

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

# Request for

PTR09038

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FRANK WHITTAKER 304-558-2316

RFQ COPY TYPE NAME/ADDRESS HERE

ELECTRONIC COMMUNICATIONS OF WV. INC. "YOUR COMMUNICATIONS CONNECTION"

408 Old Goff Mt. Road Cross Lanes, WV 25313-1496 DIVISION OF PUBLIC TRANSIT

BUILDING 5, ROOM 906 1900 KANAWHA BOULEVARD, EAST CHARLESTON, WV 25305-0432 304-558-0428

DATE PRINTED TERMS OF SALE SHIP VIA FØB, FREIGHTTERMS 06/08/2009 **BID OPENING DATE:** 06/17/2009 BID OPENING TIME 01:30PM CAT NO LINE QUANTITY UOP ITEM NUMBER UNITPRICE AMOUNT ता प्राप्तुन के d001 4 40 725-74 10 MOBILE RADIOS WITH 100 WATT UHF THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF PUBLIC TRANSIT, IS SOLICITING BIDS FOR A CONTRACT FOR THE PURCHASE OF TEN (10) MOBILE RADIOS WITH 100 WATT UHF ANTENNAS, MICS, 40 WATT DESKTOP CONTROL STATION WITH LOCAL DIA-POLE UHF ANTENNA, AND REPEATER PER THE ATTACHED SPECIFICATIONS. THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A EREFERENCE OR FAVOR ANY HARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING lternates should so state and include pertinent ITERATURE 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 SPECIFICATION IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST Virginia legislative rules and regulations. 2009 JUN 17 PH 12: 44 EXHIBIT 5 WV PURCHASING DIVISION WEST VIRGINIA CODE 21-10-5 PROVIDES THAT: ANY SOLICITA-TION FOR A PUBLIC IMPROVEMENT CONSTRUCTION CONTRACT REQUIRES EACH VENDOR THAT SUBMITS A BID FOR THE WORK TO SUBMIT AT THE SAME TIME AN AFFIDAVIT OF COMPLIANCE WITH THE BID. THE ENCLOSED DRUG-FREE WORKPLACE AFFIDAVIT MUST BE SIGNED AND SUBMITTED WITH THE BID AS EVIDENCE SEE REVERSE SIDE FOR TERMS AND CONDITIONS SIGNATURE TITLE 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 detect, 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, the State may deem this contract null and void, and terminate such contract 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."

#### **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.
- Complete all sections of the quotation form.
- 4. Unit prices shall prevail in case of discrepancy.
- 5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
- **6. BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



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DATE PRINTED TERMS OF SALE SHIP VIA F.O.B FREIGHT TERMS 06/08/2009 BID OPENING DATE: 06/17/2009 BID OPENING TIME 01:30PM LINE QUANTITY UOP ITEM NUMBER UNIT PRICE AMOUNT IN ACCORDANCE WITH WEST VIRGINIA CODE 5-19-1 ET., \$EQ., EVERY CONTRACT FOR CONSTRUCTION, RECONSTRUCTION, ALTERATION, REPAIR, IMPROVEMENT OR MAINTENANCE OF PUBLIC WORKS, WHERE THE COST IS MORE THAN \$50,000 AND, IN THE CASE OF STEEL ONLY, WHERE THE COST OF STEEL IS MORE THAN \$50,000 OR WHERE MORE THAN 10,000 POUNDS OF STEEL ARE REQUIRED, THE STATE WILL ACCEPT ONLY ALUMINUM GLASS, OR STEEL PRODUCTS PRODUCED IN THE UNITED STATES. IN ADDITION, ITEMS OF MACHINERY OR EQUIPMENT PURCHASED FOR USE AT THE SITE OF PUBLIC WORKS SHALL BE MADE OF DOMESTIC ALUMINUM, GLASS OR STEEL, UNLESS THE COST OF THE PRODUCT IS LESS THAN \$50,000 OR LESS THAN 10,000 POUNDS OF STEEL ARE USED IN PUBLIC WORKS PROJECTS. FOREIGN MADE ALUMINUM, GLASS OR STEEL PRODUCTS MAY BE ACCEPTED ONLY IF THE COST OF DOMESTIC PRODUCTS IS FOUND to be unreasonable. Such cost is unreasonable if it is 20% OR MORE HIGHER THAN THE BID PRICE FOR FOREIGN MADE IF THE DOMESTIC ALUMINUM, GLASS OR STEEL PRODUCTS TO BE SUPPLIED OR PRODUCED IN A "SUBSTANTIAL LABOR SURPLUS AREA", AS DEFINED BY THE UNITED STATES DEPARTMENT OF LABOR, FOREIGN PRODUCTS MAY BE SUPPLIED ONLY IF DOMESTIC PRODUCTS ARE 30% OR MORE HIGHER IN PRICE THAN THE FOREIGN MADE PRODUCTS. IF, PRIOR TO THE AWARD OF A CONTRACT UNDER THE ABOVE PROVISIONS, THE SPENDING OFFICER OF THE SPENDING UNIT DETERMINES THAT THERE EXISTS A BID FOR LIKE FOREIGN ALUMINUM, GLASS OR STEEL THAT IS REASONABLE AND LOWER THAN THE LOWEST BID DOMESTIC PRODUCTS, THE SPENDING OFFICE MAY REQUEST, IN WRITING, A REEVALUATION AND REDUCTION IN THE LOWEST BID FOR SUCH DOMESTIC PRODUCTS. ALL VENDORS MUST INDICATE IN THEIR BID IF THEY ARE Supplying foreign aluminum, glass or steel. REV. 3/88 SEE REVERSE SIDE FOR TERMS AND CONDITIONS SIGNATURE TELEPHONE TITLE ADDRESS CHANGES TO BE NOTED ABOVE



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Buyer FW-44 Page PO#PTR09038
Spending Unit: Division of Public Transit
Department of Transportation

# Technical Specifications For The Procurement Of Two- Way Radio Communication Equipment

#### SCOPE:

The technical specifications establish requirements for 100 watt UHF mobile radios, speakers, microphones, antennas and a 40 watt UHF desk top mount control station with a local dia-pole UHF antenna and transmission line.

The radio system must be in compliance with all current and must meet the NEW Narrowbanding January 1, 2013 FCC Requirements.

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, handling, materials, one time hook up repeater fees and complete installation within 72 hours of delivery, programming cost and the liaison for the transit system is required to obtain a FCC license permit at the transit system's location.

The transit system will be renting the use of a tower near Philippi, WV. The tower contact information is The City of Philippi, WV, Mr. Buddy Shreve (304) 457-3700.

Two copies of the bid shall be sent to the West Virginia Division of Purchasing prior to the deadline of the bid opening. One Bid marked for West Virginia Division of Public Transit.

## **GENERAL SPECIFICATIONS:**

VEHICLE RADIOS: (10) Ten Units

100 watts Two- Way Mobile Radio with UHF loaded RAE-4014 ARB antenna, microphones, mounting hardware, power, ignition sense and mounting cable, user guide on CD and 7.5 Watt speaker. Motorola Model # PM 1500 Professional Series or Equal.

Each radio shall be equipped with a Motorola Emergency Foot Switch Model # HLN5113B or Equal to allow notification from the radio to the base unit in case of emergency. All hardware, software and installation to be included in base price.

Buyer FW-44 Page PO#PTR09038
Spending Unit: Division of Public Transit
Department of Transportation

BASE STATION: (1) One Unit

40 watt desk top mount control station with a local 4 bay DIA-pole UHF antenna #65143, transmission line, tone remote adapter and (3) three desktop remotes and kit(s) to connect to base unit. Motorola Model # CM-200 base with power control # HKN-9455, power supply # HPN-4007, desk mic # RMN-5068 and desk tray and speaker # RLN-5390 or Equal. 150 feet of transmission line is estimated to be used. ½ Heliax type cable to be used or equal. Lighting and A/C power protection is required.

Base station shall have the capabilities of receiving the Motorola Emergency Foot Switch notification signal as stated above.

REPEATER FOR TOWER: (1) One Unit

Motorola MTR 2000 or Equal to be supplied to all installation, wiring, software hardware and all other materials to make it functional. Vendor will be responsible for installing repeater.

The bidder is requested to submit description, warranty information and complete literature information of the product with bid.

### **IDENTIFICATION NUMBER:**

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

#### **WARRANTY:**

Each mobile radio, repeater and control station shall have a minimum of a written fiveyear warranty against all defects of the product.

#### **MANUALS:**

The vendor shall supply an operations and maintenance manual for each mobile radio, repeater 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.

Buyer FW-44 Page PO#PTR09038
Spending Unit: Division of Public Transit
Department of Transportation

## **EQUIPMENT DELIVERY AND INSTALLATION LOCATION:**

Here and There Transit Attn: Brenda Wilmoth, Director 101 Church Street PO Box 146 Philippi, WV 26416 (304) 457-1818

#### **BILLING INFORMATION:**

West Virginia Division of Public Transit 1900 Kanawha Blvd., East Building 5, Room 906 Charleston, WV 25305 (304) 558-0428

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Buyer FW-44 Page	Spending Unit: Division of Public Transit	Department of Transportation

PRICE SHEET PTR09038

Extended Price	\$ 18,650,00	\$ 10,033.00	\$ 12, 437.50	\$ 41,110.50
	10	_	<i>4</i>	TOTAL BID:
	\$  865.00 each	\$ 10,033.00 each	\$ 12, 437.50 each	
	1. 100 Watt Mobile Radio	2. 40 Watt Desk Top Console Station	3. Repeater for Tower	
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#### **Notification of Federal Participation**

Federal funding for this project is being provided by the Federal Transit Administration through CFDA 20509 for 100 % of the project cost.

#### 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 seg. 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 faise, 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. § 5325(h) 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 of 1964, as amended, 42 U.S.C.§ 2000d, Section 303 of the Age Discrimination Act of 1974, as amended, 42 U.S.C.§ 6101 et seq., Section 202 of the Americans With Disabilities Act of 1990, 42 U.S.C.§ 12101 et seq., and Federal transit law at 49 U.S.C.§ 5332, the Vendor agrees that it will not discriminate against

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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 of 1964, 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, disability 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, 42 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) <u>Disabilities</u>. 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 seg. and Section 508 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1368, and other provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§ 1251 et seg. 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.

Overlime 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.

<u>Subcontracts</u>. 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 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.

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#### **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 falls to perform in the manner called for in the contract, or if the Vendor falls 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.

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#### FTA Role in Bid Protests

Under the Federal Transit Administration's Circular 4220.1F, the Federal Transit Administration's (FTA's) appeals process for reviewing protests of a recipient's procurement decisions are:

- 1. Requirements for the Protester. The protester must:
- a. <u>Qualify as an "interested Party."</u> Only an "interested party" qualifies for FTA review of its appeal. An "interested party" is a party that is an actual or prospective bidder or offeror whose direct economic interest would be affected by the award or failure to award the contract at issue.
  - 1. <u>Subcontractors</u>. A subcontractor does not qualify as an "interested party" because it does not have a direct economic interest in the results of the procurement.
  - 2. Consortia/Joint Ventures/Partemerships/Teams. An established consortium, joint venture, partnership, or team that is an actual bidder or offeror and is acting in its entirety, would qualify as an "interested party" because it has a direct economic interest in the results of the procurement. An individual member of a consortium, joint venture, partnership, or team, acting solely in its individual capacity, does not qualify as an "interested party" because it does not have a direct economic interest in the results of the procurement.
  - 3. <u>Associations or Organizations</u>. An association or organization that does not perform contracts does not qualify as an "interested party," because it does not have a direct economic interest in the results of the procurement.
- b. Exhaust Administrative Remedies. The protester must exhaust its administrative remedies by pursuing the WV Division of Public Transit's protest procedures to completion before appealing the WV Division of Public Transit's decision to FTA.
- c. <u>Appeal Within Five Days</u>. The protester must deliver its appeal to the FTA Regional Administrator, Region III, 1760 Market Street, Suite 500, Philadelphia, PA 19103-4124 within five (5) working days of the date when the protester has received actual or constructive notice of the WV Division of Public Transit's final decision. Likewise, the protester must provide its appeal to the same address within five (5) working days of the date when the protester has identified other grounds for appeal to FTA. For example, other grounds for appeal include the WV Division of Public Transit's failure to have or failure to comply with its protest procedures or failure to review the protest.
- 2. Extent of FTA Review. FTA limits its review of protests to:
- Failure of the Division of Public Transit to have or adhere to its written bid protest procedures, or failure of the Division of Public Transit to review a complaint or protest.
- 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. <u>See, e.g.,</u> 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.

FTA will exercise discretionary jurisdiction over those appeals involving issues important to FTA's overall public transportation program. FTA will refer violations of Federal law for which it does not have primary jurisdiction to the Federal authority having proper jurisdiction.

3. <u>FTA Determinations to Decline Protest Reviews</u>. FTA's determination to decline jurisdiction over a protest does not mean that FTA approves of or agrees with the Division of Public Transit's decision or that FTA has determined the contract is eligible for Federal participation. FTA's determination means only that FTA does not consider the issues presented to be sufficiently important to FTA's overall program that FTA considers a review to be required.

#### **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 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.

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#### **Prompt Payment**

The prime Contractor agrees to pay each sub-contractor under this prime contract for satisfactory performance of its contract no later than 15 days from the receipt of each payment the prime Vendor receives from the Division of Public Transit. The Vendor agrees further to return retainage payments to each subcontractor within 15 days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Division of Public Transit. This clause applies to both DBE and non-DBE subcontractors.

#### 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(15) dated October 1, 2008) 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**

Vendor agrees to comply, and assures the compliance of any other participant at any tier of the project, with Executive Orders Nos. 12549 and 12689, "Debarment and Suspension," 31 U.S.S. § 6101 note, and U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 CFR Part 1200, which adopts and supplements the provisions of U.S. Office of Management and Budget (U.S. OBM) "Guldelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 CFR Part 180.

The vendor agrees to, and assures that any other participant at any tier of the project will review the "Excluded Parties Listing"

By signing and submitting its bid or proposal, the bidder certifies as follows:

System" at http://epis.gov/ before entering into any other arrangement in connection with the project.

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 2 CFR Part 1200, 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.

#### Accessibility

Vendor agrees that products provided shall be in accordance with the 42 U.S.C. Sections 12101 et seq. and DOT regulations, "Transportation Services for Individuals with Disabilities (ADA)," 49 CFR Part 37; and Joint ATBCB/DOT regulations, "American with Disabilities (ADA) Accessibility Specifications for Transportation Vehicles," 36 CFR Part 1192 and 49 CFR Part 38.

#### 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 4220.1F, 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, fall 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.

#### 03/11/2009

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Agency\_\_\_\_ REQ.P.O#\_

Attorney-in-Fact

BID BOND	<u>.</u>
KNOW ALL MEN BY THESE PRESENTS, That we, the undersigned,	Flectmonic Communications of WV Inc
of Choss LANES, West Vingmin	as Principal, and <u>Electronic tommunications of bu</u>
Inc of Choss LANG, West Vinginia, a corporation orgi	anized and existing under the laws of the State of
West Ungwa with its principal office in the City of Choss Canes.	as Surety, are held and firmly bound unto the State
of West Virginia, as Obligee, in the penal sum of Five of BID	(\$ <u>2,055.63</u> ) for the payment of which,
well and truly to be made, we jointly and severally bind ourselves, our heirs, admir	nistrators, executors, successors and assigns.
The Condition of the above obligation is such that whereas the Principal	has submitted to the Purchasing Section of the
Department of Administration a certain bid or proposal, attached hereto and made	a part hereof, to enter into a contract in writing for
MOTORDIA MOBILE RADIO EQUIPMENT, KA	DID DASE STATION AND REMOTE,
REPEATER STATION AS WELL as IN	STALLATION AND SERVICE CONTRACT
NOW THEREFORE,	
<ul> <li>(a) If said bid shall be rejected, or</li> <li>(b) If said bid shall be accepted and the Principal shall enter into a continereto and shall furnish any other bonds and insurance required by the bid or progreement created by the acceptance of said bid, then this obligation shall be null force and effect. It is expressly understood and agreed that the liability of the Sur</li> </ul>	posal, and shall in all other respects perform the Land vold, otherwise this obligation shall remain in full
exceed the penal amount of this obligation as herein stated.	
The Surety, for the value received, hereby stipulates and agrees that the way impaired or affected by any extension of the time within which the Obligee makes notice of any such extension.	e obligations of said Surety and its bond shall be in no ay accept such bid, and said Surety does hereby
IN WITNESS WHEREOF, Principal and Surety have hereunto set their h	nands and seals, and such of them as are corporations
have caused their corporate seals to be affixed hereunto and these presents to be	
17 day of JUNE , 2009.	
	Electronic Commonications of WV
Principal Corporate Seal	TIMOTHY EDWARD FORD
1 Istorput out potato out	(Name of Principal)
	By Timothy trougho tono
·	(Must be President or Vice President)
	PRESIDENT
	(1110)
Surety Corporate Seal	PRESIDENT (Title)  Electronic Commonwatains of WV Inc. (Name of Surety)

IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance. Raised corporate seals must be affixed, a power of attorney must be attached.

AGENCY\_ RFQ/RFP#\_

#### BID BOND PREPARATION INSTRUCTIONS

		Bid Bond	DODANTS That was the sundamines of
(A)	WV State Agency	KNOW ALL MEN BY THESE PRI	ESEN 18, 1 hat we, the undersigned, (E)
	(Stated on Page 1 "Spending Unit")	(C) of (D)	
	Request for Quotation Number (upper	as Principal, and(F)	or
	right corner of page #1)	(H) , a corporation org	ganized and existing under the laws
(C)	Your Company Name	of the State of (I) with its	Id and finally bound unto The State
(D)	City, Location of your Company	(j) , as Surety, are no	ld and firmly bound unto The State
(E)	State, Location of your Company	of West Virginia, as Obligee, in the penal sur	of which, well and truly to be made,
(F)	Surety Corporate Name	(\$ (L) ) for the payment we jointly and severally bind ourselves, our l	hairs administrators executors
(G)	City, Location of Surety		iens, administrators, executors,
(H)	State, Location of Surety	successors and assigns.	on is such that whereas the Principal
(I)	State of Surety Incorporation	has submitted to the Purchasing Section of the	ne Department of Administration
<b>(J)</b>	City of Surety Incorporation	a certain bid or proposal, attached hereto and	made a part hereof to enter into a
(K)	Minimum amount of acceptable bid	contract in writing for	, made a part nervex to enter mo a
	bond is 5% of total bid. You may state	(M)	
	"5% of bid" or a specific amount on	14742	100 - 100 -
	this line in words.		
(L)	Amount of bond in figures	NOW THEREFORE.	
(M)	Brief Description of scope of work	(a) If said bid shall be rejected, or	
(N)	Day of the month	(b) If said bid shall be accepted an	d the Principal shall enter into a
(O)	Month	contract in accordance with the bid or propo	sal attached hereto and shall furnish
(P)	Year Name of Corporation	any other bonds and insurance required by the	ne bid or proposal, and shall in all
(Q)	Raised Corporate Seal of Principal	other respects perform the agreement creater	d by the acceptance of said bid then
(R)	Signature of President or Vice	this obligation shall be null and void, otherw	vise this obligation shall remain in full
(S)	President	force and effect. It is expressly understood	and agreed that the liability of the
(T)	Title of person signing	Surety for any and all claims hereunder shall	l, in no event, exceed the penal
(T) (U)	Raised Corporate Seai of Surety	amount of this obligation as herein stated	
(V)	Corporate Name of Surety	The Surety for value received, her	eby stipulates and agrees that the
(W)	Signature of Attorney in Fact of the	obligations of said Surety and its bond shall	be in no way impaired or affected by
(**)	Surety	any extension of time within which the Obli	igee may accept such bid: and said
NOTE:	Dated, Power of Attorney with Raised	Surety does hereby waive notice of any sucl	h extension.
110 11.	Surety Seal must accompany this bid	IN WITNESS WHEREOF, Princip	oal and Surety have hereunto set their
	bond.	hands and seals, and such of them as are con	porations have caused their corporate
	0.00	seals to be affixed hereto and these presents	to be signed by their proper officers,
		this (N) day of (O)	
			(0)
		Principal Corporate Seal	(Q)
			(Name of Principal)
		(R)	By (S) (Must be President or
			(Must be President of Vice President)
			(T)
			Title
		An.	1 Itae
		(U)	(V)
		Surety Corporate Seal	(Name of Surety)
			(Viniva or maran)
			(W)
			Attorney-in-Fact

IMPORTANT – Surety executing bonds must be licensed in West Virginia to transact surety insurance. Raised Corporate Seals must be affixed and a Power of Attorney must be attached.



# State of West Virginia DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT West Virginia Code §21-1D-5

STATE OF West Virginia
COUNTY OF KANAWHA , TO-WIT:
I, Timothy & Toxo, after being first duly sworn, depose and state as follows:
1. I am an employee of Electronic Conmunications of wu ; and, (Company Name)
2. I do hereby attest that Electronic Communication of WV Inc (Company Name)
maintains a valid written drug free workplace policy and that such policy is in compliance with <b>West Virginia Code</b> §21-1D-5.
The above statements are sworn to under the penalty of perjury.
Electronic Communications of WV Inc (Company Name)
By: Timothy & Fond
Title:
Date: 17 2009
Taken, subscribed and sworn to before me this 17th day of Jane, 2007.
By Complission expires  RY PUBLIC, STATE OF WEST VIRGINIA  (SESSAMESTOWN ROAD  NITRO, WV 25143  Commission Expires Mey 18, 2014  (Notary Public)

THIS AFFIDAVIT MUST BE SUBMITTED WITH THE BID IN ORDER TO COMPLY WITH WV CODE PROVISIONS. FAILURE TO INCLUDE THE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF THE BID.

Rev March 2009

	RFQ NO.

## 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: Electronic Com	MUNICHTIONS OF	WV	Inc.	
Authorized Signature:		Date:	Dine-	17 2009
Purchasing Affidavit (Revised 01/01/09)	$\sim \varphi$		/	



## Sales Quotation

## **Electronic Communications of WV. Inc.**

Total Communications Sales and Service

DATE 6-15-2009

408 Old Goff MT. Rd. Cross Lanes WV, 25313 Phone 304-776-4091 Fax 304-776-7092 Toll Free in WV. (800) 570-4091

Divison Of Public Transit TO

SHIP TO

Dustin Osborne	Mobile Radios	Standard	FOB	15 davs ARO	Net 30	Net 30
SALESPERSON	ЈОВ	SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE	PAYMENT TERMS	DUE DATE

QTY	ITEM#	DESCRIPTION	LIST PRICE	CONTRACT PRICE	CONTRACT EXTENDED
10	1	Motorola PM 1500 mobile radio 100 watt w speaker, mounting hardware user guide and misc hardware	1900.00	1385.00	13850.00
10	2	Antenna RAE-4014 ARB	110.25	96.00	960.00
10	3	Emergency Foot Switch Model HLN5113B	61.75	54.00	540.00
10	4	G398 3 Year Extended Warranty	182.00	105.00	1050.00
10	5	Labor to Install Radio	225.00	225.00	2250.00
*	*	Warranty Covers Parts and labor on radio itself not labor to and from location or shipping to send back to factory for repair.			
L	.[		ı	1865.00	18650.00
			·	SUB TOTAL	18650.00

TAX 18650.00

TOTAL



# PM1500

## Professional Series Two-Way Mobile Radio



#### **Multicolored LED Indicators**

#### 4 Programmable Buttons

Easy access to favorite features. Optional keypad microphone allows you to scroll through the menu and access up to 16 programmable features

#### Programmable Emergency Button

Alerts dispatcher in an emergency situation

#### Backlit 8-Character Alphanumeric Display

User friendly icons and soft menu so you easily view status and access features. Display for viewing of channel names and Caller ID

#### Large Channel and Push Button On/Off Volume Knobs

#### 7.5 Watt External Speaker

Allows for clear, crisp communication in loud environments

#### P25 Conventional Upgradable

#### **Dual Control Head Option**

Enables multiple radio control heads to be located within the same vehicle. Available with independent volume and backlight display

### PM1500 Standard Package

- Palm Microphone
- 7.5 Watt External Speaker
- Mounting Hardware
- · 20 Ft. Power Cable
- . 17 Ft. Remote Mount Cable
- Ignition Sense Cable
- User Guide CD
- 2-Year Standard Warranty

#### Dual Control Head Standard Package also includes:

- Two Palm Microphones
- One 75 Watt External Speaker
- One 13 Watt External Speaker
- Two 17 Ft, Remote Mount Cables
- · Additional Mounting Bracket

#### **Additional Features**

Send and receive information in a variety of ways:

## Quik-Call II™, MDC1200 and DTMF Signaling

- Selective Call (Decode)
  - Receive a call from a specific group or individual
- Call Alert (Decode)

Receive alerts of incoming calls when a short distance from radio

#### **MDC1200 Signaling Only**

- Push-to-Talk ID (Encode)
   Identify outgoing calls
- Radio Check (Decode)
   Lets others check users radio status

stolen or missing radios

- Emergency (Encode)
   Alerts dispatcher in urgent situations
- Selective Radio Inhibit (Decode)
   Allows system owner to disable

To keep things running efficiently, safely, and productively, you need to stay connected.

That's why so much quality and performance is built into the Professional Series PM1500 two-way mobile radio from Motorola. Long-range communications are robust with the mobile radio that packs 110 watts of power. The rugged housing and standard external speaker of the PM1500 make it the dependable choice in tough, loud environments. You'll appreciate the user-friendly design of the controls, backlit alphanumeric display and programmable buttons for easy access to favorite features.

The PM1500 puts quality Motorola technology to work helping public safety, utility, transportation and construction users with strong, reliable communications – even over long distances.

Linking Communities with Project 25 (P25)

With a single software upgrade, the PM1500 becomes P25 interoperable. This vital feature gives you the ability to interact with other networks in times of crisis.

#### **SPECIFICATION SHEET**

PM1500 PROFESSIONAL SERIES Two-Way Mobile Radio

	GENERAL SPECIFICATIONS		ENVIRONMENTAL	
	UHF	V/air	Operating Temperature	-30°C to +60°C
Frequency Range	380-470 MHz	136-174 MHz	Storage Temperature	-40°C to +85°C
Channel Bandwith	12.5/25 kHz	12.5/25 kHz	International Protection	IP54 certified
Dimensions (H x W x D)				
Control Head	2.56 x 7.22 x 3.36 inches	(65 x 183.5 x 85,8 mm)		
High Power Redio Transceiver	2,765 x 8,08 x 12,31 inche	es (70.2 x 205.2 x 312.7 mm)		
Weight				
Control Head	6.1 lbs (2.77 kg)			
High Power Redio Transceiver	8.8 lbs (3.99 kg)			

	POWER AND BATTER	Y DRAIN
Model Type	380-470 MHz	136-174 MHz
Minimum RF Power Output	25-110 Watt	25-110 Watt
Operation	12V DC Negative Ground	12V DC Negative Ground
Standby at 13.8V	0,65A-0.85A	0.5A-0.7A
Receive at Rate Audio at 13.8V	1.5A-3.2A	1.3A-3.0A

	TRANSMITTER	
	Typical Performance	Specifications
	(0)415	VHF
Frequency Range	380-470 MHz	136-174 MHz
RF Power	25-110W	25-110W
Maximum Frequency Separation	Ref Above Bandsplit	Full Bandsplit
Frequency Stability Operating Frequency Accuracy	2 ppm (-30° to +60°C; +25°C ref) +/- 2 ppm	2.5 ppm (-30" to +69"C)
Modulation Limiting 25 kHz channel 12.5 kHz channel	+5 kHz +2.5 kHz	+5 kHz +2.5 kHz
Channel Spacing Analog	12.5/25 kHz	12.5/25 kHz
FM Hum and Noise 26 kHz 12.5 kHz	45 dB 40 dB	50 dB 40 dB
Emissions	Conducted Radiated -95 dBc -20 dBc	Conducted Radiated -85 dBc -85 dBc
Audio Response (6 dB/Octave Pre-emphasis from 300 to 3000 Hz)	+1, -3 d8 (EIA)	+1, -3 dB (EIA)
Audio Distortion per EIA	2%	2%

	RECEIVER Typical Performance	
	URIF	WHE
Channel Spacing	12.5/25 kHz	12,5/25 kHz
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit
Analog Sensitivity 20 dB Quieting 12 dB SINAD per EIA	0.25µV   0.40µV 0.26µV   0.30µV	0.25µV   0.40µV 0.20µV   0.30µV
Intermodulation	80 dB   85 dB	65 dB 185 dB
Spurious Response Rejection	80 48 I 90 48	90 dB 190 dB
Audio Output Power at 3% distortion	7.5W (ext. speaker)	7.5W (ext. speaker)
Adjacent Channel Rejection Selectivity (12.5 kHz/25 kHz)	75 dB i 82 dB	85 dB 185 dB

FCCTY	PE ACCEPTANCE ID	
- DEPARTS	NITHER POWER	
Band	380-470 MHz	136-174 MHz
Output	25-110 W	25-110 W
Number	AZ492FT4870	AZ492FT3808
Model	AAM79KTD9PW5_N	AAM79QTD9PW5_N

	MILITA	RY STANDAR	DS 810C, D, E	& F				
		an 3:00	Milesi	D 810D	IVIII.SII	B 810E	MILST	D 8 (0);
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1		500.2	- 11	500.3	······································	500.4	11
High Temperature Storage	501.1	ı	501.2	I/A1	501.3	I/A1	501,4	I/Hot
High Tomperature Storage	501,1	11	501.2		501.3	II/A1	501.4	II/Hot
Low Temperature Storage	502.1	. 1	502.2	I/C3	502.3	1/C3	502.4	I/C3
Low Temperature Operational	502.1	1	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	#	505.2	I "	505.3		505.4	ŧ
Rain Blowing	506.1	ĺ	506.2	l l	506.3	ı	506.4	l l
Rain Steady	506.1	11	508.2	ll II	506,3	[]	506.4	111
Humidity	507.1	ii ii	507.2		507.3		507.4	
Salt Fo()	509,1		509.2		509.3	-	509.4	
Blowing Dust	510.1	1	510.2	I	510.3	ı .	510,4	1
Blowing Sand			510.2	jj i	510.3	11	510,4	. 11
Vibration Minimum Integrity	514.2	VIII/F, Curve-W	514.3	1/10	514.4	1/10	514.5	1/24
Vibration Loose Cargo			514.3	11/3	514,4	11/3	514.5	11/5
Shock Functional	516.2	1	516.3	. (	516.4		516.5	J
Shock Crash Hezard	516.2	111	516.3	٧	516.4	٧	516,5	V
Shock Bench Handling	516.2	V	516.3	VI	516,4	V!	516.5	VI

#### Accelerated LifeTest

Motorola's Accelerated Life Test (ALT) is a developmental process of rigorous laboratory testing that simulates years of field use. Motorola has a firm commitment to quality and reliability. These radios have been designed, manufactured and tested to achieve high levels of component and workmanship quality. Motorola radios are designed to minimize costly repairs and downtime.



MOTOROLA and the Stylized M Logo are registered in the U.S. Patent and Tradamark Office. All other product or service names are the property of their registered owners. 

Motorola, Inc. 2007.



## Sales Quotation

## **Electronic Communications of WV. Inc.**

Total Communications Sales and Service

DATE 6-15-2009

408 Old Goff MT. Rd. Cross Lanes WV, 25313 Phone 304-776-4091 Fax 304-776-7092 Toll Free in WV. (800) 570-4091

TO Division of Public Transit

SHIP TO

оту	ITEM#	DESCRIPTION	LIST PRICE	CONTRACT PRICE	CONTRACT EXTENDED
1	1	CM-300 Mobile Radio	647.00	500.00	500.00
1	2	HKN-9455 Power Control	22.00	16.00	16.00
1	3	HPN-4007 Power Supply	296.00	276.00	276.00
. 1	4	RMN-5068 Desk Microphone	120.00	102.00	102.00
1	5	RLN-5390 Tray and Speaker	81.00	76.00	76.00
3	6	L3276 Tone Remote Adapter	655.00	612,00	1836.00
1	7	DDN 6338 Radio Interface	72.00	70.00	70.00
1	8	DDN 6481 Punch Block	705.00	378.00	378.00
3	9	L3216 Remote	1280.00	1190.00	3570.00
1	10	4 Bay Dia Pole Antenna 65143		750.00	750.00
100	11	½ Hard-line Cable 429150	6.00	4.50	450.00
1	12	Hardware Package Includes Connectors and any extra cabling need to wire remotes to remote locations	59.00	59.00	59.00
1	13	Extended 3 Year Warranty	500.00	500.00	500.00
1	14	Labor to install Base, Antenna, and wire line remotes	1440.00	1440.00	1440.00
*	*	Warranty Covers Parts and labor on radio itself not labor to and from location or shipping to send back to factory for repair.			

 SUB TOTAL
 10023.00

 TAX
 10023.00



# MC SERIES

## **Deskset Controllers**



#### STANDARD FEATURES

- · Multiple models for various applications
  - Extended Local Control for controlling an on-site radio up to 1000 feet away
  - -Tone or DC Remote Control for controlling a station with 600 ohm telephone lines
- Multiple control points allow up to 10 units to operate in parallel
- Internal microphone, intercom, and speaker for convenient operation
- Push-to-talk (PTT) handset for private communications
- Monitor switch for monitoring channel activity before transmitting

#### PRODUCT OVERVIEW

The MC Series Desktop Controllers allow remote access to the functions of a compatible station (base station, repeater, or control station). These desktop controllers support tone, DC, and E&M signalling for keying and control of stations.

MC SERIES
Deskset Controllers

#### MC1000 BASIC MODEL (non-signaling) FEATURES

#### For Local Control Models

- Single Frequency and Single Station Control
- Push-to-Talk Handset
- Speaker
- Speaker on/off (receive audio is heard through handset and speaker simultaneously)
- Volume Control
- Full Duplex Capability
- Internal Mic (for use without handset)
- Transmit Button with LED

- Monitor Button with LED
- Front panel programming (easy setup no RSS required)
- Intercom between MC1000 units and stations
- · Operator cross mute
- 10 units can operate in parallel
- Parallel Operator Busy Indication
- 120 Vac 60 Hz Power Supply
- Can be wall mounted

#### For Tone and DC Control Models Only in addition to Local Features

- 4 Frequency Single Station Control
- 2- or 4-Wire Audio
- Takeover/Line Select allows a supervisory unit to override other parallel units or allows connection of two base stations for back-up control (Main/Alt operation)

#### MC2000 ADVANCED MODEL (signaling) FEATURES

#### • All MC1000 Basic Model features plus:

- 110/220 Vac 50/60 Hz Power Supply
- Parallel Status (Tone model only) .... Each deskset operator knows the selected frequency and status of the station
- Programmable Voice Delay ............... User can speak immediately after pressing PTT or Transmit bar without message truncation
- Desk Mic Compatible ...... Allows another choice of audio accessory
- MDC1200 Signaling and Paging..... Operator can selectively signal pagers, portables, or mobile radios Supports the following: (E/D; E = Encode, D = Decode)
  - PTT Unit ID (E/D) ...... Displays unit ID of caller (250 aliases)

  - Call Alert/Short Call Alert (E/D) ... Informs the user to call-in by sending a "page" to their portable or mobile
  - Status/Message (D)...... Displays received status and message codes
  - Radio Enable/Disable (E) ...... Allows operator to remotely enable and disable a lost or stolen portable

  - Emergency Alarm (D) ...... Flashing display, audible tone, and an output for external alarms can alert the console operator of emergency situations

  - Alert Tone ...... 3 alert tones are supported

MC SERIES Deskset Controllers

#### MC2000 ADVANCED MODEL (signaling) FEATURES (cont'd)

MODEL OIGH	amig/ EATORES (Conta)
Paging Encoder	Integrated paging encoder supporting 2 Tone, Quik-Call I & II, DTMF, 5 Tone, 6 Tone, GE99, NEC5, NEC6, Reach 1+1, Pulse and custom 2-tone with aliasing
• 18 Programmable Buttons	Allows for deskset flexibility. Button usage may include single button paging, fast access to paging or MDC1200 signalling, alert tones, frequency selection, speaker mute, relay control and wildcards
Frequency Control	. 16 Frequency Control (Tone) and 4 Frequency Control (DC) with alias names
DTMF Decode	. Allow ANI (Automatic Number Identification) or selective call mode of operation
Securenet Compatible	Allows control of coded/clear modes of operation on Motorola secure equipped stations
RSS Programming Available	Allows the console to be customized to fit customer requirements
External connectors	For power, RSS/printing, base station connections, and desk mic
• 2 line x 20 character	
backlit display	Displays important, easy to read information to the operator such as channel status, alias names, emergency ID's, status/message information and VU meter

#### MC2500 MULTI-CHANNEL MODEL FEATURES

#### • All MC2000 Advanced Model features plus:

4 channel control	Controls up to 4 radios or base stations. Includes ability for DC control on 1 channel
Individual channel select and instant transmit	Individual status indicators and control
Unselect speaker connector	Allows connection of unselect speaker to separate audio for ease of operation
Individual volume control	Each channel has individual volume control
All mute	Mutes audio on the unselected channels
Dedicated logging recorder output.	Fixed 600 Ohm output (no keying tones) with all audio summed for recording
Radio Patch	Patch any two channels

#### **ACCESSORIES**

#### For Extended Local Control

 Junction Box connects up to six local desksets to the station.
 When 7-10 desksets are operating in parallel, two junction boxes are required.

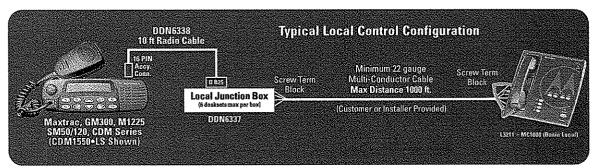
#### TONE AND DC REMOTE CONTROL ADAPTERS

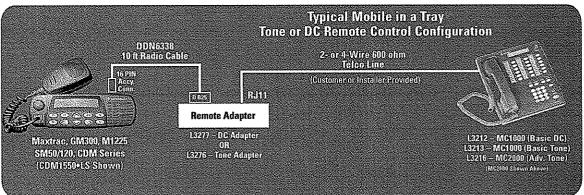
Tone and DC Remote Adapters allow local control base stations to be controlled remotely via a Tone or DC Remote Deskset. Each adapter will accept up to 10 desksets.

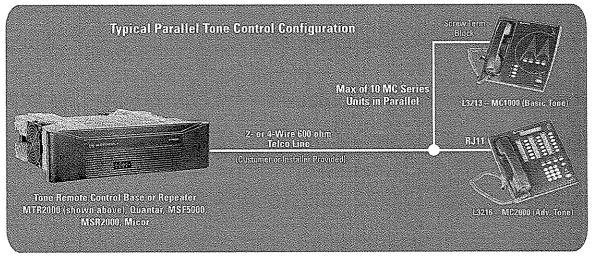
Tone (L3276)	DC (L3277)
LED Indicators for Power, Line PTT,	LED Indicators for Power, Line PTT,
Monitor, Squeich Detect, Accessory Port	Monitor, Squelch Detect, Accessory Por
and Desk Mic	F1, F2, F3 and F4
Local Desk Mic Port	N/A
16 Function Tone Decode	5 DC Current Detects
2- or 4-w	rire Audio
Accessory Port used for loca	l deskset or data applications
Accessible audio	level adjustments

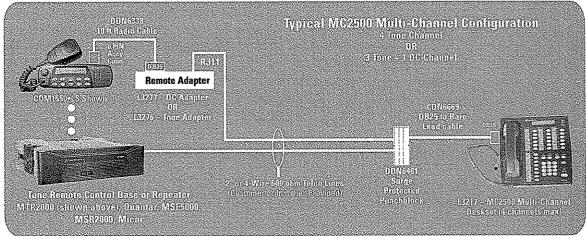
Rack mountable

MC SERIES Deskset Controllers









MC SERIES Deskset Controllers

	Local Deskset	DC Remote Deskset	Tone Remote Deskset
	MC1000 - L3211	MC1000 - L3212	MC1000 - L3213
		***************************************	MC2000 - L3216
**************************************		MC2500 - L3217	MC2500 - L3217
Dimension	3.75" H × 8.5"	W x 9.9" D (9.53 cm H x 21.59 cm V	V x 25,14 cm D)
Weight	And Provided And Provinces to Learning or Street to Management of Anny Street Anny Street Street Street Street	Maximum 3.75 lb. (1.7 kg)	
Temperature Range		32°F to 122°F (0°C to 50°C)	
Humidity		95% at 122°F (50°C) (non-condensing	3)
Power Input:	والمراجعة	والمنافذة المنافذة والمنافذة والمناف	
MC1000 Models		+12 Vdc/1 A max	
MC2000 Model		+12 Vdc/2.5 A Max	
MC2500 Models	4	+12 Vdc/1 A, -12 Vdc/0.2 A, +5 Vdc/2	A
Frequency Response	300 to	3300 Hz +3, -3 d8 @ less than 3% d	istortion
Hum and Noise		45 dB below rated output at any por	t .
Audio Distortion		Less than 3% THD	
Audio Output to Speaker		.8 W (1 W peak)	and the second
ine Impedance	P1000000000000000000000000000000000000	600 or 10 K Ohm, or differential	(1)=(======\(\delta\);\delta\);\delta\
Receive Audio Input	300 mv AC	Adjustable from -30 to +11 dBm	
Transmit Audio Output	80 mv AC	Adjustable from -30 to +11 dBm	
Maximum Number of Desksets		10 in Parallel	
Control Functions (Maximum):	***************************************	**************************************	d fol for the law principles are also as a second bull makes a beginning for the constraint of the bull makes a
MC1000 Models	PTT + Monitor	4 Freq Select + Monitor	4 Freq Select + Monitor
MC2000 Models	PTT + Monitor	4 Freq Select + Monitor	15 Freq Select + Monito
MC2500 Models		4 Freq Select + Monitor	15 Freq Select + Monitor
Number of Radios:			
MC1000 and MC2000 Models	1	1	1
MC2500 Models		1 Max	4 Max
Outputs and Inputs:		The Tip May I do by the beautiful to the second of the beautiful to the second of the beautiful to the second of t	
PTT Relay	Form C di	ry closure. 150 mA, 60 Vdc non-indu	ctive load.
Monitor/Aux Outputs	Form C di	ry closure. 150 mA, 60 Vdc non-indu	ctive load.
Aux Inputs	Opto-coupled inputs, 5	K Ohms impedance, 5 to 20 MA inp	ut current, unbalanced.
Recorder Port (MC2500 only)		Nominal output –10 dBm @ 600 Ohm	)
Auxiliary/Paging Input (MC2500	only) Nomina	al output –10 dBm, balanced 600 Ohi	m input
All Mute (MC2500 only)	-24	dB or full muting of unselected chan	nels,
	timer progr	ammable 1 to 255 seconds or infinite	e durations.

MC SERIES Deskset Controllers

	DC (L3277)		Tone (L3276)	
Dimensions	Approximately 8.2" \	N (20.8 cm) x	: 7.3" L (18.5 cm) x 1.3" H (3.3 cm)	
Weight	A	pproximately	1.55 lbs (.7 kg)	
Operating Temperature Range	-2:	-22°F to 140°F (-30°C to +60°C)		
Humidity	95%	at 122°F (50°C	C) (non-condensing)	
Power Input	10.5 to 16 Vdc max.; 250 mA 650 mA max.	\ typical	10.5 to 16 Vdc max.; 350 mA typical 650 mA max.	
Frequency Range	±3 dB from 300 to 3000 Hz @	1 KHz ref.	±3 dB from 300 to 3000 Hz @ 1 KHz ref. except at 2175 Hz notch filter	
Hum and Noise	Less	than –45 dB	below rated output	
Audio Distortion		Less than 3%	THD @ 1 KHz	
Radio Rx Input (from Radio)			). Jumper selectable to between range: ault) or 500 mVac to 4.5 Vac	
RadioTx Output (to Radio)		620s.	c). Jumper selectable to between range: alt) or 500 mVac to 800 mVac	
Line Rx Input (from consoles/de	sksets) –24 dBm t	o 0 dBm (non	ninal –10 dBm into 600Ω)	
LineTx Output (to consoles/des	ksets) –15 dBm to	+10 dBm (no	minal –10 dBm into 600Ω)	
Max. Number of Desksets Supp	orted	¥	10	
Control Functions (Max.)	tions (Max.) 4 Freq. + Monitor		15 Freg. + Monitor	
Input Tolerance	±20%		±2%	
DIGITAL JUNCTION BOX SPEC	FICATIONS	ė		
Dimension	8-2/16" W (20.5 cm	) x 8-1/4" L (2	21 cm) x 1-3/8" (3.5 cm)	
Weight	1.5 pounds (680 gra	ms)		
Audio Distortion	Less that 3% THD (	total harmoni	c distortion)	
AudioTransmit	0.78 Vac nominal			
Audio Receive	0.78 Vac nominal			
Data Interface	RS-485 standard	***************************************		
Frequency Response	€ ±3 dB from 300-30	00 Hz @ 1 kH	z ref	
Hum and Noise	Less than -45 dB b	elow rated <u>ဝွ</u> ဋ	itputs	
Humidity	95% at 122°F (50°C	) <u>(</u>		
Maximum distance between M Digital Junction Box and conso		eters) (50 feet	[15 meters] for RCH 3000)	
Maximum distance to digital ra	dio 50 feet (15 meters)			
Power Input	10.5 to 16 Vdc max	imum		
Temperature Range	32°F to 122°F (0°C	to 50°C)		
Paradignations authors to abrony without and	-	handark (and contact to be contact to a contact to be contact to a contact to be contact to a	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	

Specifications subject to change without notice.





## **Coaxial Cable**



## PRODUCT SPECIFICATION

## LDF4-50A

Standard coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-8800 MHz)

#### **CHARACTERISTICS**

Attenuation and Average Power Ratings					
Frequency (MHz)	Attenuation (dB/100ft)	Attenuation (dB/100m)	Average Power (kW)		
800	1.968	6.456	1.18		
824	1.999	6.559	1.16		
860	2.046	6.712	1.14		
894	2.089	6.855	1.11		
960	2.171	7.124	1.07		
1000	2.220	7.283	1.05		
1250	2.507	8.225	0.93		
1500	2.771	9.092	0.84		
1640	2.911	9.551	0.80		
1700	2.970	9.743	0.78		
1800	3.066	10.057	0.76		
2000	3.251	10.666	0.72		
2100	3.341	10.960	0.70		
2200	3.429	11.250	0.68		
2300	3.516	11.534	0.66		
2500	3.685	12.089	0.63		
2700	3.849	12.627	0.60		
3000	4.086	13.406	0.57		
3300	4.315	14.156	0.54		
3400	4.389	14.400	0.53		
4000	4.820	15.814	0.48		
4900	5.425	17.797	0.43		
5000	5.489	18.009	0.42		
5200	5.617	18.429	0.41		
5300	5.680	18.636	0.41		
5600	5.868	19.251	0.40		
6000	6.113	20.054	0.38		
6100	6.173	20.252	0.38		
6600	6.469	21.224	0.36		
8000	7.262	23.824	0.32		
8800	7.694	25.243	0.30		



## **Coaxial Cable**



### PRODUCT SPECIFICATION

## **LDF4-50A**

Standard coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-8800 MHz)

#### **CHARACTERISTICS**

L4PDM-RC	7-16 DIN Male	Ring Flare	Captivated	Plated
L4PDR	7-16 DIN Male	Right Angle	Solder	Plated
L4PDR-C	7-16 DIN Male	Right Angle	Captivated	Plated
L4PNF	N Female	N/A	Solder	Plated
L4PNF-A	N Female	N/A	Solder	Plated
L4PNF-BH	N Female	Bulkhead	Solder	Plated
L4PNF-PM	N Female	Panel Mount	Solder	Plated
L4PNF-RC	N Female	Ring Flare	Captivated	Plated
L4PNM-H	N Male	Hex Head	Solder	Plated
L4PNM-HA	N Male	Hex Head	Solder	Plated
L4PNM-RC	N Male	Ring Flare	Captivated	Plated
L4PNR-H	N Male	Right Angle	Solder	Plated
L4PNR-HC	N Male	Right Angle	Captivated	Plated

**Attenuation and Average Power Ratings** 

Frequency (MHz)	Attenuation (dB/100ft)	Attenuation (dB/100m)	Average Power (kW)	
0.5	0.045	0.149	40.00	
1	0.064	0.211	36.11	
1.5	0.079	0.259	29.46	
2	0.091	0.299	25.50	
10	0.205	0.672	11.35	
20	0.291	0.954	7.99	
30	0.357	1.172	6.51	
50	0.463	1.520	5.02	
88	0.619	2.031	3.76	
100	0.661	2.168	3.52	
108	0.688	2.256	3.38	
150	0.815	2.673	2.85	
174	0.880	2.887	2.64	
200	0.946	3.103	2.46	
300	1.169	3.835	1.99	
400	1.360	4.462	1.71	
450	1.447	4.748	1.61	
500	1.530	5.021	1.52	
512	1.550	5.085	1.50	
600	1.686	5.533	1.38	
700	1.831	6.009	1.27	

**Customer Support Center:** 

From North America: 1-800-255-1479 International: +1-708-873-2307

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## **Coaxial Cable**

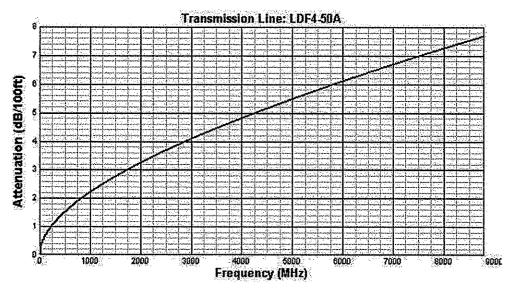


#### PRODUCT SPECIFICATION

## **LDF4-50A**

Standard coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-8800 MHz)

#### **CHARACTERISTICS**



#### **Standard Conditions:**

For Attenuation. VSWR 1.0, ambient temperature 20°C (68°F). For Average Power. VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F); no solar loading.



## **Sales Quotation**

## Electronic Communications of WV. Inc.

Total Communications Sales and Service

DATE 6-15-2009

408 Old Goff MT. Rd. Cross Lanes WV, 25313 Phone 304-776-4091 Fax 304-776-7092 Toll Free in WV. (800) 570-4091

TO Division of Public Transit

SHIP TO

SALESPERSON	JOB	SHIPPING METHOD	SHIPPING TERMS	DELIVERY DATE	PAYMENT TERMS	DUE DATE
Dustin Osborne	Repeater	Standard	FOB	15 days ARO	Net 30	Net 30

QTY	ITEM #	DESCRIPTION	LIST PRICE	CONTRACT PRICE	CONTRACT EXTENDED
1	1	Motorola MTR 2000 Repeater 100 Watt	1020.00	800.00	800.00
		Power Option X540	3175.00	2375.00	2375.00
, 1	2	Motorola Software X597	2975.00	2235.00	2235.00
1	3	Motorola Repeater Option X580	INC	INC	INC
1	4	Sinclair UHF Duplexer		1300.00	1300.00
1	5	Motorola X741 Rack	200.00	150.00	150.00
, 1	6	4 Bay Dia Pole Antenna 65143		750.00	750.00
150	7	Andrew LDF5-50A Coax		8.25	1237.50
1	8	Hardware Package includes connectors and any other accessories needed to assist in install of repeater and antenna		150.00	150.00
1	6	Application and FCC License Fees	1200.00	1200.00	1200.00
1	7	Labor to Install Repeater	1440.00	1440.00	1440.00
1	8	Extended 3 year Warranty	800.00	800.00	800.00
*	**	Warranty Covers Parts and labor on radio itself not labor to and from location or shipping to send back to factory for repair.	***************************************		
*	***	Licensing may take 6 months to a year to receive from FCC will not be able to switch to new repeater till then. All other product will be in with in 90 days.			
*	***	1			

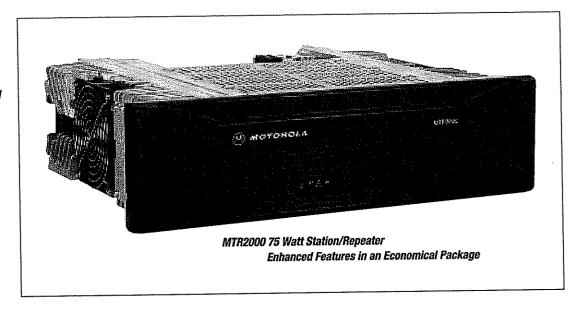
SUB TOTAL	12437.50
TAX	
TOTAL	12437.50

# MTR2000

800/900 MHz Station/Repeater/Receiver

MTR2000 Station/Repeater available in:

- ► Conventional: Local Operation Tone Remote Control Spectra-TAC Voting
- ► Trunking: SMARTNET and SmartZone
- ➤ Continuous Duty



## FEATURES/BENEFITS

## Provides Unmatched Flexibility in a Compact Design

- ▶ Analog operation in conventional systems
- Analog operation in SMARTNET or SmartZone trunking systems
- Software based design allows for future system applications
- ▶ 75-20 Watt variable power models
- ➤ Compact dimensions, 3 rack units (5.25" or 13.3 cm), utilize expensive site space efficiently
- 12.5 or 25 kHz programmable channel spacing (800 MHz)
- ▶ 12.5 kHz channel spacing (900 MHz)

## **Shortens Installation and Maintenance Time**

- Programming and diagnostic testing performed through a personal computer
- ▶ Standard EIA 19" rack mount configuration
- ▶ Lightweight (40 lbs/19 kg)
- Functionally separate modules: Field Replaceable Units (FRU)
- Software based design simplifies upgrades

#### Contributes to Maximizing System Up-Time

- Microprocessor based design with integrated DSP capability
- ► Continuous duty cycle operation
- Self testing monitors station performance
- Switching power supply functions over a wide range of voltages and frequencies

# MTR2000 Station/Repeater

## **SPECIFICATIONS**

				<del></del>
	G	ENERAL SPE	CIFICATIONS	
Model Number:	T5544, T5731			
Application	System Software Option Power/Bs	nd Option	RF Power Output	Receiver Band Option
	X450 (851- X460 (935-		75-20 75-20	X600 (806-825 MHz) X663 (896-901 MHz)
Conventional Analog	X697	G-60 les ig	10 20	years lead and the inf
SMARTNET 6809 Analog Trunking	X997			
SmartZone 6609 Analog Trunking	X51			
No. of Frequencies:	Up to 32	Modulation:	FM	
Frequency Generation:	Synthesized	Temperature Range:	-30°C to +60°C°	
Channel Spacing:	12.5 kHz/25 kHz 800 MHz	Antenna Connectors:	Transmit and Receive, Type "N* Female	
	12.5 kHz 900 MHz			
Mode of Operation:	Simplex / Semi-duplex / Duplex			
Input Voltage AC:	85-264VAC, 47-63 Hz			
Optional DC Only Operation	28.6 VDC (75 Watt station)			
Operational Battery Revert:	24 VDC (75-20 Watt stations) Output power n	nay be reduced up to 3 dB in	battery revert mode to conserve battery life.	
	Dimensions		Weight	
All Stations and Receivers	5.25 x 19 x 16.5 in. † (133 x 483 x 419 mm)		40 lbs † (19 kg)	· · · · · · · · · · · · · · · · · · ·
Alternative Cablnet Enclosures				
30" Indoor Cabinet	30 x 22 x 20 in. (762 x 559 x 508 mm)		66 lbs** (30 kg)	
46" Indoor Cabinet	46 x 22 x 20 in. (1168 x 559 x 508 mm)		75 lbs** (34 kg)	
60* Indoor Cabinet	60 x 22 x 20 in. (1524 x 559 x 508 mm)		102 lbs** (46 kg)	
30" Modular Rack	30 x 22 x 20 in. (762 x 569 x 508 mm)		52 lbs** (24 kg)	
45" Modular Rack	46 x 22 x 20 in. (1168 x 559 x 508 mm)		59 lbs** (27 kg)	
52" Modular Rack	60 x 22 x 20 in. (1524 x 559 x 508 mm)		61 lbs** (28 kg)	
Anolies to standard station configuration	"Temperature specification applies to one stat	inn nor cabinot only See Pro-	fuct Planner for details ** Enclosure Only	

800/900 MHz INPUT POWER (VARIES WITH OPTIONS)					
DC Only Operation (x12) Option) Neg. Gnd. or Battery Revert					
	AC Line 117 Volts / 229 Volte	28 VDC			
Standby	0.7A/0.4A	1A			
76 W - Transmit	4.5A / 2.5A	800 MHz; 10A / 900 MHz; 11A			

	600 MHz	900 MHz
Frequency - 75 Watt:	851-870 MHz	935-940 MHz
Bandwidth:	Full Band	Full Band
Output Impedance:	50 Ohms	50 Ohms
Frequency Stability: (for temperature and voltage variation)	1.0 PPM/External Ref (optional)	External Reference Required
Intermodulation Attenuation:	50 dB	50 dB
Maximum Deviation (RSD):	. F.141	112
25 kHz: 12.5 kHz:	±5 KHz ±2.5 KHz	NA ±2.5 kHz
Audio Sensitivity:	-20 dBm to 0 dBm variable	~20 dBm to 0 dBm variable
Spurious and Harmonic Emissions Attenuation:	80 dBc	80 oBc
FM Hum and Noise: (750µs de-emphasis)	300 to 3000 Hz bandwidth, 60% RSD	300 to 3000 Hz bandwidth, 60% RSD
25 kHz: 12.5 kHz:	50 dB nominal 45 dB nominal	NA 45 dB nominal
Audio response:	+1,-3 dB from 6 dB per octave preemphasis; 300-3000 Hz referenced to 1000 Hz at line input	+1,-3 dB from 6 dB per octave preemphasis; 300-3000 Hz referenced to 1000 Hz at line input
Audio distortion:	Less than 3% at 1000 Hz; 60% RSD	Less than 3% at 1000 Hz; 60% RSD
Emission Designators*:	16K0F3E, 13K6F1D*,	11K0F3E, 8K60F1D*

***************************************	Frequency - Wideband:
	Bandwidth:
	Selectivity:
	25 kHz:
e Required	12.5 kHz:
	Sensitivity 12 dB SINAD
	Signal displacement Bandwidth:
	(Off Channel Acceptance) (12.5/25 kHz)
	Frequency Stability:
n variable	(for temperature and voltage variation)
	Intermodulation Rejection:
	(Intermodulation) (12.5 and 25 kHz)
andwidth,	Spurious and Image Response Rejection:
	Audio Response:
	Maulo Neapolise.
iß per octave	
+3000 Hz	
0 Hz	Audio Distertion:
000 Hz;	Line output:
ID.	FM Hum and Noise:
	(750µs de-emphasis)
	25 kH2:

*Ne	Emission Designators*: w FCC emission designators are the result of	16K0F3E, 13K6F1D*, of recent FCC policy changes.	11K0F3E, 8K60F1D*		FM Hum and Noise: (750µs de-emphasis) 25 kH2: 12.5kH2: RF Input Impedance:	1000 Hz tone @ 6 50 dB nominal 45 dB nominal 50 Ohms	50% RSD
			FCC TYP	E ACCEPT	TANCE		

	FCC T	YPE ACCEPTANCE	
Frequency Range in MHz	Туре	Power Output in Watts	Type Acceptance Number
851-870	Transmitter	76-20	ABZ89FC5785
806-825	Receiver	NA NA	ABZ89FR5786
935-940	Transmitter	76-20	ABZ89FC5788
896-901	Receiver	NA NA	ABZ89FR5789

Industry Canada Approval: Type T554X 109195112

Note: Specifications per TIA/EIA 603.

Specifications subject to change without notice.



#### **Support Services** Wherever Motorola sells, our product is backed by service. Our products are serviced throughout the world by a wide network of company or authorized independent distributor service organizations.





#### **MOTOROLA**

Motorola U.S.A. 1301 E. Algonquin Road Schaumburg, Illinois 60196 In the U.S. call: 1-800-247-2346

Motorola Canada Limited 3900 Victoria Park Avenue North York, Ontario M2H 3H7 In Canada call: 1-800-268-5758

Outside the U.S. and Canada call: (847) 538-6602

RECEIVER 800 MHz

806-825 MHz

1 kHz/2kHz

1.0 PPM/External Ref (optional)

+1,-3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz at line input

Less than 3% at 1000 Hz; 60 % RSD

-20 dBm to 7 dBm, @ full system deviation @ 1 kHz

Full Band

80 dB

70 dB

0.35µV

85 dB

000 MHz

Full Band

70 dB

85 dB

90 d8

at line input Less than 3% at 1000 Hz;

60 % RSD -20 dBm to 7 dBm, @ full

1 kHz/NA

External Reference Required

+1,-3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz

system deviation @ 1 kHz 1000 Hz tone @ 60% RSD 45 dB nominal 50 Ohms

896-901 MHz

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Motorola is an Equal Employment Opportunity/Affirmative Action Employer



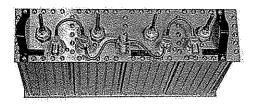
**Duplexers UHF** and Tetra Duplexer Q3220E Series

Q3220E

### Duplexer, Q-Circuit, rack mount, 406-512 MHz

- · Compact design provides excellent performance while conserving rack space
- Isolation of greater than 75 dB at 5 MHz separation and less than 0.8 dB insertion loss
- · Rugged Res-Lok design reduces inter-cavity cabling

Designed for operation in the 406-512 MHz band, this compact 4-cavity duplexer provides excellent performance while conserving valuable rack space. At 5 MHz separation, this unit provides isolation in excess of 75 dB with less than 0.8 dB insertion loss.



Region **United States** Europe, Middle East and Africa Canada and rest of the world Caribbean and Latin America Canada: 1 800 263 3238 Telephone USA: 1 800 288 2763 International: +44 (0) 1223 42 03 03 International: 1 800 263 3275 International: +1 905 727 0165 E-mail salesusa@sinctech.com salesuk@sinctech.com salesla@sinctech.com

Product Specification Sheet

O3220F

Issue: 42

salescan@sinctech.com

Dated: 20-04-09 Dated: 20-12-02



# Duplexers UHF and Tetra Duplexer Q3220E Series

Notes

\*1

\*1 : Referenced to 50 ohms

**Electrical Specifications** 

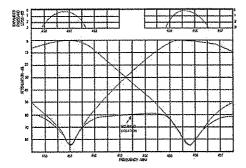
Ciectifical Operitications			
Frequency Range 1 (F1)	MHz	406 to 512	
Isolation (min)	dB	75	
Impedance	Ω	50	mi brisvinty/IR
Input VSWR (max)		1.5:1	alan(home)
Average power input (max)	W	350	
Frequency separation (min)	MHz	5	
Insertion loss (max)	dB	0.8	

**Ordering Information** 

Specify transmit and receive frequencies when ordering.

**Mechanical Specifications** 

Connectors	territoria de la companya de la comp	N (female)
Length/ Height	in (mm)	4.2 (106)
Width	in (mm)	19 (483)
Depth	in (mm)	16.3 (414)
Shipping dimensions	in (mm)	19x8x22 (483x203x559)
Weight	lbs (kg)	13.5 (6.1)
Actual Shipping weight	lbs (kg)	25 (11.4)
Finish	, , , , , , , , , , , , , , , , , , , ,	chromate conversion



Environmental Specifications
Temperature range

Temperature range	°F (°C)	-40 to +140 (-40 to +60)

www.sinctech.com

# Product Specifications



#### LDF5-50A

LDF5-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 7/8 in, black PE jacket



NOTE: Regular production of this product ends December 31, 2007

#### CHARACTERISTICS

#### Construction Materials

Jacket Material PE
Dielectric Material Foam PE
Flexibility Standard
Inner Conductor Material Copper tube
Jacket Color Black

Outer Conductor Material Corrugated copper

#### Dimensions

 Nominal Size
 7/8 in

 Cable Weight
 0.33 lb/ft | 0.49 kg/m

 Diameter Over Dielectric
 23.622 mm | 0.930 in

 Diameter Over Jacket
 26.162 mm | 1.030 in

 Inner Conductor OD
 8.890 mm | 0.350 in

 Outer Conductor OD
 24.892 mm | 0.980 in

**Electrical Specifications** 

Cable Impedance 50 ohm ± 1 ohm
Capacitance 23 pF/ft | 75 pF/m

dc Resistance, Inner Conductor 0.320 ohms/kft | 1.049 ohms/km dc Resistance, Outer Conductor 0.360 ohms/kft | 1.181 ohms/km

dc Test Voltage 6000 V Inductance 0.187  $\mu$ H/m | 0.057  $\mu$ H/ft

Insulation Resistance 100000 MOhm
Jacket Spark Test Voltage (rms) 8000 V
Operating Frequency Band 1 - 5000 MHz
Peak Power 91.0 kW

Peak Power
Pulse Reflection
Velocity
91.0 F
91.0 F
91.0 F
91.0 F
91.0 F

### **Environmental Specifications**

Installation Temperature

-40 °C to +60 °C (-40 °F to +140 °F)

Operating Temperature

-55 °C to +85 °C (-67 °F to +185 °F)

Storage Temperature

-70 °C to +60 °C (-94 °F to +140 °F)

#### Mechanical Specifications

Bending Moment 22.4 N-m | 16.5 ft lb

# Product Specifications



Flat Plate Crush Strength Minimum Bend Radius, Multiple Bends Minimum Bend Radius, Single Bend Number of Bends, minimum Number of Bends, typical Tensile Strength 80.0 lb/in | 1.4 kg/mm 254.00 mm | 10.00 in 127.00 mm | 5.00 in 15 50 159 kg | 350 lb

#### Standard Conditions

Attenuation, Ambient Temperature 20
Average Power, Ambient Temperature 40
Average Power, Inner Conductor Temperature 10

20 °C | 68 °F 40 °C | 104 °F 100 °C | 212 °F

#### Return Loss

Frequency Band	VSWR	Return Loss (dB)
806-960 MHz	1.13	24.30
1700-2000 MHz	1.13	24.30

#### Attenuation

Frequency (MHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)
0.5	0.025	0.081	91.00
1	0.035	0.115	79.19
1.5	0.043	0.141	64.60
2	0.05	0.163	55.89
10	0.112	0.366	24.81
20	0.159	0.521	17.44
30	0.195	0.641	14.18
50	0.254	0.833	10.91
88	0.34	1.116	8.14
100	0.364	1,193	7.62
108	0.378	1.242	7.32
150	0.449	1,475	6.16
174	0.486	1.595	5.70
200	0.523	1.716	5.30
300	0.649	2.13	4.27
400	0.758	2,486	3.66.
450	0.808	2.65	3.43
500	0.855	2.806	3,24
512	0.866	2.843	3.20
600	0.945	3.1	2.93
700	1.029	3.375	2.69
800	1.107	3,633	2.50
824	1.126	3.694	2.46
894	1.178	3.865	2.35
960	1.226	4.022	2.26
1000	1.254	4.115	2.21
1250	1,423	4.667	1.95
1500	1.578	5.178	1.76
1700	1.696	5,565	1.63
1800	1.753	5.751	1.58
2000	1.863	6.114	1.49
	1.917	6,29	1.44
2100			1.44

# Product Specifications



2200	1.97	6.464	1.41
2300	2.022	6.634	1.37
2500	2.124	6.968	1.30
2700	2.223	7.293	1.25
3000	2.366	7.764	1.17
3400	2.551	8,369	1.09
4000	2.815	9.235	0,98
5000	3.228	10.59	0.86

## Regulatory Compliance/Certifications

Agency RoHS 2002/95/EC Classification Compliant



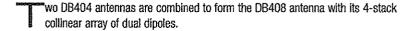
#### Experied Dietelo Cirridonnii Ambenine

406 - 512 MHz / 66 or 78 dBd Gam



DB408

50:512 MHz



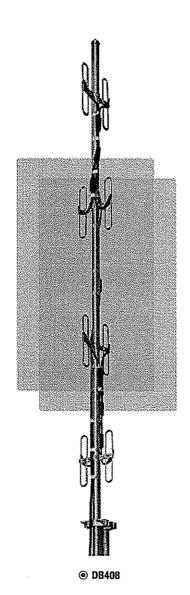
- Extremely Rugged Resists winds up to 125 mph (201 km/hr).
- Broad Response With 14 to 24 MHz bandwidth, this antenna is suitable for duplex operation.
- Moisture Resistant VAPOR-BLOC® cable harness provides weather protection and assures inphase signal distribution to all elements.
- © Circular Pattern DB408 has dual dipoles positioned at 90° angles from each other.
- Offset Pattern DB408L has all dual dipoles mounted in line, collinearly, on the mast.
- Side Mounting Either model can be side mounted, resulting in significantly different patterns.
- Dual Models Two DB404 antennas on the same mast that function independently.
- Field Changeable Patterns can be adjusted with ordinary hand tools.
- Lightning Resistant Radiators operate at DC ground, and the aluminum mast, with its pointed top, provides a low resistance discharge path to the tower or ground system.

ELECTRICAL DATA	
Frequency Ranges – MHz	A = 406-420, B = 450-470, C = 470-488, D = 488-512, E = 482-494
Bandwidth	Same as above
VSWR	1.5 to 1 or less
Nominal Impedance - Ohms	50 .
Gain (over half-wave dipole) – dBd	6,6 or 7.8
Rated Power Input - Watts	250
Vertical Beamwidth (half-power)	14"
Decoupling Between Antennas (dual) — dB	30 mintmum
Lightning Protection	Direct ground
Standard Termination	Captive Type N-Male attached to end of flexible lead.

MECHANICAL DATA	
Mast (aluminum) — in. (mm) Radialing Elements (aluminum) — in. (mm)	1.75 (44.45) 00 with 0.062 (1.575) to 0.125 (3.175) wall 0.375 (9.525) 0D with 0.058 (1.473) wall
Maximum Exposed Area (flat plate equivalent) ft² (m²)	1.9 (.177)
Wind Rating:* Survival w/o ice - mph (km/hr) Survival with 0.5" (12.7 mm) Radial ice - mph (km/hr)	>125 (201) 85 (137)
Lateral Thrust at 100 mph (161 km/hr) — lbf (N)	76 (338)
Bending Moment at Top Clamp at 100 mph (161 km/hr) — ft. lbs. (kg m)	250 (34.6)
Overall Length (450-470 MHz) – ft. (m) Net Welght (w/clamps) – ibs. (kg) Shipping Weight (w/clamps) – ibs. (kg)	9.42 (2.87) 17 (7.71) 29 (13.15)
Mounting Clamps (Galv. steel)	DB365-OS

<sup>\*</sup> Top mounted antenna. Wind rating is greatly increased when antenna is side mounted. Calculation of wind survivability does not include damage due to flying debris.

NOTE: The mechanical specifications are degraded for the antenna covering the 120-150 MHz band.



#### ORDERING INFORMATION

Use model number for correct frequency and specify termination if non-standard. Order DB408 for omni pattern, DB408L for offset Pattern, DB408D for dual antennas with omni patterns. DB365-OS Clamps are included. Order DB5012 Side Mount Kit if needed. Other size clamps can be special ordered. Examples: DB408-B or DB408L-B for 450-470 MHz range. Order jumper cable separately, if desired.

NOTE: DB408D has two feed lines and each antenna has 3.8 or 5 dBd gain, 406-512 MHz.



80-512 MHz

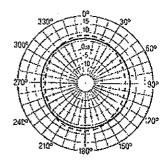
## Exposed Dipole Quasi-Omni Antenna

406 - 512 MHz. / 6.6 or 7.8 dBd Gain

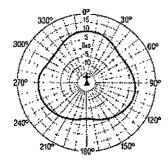
DB408

#### SIDE MOUNTING

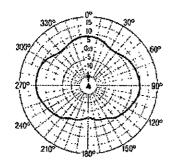
Typical pattern shape of the antenna side mounted on a tower with an 18" (457.2 mm) face. The patterns for 12" (304.8 mm) and 24" (609.6 mm) towers will be similar.



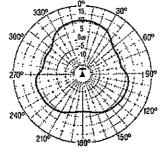
Morizontal Radiation Pattern DB408(——) and DB408L(———)



@ DB408 (Omni) mounted on side of tower



DB408i. elements pointed toward tower



DB408L elements broadside to tower

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