



**MOTOROLA**

August 8, 2006

Ms. Krista Ferrell  
West Virginia Division of Purchasing  
2019 Washington St., E.  
Charleston, WV 25305

Re: **Request for Quotation, PTR07003 for UHF Mobile Radios**

Dear Ms. Ferrell,

Motorola, Inc., through its Government and Commercial Markets Division, is pleased to offer this response to your Request for Quotation PTR07003 for new mobile radios for the WV Division of Public Transit. All mobile radios offered are state of the art and have passed Motorola's tests for ruggedness and long term reliability. These units contain "FlashPort Upgradability" which allows the WV Division of Public Transit to add additional features to the radio units as new requirements may arise. In order to take advantage of the many options that are available with the XTL2500 mobile radio, Motorola has attached several options pages (5) that greatly enhance the flexibility of the requested radio.

Motorola is compliant with all equipment technical specifications contained in the RFQ. Pricing for the equipment does not include installation. Installation costs vary by location, vehicle types, building variance and variable labor rates based on geographic location. Therefore, Motorola is unable to provide one install quote that fits all situations. Motorola proposes to provide installation pricing on a case by case basis using the closest mutually agreed to local service center at the prevailing rates. Delivery charges are: Prepay and allow (no cost to customer).

Motorola submits the following additional information with regard to Section entitled Audit and Inspection on page 14 of the Request for Quotation: According to these provisions, authorized representatives of the Transit Authority, the United States Department of Transportation and the Comptroller General of the United States have the right to inspect and audit books and records directly pertinent to the contract. Motorola will allow access to such records as required by the solicitation or contract.

Our goal is to work with the WV Division of Public Transit personnel to provide them with the most rugged, reliable and system flexible radios in the industry today. It is Motorola's goal to provide total customer satisfaction and we pride ourselves in servicing the public safety industry for the past 75 years.

Reference: Addendum No. 1: Motorola extends our offering to other State agencies and local governmental bodies per the addendum request.

Ms. Krista Ferrell  
West Virginia Division of Purchasing  
August 8, 2006  
Page Two

We appreciate the opportunity to continue to work with you, and we look forward to fulfilling your communications system requirements. Should you have any questions, please contact your Motorola Account Manager, Richard Culicerto at (304) 253-0086.

Sincerely,

MOTOROLA, INC.

A handwritten signature in cursive script that reads "Kristie King".

Kristie King  
MCEI Distribution Controller  
Government and Commercial Markets Division  
Networks and Enterprise



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

PTR07003

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF

KRISTA FERRELL  
304-558-2596

\*709024003 02 304-253-0086  
MOTOROLA COMMUNICATIONS & ELEC  
101 BLUFF ROAD

VENDOR

BECKLEY WV 25801

SHIP TO

DIVISION OF PUBLIC TRANSIT

BUILDING 5, ROOM 830  
1900 KANAWHA BOULEVARD, EAST  
CHARLESTON, WV  
25305-0432 304-558-0428

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
08/03/2006				
BID OPENING DATE:	08/10/2006	BID OPENING TIME	01:30PM	

LINE	QUANTITY	UQP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>ADDENDUM NO. 1</p> <p>THIS ADDENDUM IS ISSUED TO INCLUDE THE FOLLOWING LANGUAGE:</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 TO 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/HER BID. SUCH REFUSAL SHALL NOT PREJUDICE THE AWARD OF THIS CONTRACT IN ANY MANNER.</p> <p>REV. 3/88</p> <p>BID OPENING DATE REMAINS: 08/10/2006 BID OPENING TIME REMAINS: 1:30 PM</p> <p>***** END ADDENDUM NO. 1 *****</p>						
0001	1	EA		725-74		
				TRUNK MOUNT MOBILE RADIOS, SPEAKERS, MICROPHONES		

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE

*Krista Ferrell*  
Krista Ferrell

TELEPHONE

304-253-0086

DATE

8-8-06

RENEWED MCEI Distribution Corp 36-1115800

ADDRESS CHANGES TO BE NOTED ABOVE

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



State of West Virginia  
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CHARLESTON, WV  
25305-0432 304-558-0428

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
07/26/2006	Net 30 days invoice			

BID OPENING DATE: 08/10/2006 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	EA		725-74		
THE WEST VIRGINIA DIVISION OF PUBLIC TRANSIT IS						
REQUEST FOR QUOTATION						
THE WEST VIRGINIA PURCHASING DIVISION FOR THE WEST VIRGINIA DIVISION OF PUBLIC TRANSIT IS SOLICITING QUOTATIONS FOR 110 WATT UHF TRUNK MOUNT MOBILE RADIOS WITH SPEAKER, MICROPHONE, 5DB ANTENNA AND A 40 WATT UHF DESK TOP MOUNT CONTROL STATION WITH A LOCAL ANTENNA AND TRANSMISSION LINE PER THE ATTACHED SPECIFICATIONS.						
EXHIBIT 3						
LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON UPON AWARD 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.						
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.						
RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Krista Ky</i>	TELEPHONE 304-253-0086	DATE 8-8-06
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TITLE <i>MCEI Distribution Center</i>	ADDRESS CHANGES TO BE NOTED ABOVE
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WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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2

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<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>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</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Kristie Kuj</i>	TELEPHONE 304-253-0086	DATE 8-8-06
FILE <i>AMC Distribution</i>	FEIN 36-1115800	ADDRESS CHANGES TO BE NOTED ABOVE

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

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3

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CHARLESTON, WV  
25305-0432 304-558-0428

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
07/26/2006				

BID OPENING DATE: 08/10/2006 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
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.						
REV. 04/11/2001						
THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATIONS IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS.						
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).						
A. APPLICATION IS MADE FOR 2.5% 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 CORPORA-						

REVIEWED BY  
AW

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE Krista Kij	TELEPHONE 304-253-0086	DATE 8-8-06
TITLE McGraw Distribution Controller	FEIN 36-1115800	ADDRESS CHANGES TO BE NOTED ABOVE

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PAGE

4

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TION RESIDENT VENDOR AND HAS MAINTAINED ITS HEAD- QUARTERS 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 VENDO 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 CORPORATION 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.  B. APPLICATION IS MADE FOR 2.5% 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 ( ) 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						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Krista Ferrell</i>	TELEPHONE 304-253-0086	DATE 8-8-06
TITLE Procurement Specialist	FEIN 36-111 5800	ADDRESS CHANGES TO BE NOTED ABOVE

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

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State of West Virginia  
Department of Administration  
Purchasing Division  
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# Request for Quotation

RFO NUMBER

PTR07003

PAGE

6

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DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
07/26/2006				

BID OPENING DATE: 08/10/2006

BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
DATE: 8/8/06						
SIGNED: Kristie King						
TITLE: MCEI Distribution Controller						
** CHECK ANY COMBINATION OF PREFERENCE CONSIDERATION(S) IN EITHER "A" OR "B", OR BOTH "A" AND "B" WHICH YOU ARE ENTITLED TO RECEIVE. YOU MAY REQUEST UP TO THE MAXIMUM 5% PREFERENCE FOR BOTH "A" AND "B". (REV. 12/00)						
NOTICE						
A SIGNED BID MUST BE SUBMITTED TO:						
DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130						
THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:						
SEALED BID						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE Kristie King	TELEPHONE 304-253-0086	DATE 8-8-06
TITLE MCEI Distribution Controller		ADDRESS CHANGES TO BE NOTED ABOVE

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RFQ NUMBER
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PAGE
7

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VENDOR  
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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
BUYER: 21						
RFQ. NO.: PTR07003						
BID OPENING DATE: 08/10/2006						
BID OPENING TIME: 1:30 PM						
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:						
Rich Culicerto - 304-252-0427						
CONTACT PERSON (PLEASE PRINT CLEARLY):						
Rich Culicerto						
***** THIS IS THE END OF RFQ PTR07003 ***** TOTAL:						

REVIEWED BY  
KMD

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE Kristie King	TELEPHONE 304-253-0086	DATE 8-8-06
TITLE MCEI Distribution Control	FEIN 36-1115800	ADDRESS CHANGES TO BE NOTED ABOVE

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

Technical Specifications  
For The Procurement Of  
110 watt UHF Mobile Radios and Base Station

**SCOPE:**

The technical specifications establish requirements for 110 watt UHF trunk mount mobile radios, speakers, microphones, 5db antennas and a 40 watt UHF desk top mount control station with a local antenna and transmission line.

The vendor shall comply with all applicable federal and state regulations in the manufacturing of the mobile radio units and the attached federal terms and conditions.

All units or parts not specified shall be manufacturer's best quality and shall conform in material, design or workmanship to the best practice known. All parts shall be new. No parts will be accepted if used, reconditioned or obsolete.

The price for each mobile radio and control station shall be submitted in whole dollars only including the shipping and handling and installation cost at the transit system's location.

One copy of the bid shall be sent to the West Virginia Division of Purchasing prior to the deadline of the bid opening.

**GENERAL SPECIFICATIONS:**

Motorola XTL2500 110 watt Mobile Radio and 40 watt desk top mount control station or approved equal to be bid. **The bidder is requested to submit description, warranty information and complete literature information of the product with bid.**

**MODEL FEATURES: Minimum Features**

Frequency Band:	380-470MHz	Power Level:	25-110 Watt
Channels (Standard):	512	Modulation:	C4FM

Dual mode operation  
9600 and 3600 Baud capable  
Project 25 capability on Conventional and Trunking systems  
Type II Trunking Only  
Project 25 compliance interoperable voice signaling features  
Integrated voice and data capable  
Bandwidth Receiver  
12.5/25 kHz (analog) – 380-470 MHz  
12.5 kHz bandwidth receiver (digital)  
5 Programmable buttons x4 deep in menu functions  
14 digit character display  
Tri-color backlit LCD display  
Emergency button  
Multi level DIM button  
Remote mount

Meets Military Specs 810 (C,D, E and F)  
Utilizes Windows-based customer programming  
Built in FLASHport support  
Optional Keypad microphone  
External Speaker  
USB/RS232 connectivity  
Optional Siren PA  
Optional DEK  
Upgradeable  
Encryption Capable:  
- Algorithms supported  
- Advanced Digital Privacy (ADP)  
Reuse of most ASTRO/MCS accessories

**GENERAL PERFORMANCE SPECIFICATIONS:**

Frequency range  
-380-470MHz  
Protocol  
-Project 25-CAI 4.4 kbps IMBE, 2.8 kbs Error Correction Coding, 2.4 kbps, Embedded Signaling  
Channel Bandwidth  
-Analog 12.5/25 kHz (380-470 MHz and 450-520 MHz)  
Digital 12.5 kHz

**VOICE CODER:**

Voice Coding Method IMBE (CAI): Improved Multi Band Excitation  
Voice Truncation: None  
Frame Re-sync Interval: 180 mSec (Clear Digital Mode)  
Forward Error Correction: Golay code  
Error Mitigation Project 25-CAI (IMBE)  
Dual Level Level 1: Extrapolates and replaces 20 mSec voice frames that exceed the error correction algorithm tolerance.  
Level 2: Progressive muting of 20 mSec voice frames that are too severely damaged for Level 1 replacement.  
Code Book Structure: APCO Project 25 (IMBE): No code book

**SIGNALLING:**

Signalling Rate: 9.6 kbps  
Digital ID Capacity: 10,000,000 Conventional / 48,000 Trunking  
Digital Network Access Codes: 4,096 network site addresses  
Digital User Group Addresses: 4,096 network site addresses  
Project 25 – CAI Digital User Group Addresses: 65,000 Conventional / 4,094 Trunking  
Error Correction Techniques: Golay, BCH, Reed-Solomon codes  
Data Access Control: Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions.

**SPEAKER:**

Dimensions: 5.5" x 5.5" x 2.5" (139.7 x 139.7 x 63.5 mm) (Excluding mounting bracket)  
Weight: 1.5 lbs (0.68 kg)

**MOBILE:**

Control Head: 2.35" x 7.1" x 2.5" (59.7 x 180.3 x 63.5 mm)  
High Power Transceiver: 2.765" x 8.08" x 12.31" (70.2 x 205.2 x 312.7 mm)  
Weight High Power Radio Transceiver with Handle: 8.8 lbs (3.99 kg) (136MHz and 380-470 MHz)

**TRANSMITTER:**

Frequency: 380-470 MHz  
RF Power: 25-110W  
Max Freq Separation: Ref Above Bandsplit  
Freq Stability Operating Freq Accuracy (-30C to +60C; +25C Ref) – 700/800 & UHF  
(+/- 2ppm (-30C to +60C) - VHF 2 ppm  
Modulation Limiting 25/20 kHz, 25 kHz, 25/30 kHz channel ±5 kHz  
12.5 kHz channel ±2.5 kHz  
Modulation Fidelity (C4FM) 12.5 kHz digital channel ±2.8 kHz  
Channel Spacing: Analog 12.5/25 kHz  
FM Hum and Noise 20/25 kHz, 25 kHz, 20/25 kHz 45 dB  
12.5 kHz 40 dB  
Emissions: Conducted Radiated –85 dBc –20 dBc  
Audio Response (6db/Octave Pre-emphasis from 300 to 3000 Hz) +1, –3 dB (EIA)  
Audio Distortion per EIA: 2%

**POWER AND BATTERY DRAIN:**

Model Type: 380-470MHz  
Minimum RF Power Output: 25-110 Watt (380-470 MHz)  
Operation: 12V DC Negative Ground  
Standby at 13.8V: 380-470 MHz 0.65A-0.85A  
Receive at Rate Audio at 13.8V: 380-470 MHz 1.5A-3.2A  
Transmit at Rated Power: 380-470 MHz 5.7A-13.7A

**FCC TYPE ACCEPTANCE ID:**

Transmitter Power: 380-470 MHz- 25-110 W - AZ492FT4870

**ENVIRONMENTAL SPECIFICATIONS:**

Operating Temperature: –30°C / +60°C  
Storage Temperature: –55°C / +85°C  
International Protection: IP54 certified

**RECEIVER:**

Frequency: UHF  
 Channel Spacing: 12.5/ 25 kHz  
 Maximum Frequency Separation: Full Bandsplit  
 Analog Sensitivity: 20 db Quieting 0.25  $\mu$ V 0.40  $\mu$ V  
 12 db SINAD per EIA: . 0.20  $\mu$ V 0.30  $\mu$ V  
 Digital Sensitivity: 1% BER (12.5 kHz channel) 0.25  $\mu$ V 0.40  $\mu$ V  
 5% BER (12.5 kHz channel) 0.20  $\mu$ V 0.30  $\mu$ V  
 Intermodulation: 80 dB 85  
 Spurious Response Rejection: 90 dB 90 dB  
 Audio Output Power at 3% distortion: 7.5 W (ext. speaker)  
 (External/ Internal Speaker) 3 W (int. speaker)  
 Adjacent Channel Rejection Selectivity: 75 dB 82 dB

**MILITARY STANDARDS 810 C, D, E, & F:**

	MIL-STD 810 Method Proc./Cat.	MIL-STD 810D Method Proc./Cat.	MIL-STD 810E Method Proc./Cat.	MIL-STD 810F Method Proc./Cat.
Low Pressure	500.1 I	500.2 II	500.3 II	500.4 II
High Temp. Storage	501.1 I	501.2 I/A1	501.3 I/A1	501.4 I/Hot
High Temp. Storage	501.1 II	501.2 II/A1	501.3 II/A1	501.4 I/Hot
Low Temp. Storage	502.1 I	502.2 I/C3	502.3 I/C3	502.4 I/C3
Low Temp. Operational	502.1 I	502.2 II/C1	502.3 II/C1	502.4 II/C1
Temperature Shock	503.1 -	503.2 I/A1-C3	503.3 I/A1-C3	503.4 I/Hot-C3
Solar Radiation	505.1 II	505.2 I	505.3 I	505.4 I
Rain Blowing	506.1 I	506.2 I	506.3 I	506.4 I
Rain Steady	506.1 II	506.2 II	506.3 II	506.4 III
Humidity	507.1 II	507.2 II	507.3 II	507.4 -
Salt Fog	509.1 -	509.2 -	509.3 -	509.4 -
Blowing Dust	510.1 I	510.2 I	510.3 I	510.4 I
Blowing Sand		510.2 II	510.3 II	510.4 II
Vibration Min. Integrity	514.2 VIII/FCurve-W	514.3 I/10	514.4 I/10	514.5 I/24
Vibration Loose Cargo		514.3 II/3	514.4 II/3	514.5 II/5
Shock Functional	516.2 I	516.3 I	516.4 I	516.5 I
Shock Crash Hazard	516.2 III	516.3 V	516.4 V	516.5 V
Shock Bench Handling	516.2 V	516.3 VI	516.4 VI	516.5 VI

**IDENTIFICATION NUMBER:**

Each mobile radio and control station shall have an I.D. Number securely attached in the manner that it can not be removed for the purpose of inventory and record keeping.

**WARRANTY:**

Each mobile radio and control station shall have a minimum of a written one-year warranty against all defects of the product. **The vendor is requested to supply the warranty information and local service centers with the bid.**

• **MANUALS:**

The vendor shall supply an operations and maintenance manual for each mobile radio and control station ordered. **The vendor is requested to supply a copy with bid.**

**TRAINING:**

The vendor shall have at its own expense one or more qualified instructor(s) who shall be available at the Recipient Agency(ies) property for a single day training session to conduct a complete training session on the usage of the complete system. The training shall be conducted within 3 days of complete installation of the equipment.

PRICE SHEET  
PTR07003

		Estimated Number of Units	Extended Price
1. 110 Watt Mobile Radio	\$ 2,349.00 each	50	\$ 117,450.00
2. 40 Watt Desk Top Console Station	\$ 2,130.00 each	50	\$ 106,500.00
TOTAL FOR BID EVALUATION:			\$ 223,950.00

Note: Unit pricing above must be firm and will be used for when awarding the contract for these items.  
These quantities are used for bid evaluation purposes only.  
Actual quantities may differ.  
Quantities will be given to the successful vendor upon the placement of each order. (opened)

Title and risk of loss to equipment or parts will pass to Customer upon shipment. Title to software will not pass to Customer at any time.

Pricing does not include installation cost. Delivery charges are: Prepay and allow.

**No Federal Government Obligations to Third Parties**

(1) The WV Division of Public Transit and Vendor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to the WV Division of Public Transit, Vendor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.

(2) The Vendor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the Federal Transit Administration. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

**Program Fraud and False or Fraudulent Statements or Related Acts**

(1) The Vendor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. §§3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Vendor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the Federal Transit Administration (FTA) assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Vendor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Vendor to the extent the Federal Government deems appropriate.

(2) The Vendor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Vendor, to the extent the Federal Government deems appropriate.

(3) The Vendor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

**Exclusionary or Discriminatory Specifications**

The Vendor agrees that it will comply with the requirements of 49 U.S.C. § 5323(h)(2) by refraining from using any Federal assistance awarded by the WV Division of Public Transit to support procurements using exclusionary or discriminatory specifications.

**Geographic Restrictions**

The Vendor agrees to refrain from using state or local geographic preferences, except those expressly mandated or encouraged by Federal statute, and as permitted by FTA.

**Audit and Inspection**

The Vendor agrees to permit the WV Division of Public Transit, the Secretary of the United States Department of Transportation and the Comptroller General of the United States, or their authorized representatives, to inspect all Contract work, materials, payrolls, and other data and records with regard to the Contract. The Vendor also agrees to permit an audit of the books, records, and accounts of the Vendor and its subcontractors.

**Disadvantaged Business Enterprise (DBE)**

The Vendor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The requirements of 49 C.F.R. Part 26 and the WV Department of Transportation's (WVDOT) U.S. Department of Transportation (USDOT) approved Disadvantaged Business Enterprise (DBE) Program are incorporated in the Contract by reference. The Vendor agrees to take all necessary and reasonable steps under the requirements of 49 C.F.R. Part 26 and the USDOT approved Disadvantaged Business Enterprise (DBE) Program (where required) to ensure that eligible DBEs have the maximum feasible opportunity to participate in USDOT approved Contracts. Failure by the Vendor to carry out these requirements is a material breach of the Contract, which may result in the termination of this Contract or such other remedy as the WV Division of Public Transit deems appropriate.

**Civil Rights**

The following requirements apply to the underlying contract:

(1) **Nondiscrimination.** In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, Section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, Section 202 of the Americans With Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Vendor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Vendor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(2) Equal Employment Opportunity. The following equal employment opportunity requirements apply to the underlying contract;

(a) Race, Color, Creed, National Origin, Sex. In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Vendor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Vendor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Vendor agrees to comply with any implementing requirements FTA may issue.

(b) Age. In accordance with the Age Discrimination Act of 1975, as amended, 29 U.S.C. §§ 6101 et seq. and implementing regulations, the Vendor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Vendor agrees to comply with any implementing requirements FTA may issue.

(c) Disabilities. In accordance with Section 102 of the Americans With Disabilities Act, as amended, 42 U.S.C. § 12112, the Vendor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans With Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Vendor agrees to comply with any implementing requirements FTA may issue.

(3) The Vendor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

#### Energy Conservation

The Vendor agrees to comply with, and obtain the compliance of its subcontractors, with mandatory standards and policies relating to energy efficiency contained in applicable state energy conservation plans issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. §§ 6321 et seq.

#### Clean Air & Clean Water Requirements

(1) The Vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7414 and other applicable provisions of the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. § 1318, and other provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 et seq. The Vendor agrees to report each violation to the WV Division of Public Transit and understands and agrees that the WV Division of Public Transit will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Vendor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided from FTA.

#### Application of Federal, State and Local Laws and Regulations

To achieve compliance with changing federal, state and local requirements, the Vendor shall note that federal, state and local requirements may change and the changed requirements will apply to this Contract as required.

#### Labor Provisions

The Vendor shall comply with Section 102 of the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 3701 et seq., esp. § 3702 & 3704) as supplemented by Department of Labor Regulations (29 CFR, § 5 & 29 CFR § 1926) as they involve the employment of mechanics and laborers.

Overtime Requirements. No Vendor or subcontractor for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

Violation; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the clause set forth in paragraph (2) of this section, the Vendor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Vendor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (2) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (2) of this section.

Withholding for Unpaid Wages and Liquidated Damages. The WV Division of Public Transit shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Vendor or subcontractor under any such contract or any other Federal contract with the same prime Vendor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act,

which is held by the same prime Vendor, such sums as may be determined to be necessary to satisfy any liabilities of such Vendor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (3) of this section.

Subcontracts. The Vendor or subcontractor shall insert in any subcontracts the clauses set forth in this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Vendor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in this section.

Payrolls and Basic Records. Payrolls and basic records relating thereto shall be maintained by the Vendor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR .5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Vendor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

Vendors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

#### Termination

##### (a) Termination for Convenience

The WV Division of Public Transit may terminate this contract, in whole or in part, at any time by written notice to the Vendor when it is in the Government's best interest. The Vendor shall be paid its costs, including contract close-out costs, and profit on work performed up to the time of termination. The Vendor shall promptly submit its termination claim to the WV Division of Public Transit to be paid to the Vendor. If the Vendor has any property in its possession belonging to the WV Division of Public Transit, the Vendor will account for the same, and dispose of it in the manner the WV Division of Public Transit directs.

##### (b) Termination for Default (Breach or Cause)

If the Vendor does not deliver supplies in accordance with the contract delivery schedule, or, if the contract is for services, the Vendor fails to perform in the manner called for in the contract, or if the Vendor fails to comply with any other provisions of the contract, the WV Division of Public Transit may terminate this contract for default. Termination shall be effected by serving a notice of termination on the contractor setting forth the manner in which the Vendor is in default. The Vendor will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract.

If it is later determined by the WV Division of Public Transit that the Vendor had an excusable reason for not performing, such as a strike, fire, or flood, events which are not the fault of or are beyond the control of the Vendor, the WV Division of Public Transit, after setting up a new delivery of performance schedule, may allow the Vendor to continue work, or treat the termination as a termination for convenience.

##### (c) Opportunity to Cure

The WV Division of Public Transit in its sole discretion may, in the case of a termination for breach or default, allow the Vendor an appropriately short period of time in which to cure the defect. In such case, the notice of termination will state the time period in which cure is permitted and other appropriate conditions.

If Vendor fails to remedy to the WV Division of Public Transit's satisfaction the breach or default or any of the terms, covenants, or conditions of this Contract within ten (10) days after receipt by Vendor or written notice from the WV Division of Public Transit setting forth the nature of said breach or default, the WV Division of Public Transit shall have the right to terminate the Contract without any further obligation to Vendor. Any such termination for default shall not in any way operate to preclude the WV Division of Public Transit from also pursuing all available remedies against Vendor and its sureties for said breach or default.

##### (d) Waiver of Remedies for Any Breach

In the event that the WV Division of Public Transit elects to waive its remedies for any breach by Vendor of any covenant, term or condition of this Contract, such waiver by the WV Division of Public Transit shall not limit the WV Division of Public Transit's remedies for any succeeding breach of that or of any other term, covenant, or condition of this Contract.

#### Bankruptcy

Upon entering of a judgment of bankruptcy or insolvency by or against a Vendor, the WV Division of Public Transit may terminate this Contract for cause.

**FTA Role in Bid Protests**

Under the Federal Transit Administration's Circular 4220.1E, the Federal Transit Administration's (FTA's) review of any protest will be limited to:

- (a) Failure of the WV Division of Public Transit to have or adhere to its written bid protest procedures, or failure of the WV Division of Public Transit to review a complaint or protest.
- (b) Alleged violations on other grounds are under the jurisdiction of the appropriate State or local administrative authorities.
- (c) Alleged violations of a specific Federal Law or regulation that provides an applicable complaint procedure shall be submitted and processed in accordance with that Federal Law or regulation. See, e.g., Buy America Requirements, 49 C.F.R. Part 661 (Section 661.15); Participation by Minority Business Enterprise in Department of Transportation Programs, 49 C.F.R. Section 26.89.
- (d) The Federal Transit Administration will only review protests submitted by an actual or prospective bidder whose direct economic interest would be affected by the award of the Contract or by failure to award the Contract. The Federal Transit Administration reserves the right not to participate in the funding of any Contract awarded pending resolution of a protest to them.
- (e) An appeal to the Federal Transit Administration must be received by the cognizant FTA regional or Headquarters Office within five (5) working days of the date the protester learned or should have learned of an adverse decision by the WV Division of Public Transit or other basis of appeal to FTA.

**Prohibited Interest**

No employee, officer, board member, agent or their family members of the WV Division of Public Transit may participate in the selection, award, or administration of a Contract supported by Federal funds if a real or apparent conflict of interest is involved. Such a conflict could arise when any of the parties mentioned above have a financial or other interest in the Vendor selected for the Contract.

**Preference for Recycled Products**

The Vendor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act, as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

**Metric System**

As required by U.S. DOT or FTA, the Vendor agrees to use the metric system of measurement in its Project activities, as may be required by Metric Conversion Act, as amended by the Omnibus Trade and Competitiveness Act, 15 U.S.C. §§ 205a et. seq.; Executive Order No. 12770, "Metric Usage in Federal Government Programs," 15 U.S.C. § 205a note; and other regulations, guidelines, and policies issued by U.S. DOT or FTA.

**Hold Harmless**

The Vendor agrees to protect, defend, indemnify and hold the WV Division of Public Transit, its officers, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expenses or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character in connection with or arising directly or indirectly out of this Contract and/or the performance hereof. Without limiting the generality of the foregoing, any and all such claims, etc. relating to personal injury, infringement of any patent, trademark, copyright (or application for any thereof) or of any other tangible or intangible personal or property right, or actual or alleged violation of any other tangible or intangible personal or property rights, or actual or alleged violation of any applicable statute, ordinance, administrative order, rule or regulation, or decrees of any court, shall be included in the indemnity hereunder. The Vendor further agrees to investigate, handle, respond to, provide defense for and defend any such claims, etc., at his/her sole expense and agrees to bear all other costs and expenses related thereto, even if such claim is groundless, false or fraudulent.

**Licensing and Permits**

The Vendor shall be appropriately licensed for the work required as a result of the Contract. The cost for any required licenses or permits shall be the responsibility of the Vendor. The Vendor is liable for any and all taxes due as a result of the Contract.

**Compliance with Laws and Permits**

The Vendor shall give all notices and comply with all existing and future federal, state and municipal laws, ordinances, rules, Regulations, and orders of any public authority bearing on the performance of the Contract, including, but not limited to, the laws referred to in these provisions of the Contract and the other Contract documents. If the Contract documents are at variance therewith in any respect, any necessary changes shall be incorporated by appropriate modification. Upon request, the Vendor shall furnish to the WV Division of Public Transit certificates of compliance with all such laws, orders, and regulations.

**Cargo Preference**

The Vendor agrees:

To utilize privately owned United States--Flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States--Flag commercial vessels;

To furnish within twenty (20) working days following the date of loading for shipments originating within the United States or within 30 working days following the date of leading for shipments originating outside the United States, a legible copy of a rated, "on board" commercial ocean bill of lading in English for each shipment of cargo described in the paragraph above to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to the Division of Public Transit (through the Vendor in the case of a subcontractor's bill of lading.)

To include these requirements in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

**Federal Regulation Changes**

Vendor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement (Form FTA MA(12) dated October 1, 2005) between the WV Department of Transportation, Division of Public Transit and FTA, as they may be amended or promulgated from time to time during the term of this Contract. Vendor's failure to so comply shall constitute a material breach of this contract.

**Severability**

In the event any provision of the Contract is declared or determined to be unlawful, invalid or unconstitutional, such declaration shall not affect, in any manner, the legality of the remaining provisions of the Contract and each provision of the Contract will be and is deemed to be separate and severable from each other provision.

**Debarment and Suspension**

This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945.

The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. By signing and submitting its bid or proposal, the bidder certifies as follows:

The certification in this clause is a material representation of fact relied upon by the WV Division of Public Transit. If it is later determined that the bidder knowingly rendered an erroneous certification, in addition to remedies available to the WV Division of Public Transit, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder further agrees to include a provision requiring such compliance in its lower tier covered transactions.

**FTA Terms**

The preceding provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provision. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1E, dated June 19, 2003, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Contract. The Vendor shall not perform any act, fail to perform any act, or refuse to comply with any WV Division of Public Transit requests that would cause the WV Division of Public Transit to be in violation of the FTA terms and conditions.

12/15/05

# AFFIDAVIT

**West Virginia Code §5A-3-10a states:**

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 owned is an amount greater than one thousand dollars in the aggregate.

**DEFINITIONS:**

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions.

"Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**EXCEPTION:**

The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**LICENSING:**

The vendor must be licensed in accordance with any and all state requirements to do business with the state of West Virginia.

**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. Vendors should visit [www.state.wv.us/admin/purchase/privacy](http://www.state.wv.us/admin/purchase/privacy) for the Notice of Agency Confidentiality Policies.

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

Vendor's Name: Motorola, Inc.

Authorized Signature: Kristie King MCEI Distribution Control Date: 8-8-06

## AGREEMENT ADDENDUM

In the event of conflict between this addendum and the agreement, this addendum shall control:

1. **ARBITRATION** - Any references to arbitration contained in the agreement are hereby deleted. Disputes arising out of the agreement shall be presented to the West Virginia Court of Claims.
2. **HOLD HARMLESS** - Any clause requiring the Agency to indemnify or hold harmless any party is hereby deleted in its entirety.
3. **GOVERNING LAW** - The agreement shall be governed by the laws of the State of West Virginia. This provision replaces any references to any other State's governing law.
4. **TAXES** - Provisions in the agreement requiring the Agency to pay taxes are deleted. As a State entity, the Agency is exempt from Federal, State, and local taxes and will not pay taxes for any Vendor including individuals, nor will the Agency file any tax returns or reports on behalf of Vendor or any other party.
5. **PAYMENT** - Any references to prepayment are deleted. Payment will be in arrears.
6. **INTEREST** - Should the agreement include a provision for interest on late payments, the Agency agrees to pay the maximum legal rate under West Virginia law. All other references to interest or late charges are deleted.
7. **RECOUPMENT** - Any language in the agreement waiving the Agency's right to set-off, counterclaim, recoupment, or other defense is hereby deleted.
8. **FISCAL YEAR FUNDING** - Service performed under the agreement may be continued in succeeding fiscal years for the term of the agreement, contingent upon funds being appropriated by the Legislature or otherwise being available for this service. In the event funds are not appropriated or otherwise available for this service, the agreement shall terminate without penalty on June 30. After that date, the agreement becomes of no effect and is null and void. However, the Agency agrees to use its best efforts to have the amounts contemplated under the agreement included in its budget. Non-appropriation or non-funding shall not be considered an event of default.
9. **STATUTE OF LIMITATION** - Any clauses limiting the time in which the Agency may bring suit against the Vendor, lessor, individual, or any other party are deleted.
10. **SIMILAR SERVICES** - Any provisions limiting the Agency's right to obtain similar services or equipment in the event of default or non-funding during the term of the agreement are hereby deleted.
11. **ATTORNEY FEES** - The Agency recognizes an obligation to pay attorney's fees or costs only when assessed by a court of competent jurisdiction. Any other provision is invalid and considered null and void.
12. **ASSIGNMENT** - Notwithstanding any clause to the contrary, the Agency reserves the right to assign the agreement to another State of West Virginia agency, board or commission upon thirty (30) days written notice to the Vendor and Vendor shall obtain the written consent of Agency prior to assigning the agreement.
13. **LIMITATION OF LIABILITY** - The Agency, as a State entity, cannot agree to assume the potential liability of a Vendor. Accordingly, any provision limiting the Vendor's liability for direct damages or limiting the Vendor's liability under a warranty to a certain dollar amount or to the amount of the agreement is hereby deleted. In addition, any limitation is null and void to the extent that it precludes any action for injury to persons or for damages to personal property.
14. **RIGHT TO TERMINATE** - Agency shall have the right to terminate the agreement upon thirty (30) days written notice to Vendor.
15. **TERMINATION CHARGES** - Any provision requiring the Agency to pay a fixed amount or liquidated damages upon termination of the agreement is hereby deleted. The Agency may only agree to reimburse a Vendor for actual costs incurred or losses sustained during the current fiscal year due to wrongful termination by the Agency prior to the end of any current agreement term.
16. **RENEWAL** - Any reference to automatic renewal is hereby deleted. The agreement may be renewed only upon mutual written agreement of the parties.
17. **INSURANCE** - Any provision requiring the Agency to insure equipment or property of any kind and name the Vendor as beneficiary or as an additional insured is hereby deleted.
18. **RIGHT TO NOTICE** - Any provision for repossession of equipment without notice is hereby deleted. However, the Agency does recognize a right of repossession with notice.
19. **ACCELERATION** - Any reference to acceleration of payments in the event of default or non-funding is hereby deleted.
20. **AMENDMENTS** - All amendments, modifications, alterations or changes to the agreement shall be in writing and signed by both parties. No amendment, modification, alteration or change may be made to this addendum without the express written approval of the Purchasing Division and the Attorney General.

ACCEPTED BY:  
STATE OF WEST VIRGINIA

Spending Unit: \_\_\_\_\_

Signed: \_\_\_\_\_

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

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

VENDOR

Company Name: Motorola

Signed: Kristie King

Title: MCEI Distribution Controller

Date: 8/8/06

LEGAL REVIEWED  
BY: ONE

## Agreement Addendum to WV-96

The vendor and the agency agree to delete Paragraph 13 of the WV-96 Agreement Addendum and insert in lieu thereof the following:

"Vendor agrees to indemnify Agency for the negligent acts of its officers, employees, servants and agent in connection with the performance of this Agreement. Except for personal injury, death, third party claims, damages to personal property, and claims for patent, trademark or copyright infringement, Vendor's total liability shall be limited to its warranty and the contract value. In no event shall Vendor be liable for special consequential or incidental damages.

ACCEPTED BY:

STATE OF WEST VIRGINIA

MOTOROLA

Spending Unit: Division of Public Transit

Signed: \_\_\_\_\_

Signed: Quotie King

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

Title: MCEI Distribution Controller

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

Date: 8/8/06



**RADIO OPTIONS (5 pages included)**  
**ASTRO® Digital XTL 2500 Mobile**  
**UHF 380-470 MHz Band**

**1: Main Model (Must Select)**

<u>Nomenclature</u>	<u>Description</u>	<u>Price</u>
M21QTM9PW1 N	XTL 2500 UHF R1 380-470 MHZ 100 WATT	\$1,538.00
M21QSM9PW1 N	XTL 2500 UHF R1 380-470MHZ, 10-40 W	\$1,152.00

**2: Operation Mode (Must Select One)**

G241	ENH: SOFTWARE ASTRO READY ANALOG OPERATION	\$0.00
	NOT COMPATIBLE with Encryption Algorithm W969, W793, W797, G625, G298, G851, or G843 when combined with a Trunking Software Option.	
G806	ENH: SOFTWARE ASTRO DIGITAL CAI OPERATION	\$396.00

**3: System Enhancement Software (Must Select One)**

G48	ENH: CONVENTIONAL OPERATION	\$211.00
G51	ENH: SOFTWARE SMARTZONE/SINGLE TONE	\$750.00

**4: Control Head Hardware (Must Select One)**

G442	ADD: XTL2500 CONTROL HEAD	\$224.00
G88	ADD: NO CONTROL HEAD NEEDED	\$0.00

**5: Control Head Software (Must Always Select G444)**

G444	ADD: ADD: CONTROL HEAD SOFTWARE	\$0.00
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**6: Mounting (Must Select One)**

\*\*\*If a remote mount cable other than 5 meters (17ft) is desired for the G67, please reference the "Remote Mount Cables" section below in Section C: Optional Features\*\*\*

G66	ADD: DASH MOUNT	\$96.00
G67	ADD: THUMB SCREW REMOTE MOUNT W/KEYLOCK	\$228.00

**7: Antenna (Must Select One)**

G425	ADD: ANTENNA 1/4 WAVE WHIP 380-433 MHZ	\$20.00
	Not Compatible with Motorcycle	
	Corresponding kit: HAE6012.	
G426	ADD: ANTENNA 1/4 WAVE WHIP 450-470 MHZ	\$20.00
	Not Compatible with Motorcycle	
	Corresponding kit: HAE4003.	
G427	ADD: ANTENNA 3.5DB 380-433 MHZ	\$43.00
	Not Compatible with Motorcycle	
	Corresponding kit: HAE6010.	
G428	ADD: ANTENNA 3.5DB 450-470MHZ	\$39.00
	Not Compatible with Motorcycle	
	Corresponding kit: HAE4011.	
G429	ADD: ANTENNA 5.0 DB 380-433 MHZ	\$48.00
	Not Compatible with Motorcycle	
	Corresponding kit: HAE6011.	
G430	ADD: ANTENNA 5.0 DB 450-470 MHZ	\$45.00
	Not Compatible with Motorcycle	
	Corresponding kit: RAE4014ARB.	
G431	ADD: ANTENNA WIDEBAND 380-470 MHZ	\$45.00
	Not Compatible with Motorcycle	
	Corresponding kit: HAE6013.	
G89	ADD: NO ANTENNA NEEDED	\$0.00

**8: Microphones (Must Select One)**

G90	ADD: NO MICROPHONE NEEDED	\$0.00
	Select this option when ordering W3 Handheld Control Head (G92/G72)	
W22	ADD: PALM MICROPHONE	\$56.00
	Corresponding kit for W4, W5, W7: HMN1080	
	Corresponding kit for W9: HMN1081	
	Corresponding kit for O5 and XTL2500: HMN1090	

<u>Nomenclature</u>	<u>Description</u>	<u>Price</u>
W20	ADD: KEYPAD MIC (GCAI) Corresponding kit: HMN4079	\$139.00
G874	ADD: HANDSET/HANGUP GCAI	\$219.00
W382	ALT: CONTROL STATION PALM MICRO Dash Mount Required Corresponding Kit: HMN1088	\$130.00
<b>9: Speakers (Must Select One)</b> <b>***G142 NO SPEAKER Required for Control Station***</b>		
G142	DEL: OMIT SPEAKER	\$0.00
B18	ADD: AUXILARY SPEAKER 5 WATT Corresponding kit: HSN4031.	\$47.00
W432	ENH: INCREASED AUDIO POWER 10W Corresponding kit: HSN4032. NOT COMPATIBLE with W665 Control Station and Motorcycle Configuration.	\$82.00

## Section B: Control Station

### CONTROL STATION OPERATION

1. First, you must review your selection of the following options from "Section 1: Required Options".
  - Step 1 (Note: Main Model)
  - Step 2 (Note: All listed options are compliant)
  - Step 3 (Note: All listed options are compliant)
  - Step 4 (Note: XTL 2500 Control Head **OR** "No Control Head Needed" are compatible with Control Station Apl.- Must only select one).
  - Step 5 (Note: Must Select G444. The XTL 2500 Control Head Software is compatible with Control Station Application ).
  - Step 6 (Note: Must Select G66. Control Station operation is only offered in Dash mount configuration)
  - Step 7 (Note: All listed options are compliant)
  - Step 8 (Note: Select desired microphone option and if no microphone is needed, G90 must be selected).
  - Step 9 (Note: Must Select G142 - No Speaker Needed)

I. You Must Select ONE of the Following "Specific Control Station Options":

#### SPECIFIC CONTROL STATION OPTIONS

<b>Control Station Operation and Power Supply (Must Select BOTH)</b>		
G91	ADD: CONTROL STATION POWER SUPPLY Corresponding kit: HPN4007	\$207.00
W665	ADD: CONTROL STATION OPERATION For DASH MOUNT radios ONLY (G66)!!  Not compatible with W3, or W9 control head options. G665 includes a base tray and a speaker; therefore G142 has to be ordered to eliminate extra Speaker. Requires a Power Supply (G91 can be ordered as a Power Supply). Requires one of the Microphone Options: G90, W22 or W382. Corresponding kit: HLN6042	\$54.00

1. Features listed in "Section C: Optional Features" are optional, if applicable. Please read the option's description to determine con

## Section C: Optional Features

The following features are optional and will provide additional capabilities, if required.

### System Enhancement Options

G114	ENH: ENHANCED DIGITAL ID DISPLAY 8 numeric character unit to unit display. NOTE: ID display uses ASTRO signaling in digital model. Not available in Trunked analog modes.	\$58.00
G170	ENH: RADIO TRACE Note: G170 option for Radio Trace/Remote Monitor is not compatible with W3 Control Head and G474 (Multi-Radio). G787 is required for Remote Monitor Functionality.	\$58.00
G173	ENH: SMARTZONE OMNILINK Automatic Zoning Across Zones, Zone Registration, Trespass Protection, Over the Air Site Alias, 32 Preferred Sites, FastStart and AllStart Call Setup.	\$154.00
G361	ENH: ASTRO PROJECT 25 TRUNKING SOFTWARE When ordering this option G51 & G806 MUST be ordered. G173 is included at "NO CHARGE".	\$231.00
G387	ADD: CONVENTIONAL VOTING SCAN ASTRO This feature allows for voting of the Conventional Channels ONLY.	\$154.00
G683	ADD: TRUNKED ONE TOUCH BUTTON	\$116.00

<u>Nomenclature</u>	<u>Description</u>	<u>Price</u>
<b>Algorithm Options</b>		
G113	ADD: ADP ENCRYPTION REQUIRES G159. COMPATIBLE with: G361 P25 software package; and G48, G50, and G51 software packages when used with the G806 in the Digital Conventional mode ONLY. Includes 4 non-indexing encryption keys.	\$269.00
G159	ADD: ENCRYPTION UCM HW Not Compatible with G193	\$116.00
<b>Nomenclature Description Price</b>		
G194	ADD: ADP WITH DES/DES-XL/DES-OFB REQUIRES G159. INCLUDES G969 Multi-key. COMPATIBLE with: G361 P25 software package; and G48, G50, and G51 software packages when used with the G806 in the Digital Conventional mode ONLY.	\$615.00
G336	ADD: KEY RETENTION 30 SECONDS G159 REQUIRED	\$38.00
G625	ADD: DES/DES-XL/DES-OFB ENCRYPTION G159 is REQUIRED when ORDERING	\$461.00
G843	ADD: AES ENCRYPTION G159 REQUIRED G843 is NOT compatible with G851. IMPORTANT UPDATE AES OTAR FIPS APPROVED: On December 16, 2003 NIST and CSE issued a joint statement accepting AES OTAR as a FIPS approved mode of operation. The AES OTAR option (G851 with G298 or G843 with G298) is now validated to FIPS 140-2 given that the current P25 AES OTAR standard has now been approved by NIST. Any order to Motorola for this option no longer needs a prior determination by the Government that the requirements of FIPS 140-2 are either not applicable or have been properly waived.	\$366.00
G193	ADD: ADP SOFTWARE DSP BASED CRYPTO REQUIRES: G806 Digital Operation DOES NOT REQUIRE: G159 MULTIKEY or G77/G78 Encryption Warranty. Use standard warranty options if needed. COMPATIBLE with: G361 P25 software package; and G48, G50, and G51 software packages when used with the G806 in the Digital Conventional mode ONLY. Includes 4 non-indexing encryption keys..	\$8.00
W969	ADD: MULTIPLE KEY ENCRYPTION OPERATION REQUIRED when using more than one encryption algorithm or encryption key.	\$248.00
W793	ADD: DVI-XL ENCRYPTION G159 is REQUIRED when ORDERING	\$400.00
W797	ADD: DVP-XL ENCRYPTION G159 is REQUIRED when ORDERING	\$375.00
<b>Software Encryption</b>		
G193	ADD: ADP SOFTWARE DSP BASED CRYPTO REQUIRES: G806 Digital Operation DOES NOT REQUIRE: G159 MULTIKEY or G77/G78 Encryption Warranty. Use standard warranty options if needed. COMPATIBLE with: G361 P25 software package; and G48, G50, and G51 software packages when used with the G806 in the Digital Conventional mode ONLY. Includes 4 non-indexing encryption keys..	\$8.00
<b>Remote Mount Cables</b>		
***The 5 meter (17 FT) Cable Ships Standard***		
G582	ADD: REMOTE MOUNT CABLE 40 METERS (131 FT)	\$50.00
G607	ADD: REMOTE MOUNT CABLE ? 23 METERS (75 FT)	\$35.00
G609	ADD: REMOTE MOUNT CABLE ? 15 METERS (50 FT)	\$27.00
G610	ADD: REMOTE MOUNT CABLE ? 10 METERS (30 FT)	\$19.00
G879	ADD: REMOTE MOUNT CABLE ? 35 METERS (115 FT)	\$43.00
G618	ADD: REMOTE MOUNT CABLE ? 3 METERS (10 FT)	\$8.00
<b>DEK</b>		
W355	ADD: STATUS MESSAGE 8 MESSAGES Messaging functionality is NOT supported on 9600cc Systems. NOT compatible with W3 or Motorcycle Control Heads.	\$366.00
W374	ADD: DDE STATUS MESSAGES 16 Messaging functionality is NOT supported on 9600cc Systems. NOT compatible with W3 or Motorcycle Control Heads.	\$500.00

<u>Nomenclature</u>	<u>Description</u>	<u>Price</u>
<b>Direct Mode Entry</b>		
W599	ADD: 8 MODE DIRECT ENTRY ONLY compatible with Remote Mount configuration.	\$139.00
<b>Siren</b>		
W614	ADD: 16 MODE DIRECT ENTRY	\$277.00
W615	ADD: 24 MODE DIRECT ENTRY NOT COMPATIBLE with W269 Siren/PA. 9600 Systems offer ONLY "Status" and not "Message".	\$416.00
W269	ADD: ELECTRONIC SIREN/PUBLIC ADDRESS  Not compatible with W589. Include dedicated buttons to provide the necessary functions. Button is positioned in a supplemental housing that mounts directly above the control head and uses the same mounting bracket. REQUIRES REMOTE MOUNT OPTION G67 or G655. The 100 watt siren options provide Hi-Lo, Wail, Yelp and Airhorn tones plus manually controlled tone. Includes external radio (ExRd) and 50 watt PA. One supplemental housing. Not compatible with MOTORCYCLE RADIOS	\$490.00
W589	ADD: PUBLIC ADDRESS  G67 REQUIRED Provides external radio (ExRd) and PA functions with a 50 watt amplifier. One supplemental housing. NOT compatible with W3 models and W269.	\$408.00
<b>Auxiliary Switches</b>		
W591	ADD: AUXILIARY SWITCH PANEL Corresponding kit: HLN1196. G67 REQUIRED. NOT compatible with W3 control head or motorcycle.	\$127.00
<b>Alarm</b>		
W116	ADD: EXTERNAL ALARM RELAYS AND CABLE For either HORN or LIGHTS. NOT both	\$58.00
<b>Emergency</b>		
G235	ADD: EXTERNAL EMERGENCY FOOTSWITCH	\$0.00
W688	ADD: EXTERNAL EMERGENCY PUSHBUTTON Corresponding kit: HLN5131	\$43.00
<b>Frequency and Squelch Codes</b>		
W844	ENH: FACTORY PROGRAMMING	\$0.00
<b>Packet Data Interface / Data Cables</b>		
G303	ADD: RS232 DATA INTFC CABLE-DASH Corresponding kit: HKN6160.	\$39.00
G304	ADD: RS232 DATA INTERFACE CABLE-TRUNK Corresponding kit: HKN6161.	\$39.00
W947	ADD: RS232 PACKET DATA INTERFACE  This option is ONLY Operational on Digital Trunking and Digital Conventional systems!! INCLUDES the DLM Application. This option does not include Cables. G303 or G304 should be ordered separately.	\$154.00
G308	USB DATA INTFC CABLE-DASH	\$39.00
<b>RF Modem</b>		
***Supported for 9600 Trunking only***		
G319	ENH: ENABLE RF MODEM The XTL mobiles do not support Site Lens or System Watch. Therefore, the XTL RF Modem function does not support the legacy System Watch or Site Lens applications. The XTL RF Modem supports Conventional or 9600 Trunking only. ***The XTL5000 RF Modem is the only XTL mobile that supports Fireground.***	\$0.00
<b>Service Options</b>		
G24	ENH: TWO (2) YEAR EXPRESS SERVICE PLUS  Provides for 2 years of extended hardware repair coverage beginning after the standard warranty period. Repairs will be made only at the designated Motorola repair depot. Local services are not included. Motorola will pay the inbound shipping charges only with use of the Motorola designated delivery service. Motorola will pay for outbound shipping via Motorola's normal shipping methods. No discounts are allowed on this option.	\$102.00
G400	ENH: ONE (1) YEAR EXPRESS SERVICE PLUS  Provides for 1 years of extended hardware repair coverage beginning after the standard warranty period. Repairs will be made only at the designated Motorola repair depot. Local services are not included. Motorola will pay the inbound shipping charges only with use of the Motorola designated delivery service. Motorola will pay for outbound shipping via Motorola's normal shipping methods. No discounts are allowed on this option.	\$53.00

<u>Nomenclature</u>	<u>Description</u>	<u>Price</u>
G77	ENH: ONE (1) YEAR ENCRYPTED EXPRESS SERVICE PLUS  Provides for 1 year of extended hardware repair coverage, including encryption, beginning after the standard warranty period. Repairs will be made only at the designated Motorola repair depot. Local services are not included. Motorola will pay the inbound shipping charges only with use of the Motorola designated delivery service. Motorola will pay for outbound shipping via Motorola's normal shipping methods. No discounts are allowed on this option.	\$65.00
G78	ENH: TWO (2) YEAR ENCRYPTED EXPRESS SERVICE PLUS  Provides for 2 years of extended hardware repair coverage, including encryption, beginning after the standard warranty period. Repairs will be made only at the designated Motorola repair depot. Local services are not included. Motorola will pay the inbound shipping charges only with use of the Motorola designated delivery service. Motorola will pay for outbound shipping via Motorola's normal shipping methods. No discounts are allowed on this option.	\$126.00
<b>Test Results</b>		
G799	ADD: PRINTED TEST RESULTS	\$0.00
<b>Amplifier</b>		
<i>***UHF and VHF Mid and High Power Radios Only***</i>		
W12	ADD: RF PRE-AMPLIFIER	\$51.00
<b>Miscellaneous</b>		
W81	ADD: KEY LOCK MOUNT	\$25.00
<b>Customer Programming Software</b>		
<b>Nomenclature</b>	<b>Description</b>	<b>Price</b>
RVN4185	SOFTWARE FOR ASTRO 25 MOBILE CD FORMAT; VERSION R01.00.00  CD format. Software will program ASTRO Digital Spectra Plus and XTL5000 Mobile Radios. Provides 3yrs worth of support.	\$250.00
RVN4186	SOFTWARE FOR ASTRO 25 PORTABLE/MOBILE 2 CD SET-3 YRS  CD Format. Comes with 2 CDs containing RVN4185 & RVN4181. Provides 3yrs worth of support. To program XTL5000 Q5 Mobile Radios HKN6183 cable is required. To program XTL5000 W3-W9 mobile radios HKN6155 cable is required.	\$375.00
<b>Emergency</b>		
GLN7278	PUSH TO TALK FOOTSWITCH	\$56.00
HLN6188	PUSHBUTTON EXTERNAL EMERGENCY	\$56.00

## **MOTOROLA SERVICE CENTERS AND LOCATIONS**

### **Two Way Radio**

Beckley, WV

Bluefield, WV

### **F & L Electronics**

Huntington, WV

### **Lloyds Electronics**

Millwood, WV

Charleston, WV

Jane Lew, WV

Parkersburg, WV

### **Staley Communications**

Wheeling, WV

Morgantown, WV

### **Hibbs Radio**

Philippi, WV

### **Valley Two Way**

Winchester, VA

**MOTOROLA  
COMMERCIAL WARRANTY**

**General Information**

**I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:**

Motorola Inc. or, if applicable, Motorola Canada Limited ("Motorola") warrants the Motorola manufactured radio communications product, including original equipment crystal devices and channel elements ("Product"), against material defects in material and workmanship under normal use and service for a period of One (1) Year from the date of shipment.

Motorola, at its option, will at no charge either repair the Product (with new or reconditioned parts), replace it with the same or equivalent Product (using new or reconditioned Product), or refund the purchase price of the Product during the warranty period provided purchaser notifies Motorola according to the terms of this warranty. Repaired or replaced Product is warranted for the balance of the original applicable warranty period. All replaced parts of the Product shall become the property of Motorola.

This express limited warranty is extended by Motorola to the original end user purchaser purchasing the Product for purposes of leasing or for commercial, industrial, or governmental use only, and is not assignable or transferable to any other party. This is the complete warranty for the Product manufactured by Motorola. Motorola assumes no obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of Motorola. Unless made in a separate written agreement between Motorola and the original end user purchaser, Motorola does not warrant the installation, maintenance or service of the Product. Motorola cannot be responsible in any way for any ancillary equipment not furnished by Motorola which is attached to or used in connection with the Product, or for operation of the Product with any ancillary equipment, and all such equipment is expressly excluded from this warranty. Because each system which may use the Product is unique, Motorola disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

**II. GENERAL PROVISIONS:**

This warranty sets forth the full extent of Motorola's responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at Motorola's option, is the exclusive remedy. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. MOTOROLA DISCLAIMS ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. MOTOROLA'S TOTAL LIABILITY SHALL BE LIMITED TO THE APPLICABLE VALUE OF THE PRODUCTS PURCHASED. IN NO EVENT SHALL MOTOROLA BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOST PROFITS OR SAVINGS OR OTHER INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT, TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

**III. HOW TO GET WARRANTY SERVICE:**

Purchaser must notify Motorola's representative or call Motorola's Customer Response Center at 1-800-247-2346 within the applicable warranty period for information regarding warranty service.

**IV. WHAT THIS WARRANTY DOES NOT COVER:**

- A) Defects or damage resulting from use of the Product in other than its normal and customary manner.
- B) Defects or damage from misuse, accident, water, or neglect.
- C) Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.
- D) Breakage or damage to antennas unless caused directly by defects in material workmanship.
- E) A Product subjected to unauthorized Product modifications, disassemblies or repairs (including, without limitation, the addition to the Product of non-Motorola supplied equipment) which adversely affect performance of the Product or interfere with Motorola's normal warranty inspection and testing of the Product to verify any warranty claim.
- F) Product which has had the serial number removed or made illegible.
- G) Batteries (they carry their own separate limited warranty).
- H) Freight costs to the repair depot.
- I) A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with Motorola's published specifications or with the FCC type acceptance labeling in effect for the Product at the time the Product was initially distributed from Motorola.
- J) Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.
- K) That the software in the Product will meet the purchaser's requirements or that the operation of the software will be uninterrupted or error-free.
- L) Normal and customary wear and tear.
- M) Non-Motorola manufactured equipment unless bearing a Motorola Part Number in the form of an alpha numeric number (i.e., TDE6030B).

**V. GOVERNING LAW**

In the case of a Product sold in the United States and Canada, this Warranty is governed by the laws of the State to which the Equipment is shipped and the Province of Ontario, respectively.

**VI. PATENT AND SOFTWARE PROVISIONS:**

Motorola will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or its parts infringe a United States patent, and Motorola will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following: A) that Motorola will be notified promptly in writing by such purchaser of any notice of such claim; B) that Motorola will have sole control of the defense of such suit and all negotiations for its settlement or compromise; and C) should the Product or its parts become, or in Motorola's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit Motorola, at its option and expense, either to procure for such purchaser the right to continue using the Product or its parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or its parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or its parts as established by Motorola. Motorola will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or its parts furnished hereunder with software, apparatus or devices not furnished by Motorola, nor will Motorola have any liability for the use of ancillary equipment or software not furnished by Motorola which is attached to or used in connection with the Product. The foregoing states the entire liability of Motorola with respect to infringement of patents by the Product or any its parts thereof. Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted Motorola software such as the exclusive rights to reproduce in copies and distribute copies of such Motorola software. Motorola software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including, without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such Motorola software or exercise of rights in such Motorola software is permitted. No license is granted by implication, estoppel or otherwise under Motorola patent rights or copyrights.

# ASTRO® XTL™ 2500

## Digital Mobile Radio

### SPECIFICATION SHEET



#### MODEL FEATURES

##### Frequency Bands

- 136-174 MHz
- 380-470MHz
- 450-520 MHz
- 764-870 MHz

##### Power Levels

- 10-50 Watt (136-174 MHz)
- 10-40 Watt (380-470 MHz)
- 10-45 Watt (450-520 MHz)
- 10-35 Watt (764-870 MHz)
- 25-110 Watt (136-174 MHz)
- 25-110 Watt (380-470 MHz)

##### 512 Channels (Standard)

Dual mode operation (ASTRO Digital and Analog)

9600 and 3600 Baud capable

Project 25 capability on Conventional and Trunking systems

Type II Trunking Only

Project 25 compliance interoperable voice signaling features

Integrated voice and data capable

##### Bandwidth Receiver

- 12.5/30 kHz (analog) – 136-174 MHz
- 12.5/25 kHz (analog) – 380-470 MHz and 450-520 MHz
- 12.5/20/25 kHz (analog) – 764-870 MHz

12.5 kHz bandwidth receiver (digital)

5 Programmable buttons x4 deep in menu functions

14 digit character display

Tri-color backlit LCD display

Emergency button

Multi level DIM button

Dash/Remote mount

Meets Military Specs 810 (C,D, E and F)

Utilizes Windows®-based customer programming

Built in FLASHport™ support

Optional Keypad microphone

External Speaker

USB/RS232 connectivity

Optional Siren PA

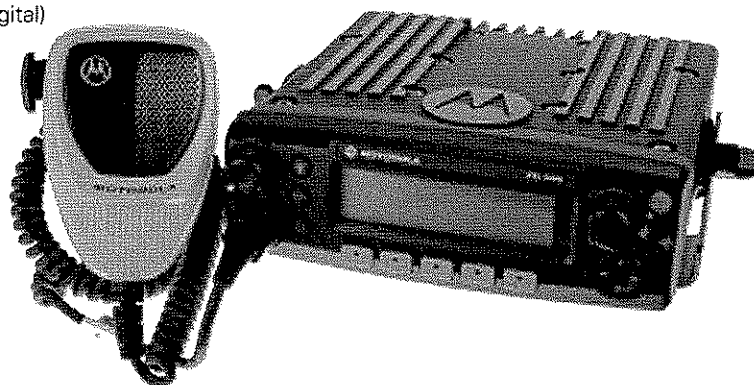
Optional DEK

Upgradeable

Encryption Capable:

- Type III (optional)
- Allows for MultiKey for single algorithms ONLY
- Algorithms supported:
  - DVI-XL
  - DVP-XL
  - DES
  - DES-XL
  - DES-OFB
  - AES
  - Advanced Digital Privacy (ADP)

Reuse of most ASTRO/MCS accessories



Motorola's XTL 2500 Project 25 compliant mobile radio is tough and well suited for users in Police, Fire, EMS, State/Local/Federal Government agencies. Taking into consideration your work environment and various job responsibilities, this robust mobile radio will support the type of consistent, high quality communication you need.

The XTL 2500 digital mobile radio supports APCO Project 25 and is available in 136-174 MHz, 380-470MHz, 450-520 MHz 764-870 MHz frequency bands and supports the accessories common to the XTL 5000 mobile radio.

The XTL 2500 digital mobile radio is specifically designed to meet the needs of your organization. When you want high performance, quality, and reliability in your daily communications, the XTL 2500 digital mobile radio is the radio of choice.

## GENERAL PERFORMANCE SPECIFICATIONS

Frequency range	136-174 MHz
	380-470MHz
	450-520 MHz
	764-870 MHz
Modulation	C4FM of QPSK-C family (Compatible Quadrature Phase Shift Keying)
Protocol	
Project 25-CAI	4.4 kbps IMBE, 2.8 kbs Error Correction Coding, 2.4 kbps Embedded Signaling
Channel Bandwidth	
Analog	12.5/30 kHz (136-174 MHz) 12.5/25 kHz (380-470 MHz and 450-520 MHz); 12.5/20/25 kHz (764-870 MHz)
Digital	12.5 kHz

## VOICE CODER

Voice Coding Method IMBE (CAI)	Improved Multi Band Excitation
Voice Truncation	None
Frame Re-sync Interval	180 mSec (Clear Digital Mode)
Forward Error Correction	Golay code
Error Mitigation Project 25-CAI (IMBE)	
Dual Level	Level 1: Extrapolates and replaces 20 mSec voice frames that exceed the error correction algorithm tolerance.  Level 2: Progressive muting of 20 mSec voice frames that are too severely damaged for Level 1 replacement.
Code Book Structure	APCO Project 25 (IMBE): No code book

## SIGNALLING (ASTRO MODE)

Signalling Rate	9.6 kbps
Digital ID Capacity	10,000,000 Conventional / 48,000 Trunking
Digital Network Access Codes	4,096 network site addresses
ASTRO Digital User Group Addresses	4,096 network site addresses
Project 25 – CAI Digital	
User Group Addresses	65,000 Conventional / 4,094 Trunking
Error Correction Techniques	Golay, BCH, Reed-Solomon codes
Data Access Control	Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions.

## SPEAKER

Dimensions	5.5" x 5.5" x 2.5"
	(139.7 x 139.7 x 63.5 mm)
	(Excluding mounting bracket)
Weight	1.5 lbs (0.68 kg)

## MOBILE

Dimensions	Mid Power Radio Transceiver
	2" x 7" x 7.8" (50.8 x 177.8 x 198.1 mm)
	Control Head
	2.35" x 7.1" x 2.5" (59.7 x 180.3 x 63.5 mm)
Weight	Mid Power Radio Transceiver and Control Head – Dash Mount
	2.35" x 7.1" x 9.1" (59.7 x 180.3 x 231.1 mm)
	High Power Transceiver
	2.765" x 8.08" x 12.31" (70.2 x 205.2 x 312.7 mm)
Weight	Mid Power Radio Transceiver and Control Head
	6.1 lbs (2.77 kg) (764-870 MHz and 136-174 MHz)
	6.1 lbs (2.77 kg) (380-470 MHz and 450-520 MHz)
	High Power Radio Transceiver with Handle
	8.8 lbs (3.99 kg) (136-174 MHz and 380-470 MHz)

**TRANSMITTER**

Frequency	764-776 MHz 794-806 MHz 806-825 MHz 851-870 MHz	380-470 MHz and 136-174 MHz	136-174 MHz
RF Power	10-35W	25-110W	25-110W
Max Freq Separation	Full Bandsplit	Ref Above Bandsplit	Full Bandsplit
Freq Stability Operating Freq Accuracy (-30C to +60C; +25C Ref) – 700/800 & UHF			
(+/- 2ppm (-30C to +60C) - VHF	1.5 ppm	2 ppm	2.5 ppm
Modulation Limiting			
25/20 kHz, 25 kHz, 25/30 kHz channel	±5 kHz, +/-4 kHz (NPSPAQC)	±5 kHz	±5 kHz
12.5 kHz channel	±2.5 kHz	±2.5 kHz	±2.5 kHz
Modulation Fidelity (C4FM)			
12.5 kHz digital channel	±2.8 kHz	±2.8 kHz	±2.8 kHz
Channel Spacing Analog	12.5/20/25 kHz	12.5/25 kHz	12.5/30kHz
FM Hum and Noise			
20/25 kHz, 25 kHz, 20/25 kHz	40 dB	45 dB	50 dB
12.5 kHz	34 dB	40 dB	40 dB
Emissions			
	Conducted   Radiated -70 dBc   -85 dBc	Conducted   Radiated -85 dBc   -20 dBc	Conducted   Radiated -85 dBc   -85 dBc
Audio Response (6db/Octave Pre-emphasis from 300 to 3000 Hz)			
	+1, -3 dB (EIA)	+1, -3 dB (EIA)	+1, -3 dB (EIA)
Audio Distortion per EIA	2%	2%	2%

**POWER AND BATTERY DRAIN**

Model Type	136-174 MHz 380-470MHz 450-520 MHz 764-870 MHz
Minimum RF Power Output	10-50 Watt (136-174 MHz) 10-40 Watt (380-470 MHz) 10-45 Watt (450-520 MHz) 10-35 Watt (764-870 MHz) 25-110 Watt (136-174 MHz) 25-110 Watt (380-470 MHz)
Operation	12V DC Negative Ground
Standby at 13.8V	
136-174 MHz	0.5A-0.7A
380-470 MHz and 450-520 MHz	0.65A-0.85A
764-870 MHz	0.7A
Receive at Rate Audio at 13.8V	
136-174 MHz	1.3A-3.0A
380-470 MHz and 450-520 MHz	1.5A-3.2A
764-870 MHz	3.0A
Transmit at Rated Power	
136-174 MHz	7A-10A
380-470 MHz	5.7A-13.7A
450-520 MHz	13A (45W)
764-870 MHz	8A (15W), 13A (35W)

**FCC TYPE ACCEPTANCE ID**

Band	Transmitter Power	
	Output	Number
136-174 MHz	10-50 W	AZ492FT3806
380-470MHz	10-40 W	AZ492FT4862
450-520 MHz	10-45 W	AZ492FT4867
764-870 MHz	10-35 W	AZ492FT5823
136-174 MHz	25-110 W	AZ492FT3808
380-470 MHz	25-110 W	AZ492FT4870

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	-30°C / +60°C
Storage Temperature	-55°C / +85°C
International Protection	IP54 certified

# RECEIVER

Frequency	700/800 MHz	UHF	VHF		
Channel Spacing	12.5 / 20 / 25 kHz	12.5 / 25 kHz	12.5 / 30 kHz		
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit		
Analog Sensitivity					
20 db Quieting	.30 $\mu$ V	0.25 $\mu$ V	0.40 $\mu$ V	0.25 $\mu$ V	0.40 $\mu$ V
12 db SINAD per EIA	.25 $\mu$ V	0.20 $\mu$ V	0.30 $\mu$ V	0.20 $\mu$ V	0.30 $\mu$ V
Digital Sensitivity					
1% BER (12.5 kHz channel)	.30 $\mu$ V	0.25 $\mu$ V	0.40 $\mu$ V	0.25 $\mu$ V	0.40 $\mu$ V
5% BER (12.5 kHz channel)	.25 $\mu$ V	0.20 $\mu$ V	0.30 $\mu$ V	0.20 $\mu$ V	0.30 $\mu$ V
Intermodulation	80 dB	80 dB	85 dB	85 dB	85 dB
Spurious Response Rejection	80 dB	90 dB	90 dB	90 dB	90 dB
Audio Output Power at 3% distortion	7.5 W (ext. speaker)	7.5 W (ext. speaker)	7.5 W (ext. speaker)		
(External/Internal Speaker)	3 W (int. speaker)	3 W (int. speaker)	3 W (int. speaker)		
Adjacent Channel Rejection Selectivity	65 dB	75 dB	85 dB	85 dB	85 dB
(12.5 kHz/25 kHz)	80 dB	82 dB	70 dB	70 dB	70 dB

# MILITARY STANDARDS 810 C, D, E, & F

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II
High Temperature Storage	501.1	I	501.2	I/A1	501.3	I/A1	501.4	I/Hot
High Temperature Storage	501.1	II	501.2	II/A1	501.3	II/A1	501.4	I/Hot
Low Temperature Storage	502.1	I	502.2	I/C3	502.3	I/C3	502.4	I/C3
Low Temperature Operational	502.1	I	502.2	II/C1	502.3	II/C1	502.4	II/C1
Temperature Shock	503.1	-	503.2	I/A1-C3	503.3	I/A1-C3	503.4	I/Hot-C3
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I
Rain Blowing	506.1	I	506.2	I	506.3	I	506.4	I
Rain Steady	506.1	II	506.2	II	506.3	II	506.4	III
Humidity	507.1	II	507.2	II	507.3	II	507.4	-
Salt Fog	509.1	-	509.2	-	509.3	-	509.4	-
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I
Blowing Sand			510.2	II	510.3	II	510.4	II
Vibration Minimum Integrity	514.2	VIII/F Curve-W	514.3	I/10	514.4	I/10	514.5	I/24
Vibration Loose Cargo			514.3	II/3	514.4	II/3	514.5	II/5
Shock Functional	516.2	I	516.3	I	516.4	I	516.5	I
Shock Crash Hazard	516.2	III	516.3	V	516.4	V	516.5	V
Shock Bench Handling	516.2	V	516.3	VI	516.4	VI	516.5	VI



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