.1.	A remote microphone with coiled cord shall be provided.	<u>  X  </u>	<u>      </u>

		Comply?	
		Yes	No
3.1.1.1.	The microphone cable shall be capable of extending a minimum of 24 inches.	<u>X</u>	_____
3.1.1.2.	The microphone shall have a spring clip to allow it to be clipped to clothing.	<u>X</u>	_____
3.1.1.3.	The remote microphone shall be available for individual purchase.	<u>X</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>	_____
3.2.1.1.	This charger shall be equipped with indication of 1) charging and 2) charger completion.	<u>X</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>	_____
3.2.1.3.	This unit should incorporate a built-in battery conditioner.	<u>X</u>	_____
3.2.1.4.	The charger shall be available for individual purchase.	<u>X</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>	_____
3.3.2.	The black leather belt loop shall be available for individual purchase, should additional belt loops be needed.	<u>X</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>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>	_____

	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>	_____
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>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>	_____
3.5.2. An option shall be provided to purchase depot level services manuals in paper form.	<u>X</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>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>	_____
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>	_____
3.6.1.1. Programming cables shall utilize USB interface to computers.	<u>X</u>	_____
Note: Any interfaces to Parallel or Serial ports shall cause disqualification of associated radios and options.	_____	_____
3.6.1.2. Updates to software shall be provided at no additional charge via Internet account to allow continuous access updates.	<u>X</u>	_____
3.6.1.2.1. Short term access is not acceptable.	<u>X</u>	_____
3.6.1.2.2. Username, password, and website	<u>X</u>	_____

		Comply?	
		Yes	No
	address shall be provided with bid and shall be part of the bid analysis and award.	<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>	_____
3.6.2.1.	Manufacturer shall provide internet access to this software/firmware.	<u>X</u>	_____
3.6.2.2.	Updates to software shall be provided at no additional charge via internet account to allow continuous access updates.	<u>X</u>	_____
3.6.2.2.1.	Short term access is not acceptable.	<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>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>	_____
3.7.2.	Operating and repair manuals will be provided on each component delivered for evaluation.	<u>X</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>	_____
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>	_____
3.7.5.	Special / Promotional pricing offered by vendors for limited periods of time shall not be considered for bid award.	<u>X</u>	_____



		Comply?	
		Yes	No
<b>3.8. Manufacturers modifications and dealer roles</b>			
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

25

TIER 1

Item #1 VHF Portable - P-25 CAI  
(P-25 Trunking optional)

\$ 1,887 (Includes 2 yr Extended Warranty)

Make: EF Johnson Model: 51SL ES

Item #2 UHF Portable - P-25 Trunked  
(P-25 CAI included)

\$ No Bid

Make: N/A Model: N/A

Options for TIER 1

Addition of P-25 Trunking for Item #1

\$ 580<sup>00</sup>

AES Encryption for Item #2

\$     

Keyloader cable for use with Motorola KVL 3000 Plus

\$ 220<sup>00</sup>

Programming Software

\$ 280<sup>00</sup>

Programming Cable and any necessary interface

\$ 120<sup>00</sup>

Additional Desktop Charger

\$ 120<sup>00</sup>

Additional Lapel Microphone

\$ 104<sup>00</sup>

Additional Portable Radio Belt Loop

\$ 56<sup>00</sup>

Additional Battery identical to what was provided

\$ 80<sup>00</sup>

Additional year of warranty (Total of 4 years)

\$ 150<sup>00</sup>

Additional year of warranty (Total of 5 years)

\$ 250<sup>00</sup>

TOTAL BID FOR TIER-1 \$ 3,687<sup>00</sup>

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

TIER 2

Item #1 VHF Portable - P-25 CAI  
(P-25 Trunking optional)

\$ 1,887.00

(Includes 2yr  
Extended warranty)

Make: EF Johnson Model: 51SL ES

Item #2 UHF Portable - P-25 Trunked  
(P-25 CAI included)

\$ 2,659.00

Make: EF Johnson Model: 5100 ES

Options for TIER 2

Addition of P-25 Trunking for Items #1

\$ 580.00

AES Encryption for Items #2

\$ 400.00

Keyloader cable for use with Motorola KVL 3000 Plus

\$ 220.00

Programming Software

\$ 280.00

Programming Cable and any necessary interface

\$ 120.00

Additional Desktop Charger

\$ 120.00

Additional Lapel Microphone

\$ 104.00

Additional Portable Radio Belt Loop

\$ 56.00

Additional Battery identical to what was provided

\$ 80.00

Additional year of warranty (Total of 4 years)

\$ 150.00

Additional year of warranty (Total of 5 years)

\$ 250.00

TOTAL BID FOR TIER-2 \$ 6,906.00

GRAND TOTAL \$ 10,593.00

Rev. 09/08

State of West Virginia

RFQ NO. DF50931 27

**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:

N/A

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:

N/A

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:

N/A

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:

N/A

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:

N/A

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:

N/A

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: EF Johnson Technologies Signed: Massoud Sa'avi

Date: 4/27/09 Title: COO

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

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**VENDOR OWING A DEBT TO THE STATE:**

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

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

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

**ANTITRUST:**

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

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

**LICENSING:**

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

**CONFIDENTIALITY:**

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

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

Vendor's Name: EF Johnson Technologies

Authorized Signature: [Signature] Date: 4/27/09

Purchasing Affidavit (Revised 01/01/09) Massoud Safavi



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

\*419152304 919-338-2567  
**E F JOHNSON COMPANY  
 7709 ORANGE GROVE RD  
 CHAPEL HILL NC 27516**

SHIP TO

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

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
04/19/2009				

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

LINE	QUANTITY	UQP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
				ADDENDUM #01		
				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.  REVISED BID OPENING: 4/29/2009; 1:30 PM		
0001		LS		725-74		
				TWO-WAY RADIOS, PORTABLE		
				***** THIS IS THE END OF RFQ	DPS0931 *****	TOTAL: _____

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>[Signature]</i>	TELEPHONE <b>972-819-0700</b>	DATE <b>4-22-09</b>
TITLE <b>COO</b>	FEIN <b>41-0736849</b>	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.

## **EF JOHNSON TECHNOLOGIES, INC. STANDARD TERMS AND CONDITIONS OF SALE**

EF Johnson Technologies, Inc., including its affiliates and subsidiaries ("Seller"), hereby offers to sell to the addressee on the face side hereof ("Purchaser") the products and services ("Products") described at the prices indicated thereon, subject to the terms and conditions ("Terms") set forth below. Seller objects to inclusion of any terms proposed by Purchaser which are additional to or different from the Terms of this offer and Seller's delivery of the Products shall not constitute an assent to any such terms. If Purchaser has previously made an offer to purchase the Products from Seller, this shall constitute an acceptance of such offer only upon the condition that Purchaser assents to all of the Terms herein.

1. Purchaser agrees to purchase the Products listed on the face side hereof at the price specified thereon. In the event of an extension error, the unit price will prevail. Purchaser's order for Seller's standard Products is firm and cannot be cancelled or changed unless Purchaser pays Seller's restocking fee of twenty five percent (25%). Purchaser's order for custom Products cannot be changed or cancelled unless Purchaser reimburses Seller for all unrecovered costs incurred by Seller through the date Seller receives notice of Purchaser's cancellation plus twenty percent (20%) of such unrecovered costs
2. Partial shipment and partial performance are hereby authorized by Purchaser. Seller will issue invoices to Purchaser for all Products as they are shipped or performed. Payment shall be made thirty (30) days from the date of the invoice, or as otherwise arranged. The purchase price does not include sales, use, excise or similar taxes, custom duties, or transfer fees, all of which shall be Purchaser's responsibility. Such taxes and fees, if paid by Seller, shall be charged to Purchaser. Purchaser agrees to pay to Seller interest at the rate of one and one half percent (1½%) per month on all amounts past due until payment is made. Failure to make payments when due shall give Seller the right to refuse to fill any unshipped orders, to stop any shipment in transit, and to exercise any other rights it may have as a Seller. Purchaser agrees to pay Seller all reasonable expenses, including but not limited to attorney's fees, of collection of accounts past due. Letters of Credit or wire payments are required in advance of shipment. If, in Seller's judgment, the financial condition of Purchaser at any time prior to receipt of Products by Purchaser, does not justify continuance of the work or shipment of the Products, Seller may, at its option, require full or partial payment in advance, or may cancel an order or any part thereof.
3. Any special tools, software, masters and/or artwork used in the manufacture of the Products ordered hereunder are considered as Seller's own engineering and design and the exclusive property of Seller. Payment of charges therefore by Purchaser shall convey neither ownership nor the right of removal from Seller. Special tools, software, masters and/or artwork paid for by the Purchaser will only be used for Purchaser's requirements, except by written permission. Payment for tools, software, masters and/or artwork is due upon submission of invoice.
4. All shipments shall be made FOB Seller's final place of Product manufacture, and delivery for shipment to a carrier at the FOB point shall constitute delivery thereof by Seller to Purchaser. All Products are shipped at Purchaser's risk, and Seller shall incur no liability for Products damaged, broken or lost in transit. If shipping instructions are not provided by Purchaser to Seller, Seller may pack and ship the products in such a manner as Seller shall determine without incurring any obligation or liability to Purchaser on account of the manner in which Seller causes same to be packed or shipped.
5. Products sold hereunder carry Seller's standard product or service warranty in effect at the time of the sale. SELLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE TOTAL LIABILITY OF SELLER ON ANY AND ALL CLAIMS, WHETHER BASED ON CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE OR PATENT INFRINGEMENT) OR OTHERWISE, ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY AGREEMENT RESULTING HEREFROM OR FROM THE MANUFACTURE, SALE, DELIVERY, RESALE, REPAIR, REPLACEMENT OR USE OF ANY PRODUCTS OR FURNISHING OF ANY SERVICE SHALL NOT EXCEED THE PRICE ALLOCABLE TO THE PRODUCTS OR SERVICE WHICH GIVES RISE TO THE CLAIM. EXCEPT AS TO TITLE, ANY SUCH LIABILITY SHALL TERMINATE UPON THE EXPIRATION OF THE APPLICABLE WARRANTY PERIOD THEREOF. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE OR PATENT INFRINGEMENT) OR OTHERWISE, SHALL SELLER BE LIABLE FOR PERSONAL INJURY OR LOSS, PROPERTY DAMAGE, OR EXPENSE ARISING FROM THE USE OF SELLER'S PRODUCTS OR FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, INDIRECT OR EXEMPLARY DAMAGES, INCLUDING BUT NOT LIMITED, TO LOSS OF PROFIT OR REVENUES, LOSS OF THE USE OF THE PRODUCTS OR ANY ASSOCIATED PRODUCTS, COST OF CAPITAL, COST OF SUBSTITUTE GOODS, FACILITIES, SERVICES OR REPLACEMENT POWER, DOWNTIME COSTS OR CLAIMS OF THE PURCHASER'S CUSTOMERS FOR SUCH DAMAGES.
6. Seller makes no representations concerning coverage or the distance at which usable radio signals will be transmitted and received by the Products supplied hereunder. Radio systems are subject to degradation of service from natural phenomenon and other causes beyond the reasonable control of Seller. Seller is not responsible for interference or disruption of service caused by operation of other radio systems, by natural phenomenon, or other interference over which there is no reasonable control.



7. Seller warrants that Seller manufactured Products furnished hereunder and any part thereof, shall be delivered free of rightful claim of any third party for infringement of any United States patent. If notified promptly in writing and given authority, information and assistance, Seller, at its expense shall defend, or may settle, any suit or proceeding against Purchaser if based on a claimed infringement which breaches this warranty. In case any such Product or any part thereof is held to constitute such an infringement and the use of said Product or part is enjoined, Seller, at its expense and option, shall either procure for Purchaser the right to continue using said Product or part, or replace same with a non-infringing Product, or modify same so it becomes non-infringing, or remove said Product and refund the purchase price (less reasonable depreciation for use and any transportation costs separately paid by Purchaser). The foregoing states the entire liability of Seller for patent infringement by such Product or any part thereof, and is subject to the limitation of liability set forth in Paragraph 4 above. The preceding shall not apply to any Product or parts manufactured to Purchaser's design, modified by Purchaser, or to the use of any Product or part furnished hereunder in conjunction with any other equipment in a combination not furnished by Seller as a part of this transaction. As to any such Product, part, or use or combination, Seller assumes no liability whatsoever for patent infringement.

8. Seller reserves the right at any time to discontinue any model in its product line and to make changes or improvements in specifications or design in such Products without incurring any obligations to Purchaser with respect to the past or future sale of such Products.

9. Prices and delivery dates apply only if this offer is accepted within thirty (30) days from the date the offer (the validity period) is originated. This offer expires upon the expiration of this validity period or such extension of the validity period as Seller may grant in writing. Seller reserves the right to adjust sell prices on existing orders when warranted due to increase in gold costs, connector prices, or any other specially purchased materials necessary to complete existing orders.

10. Purchaser may inspect the products and/or confirm the quantity of the Product upon delivery. If special or source inspection is required, man hours necessary for Seller to assist in the performance of it are chargeable at the Seller's inspection rate. Claims for defective or incorrect parts, or shortages, must be reported to Seller in writing within two (2) weeks after Purchaser's receipt of the Products. Failure to make such a claim within the time specified shall relieve Seller of all responsibility therefore. NO RETURNS ARE ALLOWED WITHOUT PRIOR WRITTEN AUTHORIZATION OF SELLER. Returned Products are to be marked with the reason for return and must be properly packaged by Purchaser to prevent damage in transit. In the absence of such prior authorization, Seller assumes no responsibility for returned Products nor does it agree to grant a credit therefore. Warranty returns must be made on the terms stated in the Seller's standard product warranty in effect at the time of sale.

11. Purchaser is solely responsible for obtaining and complying with any necessary permits and licenses for the Federal Communications Commission (FCC) or any other Federal, State or local government authority, related to the purchase, installation, construction or operation of any Products purchase hereunder. Seller will assist Purchaser with the details necessary to complete frequency coordination and FCC licensing forms. Purchaser shall be responsible for all FCC application fees and frequency coordination fees.

12. Purchaser agrees that it will comply with all U.S. export laws and that it will not directly or indirectly export, re-export, resell, ship, or divert any product or technical data or software furnished hereunder to any country for which the U.S., at the time of export, requires an export license or other governmental approval without first obtaining such license or approval.

13. Seller shall not be liable for delays in delivery or performance or for failure to manufacture, deliver, or perform due to (i) acts of God, acts of civil or military authority, governmental priorities, strikes or other labor disturbances, floods, epidemics, war, riots, or delays in transportation; or (ii) causes beyond the reasonable control of Seller or its suppliers, including inability to obtain necessary material components, services or facilities. In the event of any such delay, the date of delivery or performance shall be extended for a period equal to the time lost by reason of such delay.

14. These Terms shall be construed in accordance with the State of Texas without regard to its choice of law provisions.

15. These Terms constitute the entire understanding between the Purchaser and the Seller concerning the subject hereof, any representation, promise, understanding, proposal, agreement warranty, course of dealing or trade usage not expressly contained or referenced herein shall not be binding on Seller. No modification, amendment, rescission, waiver, or other change shall be binding on Seller unless agreed in writing by Seller. SELLER DOES NOT ASSUME ANY OBLIGATIONS OR LIABILITIES IN CONNECTION WITH THE SALE OF ITS PRODUCTS OTHER THAN THOSE EXPRESSLY STATED IN THESE TERMS, AND DOES NOT AUTHORIZE ANY PERSON (INCLUDING SELLER'S DIRECT SALES FORCE AND SALES AGENTS) TO ASSUME FOR SELLER ANY OTHER OBLIGATIONS OR LIABILITIES.



## **Product Warranty**

EFJohnson warrants to the original purchaser for use ("Buyer") that products manufactured by EFJohnson ("Products") are free from defects in material and workmanship and will conform to EFJohnson's published technical specifications for a period of, except as noted below, a period of one (1) year from the date of shipment to Buyer. EFJohnson makes no warranty with respect to the equipment not manufactured by EFJohnson, and any such equipment shall carry the original equipment manufacturer's warranty only. EFJohnson further makes no warranty as to, and specifically disclaims liability for, availability, range, coverage, grade of service or operation of the repeater system provided by the carrier or repeater operator,

If any product fails to meet the Warranty set forth above during the applicable warranty period and is returned to a location designated by EFJohnson, EFJohnson at its option shall either repair or replace such defective Product, directly or through an authorized service agent, within thirty (30) days of receipt of same. No Products may be returned without the prior authorization from EFJohnson. Any repaired or replaced Products shall be warranted for the remainder of the original warranty period. Buyer shall pay all shipping and handling charges for returning all defective products to EFJohnson or EFJohnson's authorized service agent. Buyer is also responsible for other cost and expenses of transit and delivery, including all applicable taxes and duties. EFJohnson will pay the returned shipping charges if the product is repaired or replaced under warranty. Repair or replacement of defective Products as set forth in this paragraph fulfills any and all warranty obligations on the part of EFJohnson.

This warranty is void and EFJohnson shall not be obligated to replace or repair any Products if (i) the Product has been used in other than its normal and customary manner (ii) the Product has been subject to misuse, accident, neglect or damage or has been used with other than EFJohnson approved accessories and equipment, (iii) unauthorized alterations or repairs have been made or unapproved parts have been used with the Product, or (iv) Buyer failed to notify EFJohnson or EFJohnson authorized service agent of the defect during the applicable warranty period.

THE AFORESAID WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. EFJohnson AND BUYER AGREE THAT BUYER'S EXCLUSIVE REMEDY FOR ANY BREACH OF ANY SAID WARRANTIES IS AS SET FORTH ABOVE. BUYER AGREES THAT IN NO EVENT SHALL EFJohnson BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT, OR EXEMPLARY DAMAGES WHETHER ON THE BASIS OF NEGLIGENCE, STRICT LIABILITY OR OTHERWISE. The purpose of the exclusive remedies set forth above shall be to provide Buyer with repair or replacement of non-complying products in the manner provided above. These exclusive remedies shall not be deemed to have failed of their essential purpose so long as EFJohnson is willing and able to repair or replace non-complying Products in the manner set forth above.

Some states do not allow limitations or implied warranties so the above limitations may not be applicable. You may also have other rights which vary from state to state.

### **Exception**

Thirty Day: Tuning and adjustment of portable and mobile radios