CITY OF SAN ANTONIO

PURCHASING DIVISION, FINANCE DEPARTMENT

FORMAL REQUEST FOR OFFER ("RFO") NO. 6100008569:

Professional Services Agreement for Testing of Handheld Radio and Lapel Microphone Systems

Responses may be submitted by any of the following means:
Hard copy in person or by mail to the physical address below. Please follow the instructions provided in Section 003 of this RFO.

Address for hard copy responses:

Physical Address:
Purchasing Division, Finance Department
IT Procurement Office
515 S. Frio Street
San Antonio, Texas 78207

Mailing Address:
Finance Department
IT Procurement Office
P.O. Box 839966
San Antonio, Texas 78283-3966

RFO No.: 6100008569

Southwest Research Institute

6220 Culebra Road

San Antonio, TX 78238-5166

Bid Bond: Performance Bond: Payment Bond: Other:

See Supplemental Terms & Conditions for information on these requirements.

Affirmative Procurement Initiative: DBE / ACDBE Requirements:

See Instructions for Offerors and Attachments sections for more information on these requirements.

Staff Contact Person: William Flint, Procurement Specialist III, P.O. Box 839966, San Antonio, TX 78283-3966
Email: william.flint@sanantonio.gov

Fax Number: 210-207-4040

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003 - INSTRUCTIONS FOR OFFERORS

Submission of Offers.

Submission of Hard Copy Offers. Submit one original offer, signed in ink, and two copies of the offer enclosed in a sealed envelope addressed to the IT Procurement Office, Purchasing Division, Finance Department at the address and by the due date provided on the Cover Page. The name and address of offeror, the offer due date and RFO number and title shall be marked on the outside of the envelope(s). All times stated herein are Central Time. Any offer or modification received after the time and date stated on the Cover Page shall be rejected.

Please review and complete all required sections, sign and return an electronic copy of the original via email to william.flint@sanantonio.gov . Mail the original executed RFO to the physical address below:

Attn: William Flint
Physical Address:
Purchasing Division, Finance Department
IT Procurement Office
515 S. Frio Street
San Antonio, Texas 78207

{Please mail original as per email instructions. Thanks.}

Modified Offers. This Section Left Blank Intentionally.

Certified Vendor Registration Form. If Offeror has not completed the City's Certified Vendor Registration (CVR) Form, Offeror is required to do so prior to the due date for submission of offers. The CVR form may be accessed at http://www.sanantonio.gov/purchasing/. Offerors must identify the correct name of the entity that will be providing the goods and/or services under the contract. No nicknames, abbreviations (unless part of the legal title), shortened or short-hand names will be accepted in place of the full, true and correct legal name of the entity.

Alternate Offers. This Section Left Blank Intentionally.

Catalog Pricing. This Section Left Blank Intentionally.

Restrictions on Communication.

Offerors are prohibited from communicating with: 1) elected City officials and their staff regarding the RFO or offers from the time the RFO has been released until the contract is posted as a City Council agenda item; and 2) City employees from the time the RFO has been released until the contract is awarded. These restrictions extend to "thank you" letters, phone calls, emails and any contact that results in the direct or indirect discussion of the RFO and/or offer submitted by Offeror. Violation of this provision by Offeror and/or its agent may lead to disqualification of the offer from consideration.

Exceptions to the restrictions on communication with City employees include:

Offerors may ask verbal questions concerning this RFO at the Pre-Submittal Conference.

Offerors may submit written questions, or objections to specifications, concerning this RFO to the Staff Contact Person listed on the Cover Page on or before calendar days prior to the date offers are due. Questions received after the stated deadline will not be answered. Questions submitted and the City's responses will be posted with this solicitation. All questions shall be sent by e-mail to william.flint@sanantonio.gov.

Offerors may provide responses to questions asked of them by the Staff Contact Person after responses are received. The Staff Contact Person may request clarification to assist in evaluating the Offeror's response. The information provided is not intended to change the offer response in any fashion. Such additional information must be provided within two business days from City's request.

Offerors and/or their agents are encouraged to contact the Small Business Office of the International and Economic Development Department for assistance or clarification with issues specifically related to the City's Small Business

Economic Development Advocacy (SBEDA) Program policy and/or completion of the SBEDA form (s), if any. Contacting the Small Business Office regarding this RFO after the due date is not permitted. If this solicitation contains Affirmative Procurement Initiatives, it will be noted on the Cover Page.

If this solicitation contains DBE/ACDBE requirements, respondents and/or their agents may contact the Aviation Department's DBE/ACDBE Liaison Officer for assistance or clarification with issues specifically related to the DBE/ ACDBE policy and/or completion of the required form(s). Point of contact is Ms. Lisa Brice, who may be reached via telephone at (210) 207-3505 or through e-mail at lisa.brice@sanantonio.gov. Respondents and/or their agents may contact Ms. Brice at any time prior to the due date for submission of bids. Contacting her or her office regarding this RFO after the due date is not permitted. If this solicitation contains DBE/ACDBE requirements, it will be noted on the Cover Page.

Pre-Submittal Conference. This Section Left Blank Intentionally.

Changes to RFO.

Changes to this RFO made prior to the offer due date shall be made directly to the original RFO. Changes are captured by creating a replacement version each time the RFO is changed. It is Offeror's responsibility to check for new versions until the offer due date. City will assume that all offers received are based on the final version of the RFO as it exists on the day offers are due.

No oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the RFO.

Preparation of Offers.

Any ambiguity in the offer as a result of omission, error, unintelligible or illegible wording shall be construed in the favor of City.

Correct Legal Name. If an Offeror is found to have incorrectly or incompletely stated the name of the entity that will provide goods and/or services, the City may request a revision of the offer.

Line Item Offers. Any offer that is considered for award by each unit or line item must include a price for each unit or line item for which Offeror wishes to be considered.

All or None Offers. This Section Left Blank Intentionally.

Change Orders. In order to comply with Texas law governing purchases made by municipalities, the following rules shall govern all change orders made under this contract.

Any change orders that become necessary during the term of this contract as a result of changes in plans, specifications, quantity of work to be performed, materials, equipment or supplies to be furnished must be in writing and conform to the requirements of City Ordinance 2011-12-08-1014, as hereafter amended.

Any other change will require approval of the City Council, City of San Antonio.

Changes that do not involve an increase in contract price may be made by the City's Chief Technology Officer (CTO).

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated herein.

Delivery Dates. Proposed delivery dates must be shown in the offer form where required and shall include weekends and holidays, unless specified otherwise in this RFO. Proposed delivery times must be specific. Phrases such as "as required", "as soon as possible" or "prompt" may result in disqualification of the offer. Special delivery instructions, if any, may be found in the Specifications / Scope of Services section of this document, or in the Purchase Order.

Tax Exemption. The City of San Antonio is exempt from payment of federal taxes, and State of Texas limited sales excise and use taxes. Offerors must not include such taxes in offer prices. An exemption certificate will be signed by City where applicable upon request by Offeror after contract award.

Samples, Demonstrations and Pre-award Testing. This Section Left Blank Intentionally.

Estimated Quantities for Annual Contracts.

Designation as an "annual" contract is found in the contract's title on the Cover Page of this document. The quantities stated are estimates only and are in no way binding upon City. Estimated quantities are used for the purpose of evaluation. City may increase or decrease quantities as needed. Where a contract is awarded on a unit price basis, payment shall be based on the actual quantities supplied.

Offerors shall thoroughly examine the drawings, specifications, schedule(s), instructions and all other contract documents.

Offerors shall make all investigations necessary to thoroughly inform themselves regarding plant and facilities for delivery of material and equipment, or conditions and sites/locations for providing goods and services as required by this RFO. No plea of ignorance by Offeror will be accepted as a basis for varying the requirements of City or the compensation to Offeror.

Confidential or Proprietary Information. All offers become the property of City upon receipt and will not be returned. Any information deemed to be confidential by Offeror should be clearly noted; however, City cannot guarantee that it will not be compelled to disclose all or part of any public record under the Texas Public Information Act, since information deemed to be confidential by Offeror may not be considered confidential under Texas law, or pursuant to a Court order. Pricing may be tabulated and posted to City's website, so shall not be considered proprietary or confidential.

Costs of Preparation. Offeror shall bear any and all costs that are associated with the preparation of the Offer, attendance at the Pre-Submittal conference, if any, or during any phase of the selection process.

Rejection of Offers. This Section Left Blank Intentionally.

Changes to Offer Form. Offers must be submitted on the forms furnished. Offers that change the format or content of City's RFO may be rejected.

Withdrawal of Offers. This Section Left Blank Intentionally.

Evaluation and Award of Contract. This Section Left Blank Intentionally.

Inspection of Facilities/Equipment. This Section Left Blank Intentionally.

Prompt Payment Discount. If Applicable to your business practices.

Provided Offeror meets the requirements stated herein, City shall take Offeror's offered prompt payment discount into consideration. The evaluation will not be based on the discount percentage alone, but rather the net price as determined by applying the discount to the offer price, either per line item or total offer amount. However, City reserves the right to reject a discount if the percentage is too low to be of value to City, all things considered. City may also reject a discount if the percentage is so high as to create an overly large disparity between the price City would pay if it is able to take advantage of the discount and the price City would pay if it were unable to pay within the discount period. City may always reject the discount and pay within the 30 day period, at City's sole option.

City will not consider discounts that provide fewer than 10 days to pay in order to receive the discount.

For example, payment terms of 2% 5, Net 30 will NOT be considered in offer evaluations or in the payment of invoices. However, payment terms of 2% 10, Net 30 will result in a two percent reduction in the offer price during offer evaluation, and City will take the 2% discount if the invoice is paid within the 10 day time period.

Prohibited Financial Interest. The Charter of the City of San Antonio and its Ethics Code prohibit a City officer or employee, as those terms are defined in the Ethics Code, from having a financial interest in any contract with City or any City agency such as City-owned utilities. An officer or employee has a "prohibited financial interest" in a contract with City or in the sale to City of land materials, supplies or service, if any of the following individual(s) or entities is a party to the contract or sale: the City officer or employee; his parent, child or spouse; a business entity in which he or his parent, child or spouse owns ten (10) percent or more of the voting stock or shares of the business entity, or ten (10) percent or more of the fair market value of the business entity; or a business entity in which any individual or entity above listed is a subcontractor on a City contract, a partner or a parent or subsidiary business entity.

Conflict of Interest. State of Texas Conflict of Interest Questionnaire (Form CIQ). Chapter 176 of the Texas Local Government Code requires that persons, or their agents, who seek to contract for the sale or purchase of property, goods, or services with the City, shall file a completed Form CIQ with the City Clerk if those persons meet the requirements under 176.006(a) of the statute.

By law this questionnaire must be filed with the City Clerk not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. *See* Section 176.006(a-1), Texas Local Government Code.

Form CIQ is available from the Texas Ethics Commission by accessing the following web address:

https://www.ethics.state.tx.us/filinginfo/conflict_forms.htm

In addition, please complete the **City's Addendum to Form CIQ (Form CIQ-A)** and submit it with Form CIQ to the Office of the City Clerk. The Form CIQ-A can be found at:

http://www.sanantonio.gov/atty/ethics/pdf/OCC-CIQ-Addendum.pdf

When completed, the CIQ Form and the CIQ-A Form should be submitted together, either by mail or hand delivery, to the Office of the City Clerk. If mailing, mail to:

Office of the City Clerk, P.O. Box 839966, San Antonio, TX 78283-3966.
If delivering by hand, deliver to:

Office of the City Clerk, City Hall, 2nd floor, 100 Military Plaza, San Antonio, TX 78205.

Do not include these forms with your sealed bid. The Purchasing Division will not deliver the forms to the City Clerk for you.

004 - SPECIFICATIONS / SCOPE OF SERVICES

The City of San Antonio is soliciting an offer from Southwest Research Institute to provide Professional Services Agreement for Testing of Handheld Radio and Lapel Microphone Systems as listed below for the defined periods as specified in this RFO and Attachment A and Attachment B

These items are being purchased as Professional Services according to the provisions of Texas Statutes Local Government Code 252.022.04.

005 - SUPPLEMENTAL TERMS & CONDITIONS

Original Contract Term.

This contract shall begin upon the effective date of the ordinance awarding the contract. This contract shall terminate upon completion of the scope of work.

Warranty.

A minimum of 90-days product guarantee or the manufacturer's standard commercial warranty, whichever is greater, shall apply to all products and/or services purchased under this RFO, unless otherwise specified in the Specifications/Scope of Services section of this RFO. This warranty shall provide for replacement of defective merchandise, parts, and labor, and shall include pick-up of the defective merchandise from City and delivery of the replacement(s) to the same location. The warranty shall be effective from the date of acceptance of the merchandise, or completion of the service, as applicable.

ANY TERM OR CONDITION IN ANY DOCUMENT FURNISHED BY VENDOR, DISCLAIMING THE IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR ATTEMPTING TO LIMIT VENDOR'S LIABILITY SHALL BE OF NO FORCE OR EFFECT, AND SHALL BE STRICKEN FROM THE CONTRACT DOCUMENTS AS IF NEVER CONTAINED THEREIN.

All Or None Bid. This Section Left Blank Intentionally.

Internal / External Catalog. This Section Left Blank Intentionally.

San Antonio e-Procurement. This Section Left Blank Intentionally.

SAePS Electronic Catalog Options. This Section Left Blank Intentionally.

High Technology Procurement.

Intellectual Property.

Vendor shall pay all royalties and licensing fees. Vendor shall hold City harmless and indemnify City from the payment of any royalties, damages, losses or expenses including attorney's fees for suits, claims or otherwise, growing out of infringement or alleged infringement of copyrights, patents, trademarks, trade secrets, materials and methods used in the project. It shall defend all suits for infringement of any Intellectual Property rights. Further, if Vendor has reason to believe that the design, service, process or product specified is an infringement of an Intellectual Property right, it shall promptly give such information to City.

Upon receipt of notification that a third party claims that the program(s), hardware, both the program(s) and the hardware or any other intellectual property infringe upon any United States or International patent, copyright or trademark Vendor will immediately:

Either:

obtain, at Vendor's sole expense, the necessary license(s) or rights that would allow City to continue using the programs, hardware, both the programs and hardware or any other intellectual property as the case may be, or,

alter the programs, hardware, or both the programs and hardware so that the alleged infringement is eliminated, and

reimburse City for any expenses incurred by City to implement emergency backup measures if City is prevented from using the programs, hardware, or both the programs and hardware while the dispute is pending.

Vendor further agrees to:

assume the defense of any claim, suit, or proceeding brought against City for infringement of any United States patent, copyright, trademark or any other intellectual property rights arising from the use and/or sale of the equipment or software under this Contract,

assume the expense of such defense, including costs of investigations, reasonable attorneys' fees, expert witness fees, damages, and any other litigation-related expenses, and

indemnify City against any monetary damages and/or costs awarded in such suit;

Provided that:

Vendor is given sole and exclusive control of all negotiations relative to the settlement thereof, but that Vendor agrees to consult with City Attorney of City during such defense or negotiations and make good faith effort to avoid any position adverse to the interest of City,

the Software or the equipment is used by City in the form, state, or condition as delivered by Vendor or as modified without the permission of Vendor, so long as such modification is not the source of the infringement claim,

the liability claimed shall not have arisen out of City's negligent act or omission, and

City promptly provide Vendor with written notice within 15 days following the formal assertion of any claim with respect to which City asserts that Vendor assumes responsibility under this section.

Undisclosed Features. Vendor warrants that the code and software provided to City under this contract does not contain any undisclosed features or functions that would impair or might impair City's use of the equipment, code or software. Specifically, but without limiting the previous representation, Vendor warrants there is no "Trojan Horse," lock, "time bomb," backdoor or similar routine. This contract shall not now, nor will it hereafter, be subject to the self-help provisions of the Uniform Computer Information Transactions Act or any other law. Vendor specifically disclaims any unilateral self-help remedies.

Incorporation of Attachments.

Each of the attachments and exhibits listed below is an essential part of this contract, which governs the rights and duties of the parties, incorporated herein by reference, and shall be interpreted in the order of priority as appears below, with this document taking priority over all attachments and exhibits:

Attachment A – Statement of Work/Radio Specifications
Attachment B – SwRI® Quote 18-05-10-17-051a, “MIL-STD-810 and IEC60529 Testing of a Handheld Radio and Lapel Microphone”
SwRI® Quote 18-05-10-17-063, “Explosive Atmosphere and Vibration Testing of a Handheld Radio and Lapel Microphone”
SwRI® Quote 18-05-10-17-053a, “High Temperature Validation Testing of Portable Radio and Lapel Microphone Systems (to be performed twice)

Attachment C - VOSBPP Tracking Form (City Policy)
Attachment D - TX State Form 1295 (Statutory Requirement)
Exhibit 1 -City Non-Discrimination Policy (City Policy)
Exhibit 2 - Insurance and Indemnification Requirements (Required)

006 - GENERAL TERMS & CONDITIONS

Electronic Offer Equals Original. If Vendor is submitting an electronic offer, City and Vendor each agree that this transaction may be conducted by electronic means, as authorized by Chapter 322, Texas Business & Commerce Code, known as the Electronic Transactions Act.

Delivery of Goods/Services.

Destination Contract. Vendor shall deliver all goods and materials F.O.B., City of San Antonio's designated facility, inside delivery, freight prepaid, to the address provided in this RFO or, if different, in the Purchase Order. Vendor shall bear the risk of loss until delivery. Freight charges will be paid only when expedited delivery is requested and approved in writing by City. Vendor shall be responsible for furnishing necessary personnel or equipment and/or making necessary arrangements to off load at City of San Antonio facility, unless otherwise noted herein.

Failure to Deliver. When delivery is not met as provided for in the contract, City may make the purchase on the open market, with any cost in excess of the contract price paid by Vendor, in addition to any other direct, indirect, consequential or incidental damages incurred by City as a result thereof. In addition, Vendor may be removed from City's list of eligible bidders.

Purchase Orders. Each time a City department wishes to place an order against this contract, it will issue Vendor a purchase order. Vendor must have the purchase order before making any delivery.

Acceptance by City. City shall have a reasonable time (but not less than 30 days) after receipt to inspect the goods and services tendered by Vendor. City at its option may reject all or any portion of such goods or services which do not, in City's sole discretion, comply in every respect with all terms and conditions of the contract. City may elect to reject the entire goods and services tendered even if only a portion thereof is nonconforming. If City elects to accept nonconforming goods and services, City, in addition to its other remedies, shall be entitled to deduct a reasonable amount from the price thereof to compensate City for the nonconformity. Any acceptance by City, even if non-conditional, shall not be deemed a waiver or settlement of any defect in such goods and services.

Testing. After award of contract, City may, at its sole option, test the product delivered to ensure it meets specifications. Initial testing shall be at City's expense. However, if the product does not to meet specifications, Vendor shall reimburse City for the costs of testing. City may withhold the cost of testing from any amounts owed to Vendor under this or any other contract, or invoice Vendor for same. If invoiced, Vendor shall pay City within 30 calendar days' of the invoice.

Invoicing and Payment.

Address for Invoices. All original invoices must be sent to: **City of San Antonio, Attn: Accounts Payable, P.O. Box 839976, San Antonio, Texas 78283-3976. Email to ap@sanantonio.gov.**

Please include your Accounts Receivable contact information and email address on any correspondence.

Information Required On Invoice.

All invoices must be in a form and content approved by City. City may require modification of invoices if necessary in order to satisfy City that all billing is proper and pursuant to the terms of the contract. Invoices are required to show each City Purchase Order Number. Invoices must be legible. If prices are based on list prices basis, then the list prices, and net total prices must be shown.

Payment by City.

In accordance with the Texas Prompt Payment Act, City shall have not less than 30 days to pay for goods or services. Time for payment, including payment under discount terms, will be computed from the later of: (1) the date City receives conforming goods under the contract; (2) the date performance of the service under the contract is completed; or (3) the date City receives a correct and valid invoice for the goods or services. Payment is deemed to be made on the date of mailing of the check. Payment is made in US dollars only.

This provision shall not apply where there is a bona fide dispute between City and Vendor about the goods delivered or the service performed that causes the payment to be late, or where the invoice is not mailed to the address provided herein.

The payment amount due on invoices may not be manually altered by City personnel. Once disputed items are reconciled, Vendor must submit a corrected invoice or a credit memorandum for the disputed amount. City will not make partial payments on an invoice where there is a dispute.

NECESSITY OF TIMELY INVOICE / WAIVER OF PAYMENT. NOTWITHSTANDING THE FORGOING, CITY CANNOT PAY FOR ANY GOODS OR SERVICES WITHOUT AN INVOICE. VENDOR MUST INVOICE CITY NO LATER THAN 90 CALENDAR DAYS FROM THE DATE GOODS ARE DELIVERED OR SERVICES RENDERED.

The total price for all goods and/or services is shown on the Price Schedule. No additional fees or expenses of Vendor shall be charged by Vendor nor be payable by City. The parties hereby agree that all compensable expenses of Vendor are shown on the Price Schedule. If there is a discrepancy on the Price Schedule between the unit price for an item, and the extended price, the unit price shall govern.

Amendments. Except where the terms of this contract expressly provide otherwise, any alterations, additions, or deletions to the terms hereof, **shall be effected by amendment**, in writing, executed by both City and Vendor. The Director of the Finance Department, or Director's designee, shall have authority to execute amendments on behalf of City without further action by the San Antonio City Council, subject to and contingent upon appropriation of funds for any increase in expenditures by City.

Termination.

Termination-Breach. Should vendor fail to fulfill in a timely and proper manner, as determined solely by the Director, its material obligations under this contract, or violate any of the material terms of this contract, City shall have the right to immediately terminate the contract in whole or in part. Notice of termination shall be provided in writing to the Vendor, effective upon the date set forth in the notice. City may, in City's sole discretion, provide an opportunity for Vendor to cure the default. If City elects to offer an opportunity to cure, City shall provide notice to Vendor specifying the matters in default and the cure period. If Vendor fails to cure the default within the cure period, City shall have the right, without further notice, to terminate the contract in whole or in part. Such termination shall not relieve Vendor of any liability to the City for damages sustained by virtue of any breach by Vendor.

Termination-Notice. City may terminate this contract, in whole or in part, without cause. City shall be required to give Vendor notice ten days prior to the date of termination of the contract without cause.

Termination-Funding. City retains the right to terminate this contract at the expiration of each of City's budget periods. This contract is conditioned on a best efforts attempt by City to obtain and appropriate funds for payment of any debt due by City herein.

Termination by City may be effected by Director, without further action by the San Antonio City Council.

Independent Contractor. Vendor covenants and agrees that it is an independent contractor and not an officer, agent, servant or employee of City. City shall not be liable for any claims which may be asserted by any third party occurring in connection with the services to be performed by Vendor under this contract and that Vendor has no authority to bind City. The doctrine of respondeat superior shall not apply as between City and Vendor.

Assignment. Except as otherwise stated herein, Vendor may not sell, assign, pledge, transfer or convey any interest in this contract, nor delegate the performance of any duties hereunder, by transfer, by subcontracting or any other means, without the consent of Director. As a condition of such consent, if such consent is granted, Vendor shall remain liable for completion of the services and provision of goods outlined in this contract in the event of default by the successor vendor, assignee, transferee or subcontractor. Any attempt to transfer, pledge or otherwise assign this Contract without said written approval, shall be void ab initio and shall confer no rights upon any third person.

Ownership of Documents. Pursuant to Texas Local Government Code Chapter 201, any and all Records produced by Vendor pursuant to the provisions of this contract are the exclusive property of City; and no such Record shall be the subject of any copyright or proprietary claim by Vendor. The term "Record" as used herein shall mean any document, paper, letter, book, map, photograph, sound or video recording, microfilm, magnetic tape, electronic medium, or other information recording medium, regardless of physical form or characteristic. Vendor understands and acknowledges that as the exclusive owner of any and all such Records, City has the right to use all such Records as City desires, without restriction.

Records Retention.

Vendor and its subcontractors, if any, shall properly, accurately and completely maintain all documents, papers, and records, and other evidence pertaining to the services rendered hereunder ("Documents"), and shall make such Documents available to City at their respective offices, at all reasonable times and as often as City may deem necessary during the contract period, including any extension or renewal hereof, and the record retention period established herein, for purposes of audit, inspection, examination, and making excerpts or copies of same by City and any of its authorized representatives.

Vendor shall retain any and all Documents produced as a result of services provided hereunder for a period of four years ("Retention Period") from the date of termination of the contract. If, at the end of the Retention Period, there is litigation or other questions arising from, involving or concerning these Documents or the services provided hereunder, Vendor shall retain the records until the resolution of such litigation or other such questions. Vendor acknowledges and agrees that City shall have access to any and all such Documents at any and all times, as deemed necessary by City, during said Retention Period. City may, at its election, require Vendor to return the documents to City at Vendor's expense prior to or at the conclusion of the Retention Period. In such event, Vendor may retain a copy of the documents.

Vendor shall notify City, immediately, in the event Vendor receives any requests for information from a third party, which pertain to the Documents referenced herein. Vendor understands and agrees that City will process and handle all such requests.

Severability. If any clause or provision of this contract is held invalid, illegal or unenforceable under present or future federal, state or local laws, including but not limited to the City Charter, City Code, or ordinances of the City of San Antonio, Texas, then and in that event it is the intention of the parties hereto that such invalidity, illegality or unenforceability shall not affect any other clause or provision hereof and that the remainder of this contract shall be construed as if such invalid, illegal or unenforceable clause or provision was never contained herein. It is also the intention of the parties hereto that in lieu of each clause or provision of this contract that is invalid, illegal, or unenforceable, there be added as a part of the contract a clause or provision as similar in terms to such invalid, illegal or unenforceable clause or provision as may be possible, legal, valid and enforceable.

Compliance with Law. Vendor shall provide and perform all services required under this Agreement in compliance with all applicable federal, state and local laws, rules and regulations.

Certifications. Vendor warrants and certifies that Vendor and any other person designated to provide services hereunder has the requisite training, license and/or certification to provide said services, and meets all competence standards promulgated by all other authoritative bodies, as applicable to the services provided herein.

Non-waiver of Performance. Unless otherwise specifically provided for in this Agreement, a waiver by either Party of a breach of any of the terms, conditions, covenants or guarantees of this Agreement shall not be construed or held to be a waiver of any succeeding or preceding breach of the same or any other term, condition, covenant or guarantee herein contained. Further, any failure of either Party to insist in any one or more cases upon the strict performance of any of the covenants of this Agreement, or to exercise any option herein contained, shall in no event be construed as a waiver or relinquishment for the future of such covenant or option. In fact, no waiver, change, modification or discharge by either party hereto of any provision of this Agreement shall be deemed to have been made or shall be effective unless expressed in writing and signed by the party to be charged. No act or omission by a Party shall in any manner impair or prejudice any right, power, privilege, or remedy available to that Party hereunder or by law or in equity, such rights, powers, privileges, or remedies to be always specifically preserved hereby.

Venue. Venue of any court action brought directly or indirectly by reason of this contract shall be in Bexar County, Texas. This contract is made and is to be performed in Bexar County, Texas, and is governed by the laws of the State of Texas.

Non-discrimination. As a condition of entering into this agreement, Vendor represents and warrants that it will comply with City's Commercial Nondiscrimination Policy, as described under Section IILC.1 of the SBEDA Ordinance. As part of such compliance, Vendor shall not discriminate on the basis of race, color, religion, ancestry or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or other unlawful forms of discrimination in the solicitation, selection, hiring or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall Vendor retaliate against any person for reporting instances of such discrimination. Vendor shall provide equal opportunity for subcontractors, vendors and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that nothing contained in this clause shall prohibit or limit otherwise lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in City's Relevant Marketplace. Vendor understands and agrees that a material violation of this clause shall be considered a material breach of this agreement and may result in termination of this agreement, disqualification of Vendor from participating in City contracts, or other

sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party. Vendor shall include this nondiscrimination clause in all subcontracts for the performance of this contract.

Delinquent Taxes. In the event that Vendor is or subsequently becomes delinquent in the payment of taxes owed to the City of San Antonio, City reserves the right to deduct any delinquent taxes from payments that City may owe to the delinquent Vendor as a result of this contract.

Binding Contract. This contract shall be binding on and inure to the benefit of the parties hereto and their respective heirs, executors, administrators, legal representatives, and successors and assigns, except as otherwise expressly provided for herein.

Entire Agreement. This contract together with its authorizing ordinance, and its price schedule(s), attachments, purchase orders, and exhibits, if any, constitutes the final and entire agreement between the parties hereto and contains all of the terms and conditions agreed upon. No other agreements, oral or otherwise, regarding the subject matter of this contract shall be deemed to exist or to bind the parties hereto, unless same be in writing, dated subsequent to the date hereof, and be duly executed by the parties, in accordance with the Amendment provision herein.

007 - SIGNATURE PAGE

By submitting an offer, whether electronically or by paper, Offeror represents that:

(s)he is authorized to bind Offeror to fully comply with the terms and conditions of City's Request for Offer for the prices stated therein;

(s)he has read the entire document, including the final version issued by City, and agreed to the terms therein;

Offeror is in good standing with the Texas State Comptroller's Office; and

to the best of his/her knowledge, all information is true and correct.

If submitting your offer by paper, complete the following and sign on the signature line below. Failure to sign and submit this Signature Page will result in rejection of your offer.

Offeror Information
Please Print or Type
Vendor ID No. _____

Signer's Name _____

Name of Business _____

Street Address _____

City, State, Zip Code _____

Email Address _____

Telephone No. _____

Fax No. _____

City's Solicitation No. _____

_____
Signature of Person Authorized to Sign Offer

008 - STANDARD DEFINITIONS

Whenever a term defined by the Uniform Commercial Code ("UCC"), as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

All-or-None Offer - an RFO in which City will award the entire contract to one offeror only.

Alternate Offer - two or more offers with substantive variations in the item or service offered from the same offeror in response to a solicitation.

Assignment - a transfer of claims, rights or interests in goods, services or property.

Bid Bond - security to ensure that Offeror (a) will not withdraw the offer within the period specified for acceptance, and (b) will furnish any required bonds and any necessary insurance within the time specified in the solicitation.

City - the City of San Antonio, a Texas home-rule municipal corporation.

Contractor - the offeror whose offer is accepted by City and is, therefore, the person, firm or entity providing goods or services to City under a contract.

Director – the Director of City's Purchasing & General Services Department or Director's designee.

Line Item - a listing of items in an offer for which an offeror is expected to provide separate pricing.

Offer - a complete, signed response to an RFO that, if accepted, would bind Offeror to perform the resultant contract.

Offeror - a person, firm or entity that submits an offer in response to a solicitation. The offeror whose offer is accepted by City may also be referred to herein as Contractor, Vendor or Supplier.

Payment Bond - a particular form of security provided by the contractor to protect City against loss due to the contractor's failure to pay suppliers and subcontractors.

Performance Bond - a particular form of security provided by the contractor to protect City against loss due to the contractor's inability or unwillingness to complete the contract as agreed.

Performance Deposit - security provided by the contractor to protect City against loss due to the contractor's inability or unwillingness to complete the contract as agreed.

Pre-Submittal Conference - a meeting conducted by City, held in order to allow offerors to ask questions about the proposed contract and particularly, the contract specifications.

Purchase Order - a validly issued order placed by an authorized City department for the purchase of goods or services, written on City's standard purchase order form, and which is the vendor's authority to deliver to and invoice City for the goods or services specified in an RFO for the price stated in vendor's offer.

Specifications - a description of what City requires and what Offeror must offer; a description of the physical or functional characteristics of a product or material, or the nature of a service or construction item.

Subcontractor - a person, firm or entity providing goods or services to a vendor to be used in the performance of the vendor's obligations under the contract with City.

Supplier - the offeror whose offer is accepted by City and is, therefore, the person, firm or entity providing goods or services to City under a contract.

Vendor - the offeror whose offer is accepted by City and is, therefore, the person, firm or entity providing goods or services to City under a contract.

009 - ATTACHMENTS

Attachment A – Statement of Work/Radio Specifications
Attachment B – SwRI® Quote 18-05-10-17-051a, “MIL-STD-810 and IEC60529 Testing of a Handheld Radio and Lapel Microphone”
SwRI® Quote 18-05-10-17-063, “Explosive Atmosphere and Vibration Testing of a Handheld Radio and Lapel Microphone”
SwRI® Quote 18-05-10-17-053a, “High Temperature Validation Testing of Portable Radio and Lapel Microphone Systems (to be performed twice)

Attachment C - VOSBPP Tracking Form (City Policy)
Attachment D - TX State Form 1295 (Statutory Requirement)
Exhibit 1 -City Non-Discrimination Policy (City Policy)
Exhibit 2 - Insurance and Indemnification Requirements (Required)

Southwest Research Institute -Statement of Work (SOW)

The following is a statement of work including testing parameters to be conducted by Southwest Research Institute (SwRI) on the Harris XG-75P, XL-200P, and Motorola APX 8000XE-3.5 radio units to include all related accessory items, belt clip and carrying cases.

Background

The City of San Antonio (City) is currently in the process of soliciting a vendor for the San Antonio Public Safety Radio System (SAPSRS). In order for the City to purchase radio units with the assurance they will provide safe and reliable use by Police, EMS, and Fire operations personnel, the radios must comply with stringent and rigorous operational standards. The City has obtained test reports and specifications submitted by radio manufacturers, and wishes to have those manufacturer test results reviewed by an accredited laboratory in order to validate the testing was performed on the proposed equipment in accordance with the referenced test specifications. In addition, the City wishes to have all equipment under consideration validated against standards that are representative of operational use or standards. In particular, the City suggest an accredited laboratory conduct unique testing of public safety radio equipment and accessories against MIL-STD-810G, IEC 60529, NIST-TN-1850 and NFPA 1802 guidelines using San Antonio Police and Fire real-world criteria. These radio units are the public safety operators' full-time means of communication to conduct duties in support of the public safety for themselves and the entire community of San Antonio and Bexar County. The testing described in this SOW and the corresponding reports will be a validation tool for operators and evaluation committees to ensure the radio units purchased can safely and reliably fulfill their intended purpose.

The radios and attached accessories listed are designed, tested and marketed as MIL-STD-810G certified radios. During operational use the radios are subject to constant water over spray, immersion, intense heat, and drop shock. Radios and attached accessories are carried at the hip and in upper pockets of fire fighter gear. Further details can be found in the attached specification sheets and incorporated as "Attachment A" for each model. The City wishes to have the radios validated against the testing conditions described in the MIL-STD-810G and IEC 60529 standards, and to also conduct testing under NIST-TN-1850 and NFPA 1802 guidelines established for the extreme thermal class environments in which the fire fighters often operate. The testing proposed in this SOW is designed to address Class I-III thermal environments and to validate the temperature tolerance of the radio within these conditions.

Equipment

The following equipment will be provided for testing purposes. It is recognized that equipment items may change before the testing begins, the quantities will remain the same however, description names and model numbers will change. Serial numbers will be provided at time of testing inventory:

Attachment A

Three (3) Harris XG-75P series immersion rated portable radio Model # EVXG-PF78Y with belt clip and carrying cases

Three (3) Harris XL-200 series immersion rated portable radio Model # XL-PFM1M& XL-PAZA with belt clip and carrying cases

Three (3) Motorola APX 8000XE-3.5 series immersion rated portables radios Model # H91TGD9PW7 N with belt clip and carrying cases

Three (3) Harris P7300 immersion rated lapel Mic's Model # MC-011617-606 Rev A for attachment to XG-75P series portable radio

Three (3) Harris immersion rated lapel Mic's Model # XL-AE9N for attachment to XL-200 series portable radio

Three (3) Motorola Remote Speaker Microphone IMPRES Windreporting RSM, IP55 Immersion rated Mic's Model # PMMN4099A for attachment to APX 8000XE-3.5series portable radio

Three (3) Battery 7.4 LiON Model Number BR-023406-006 Rev D for attachment to XG-75series portable radio

Three (3) Battery LiON,3100,HAZLOC RADIO – ADDER Model Number XL-PA2A for attachment to XL-200 series portable radio

Three (3) Battery GEN2 ISA Div2 Hi-Cap (PMNN4505A) - 4850 mAH ,Model Number QA05595A for attachment to APX 8000XE-3.5 series portable radio

Test Witnesses

The City requires employees witness testing. Test witnesses will be pre-designated and will abide by all required safety standards and practices as designated by the testing laboratory. No City witnesses will record testing via phone or photograph cameras. City employees will present City identification and driver license for entry into the test venue.

Testing Parameters

Testing shall be conducted in accordance with MIL-STD-810G, IEC 60529 Edition 2.2, NIST-TN-1850 and NFPA 1802 guidelines and follow the following summary of testing:

Method	Description	Procedure
501.6	High Temperature	PI,PII/Climate A2
502.6	Low Temperature	PI,PII/Climate A2
503.6	Temperature Shock	PI (C)
505.6	Solar Radiation (240 hrs)	PI/Cat A1
506.6	Blowing Rain	PI
507.6	Humidity	PII
509.6	Salt Fog	PII
510.6	Blowing Dust & Sand	PI, PII
511.5	Explosive Atmosphere*	PI
514.7 Conducted as prelim test as well per additional quote	Vibration**	PI /Cat 4 & PII/Cat 5
516.7 Conducted as prelim test as well per additional quote	Shock (Drop)***	PIV
IEC 60529	Wire Access Probe (1.0mm)	12.2
IEC 60529	Dust Test	13.4 & 13.6
IEC 60529	Continuous Immersion	14.2.8
Thermal Class	Pre-test Immersion/Audio	
Thermal Class II &III	Dry High Temperature	
Thermal Class II & III	High Temperature Rapid Cooling	
Thermal Class II & III	Wet to High Temperature	
Thermal Class	Post-test Immersion/Audio	

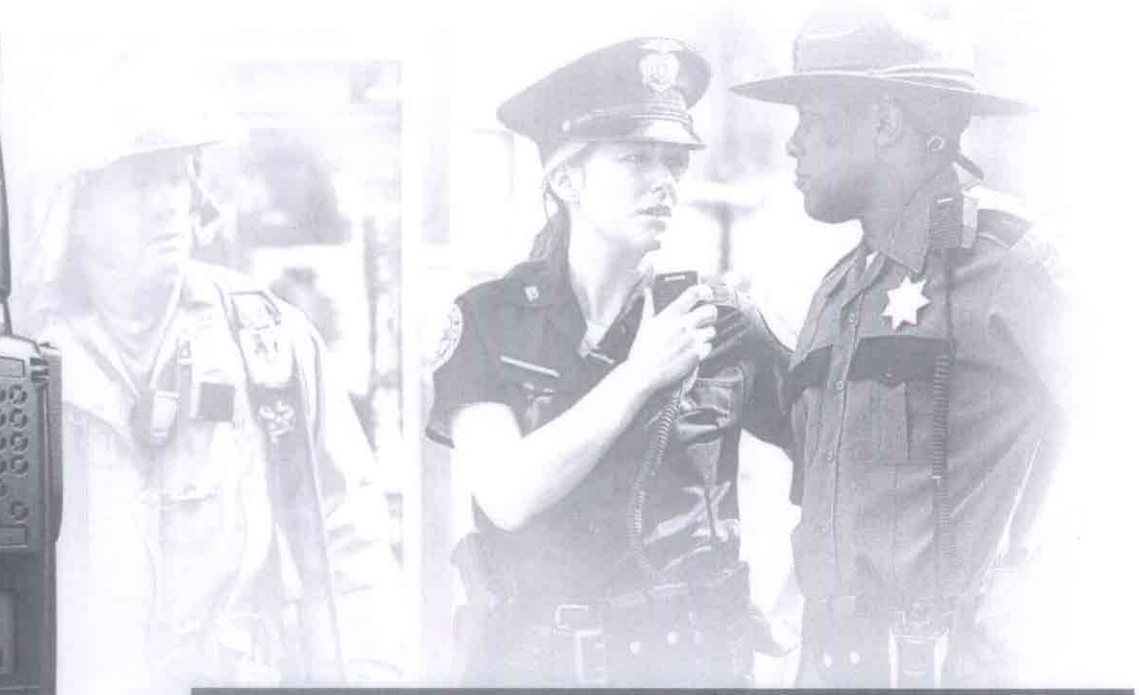
*To elevation of 14,000 feet ASL only
**Connection point to belt clip (pocket), belt clip (traditional), carrying case
***No transportation in box testing required

Results

Results of the testing will be provided to the City in final test report format in both electronic format (PDF) and hard copy. The report will include photographs, test data, results, listing of test equipment, procedure details, results and conclusions, laboratory logs and video/audio record. All materials will be picked-up by City personnel at the test laboratory location with the exception of the electronic format. Electronic format will be emailed to: Richard.morales@sanantonio.gov.

Attachment "A"

Specification Sheets



XG-75P PORTABLE

VHF, UHF-L, 700/800 MHz

RELIABLE OPERATION UNDER HARSH CONDITIONS

Delivering high reliability, clear audio quality, and secure communications, the XG-75P portable radio provides a fully trusted communications device for those who defend, protect, and serve communities in day-to-day operations as well as emergency situations. The XG-75P is the next generation ruggedized P25 Phase 2 capable radio designed for mission-critical communications in extreme conditions.

FEATURES

Instant recall of received audio replays the last transmission received to avoid repetition.

Single-key DES encryption and Encryption Lite are standard. Single-key DES interoperates across the industry. Encryption Lite allows communication with commonly available encrypted radios using a 40-bit key.

A 2-position A-B switch allows access to 32 talkgroups/channels directly from the top of the radio.

Optional features are available for IP68 immersion, UL certification for C1D1 HAZLOC use, and FIPS for enhanced security using federally approved 256-bit AES for encrypted communications.

MULTIMODE AND MULTI-PROTOCOL SUPPORT

Designed for users on P25 platforms as well as Harris legacy platforms, the XG-75P supports P25, EDACS®, ProVoice™, and OpenSky® users who want one radio to manage their migration needs.

BEST-IN-CLASS AUDIO

The XG-75P delivers the clear and exceptional audio that users have grown to expect from Harris. The enlarged speaker chamber provides extremely powerful audio. Combining a dual microphone, active noise cancellation algorithm, and AMBE+2™ vocoder, this radio provides a best-in-class audio experience in extreme noise and harsh environments. The vocoder also controls distortion that may occur from shouting into the microphone.

FUTURE READY

The XG-75P is a safe investment that agencies can rely on as transitions occur to P25 technology. The portable radio supports wideband and narrowband channels (per applicable regulatory standards), and its software-defined architecture allows field upgrading to operating modes such as P25 Phase 2 trunking.

ERGONOMIC PACKAGE

From the keypad buttons to the battery, each aspect of the XG-75P has been developed to provide a better user experience. The knobs and buttons of the radio are designed to be strong enough to protect against impact and are shaped to avoid incidental change while being managed by users wearing gloves.

GENERAL SPECIFICATIONS

Radio Models

Full Keypad:	Dot matrix LCD and DTMF keypad
Partial Keypad:	Dot matrix LCD and limited keypad

Dimensions (Without Antenna, Battery, and Knobs)

	Inches	Millimeters
Height:	5.89	149.6
Width:	2.44	62.0
Depth:	1.86	47.2

Weight (Without Antenna and Battery)

	Ounces	Grams
Portable:	10.4	294.5

Housing Colors

Midnight Black, Black-Gray, Black-Yellow, and Tactical Green

Environmental Specifications

Relative Humidity:	95% @ 140°F (+60°C)
Vibration:	9.2G (per US Forest Service)
Drop Shock:	1.5 meter drop to concrete (exceeds TIA-603-C)
Immersion*:	2 meters for 4 hours in accordance with MIL-STD-810G/IP68 (per IEC60529)

*Optional feature

Environmental Specifications (Cont'd)

	°F	°C
Operating Temperature *:	-22 to +140	--30 to +60

*Extremely low temperatures adversely affect battery life

	°F	°C
Storage Temperature*:	-40 to +176	-40 to +80
*Store batteries at the following temperatures:		
Li-Ion:	-40 to + 176	-40 to +80
Li-Polymer:	-22 to +176	-30 to +80
NiMH:	-40 to + 176	-40 to +80

Altitude	**Feet**	**Meters**
Operational:	15,000	4,572
In Transit:	50,000	15,240

Electrical

Input Voltage: 7.5 VDC (nominal)

Safety

HAZLOC Options:
UL certified to ANSI/TIA-4950, ANSI/ISA 12.12.01, CAN/CSA-C22.2 No. 157-92, CAN/CSA-C22.2 No. 213-15 standards as suitable for use in Class I, Division 1, Groups C and D; Class II, Division 1, Groups E, F, and G; Class III, Division 1 hazardous locations; Class I, Division 2, Groups A, B, C, and D or non-hazardous (unclassified) locations only

RoHS compliant

TRANSMITTER

Typical Performance Specifications	VHF	UHF-L	700/800
Frequency Range (MHz):	136-174	378-470	764-776, 794-805, 806-825, 851-870
Rated RF Power (W):	6	5	3 (Trnk & Talkaround)
Frequency Stability (-30 to +60°C, +25°C Ref) (ppm):	±1.5	±1.5	±1.5
Frequency Separation (MHz):	Full Bandwidth	Full Bandwidth	NA
Modulation Deviation (kHz):	5.0 (wideband*) 2.5 (narrowband)	5.0 (wideband*) 2.5 (narrowband)	2.5, 4, or 5 FM
FM Hum and Noise Companion Receiver (dB):	-52 (wideband*) -50 (narrowband)	-50 (wideband*) -45 (narrowband)	44 (700 MHz) 47 (800 MHz NPSPAC) 48 (800 MHz non-NPSPAC)
Spurious and Harmonics (dBm/dBc):	-36/-75	-36/-75	-55/90
Audio Response (dB):	+1/-3	+1/-3	Meets TIA-603-C Section 3.2.6
Audio Distortion (1 kHz tone):			
@ 3 kHz deviation:	1% (wideband)	1% (wideband)	1% (800 MHz non-NPSPAC)
@ 2.4 kHz deviation:	NA	NA	1% (800 MHz NPSPAC)
@ 1.5 kHz deviation:	1% (narrowband)	1% (narrowband)	1% (700 MHz)
Project 25 Modulation Fidelity (%):	<5	<5	1
Project 25 Adjacent Channel Power (dBc):	>67	>67	73

*VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz.

REGULATORY DATA

Frequency Range (MHz)	RF Output (W)	Frequency Stability (ppm)	FCC Type Acceptance Number	Applicable FCC Rules	Industry Canada Certification Number	Applicable Industry Canada Rules	NTIA Certification Number
136-174	6	±1.5	OWDTR-0059-E	22, 80, 90	3636B-0059	RSS-119	J/F 12/9974
378-470	5	±1.5	OWDTR-0070-E	90	3636B-0070	RSS-119	J/F 12/9974
764-776, 794-806 806-824, 851-869, 854-869	3	0.2	OWDTR-0074-E	90	3636B-0074	RSS-119	NA

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

N24BB2 For UHF-L frequencies

RECEIVER

Typical Performance Specifications	VHF	UHF-L	700/800
Frequency Range (MHz):	136-174*	378-470	764-776, 851-870
Frequency Separation (MHz):	Full Bandwidth	Full Bandwidth	NA
Channel Spacing (kHz):	25/30 (wideband**) 12.5/15 (narrowband)	25 (wideband**) 12.5 (narrowband)	12.5, 25, PLL Steps
Frequency Stability (-30 to +60°C, +25°C Ref) (ppm):	±1.5	±1.5	±1.5
Sensitivity (12 dB SINAD) (µV/dBm):	0.20/-121	0.25/-119.0	0.25/-119.0
Adjacent Channel Selectivity @ 25 kHz (dB): @12.5 kHz (dB):	79 (wideband**) 66 (narrowband)	>73 >60	75 (800 MHz non-NPSPAC) 67 (700 MHz)
Intermodulation (dB):	77	75	75
Spurious and Image Rejection (dB):	80	80	>80
FM Hum and Noise (dB):	>50 (wideband**) >45 (narrowband)	>50 (wideband**) >45 (narrowband)	>40 (700 MHz) >43 (851-854 MHz NPSPAC) >45 (854-870 MHz wideband**) >60 squelched
Audio Output (mW):	500 rated (3800 max)	500 rated (3800 max)	500 rated
Audio Distortion @ Rated Power (%):	1.5	1.5	1.5
Project 25 Reference Sensitivity @ 5% BER (µV/dBm):	0.22/-121	0.25/-119	0.22/-120
Project 25 Adjacent Channel Rejection (dB):	>60	>60	64

*The following self-quieting frequencies cannot be programmed as receive frequencies: 144.000, 153.600, 163.200, and 172.800 MHz.

**VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz.

ENVIRONMENTAL STANDARDS

Standard	Parameter	Methods	Procedures/Categories
MIL-STD-810G*	Low Pressure	500.5	1,2
	High Temperature	501.5	1,2
	Low Temperature	502.5	1,2
	Temperature Shock	503.5	1-B
	Solar Radiation	505.5	2
	Blowing Rain	506.5	1
	Humidity	507.5	2
	Salt Fog	509.5	1
	Blowing Dust	510.5	1
	Immersion**	512.5	1
	Vibration (Minimum Integrity)	514.6	1, Category 24
	Vibration (Basic Transportation)	514.6	1, Category 4
	Shock (Functional/Basic)	516.6	1
	Shock (Transit Drop)	516.6	4
IEC 60529	Dust-tight, Continuous Immersion	IP68	
U.S. Forest Service	Vibration (10-60 Hz)	USDA LMR Standard Section 2.15	
TIA-603-C***	Shock (1-meter drop)	Paragraph 3.3.5.3	

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

**XG-75 immersion model only. Available option that must be ordered. Additional certification for water intrusion with water depth of 2 meters for 4 hours.

***Environmental test certification of 1.5-meter drop shock to concrete using parameters of TIA-603-C 1.0-meter drop shock with additional height.

DIGITAL OPERATION

Protocol	OpenSky® (700/800 MHz)	ProVoice™	P25
Vocoding Method:	AMBE + 2™ Half Rate & Enhanced Half Rate	AMBE + 2 Enhanced Full Rate	AMBE + 2 Enhanced Full Rate & Enhanced Half Rate
Signaling Rate (kbps):	19.2 & 9.6	9.6	9.6
Modulation:	4-Level GFSK & M4FM	GFSK	Phase1 TX: C4FM, RX: C4FM & WCQPSK Phase 2 TX: HCPM, RX: WCQPSK

ENCRYPTION

Encryption Algorithms:	AES (FIPS-140-2 certified), DES, Encryption Lite (40-bit)*
Encryption Keys per Radio:	Capable of storing 128 keys (64 AES, 64 DES)

*Option included as standard with the radio. Interoperates with commonly available ARC4 encryption algorithms.

BATTERIES

Type	Dimensions (L x W x D)	Weight	Life (@5% Tx, 5% Rx, and 90% standby)	Capacity (mAh)
Li-Ion	4.42 x 2.44 x 0.83 in.	5.1 oz (145g)	10 hours	2400
Li-Polymer	4.42 x 2.44 x 0.83 in.	6.6 oz (187g)	16 hours	3600
NiMH	4.42 x 2.44 x 0.83 in.	9.5 oz (270g)	10 hours	2400

ACCESSORIES

The XG-75P offers a full complement of accessories that operate under the extreme conditions experienced by first responders. Several are shown below.

Audio Accessories

The XG-75P can be used with a wide variety of audio accessories including speaker microphones, headsets, and covert audio accessories to provide a complete user-gear solution for the industrial, public safety, utility, and transportation markets. Heavy-duty and lightweight headsets are available with in-ear or over-the-ear hearing protection, flexible boom microphones with noise-reduction technology, and standard or remote PTTs. In addition, the XG-75P can be used with Bone Conducting Skull Headsets and Throat Microphone/Headset Kits. Covert audio kits are available in black or beige, and in 2-wire or 3-wire configurations with earpiece, microphone, and PTT.

Speaker Microphone

Fire Speaker Microphone

Tactical Headset

3-Wire Mini-Lapel Microphone

Carrying Cases

Harris offers a versatile line of carrying cases for the XG-75P radio. Options include a standard belt clip and premium belt loop, both of which afford the radio user a low-profile, integrated carrying option. In addition, a premium leather holster is available for attaching to a belt or wearing with the premium leather shoulder strap.

Nylon Carrying Case

Belt Clip

Leather Carrying Case

Chargers

Harris offers a variety of chargers for the XG-75P radio: Single-Bay, Multi-Bay, and a Vehicular Charger for in-car charging. The chargers are designed to quickly and safely charge battery packs in approximatelv 1 to 4 hours.

Single-Bay Charger

Multi-Bay Charger

Vehicular Charger

Additional Accessories Available

Antennas, Bluetooth® speaker microphones, Bluetooth covert earpieces, public safety speaker microphones, Lithium batteries, PC programming software, and cables are available.

About Harris Corporation

Harris Corporation is a leading technology innovator that creates mission-critical solutions that connect, inform and protect the world. The company's advanced technology provides information and insight to customers operating in demanding environments from ocean to orbit and everywhere in between. Harris has approximately $8 billion in annual revenue and supports customers in 125 countries through four customer-focused business segments: Communication Systems, Space and Intelligence Systems, Electronic Systems, and Critical Networks.

FLORIDA | NEW YORK | VIRGINIA | BRAZIL | UNITED KINGDOM | UAE | SINGAPORE

HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

XL-200P PORTABLE

FULL-SPECTRUM MULTIBAND RADIO

The Harris XL-200P is the industry's only full-spectrum, LTE-ready multiband radio. Capable of operating on VHF, UHF, and 700/800 MHz frequencies, this powerful portable also supports voice and data over LTE broadband. Users have the flexibility to purchase the XL-200P as single band, dual band, or full spectrum, with options to upgrade by adding bands or LTE as organizational needs change.

EXCEPTIONAL COMMUNICATIONS IN SEVERE ENVIRONMENTS

KEY FEATURES

- Industry's only full-spectrum, LTE-ready multiband radio
- Instant recall of received audio replays transmissions to avoid missed calls
- Wi-Fi® connectivity for voice delivery outside coverage areas through Harris BeOn® application
- Optional cell modem for voice and data wherever cellular/LTE is available
- Built-in GPS, Bluetooth®, Active Noise Cancellation, and 4-position A-B-C-D switch standard

Designed from the ground up with input from mission-critical users, the XL-200P is an entirely new radio platform. Its advanced processor, memory and software technologies merge robust LMR voice with voice and data over cellular, LTE and Wi-Fi, for leading-edge connectivity.

The XL-200P is engineered for audio excellence, pairing a powerful 1.5 watt audio amplifier with woofer and tweeter speakers complete with resonant cavities and tuned ports to deliver the highest-quality sound experience of any handheld radio available today. Compact and ergonomic, the portable's shape is based on extensive research, resulting in a radio that fits naturally in users' hands. Controls are shaped and arranged for ease of use and optimum performance, including accessory connections.

With its ruggedized aluminum I-beam frame and tough seals, the XL-200P is built to operate in severe environments. This radio meets MIL-STD-810G for durability, including Method 511.5 for explosive atmospheres and Method 504.1 for contamination by fluids, so it can be scrubbed with cleansers and biological sanitizers.

harris.com | #harriscorp

HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

SPECIFICATIONS FOR: XL-200P PORTABLE FULL-SPECTRUM MULTIBAND RADIO

GENERAL		
Radio Models:		
Full Keypad	TFT LCD w/DTMF keypad, navigation cluster, soft keys	
Partial Keypad	TFT LCD w/partial keypad, navigation cluster, soft Keys	
Dimensions w/Battery (H x W x D)	5.8 x 2.3 x 1.4 in (148.0 x 60.0 x 36.0 mm)	
Weight	**w/Battery and Antenna** 16.2 oz (464 g)	**w/o Battery and Antenna** 10.4 oz (296 g)
Housing Colors	Midnight Black, High-Visibility Yellow	
Interfaces:		
Front Display	320 x 178 pixels, 1.8 in transflective LCD, 16-bit color with backlight	
Top Display	128 x 32 pixels, 1.1 in multi-color backlight, sunlight readable	
Keypad	Backlight, 3 soft keys, 5-way navigation key, full DTMF keypad	
Buttons	Large PTT button, on/off knob, volume knob, red emergency button, 16-position top-mounted rotary knob, 2-position concentric switch, 4-position toggle switch, 3 programmable side buttons	
Tx/Rx Indicator	Multi-colored LEDs	
Transceiver	**Supported Bands** VHF, UHF, 700/800 MHz and LTE	**Channel Capacity** 12,500 (1,250 per mission plan)
Environmental:		
Relative Humidity	5% @ 140°F (+60°C), 95% @ 122°F (+50°C)	
Vibration	USDA LMR Standard, Section 2.15 and MIL-STD-810G, Test Method 514.6	
Drop Shock	1.0 meter drop to concrete (exceeds TIA-603-D)	
Immersion[1]	2 meters for 4 hours in accordance with MIL-STD-810G/IP68	
Operating Temperature[2]	-22°F to +140°F (-30°C to +60°C)	
Storage Temperature[3]	-40°F to +176°F (-40°C to +80°C)	
Altitude	**Operational** 15,000 feet (4,572 meters)	**In Transit** 50,000 feet (15,240 meters)
Electrical Input Voltage	7.5 VDC (nominal)	
GPS/GNSS Specifications:		
Channels	52	
Tracking Sensitivity (dBm)	-166 (GPS), -163 (GLONASS)	
Acquisition Sensitivity (dBm)	-146 (GPS)	
Cold Start w/-130 dBm input	<35 seconds	
Hot Start w/-130 dBm input	<1 second	
Safety:		
Hazardous Location Options	Approved for use in the US and Canada in Class I, Division 2 Groups A, B, C and D hazardous locations	
RoHS Compliant		

[1] Optional feature
[2] Extreme low temperatures adversely affect battery life
[3] Store batteries at +25°C ± 5°C

LMR TRANSMITTER			
Frequency Bands	**VHF***	**UHF***	**700/800 MHz**
Frequency Ranges (MHz)			
Option 1 (US)	136-174	378-522	768-776, 798-806, 806-816, 851-861
Option 2 (International)	136-174	378-522	763-776, 793-806, 806-825, 851-870**
Rated RF Power/Talkaround (W)	1-6	1-5	0.5-3
Frequency Stability (-30 to +60°C)	±1.0 ppm	±1.0 ppm	±1.0 ppm
Modulation Limiting (kHz)	2.5, 4, 5 (FM)	2.5, 4, 5 (FM)	2.5, 4, 5 (FM)
Audio Response (dB)	+1/-3	+1/-3	+1/-3
Spurious and Harmonics (dBc)	-80 (FCC Part 90)	-80 (FCC Part 90)	-80 (FCC Part 90)
FM Hum and Noise Companion Receiver (dB):			
@ 25 kHz	70	60	55
@ 12.5 kHz	47	47	45
Audio Distortion (%)	<1.25	<1.25	<1.25
Project 25 Modulation Fidelity (%)	1.0	1.0	1.0
Project 25 Adjacent Channel Power (dBc)	>71	>71	>71

*Full-spectrum multiband VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz
**Future option

REGULATORY DATA

Frequency Range	RF Output	Frequency Stability	FCC Type Acceptance No.	Applicable FCC Rules	Industry Canada Certification No.	Applicable Industry Canada Rules	NTIA Cert. No.
136-174 MHz	6 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	22, 74, 80, 90	3636B-0133, 3636B-0145	RSS-119	SPS-217 49/1
378-522 MHz	5 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	22, 74, 80, 90	3636B-0133, 3636B-0145	RSS-119	SPS-217 49/1
768-776 MHz	3 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	90	3636B-0133, 3636B-0145	RSS-119	
798-806 MHz	3 W	±1.0 ppm	OWDTR-0133-E, OWDTR-0145-E	90	3636B-0133, 3636B-0145	RSS-119	
806-816 MHz	3 W	±1.0 ppm	OWDTR-0133-E	90	3636B-0133	RSS-119	
806-825 MHz	3 W	±1.0 ppm	OWDTR-0145-E	90	3636B-0145	RSS-119	
851-861 MHz	3 W	±1.0 ppm	OWDTR-0133-E	90	3636B-0133	RSS-119	
851-869 MHz	3 W	±1.0 ppm	OWDTR-0145-E	90	3636B-0133	RSS-119	

REGULATORY DATA (Continued)

Frequency Range	RF Output	Frequency Stability	FCC Type Acceptance No.	Applicable FCC Rules	Industry Canada Certification No.	Applicable Industry Canada Rules	NTIA Cert. No.
2402-2480 MHz	0.2 W	TBD	OWDTR-0133-E, OWDTR-0145-E	15	3636B-0133, 3636B-0145	RSS-119	
5180-5825 MHz	0.1 W	TBD	OWDTR-0133-E, OWDTR-0145-E	15	3636B-0133, 3636B-0145	RSS-119	

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

LMR RECEIVER

Frequency Bands	VHF	UHF	700/800 MHz
Frequency Ranges (MHz):			
Option 1 (US)	136-174	378-522	768-776, 851-861
Option 2 (International)	136-174	378-522	763-776, 851-870**
Channel Spacing (kHz)	25 (wideband*), 12.5 (narrowband), 6.25 equiv (TDMA P25 Phase 2)		
Frequency Stability (-30 to +60°C)	±1.0 ppm	±1.0 ppm	±1.0 ppm
Sensitivity (dBm): @ 12 dB SINAD	-122	-121	-121 (700 MHz) -120 (800 MHz)
Project 25 Reference Sensitivity (dBm): @ 5% BER	-122	-121	-120.5
Analog Selectivity (dB):			
@ 25 kHz	77	77	74
@ 12.5 kHz	71	70	64
Project 25 Adjacent Channel Rejection (dB)	66.2	62.2	62
Offset Channel Selectivity (dB): @ NPSPAC	NA	NA	30
Intermodulation (dB)	79	78	75
Spurious and Image Rejection (dB)	80	81	78
FM Hum and Noise (dB):			
@ 25 kHz	-60	-60	-55
@ 12.5 kHz	-55	-53	-50
Audio Output - Rated/Max (mW)	1500/4000	1500/4000	1500/4000
Audio Distortion @ Rated Power (%)	1.1	1.1	1.1

*Full-spectrum multiband VHF and UHF product is compliant with applicable FCC narrowbanding mandate below 512 MHz
**Future option

ENVIRONMENTAL STANDARD

Applicable MIL-STD	Parameter	Methods	Procedure/Categories
MIL-STD-810G*	Low pressure	500.5	1, 2
	High temperature	501.5	1, 2
	Low temperature	502.5	1, 2
	Temperature shock	503.5	1
	Solar radiation	505.5	1
	Contamination by fluids	504.1	2
	Rain	506.5	1, 3
	Humidity	507.5	2
	Salt fog	509.5	1
	Blowing dust and sand	510.5	1, 2
	Explosive atmosphere	511.5	1
	Immersion in water**	512.5	1
	Vibration (minimum Integrity)	514.6	1, Category 24
	Vibration (basic transportation)	514.6	1, Category 4
	Shock (functional/basic)	516.6	1
	Shock (transit drop)	516.6	4
	Shock (bench handling)	516.6	6
IEC 60529	Dust-tight, continuous immersion in water**		IP68

*Also meets equivalent superseded MIL-STD-810D, -E and -F
**Optional feature

CELLULAR BROADBAND

LTE Protocol	3GPP Release 9, Power Class 3 UE with Rx diversity*
Public Safety Broadband	Band 14, 788-798 MHz Tx, 758-768 MHz Rx, 5 or 10 MHz BW*
Commercial Broadband	Band 13, 777-787 MHz Tx, 746-756 MHz Rx, 5 or 10 MHz BW*
Commercial Broadband	Band 4, 1710-1755 MHz Tx, 2110-2155 MHz Rx, 5, 10, 15, or 20 MHz BW*
Wi-Fi	802.11 b/g/n 2.4 GHz and 5 GHz
Bluetooth	Bluetooth 4.0 (128-bit encryption)

*Future option

DIGITAL OPERATION

Protocol	ProVoice™*	P25
Vocoding Method	AMBE +2™ enhanced full rate	AMBE +2 enhanced full rate and enhanced half rate

*Future option

DIGITAL OPERATION (Continued)

Protocol	**ProVoice™***	**P25**
Signaling Rate (kbps)	9.6	9.6
Modulation	GFSK	Phase 1 Tx: C4FM, Rx: C4FM and WCQPSK

*Future option

ENCRYPTION

Encryption Algorithms	AES, DES-OFB
Encryption Keys per Radio	Capable of storing 128 keys (64 AES, 64 DES)
Keying	Harris Key Loader, Over-the-Air Rekeying (OTAR), Motorola KVL 3000+/4000
Standards	FIPS 140-2, FIPS 197

BATTERIES

Type	Dimensions (H x W x D)	Weight	Capacity (mAh)
Li-Ion	3.0 x 2.3 x 0.9 in	4.8 oz (136 g)	3100

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

ACCESSORIES

The XL-200P is available with a selection of dependable Harris accessories that operate in a range of environments. Several are shown below.

Headsets

The XL-200P can be used with a wide variety of headsets and covert audio accessories to provide a complete user-gear solution for the industrial, public safety, utility, and transportation markets. Heavy-duty and lightweight headsets are available with in-ear or over-the-ear hearing protection, flexible boom microphones with noise-reduction technology, and standard or remote PTTs. In addition, the XL-200P can be used with Bone Conducting Skull Headsets and Throat Microphone/Headset Kits. Covert audio kits are available in black or beige, 2-wire or 3-wire configurations with ear-piece, microphone and PTT.

3-Wire Mini-Lapel Microphone

Tactical Headset

Carrying Cases

Harris offers a versatile line of carrying cases for the XL-200P full-spectrum multiband radio. Options include a standard belt clip and premium belt loop, both of which afford the radio user a low-profile, integrated carrying option. In addition, a premium leather holster is available for attaching to a belt or wearing with the premium leather shoulder strap.

Belt Clip

Leather Carrying Case

Chargers

Harris offers a variety of chargers for the XL-200P: Single-Bay, Multi-Bay and a Vehicular Charger for in-car charging. The chargers are designed to quickly and safely charge battery packs in approximately 1 to 4 hours.

Single-Bay Charger

*Multi-Bay Charger**

*Vehicular Charger**

Additional Accessories Available

Bluetooth speaker microphones, Bluetooth covert earpieces, standard speaker microphones, Lithium Ion battery, PC programming software and cables, other subminiature surveillance accessories, and antennas.

*Accessories unavailable in Brazil

About Harris Corporation: Harris Corporation is a leading technology innovator that creates mission-critical solutions that connect, inform and protect the world. The company's advanced technology provides information and insight to customers operating in demanding environments–from ocean to orbit and everywhere in between. Harris has approximately $7.5 billion in annualized revenue and supports customers in more than 100 countries through four customer-focused business segments: Communication Systems, Space and Intelligence Systems, Electronic Systems and Critical Networks.

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Non-Export Controlled Information

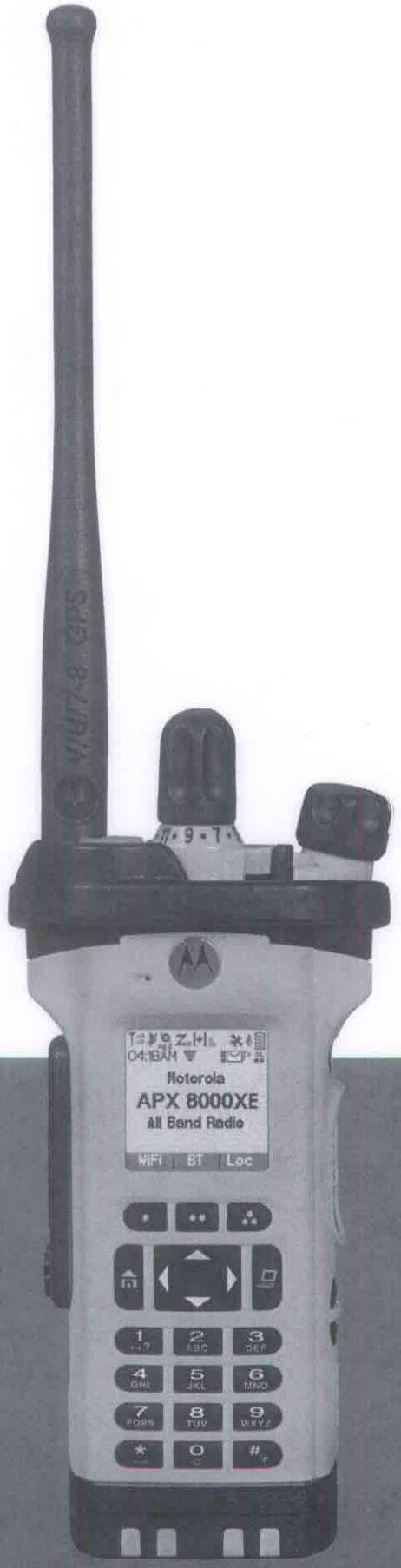
HARRIS® TECHNOLOGY TO CONNECT, INFORM AND PROTECT™

APX™ 8000XE ALL-BAND P25 PORTABLE RADIO

Working together with firefighters around the world, we designedthe APX™ Extreme Series, a safe, and easy and efficient to use portfolio of ergonomically advanced, ultra-rugged radios and accessories. With over eighty years of experience in ergonomics, design and technology for public safety, the APX XE Series is the culmination of cross-disciplines and user input.

Firefighters said they wanted equivalent extreme features as the APX Extreme Series including a larger display, exaggerated control knobs, and the capability to communicate with surrounding municipalities within an all-band radio solution. The APX 8000XE brings together not only these requirements, but also the integration of WiFi® for programming flexibility.

The APX 8000XE is redefining mission critical communications by delivering an ultra-durable radio that combines unlimited interoperability, loud audio, and secure WiFi connectivity. With a dedicated channel knob and ability to withstand 500 degrees heat exposure, the APX XE500 Remote Speaker Microphone is the perfect companion to the APX 8000XE. When combined, the APX 8000XE All-Band Portable Radio and XE500 Remote Speaker Microphone create the ultimate mission critical solution designed for safety personnel in extreme environments.



KEY FEATURES

- Unlimited interoperability with one device
- Secure WiFi for seamless software updates
- Extra-large buttons for glove use
- IP68 submersion (2 meters, 4 hours)
- ANSI/ISA-12.12.01-2015 CAN/CSA C22.2 NO. 213-15, Nonincendive Electrical Equipment for Use in Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III, Division 2
- Integrated GPS/GLONASS for outdoor location tracking
- Equipped with FIPS - certified encryption hardware
- RFID volume knob for asset tracking (optional)
- Bluetooth-enabled APX radios capable of transmitting SCBA voice and data

PRODUCT DATA SHEET
APX™ 8000XE

RF BANDS

- 700/800 MHz, VHF, UHF Range 1 & 2

OPERATION MODES

- 9600 Baud Digital APCO P25 Phase 1 FDMA and Phase 2 TDMA Trunking
- 3600 Baud SmartNet®, SmartZone®, Omnilink Trunking
- Digital APCO 25, Conventional, Analog MDC 1200, Quick Call II System Configurations
- Narrow and wide bandwidth digital receiver (6.25 kHz equivalent/25/20/12.5 KHz)

STANDARD FEATURES

- Mission Critical Wireless Bluetooth*
- ASTRO 25 Integrated Voice & Data
- Integrated GPS/GLONASS for outdoor location tracking
- Software Key
- Text-Messaging
- Voice Announcements
- ISSI 8000 Roaming
- Radio Profiles, Dynamic Zone
- Intelligent Lighting
- Single-key ADP Encryption
- IP68 submersion (2 meters, 4 hours)
- IMPRES Battery
- ANSI/ISA-12.12.01-2015 CAN/CSA C22.2 NO. 213-15, Nonincendive Electrical Equipment for Use in Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III, Division 2

ADAPTIVE AUDIO ENGINE

- 3 Watt Speaker with Adaptive Equalization
- Adaptive Dual-sided Operation
- Adaptive Noise Suppression Intensity
- Adaptive Gain Control
- Adaptive Windporting

PROGRAMMING

- Utilizes Windows 7 & 8 Customer Programming Software (CPS) with Radio Management

OPTIONAL FEATURES

- WiFi 802.11 b/g/n
- RFID Volume Knob
- Multikey for 128 keys and multi-algorithm
- Programming Over Project 25 (OTAP)
- Over the Air Rekey (OTAR)
- Digital Tone Signaling
- P25 Authentication
- Man Down Sensor

* Compatible with BT 4.0, BT 2.1, HSP, PAN, DUN and SPP Profiles found in off-the-shelf BT accessories

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

		700/800	VHF	UHF Range 1	UHF Range 2
Frequency Range/Bandsplits		764-776, 794-806 MHz 806-825, 851-870 MHz	136-174 MHz	380-470 MHz	450-520 MHz
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Rated RF Output Power Adj[1]		700 MHz: 1-2.5 Watts 800 MHz: 1-3 Watts	1-6 Watts	1-5 Watts	1-5 Watts
Frequency Stability[1] (-30°C to +60°C, +25°C Ref.)		+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm
Modulation Limiting[1]		±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz	±5 kHz / ±4 kHz / ±2.5 kHz
Emissions (Conducted and Radiated)[1]		-75 dBc	-75 dBc	-75 dBc	-75 dBc
Audio Response[1]		+1, -3 dB	+1, -3 dB	+1, -3 dB	+1, -3 dB
FM Hum & Noise (25kHz / 12.5kHz)[1]	700 MHz 800 MHz	-49 dB / -47 dB -49 dB / -46 dB	-51 dB / -51 dB	-51 dB / -51 dB	-51 dB / -47 dB
Audio Distortion (25kHz / 12.5kHz)[1]	700 MHz 800 MHz	0.90 % / 0.90 % 0.60 % / 0.90 %	0.50 % / 0.90 %	0.50 % / 0.90 %	0.60 % / 0.90 %

BATTERIES FOR APX 8000XE

Battery Capacity / Type	Dimensions (HxWxD)	Weight	Battery Part Number	Battery Capacity
Li-Ion IMPRES UL2054 DIV 2 Rugged 3400 mAh IP68**	3.4" x 2.3" x 1.7"	6.5 oz	PMNN4504A	3400 mAh
Li-Ion IMPRES UL2054 DIV 2 Rugged 4850 mAh IP68	5" x 2.3" x 1.7"	10 oz	PMNN4505A	4850 mAh

KEY AUDIO ACCESSORIES****

Name	Type	Part Number	Features
IMPRES Display RSM	Wired	HMN4104	Windporting, Audio Jack, Channel Knob, Volume Control, Orange Button, IP68
IMPRES XE RSM BLACK	Wired	NNTN8575ABLK	Windporting, Audio Jack, Strobe Light, Volume Control, Orange Button, IP68
IMPRES XE RSM GREEN	Wired	NNTN8575	Windporting, Audio Jack, Strobe Light, Volume Control, Orange Button, IP68
IMPRES XE500 RSM BLACK	Wired	PMMN4106ABLK	Adaptive Audio Engine, Audio Jack, Strobe Light, Volume Control, Channel Knob, Orange Button, IP68
IMPRES XE500 RSM GREEN	Wired	PMMN4106	Adaptive Audio Engine, Audio Jack, Strobe Light, Volume Control, Channel Knob, Orange Button, IP68

** Ships standard with radio
**** Pending Hazardous Certification

PRODUCT DATA SHEET
APX™ 8000XE

RADIO MODELS

MODEL 1.5

MODEL 2.5

MODEL 3.5

	MODEL 1.5	MODEL 2.5	MODEL 3.5
Display	Full bitmap monochromatic LCD top display 1 line text x 8 characters 1 line of icons No menu support Multi-color backlight	**Top display plus:** Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight	**Top display plus:** Full bitmap color LCD display 4 lines of text x 14 characters 2 lines of icons 1 menu line x 3 menus White backlight
Keypad	none	Backlit keypad 3 soft keys 4 direction navigation key Home and Data buttons	Backlit keypad 3 soft keys 4 direction navigation key 4x3 keypad Home and Data buttons
Channel Capacity	1200	3000	3000
FLASHport Memory	2 GB	2 GB	2 GB
700/800 MHz (764-870 MHz) VHF (136-174 MHz) UHF Range 1 (380-470 MHz) UHF Range 2 (450-520 MHz)	H91TGD9PW5AN	H91TGD9PW6AN	H91TGD9PW7AN
Buttons & Switches	Large PTT button • Angled On/Off volume control • X-large orange emergency button • 16 position top-mounted rotary switch 2-position concentric switch • Glove accessible 3-position switch • 3 programmable side buttons		

Regulatory Information

FCC ID	AZ489FT7061
Industry Canada	109U-89FT7061
Emission Designators	LMR: 8K10F1D, 8K10F1E, 8K10F1W, 11K0F3E, 16K0F3E***, 20K0F1E*** Bluetooth®: 852KF1D, 1M17F1D, 1M19F1D, 1M04F1D WLAN (WiFi): 13M7G1D, 17M0D1D, 18M1D1D

*** In accordance with FCC mandate, the APX 8000XE all band radio is restricted to 12.5kHz operation only and does NOT support 25kHz in the VHF and UHF Bands (excluding T-Band). This applies to customers under Rule Part 90.

RECEIVER - TYPICAL PERFORMANCE SPECIFICATIONS

		700	800	VHF	UHF
Frequency Range/Bandsplits		764-776 MHz	851-870 MHz	136-174 MHz	380-520 MHz
Channel Spacing		25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz	25/20/12.5 kHz
Maximum Frequency Separation		Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit
Speech Loudness at 30cm		105 Phons	105 Phons	105 Phons	105 Phons
Audio Output Power at Rated/Max		3 Watt/5 Watt	3 Watt/5 Watt	3 Watt/5 Watt	3 Watt/5 Watt
Frequency Stability[1] (-30°C to +60°C, +25°C Ref.)		+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm	+/- 1.0 ppm
Analog Sensitivity[1] Digital Sensitivity[2]	12 dB SINAD 1% BER 5% BER 5% BER Faded	0.224 uV 0.316 uV 0.211 uV 0.562uV	0.224 uV 0.316 uV 0.211 uV 0.562 uV	0.168 uV 0.251 uV 0.149 uV 0.562 uV	0.199 uV 0.282 uV 0.158 uV 0.530 uV
Selectivity (25 kHz / 12.5 kHz)[1, 3]		79 dB / 72 dB	78 dB / 72 dB	82 dB / 77 dB	80 dB / 74 dB
Intermodulation Rejection[1]		81 dB	80 dB	82 dB	80 dB
Spurious Rejection[1]		98 dB	98 dB	92 dB	98 dB
FM Hum and Noise (25 kHz / 12.5 kHz)[1]		-55 dB / -53 dB	-54 dB / -52 dB	-57 dB / -55 dB	-56 dB / -54 dB
Audio Distortion at Rated		1.2%	1.3%	1.3%	1.2%

PORTABLE MILITARY STANDARDS 810 C, D, E , F & G

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot	501.5	I/A1, II/A1
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II/C1
Temperature Shock	503.1	I	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I/C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II/Aggravated
Salt Fog	509.1	I	509.2	I	509.3	I	509.4	1 Proc	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Explosive Atmosphere	-	-	-	-	-	-	511.4	I	511.5, 511.6	I
Blowing Sand	1 Proc	1 Proc	510.2	II	510.3	II	510.4	II	510.5	II
Submersion	512.1	I	512.2	I	512.3	I	512.4	I	512.5	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI
Shock (Drop)	516.2	II	516.2	IV	516.4	IV	516.5	IV	516.6	IV

DIMENSIONS OF THE RADIOS WITHOUT BATTERY	Inches	Millimeters
Length	6.15	156.2
Width Push-To-Talk button	2.39	60.7
Depth Push-To-Talk button	1.40	35.5
Width Top	3.32	84.3
Depth Top	2.13	54.1
Depth Bottom of Battery	1.24	31.5
Weight of the radios without battery	13.9 oz	394.1 g

ENCRYPTION	
Supported Encryption Algorithms	ADP, AES, DES, DES-XL, DES-OFB, DVP-XL, Localized Algorithm
Encryption Algorithm Capacity	8
Encryption Keys per Radio	Module capable of storing 1024 keys. Programmable for 128 Common Key Reference (CKR) or 16 Physical Identifier (PID)
Encryption Frame Re-sync Interval	P25 CAI 360 mSec
Encryption Keying	Key Loader and Over the Air Rekeying (OTAR)
Synchronization	XL – Counter Addressing OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology (NIST) approved random number generator
Encryption Type	Digital and SecureNet
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 140-2 Level 3 FIPS 197

GPS/GNSS SPECIFICATIONS	
Constellations	GPS & GLONASS
Tracking Sensitivity	–164 dBm
Accuracy[1]	<5 meters (95%)
Cold Start[2]	<60 seconds (95%)
Hot Start[3]	<5 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted)

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature[4]	-30°C / +60°C
Storage Temperature[4]	-50°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP68 (2 meters, 4 hours)

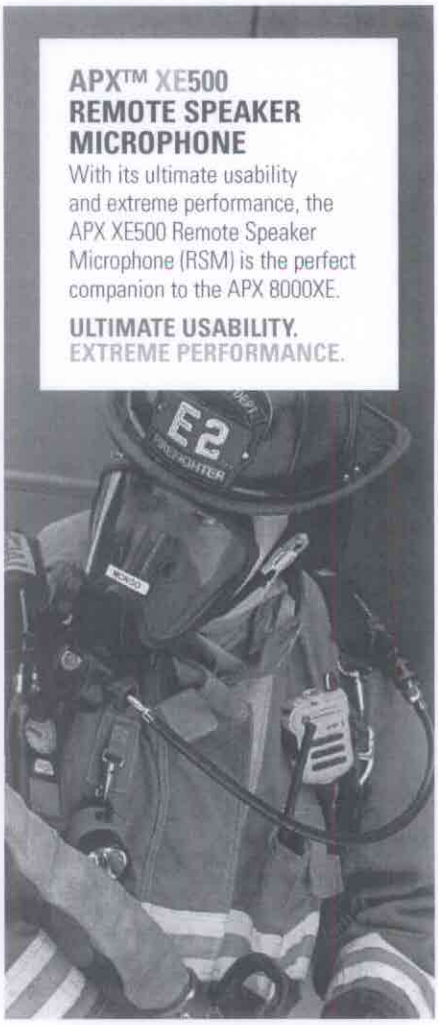
RUGGED SPECIFICATIONS	
Leakage (submersion)	MIL-STD-810 C, D, E, F and G Method 512 X Procedure I, IP68 (2 meters, 4 hours)

HOUSING COLOR
Black (Standard), Public Safety Yellow, and High Impact Green

WIRELESS CONNECTIVITY & SECURITY
Frequency Range/Bandsplits: Bluetooth: 2402 - 2480 MHz, WLAN (WiFi): 2400 - 2483.5 MHz
WLAN (WiFi) 802.11 b/g/n supports WPA-2, WPA, WEP security protocols; radio can be pre-provisioned with up to 20 SSIDs[6]
Mission Critical Wireless Bluetooth 2.1 uses 96 bit encryption for pairing & 128 bit encryption for voice, signaling and data. The radio BT supports up to 6 data connections and 1 audio connection
Bluetooth 4.0 Low Energy uses 128-bit AES-CCM encryption

[1] Measured conductively in analog mode per TIA / EIA 603 under nominal conditions.
[2] Measured conductively in digital mode per TIA / EIA IS 102.CAAA under nominal conditions.
[3] Measured conductively with >6 satellites visible at a nominal –130 dBm signal strength. Specs provided are 95th percentile values.
[4] Temperatures listed are for radio specifications. Battery storage is recommended at 25°C, ±5°C to ensure best performance.
[5] Measured using the TIA-603 single-tone method.
[6] 2400 - 2483.5 MHz for EMEA region and includes guardband. Channels 1 - 11 used for FCC/IC region.
Specifications subject to change without notice.

All specifications shown are typical.
Radio meets applicable regulatory requirements



For more information, please visit: www.motorolasolutions.com/APX8000XE

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MECHANICAL ENGINEERING DIVISION

January 24, 2017

Mr. Richard Morales, Jr.
IT Manager, Radio Services
City of San Antonio
Work: 210-207-7022
richard.morales@sanantonio.gov

Subject: *Revised* SwRI® Quote 18-05-10-17-051a, "MIL-STD-810 and IEC60529 Testing of a Handheld Radio and Lapel Microphone"

Dear Mr. Morales:
Thank you for your interest in testing services at Southwest Research Institute (SwRI). SwRI is one of the largest independent, nonprofit, research and development organizations in the world with nearly 3,000 employees. SwRI was founded in 1947 to help clients from both industry and government solve scientific and technological problems. The engineering staff at SwRI provides technical evaluations and assistance, test design and tailoring, and standardized testing to a variety of national (ANSI/ASTM), military (MIL-STD), European (ETS) and international (IEC/ISO) standards.

General Information

In response to the inquiry received from the City of San Antonio and follow-up clarification, this letter constitutes a quote for environmental testing of a Handheld Radio and Lapel Microphone. Testing will be conducted in accordance with MIL-STD-810G and IEC 60529 (Edition 2.2). All testing will be performed in accordance with the latest revisions of the referenced test specification in use at the time testing commences unless otherwise specified. *Note: This quote is being revised to clarify the quantity of samples and/or test runs included in the cost estimate.*

Test Witness

City of San Antonio personnel are permitted to witness the testing onsite at SwRI; however, all visiting personnel must sign a release upon entry to the laboratory, and are required to abide by SwRI safety policies including the use of appropriate and available PPE. City of San Antonio personnel are not permitted to take photographs during testing of any items or facilities except your specific test article. Due to the nature of the testing performed at SwRI, we must have advance notice if any of the visitors planning to be onsite are not U.S. citizens or permanent residents.

Quality Assurance

The Structural Engineering Department at SwRI operates under a certified ISO 9001:2015 Quality Management System. While this quote does not include any witnessing by QA personnel, additional quality assurance can be provided by the SwRI Institute Quality Systems (IQS) Department if required. The SwRI IQS Department is an independent organizational element of the Institute and reports to the Office of the President of SwRI.

Assumptions

- SwRI will utilize monitoring and measurement equipment with NIST-traceable calibration.
- SwRI will maintain MIL-STD-810 tolerances on temperature and humidity.
- SwRI assumes that all pre- and post-test functional testing will consist of verifying that the radio/mic are operational, and will not involve quantification of acoustic output or quality of transmitted or received signals.
- Temperature Shock testing will involve six transitions – 3 each from cold-to-hot and hot-to-cold.

Cost Estimate

The costs for performing the requested testing are summarized in Table 1 and includes SwRI setup. Any additional retesting due to test item failure is not included, and will be addressed immediately with the City of San Antonio personnel in terms of cost and schedule impact.

This testing has not yet been scheduled. The schedule for testing and delivery of the final report will be negotiated and agreed upon by SwRI and City of San Antonio personnel should this program be awarded.

The testing in Table 1 has been estimated on a per-run basis. With the exception of the explosive atmosphere test (which must be performed on an individual sample), up to five radio/mic samples could be accommodated in a single test run. SwRI understands, however, that the various models of radios being evaluated by the City of San Antonio may not be available simultaneously to support concurrent testing. If additional test runs are necessary based on sample availability, SwRI will work with the City of San Antonio to minimize the additional cost to the extent possible based on time lag between sample availability and test order.

Table 1: Summary of Testing

METHOD	DESCRIPTION	PROCEDURE	DURATION	COST
All	Test Plan	All	2 weeks	$3,000
501.6	High Temperature	PI, PII/Climate A2	7 days	$7,000
502.6	Low Temperature	PI, PII/Climate C1	2 days	$2,000
503.6	Temperature Shock	P1 (C)	2 days	$2,500
505.6	Solar Radiation (240 hours)	PI/Cat A1	10 days	$8,750
506.6	Blowing Rain	PI	1 day	$2,250
507.6	Humidity	PII	11 days	$11,000
509.6	Salt Fog	PII	4 days	$2,800
510.6	Blowing Dust and Sand	PI, PII	4 days	$6,500
511.5	Explosive Atmosphere	PI	2 days	$7,000
514.7	Vibration	PI/Cat. 4 & PII/Cat. 5	2 days	$6,000
516.7	Shock (Drop)	PIV	1 day	$1,000
IEC60529	Wire Access Probe (1.0 mm) Test	12.2	½ day	$300
	Dust Test	13.4 & 13.6	2 days	$6,500
	Continuous Immersion	14.2.8	1 day	$1,850
--	Report / Project Management		2 weeks	$3,500
	Total Cost in USD:			**$71,950**

Final Reporting

The deliverable for this program will be the final test report, which will be provided in electronic (PDF) format following the conclusion of all testing. The final report will include photographs, test data, results, listing of test equipment, procedure details, and copies of laboratory data logs. The report will be delivered via email to City of San Antonio personnel within two weeks of the completion of all testing, assuming all information necessary to complete the report has been received.

Shipping

Shipping costs of all equipment **to and from** SwRI shall be the responsibility of the City of San Antonio. All equipment should be addressed to:

Southwest Research Institute
Attn: Jenny Ferren
Building 231 Highbay
9503 W. Commerce
San Antonio, Texas 78227

This pre-proposal is submitted as a guide and merely represents our estimated time and/or price to perform the services based upon our general understanding of the program and your needs at this time. The estimated time and price as set forth herein are subject to change. This pre-proposal shall not constitute an offer for services and is intended for discussion purposes only. Should your organization decide to have SwRI conduct this program, SwRI will prepare a formal proposal which will include a statement of work and contract for services. **Alternatively, your organization may submit a purchase order in response to this pre-proposal, which will serve to initiate the contract process.** For administrative purposes only, the contractual period of performance for this effort shall be 12 months beyond the date the PO is received. This quote is valid for 120 days.

Thank you for the opportunity to submit this quote for testing services. SwRI is fully committed to performing your testing to your satisfaction. If you have any questions concerning this quote, feel free to contact me directly at (210) 522-2329, by FAX at (210) 522-3042, or by E-Mail at jferren@swri.org.

Sincerely,

Jenny Ferren, Manager
Structural Dynamics and Product Assurance

SOUTHWEST RESEARCH INSTITUTE®

6220 CULEBRA ROAD 78238-5166 • P.O. DRAWER 28510 78228-0510 • SAN ANTONIO, TEXAS, USA • (210) 684-5111 • WWW.SWRI.ORG

MECHANICAL ENGINEERING DIVISION

January 27, 2017

Mr. Richard Morales, Jr.
IT Manager, Radio Services
City of San Antonio
Work: 210-207-7022
richard.morales@sanantonio.gov

Subject: SwRI® Quote 18-05-10-17-063, "Explosive Atmosphere and Vibration Testing of a Handheld Radio and Lapel Microphone"

Dear Mr. Morales:
Thank you for your interest in testing services at Southwest Research Institute (SwRI). SwRI is one of the largest independent, nonprofit, research and development organizations in the world with nearly 3,000 employees. SwRI was founded in 1947 to help clients from both industry and government solve scientific and technological problems. The engineering staff at SwRI provides technical evaluations and assistance, test design and tailoring, and standardized testing to a variety of national (ANSI/ASTM), military (MIL-STD), European (ETS) and international (IEC/ISO) standards.

General Information

In response to the inquiry received from the City of San Antonio and follow-up clarification, this letter constitutes a fixed-price quote for environmental testing of a Handheld Radio and Lapel Microphone. Testing will be conducted in accordance with selected tests from MIL-STD-810G. All testing will be performed in accordance with the latest revisions of the referenced test specification in use at the time testing commences unless otherwise specified.

Test Witness

City of San Antonio personnel are permitted to witness the testing onsite at SwRI; however, all visiting personnel must sign a release upon entry to the laboratory, and are required to abide by SwRI safety policies including the use of appropriate and available PPE. City of San Antonio personnel are not permitted to take photographs during testing of any items or facilities except your specific test article. Due to the nature of the testing performed at SwRI, we must have advance notice if any of the visitors planning to be onsite are not U.S. citizens or permanent residents.

Quality Assurance

The Structural Engineering Department at SwRI operates under a certified ISO 9001:2015 Quality Management System. While this quote does not include any witnessing by QA personnel, additional quality assurance can be provided by the SwRI Institute Quality Systems (IQS) Department if required. The SwRI IQS Department is an independent organizational element of the Institute and reports to the Office of the President of SwRI.

Assumptions

- SwRI will utilize monitoring and measurement equipment with NIST-traceable calibration.
- SwRI will maintain MIL-STD-810 tolerances on temperature and humidity.
- SwRI assumes that all pre- and post-test functional testing will consist of verifying that the radio/mic are operational, and will not involve quantification of acoustic output or quality of transmitted or received signals.
- Explosive atmosphere testing will be performed with the test article in a vacuum chamber in a fuel vapor environment. The radio and mic will each be keyed while in the fuel vapor environment, but no voice transmission will be involved. The test is normally performed at an

equivalent altitude of 40kft, but will be conducted at 14kft at the request of the City of San Antonio. Testing will be conducted at the maximum specified operating temperature, +60°C.

- Vibration testing will be performed with multiple units (***up to five***) representing various typical carrying methods including belt clip-to-pocket, belt clip-to-belt, and carrying case. The estimated cost assumes that all samples will be tested simultaneously. If functional testing is performed during vibration testing, it will be limited to keying of the microphone.
- No specialized fixturing is included for vibration testing. SwRI expects the pocket, belt, and carrying case will be secured to existing bookend style fixtures or other appropriate means of attaching the test items to the shaker.
- The City of San Antonio shall provide the test articles with belt clips, as well as the jacket(s) or portions of jacket(s) to which the belt clip will be attached. If the belts are part of the standard issue uniform, those should also be provided to ensure that the mounting method during vibration is truly representative of in-use conditions.

Cost Estimate

The costs for performing the requested testing are summarized in Table 1 and include SwRI setup. Any additional retesting due to test item failure is not included, and will be addressed immediately with the City of San Antonio personnel in terms of cost and schedule impact.

This testing has not yet been scheduled. The schedule for testing and delivery of the final report will be negotiated and agreed upon by SwRI and City of San Antonio personnel should this program be awarded.

Table 1: Summary of Testing

METHOD	DESCRIPTION	PROCEDURE	DURATION	COST
511.6	Explosive Atmosphere	Proc. I @ 14kft	2 days	$4,500
514.7	Vibration	Proc. I – Uniaxial test	2 days	$6,000
		Proc. II – Orbital test		
--	Report / Project Management	--	1 week	$1,650
	Total Cost in USD:			**$12,150**

Final Reporting

The deliverable for this program will be the final test report, which will be provided in electronic (PDF) format following the conclusion of all testing. The final report will comply with requirements addressed in Annex A, Task 406 of MIL-STD-810G, and will include photographs, test data, results, listing of test equipment, procedure details, and copies of laboratory data logs. The report will be delivered via email to City of San Antonio personnel within one week of the completion of all testing, assuming all information necessary to complete the report has been received.

Shipping

Shipping costs of all equipment **to and from** SwRI shall be the responsibility of the City of San Antonio. All equipment should be addressed to:

Southwest Research Institute
Attn: Jenny Ferren
Building 231 Highbay
9503 W. Commerce
San Antonio, Texas 78227

This pre-proposal is submitted as a guide and merely represents our estimated time and/or price to perform the services based upon our general understanding of the program and your needs at this time. The estimated time and price as set forth herein are subject to change. This pre-proposal shall not constitute an offer for services and is intended for discussion purposes only. Should your organization

decide to have SwRI conduct this program, SwRI will prepare a formal proposal which will include a statement of work and contract for services. **Alternatively, your organization may submit a purchase order in response to this pre-proposal, which will serve to initiate the contract process.** For administrative purposes only, the contractual period of performance for this effort will be 12 months beyond the date the PO is received. This quote is valid for 120 days.

Thank you for the opportunity to submit this quote for testing services. SwRI is fully committed to performing your testing to your satisfaction. If you have any questions concerning this quote, feel free to contact me directly at (210) 522-2329, by FAX at (210) 522-3042, or by E-Mail at jferren@swri.org.

Sincerely,

Jenny Ferren, Manager
Structural Dynamics and Product Assurance

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MECHANICAL ENGINEERING DIVISION

January 24, 2017

Mr. Richard Morales, Jr.
IT Manager, Radio Services
City of San Antonio
Work: 210-207-7022
richard.morales@sanantonio.gov

Subject: *Revised* SwRI® Quote 18-05-10-17-053a, "High Temperature Validation Testing of Portable Radio and Lapel Microphone Systems

Dear Mr. Morales:
Thank you for your continued interest in testing services at Southwest Research Institute (SwRI). SwRI is one of the largest independent, nonprofit, research and development organizations in the world with nearly 3,000 employees. SwRI was founded in 1947 to help clients from both industry and government solve scientific and technological problems. The engineering staff at SwRI provides technical evaluations and assistance, test design and tailoring, and standardized testing to a variety of national (ANSI/ASTM), military (MIL-STD), European (ETS) and international (IEC/ISO) standards.

General Information

In response to the inquiry received from the City of San Antonio and follow-up clarification, this letter constitutes a quote for environmental testing of portable radio systems used in Fire and EMS operations for the City of San Antonio. Testing will be conducted in accordance with the SwRI revision to the SAFD Validation Test Procedure, dated January 11, 2017. *Note: This quote is being revised to clarify the quantity of samples and/or test runs included in the cost estimate.*

Test Witness

City of San Antonio personnel are permitted to witness the testing onsite at SwRI; however, all visiting personnel must sign a release upon entry to the laboratory, and are required to abide by SwRI safety policies including the use of appropriate and available PPE. City of San Antonio personnel are not permitted to take photographs during testing of any items or facilities except your specific test article. Due to the nature of the testing performed at SwRI, we must have advance notice if any of the visitors planning to be onsite are not U.S. citizens or permanent residents.

Quality Assurance

The Structural Engineering Department at SwRI operates under a certified ISO 9001:2015 Quality Management System. While this quote does not include any witnessing by QA personnel, additional quality assurance can be provided by the SwRI Institute Quality Systems (IQS) Department if required. The SwRI IQS Department is an independent organizational element of the Institute and reports to the Office of the President of SwRI.

Assumptions

- SwRI will utilize monitoring and measurement equipment with NIST-traceable calibration.
- SwRI will maintain ML-STD-810 tolerances on temperature and humidity.

Cost Estimate

The costs for performing the requested testing are summarized in Table 1 and include SwRI setup. Any additional retesting due to test item failure is not included, and will be addressed immediately with the City of San Antonio personnel in terms of cost and schedule impact.

The testing in Table 1 has been estimated on a per-day basis. Up to three radio/mic samples can be accommodated within the timeframe included. SwRI understands that the various models of radios being evaluated by the City of San Antonio may not be available simultaneously, but will honor the estimated costs for three samples provided no more than two test runs are required. If radios are tested on completely separate occasions, some additional setup costs may be necessary. SwRI does, however, assume that all samples tested will be included in a single report.

Table 1: Summary of Testing

CLASS	DESCRIPTION	DURATION	COST
--	Pre-Test Immersion Testing	½ day	$850
	Pre-Test Audio Test		
II & III	Dry High Temperature	2 days	$2,000
	High Temperature with Rapid Cooling		
	Wet to High Temperature		
--	Post-Test Immersion Testing	½ day	$850
	Post-Test Audio Test		
	Report / Project Management	≤2 weeks	$2,280
	Total Cost in USD:		**$5,980**

This testing has not yet been scheduled. The schedule for testing and delivery of the final report will be negotiated and agreed upon by SwRI and City of San Antonio personnel should this program be awarded.

Final Reporting

The deliverable for this program will be the final test report, which will be provided in electronic (PDF) format following the conclusion of all testing. The final report will include photographs, test data, results, listing of test equipment, procedure details, and copies of laboratory data logs. The report will be delivered via email to City of San Antonio personnel within 2 weeks of the completion of all testing, assuming all information necessary to complete the report has been received.

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Southwest Research Institute
Attn: Jenny Ferren
Building 231 Highbay
9503 W. Commerce
San Antonio, Texas 78227

This pre-proposal is submitted as a guide and merely represents our estimated time and/or price to perform the services based upon our general understanding of the program and your needs at this time. The estimated time and price as set forth herein are subject to change. This pre-proposal shall not constitute an offer for services and is intended for discussion purposes only. Should your organization decide to have SwRI conduct this program, SwRI will prepare a formal proposal which will include a statement of work and contract for services. **Alternatively, your organization may submit a purchase order in response to this pre-proposal, which will serve to initiate the contract process.** For administrative purposes only, the contractual period of performance for this effort shall be 12 months beyond the date the PO is received. This quote is valid for 120 days.

Thank you for the opportunity to submit this quote for testing services. SwRI is fully committed to performing your testing to your satisfaction. If you have any questions concerning this quote, feel free to contact me directly at (210) 522-2329, by FAX at (210) 522-3042, or by E-Mail at jferren@swri.org.

Sincerely,

Jenny Ferren, Manager
Structural Dynamics and Product Assurance

ATTACHMENT C

City of San Antonio

Veteran-Owned Small Business Program Tracking Form

Authority. San Antonio City Code Chapter 2, Article XI describes the City's veteran-owned small business preference program.

Tracking. **This solicitation is not eligible for a preference** based on status as a veteran-owned small business (VOSB). Nevertheless, in order to determine whether the program can be expanded at a later date, the City tracks VOSB participation at both prime contract and subcontract levels.

Certification. The City relies on inclusion in the database of veteran-owned small businesses (VOSB) maintained by the U.S. Small Business Administration to verify VOSB status; however, veteran status may also be confirmed by certification by another public or private entity that uses similar certification procedures.

Definitions.

The program uses the federal definitions of veteran and veteran-owned small business found in 38 CFR Part 74.

- The term "veteran" means a person who served on active duty with the U.S. Army, Air Force, Navy, Marine Corps, Coast Guard, for any length of time and at any place and who was discharged or released under conditions other than dishonorable. Reservists or members of the National Guard called to federal active duty or disabled from a disease or injury incurred or aggravated in line of duty or while in training status.

- A veteran-owned small business is a business that is not less than 51 percent owned by one or more veterans, or in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; the management and daily business operations of which are controlled by one or more veterans and qualifies as "small" for Federal business size stand purposes.

The program uses the below definition of joint venture.

- Joint Venture means a collaboration of for-profit business entities, in response to a solicitation, which is manifested by a written agreement, between two or more independently owned and controlled business firms to form a third business entity solely for purposes of undertaking distinct roles and responsibilities in the completion of a given contract. Under this business arrangement, each joint venture partner shares in the management of the joint venture and also shares in the profits or losses of the joint venture enterprise commensurately with its contribution to the venture.

The program does not distinguish between a veteran and a service-disabled veteran-owned business and is not limited geographically.

COMPLETE THE FOLLOWING FORM AND SUBMIT WITH YOUR BID/PROPOSAL.

INSTRUCTIONS

- IF SUBMITTING AS A PRIME CONTRACTOR ONLY, COMPLETE **SECTION 1** OF THIS FORM.

- IF SUBMITTING AS A PRIME CONTRACTOR UTILIZING A SUBCONTRACTOR, COMPLETE **SECTIONS 1 AND 2** OF THIS FORM.

ATTACHMENT C

City of San Antonio

Veteran-Owned Small Business Program Tracking Form

SOLICITATION NAME/NUMBER: _____

Name of Respondent:		
Physical Address:		
City, State, Zip Code:		
Phone Number:		
Email Address:		
Is Respondent certified as a VOSB with the U.S. Small Business Administration? (circle one)	Yes	No
If yes, provide the SBA Certification #		
If not certified by the SBA, is Respondent certified as a VOSB by another public or private entity that uses similar certification procedures? (circle one)	Yes	No
If yes, provide the name of the entity who has certified Respondent as a VOSB. Include any identifying certification numbers.		
Participation Percentage:		
Participation Dollar Amount:		

Is Respondent subcontracting with a business that is certified as a VOSB? (circle one)	Yes	No
Name of **SUBCONTRACTOR** Veteran-Owned Small Business:		
Physical Address:		
City, State, Zip Code:		
Phone Number:		
Email Address:		
Is **SUBCONTRACTOR** certified as a VOSB with the U.S. Small Business Administration? (circle one)	Yes	No
If yes, provide the SBA Certification #		
If not certified by the SBA, is **SUBCONTRACTOR** certified as a VOSB by another public or private entity that uses similar certification procedures? (circle one)	Yes	No
If yes, provide the name of the entity who has certified **SUBCONTRACTOR** as a VOSB. Include any identifying certification numbers.		
Participation Percentage:		
Participation Dollar Amount		

ATTACHMENT C

City of San Antonio

Veteran-Owned Small Business Program Tracking Form

ACKNOWLEDGEMENT

THE STATE OF TEXAS

I certify that my responses and the information provided on this Veteran-Owned Small Business Preference Program Identification Form are true and correct to the best of my personal knowledge and belief and that I have made no willful misrepresentations on this form, nor have I withheld any relevant information in my statements and answers to questions. I am aware that any information given by me on this Veteran-Owned Small Business Preference Program Identification Form may be investigated and I hereby give my full permission for any such investigation, including the inspection of business records and site visits by City or its authorized representative. I fully acknowledge that any misrepresentations or omissions in my responses and information may cause my offer to be rejected or contract to be terminated. I further acknowledge that providing false information is grounds for debarment.

BIDDER/RESPONDENT'S FULL NAME:

_____

(Print Name) Authorized Representative of Bidder/Respondent

_____

(Signature) Authorized Representative of Bidder/Respondent

_____

Title

_____

Date

This Veteran-Owned Small Business Program Tracking Form must be submitted with the Bidder/Respondent's bid/proposal.

ATTACHMENT D

CERTIFICATE OF INTERESTED PARTIES (Form 1295)

The Texas Government Code §2252.908, and the rules issued by the Texas Ethics Commission found in Title 1, Sections 46.1, 46.3 and 46.5 of the Texas Administrative Code, require a business entity to submit a completed Form 1295 to the City before the City may enter into a contract with that business entity.

Form 1295 must be completed online. In Box 3 of the form, provide the solicitation number shown on the cover page of this solicitation (e.g. IFB 6100001234, RFO 6100001234 or RFCSP 6100001234). The form is available from the Texas Ethics Commission by accessing the following web address:

https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

Print your completed Form 1295 showing the Certification Number and Date Filed in the Certification of Filing box at the upper right corner. Sign Form 1295 in front of a notary and submit it with your response to this solicitation.

The following definitions found in the statute and Texas Ethics Commission rules may be helpful in completing Form 1295.

"Business entity" includes an entity through which business is conducted with a governmental entity or state agency, regardless of whether the entity is a for-profit or nonprofit entity. The term does not include a governmental entity or state agency.

"Controlling interest" means: (1) an ownership interest or participating interest in a business entity by virtue of units, percentage, shares, stock, or otherwise that exceeds 10 percent; (2) membership on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members; or (3) service as an officer of a business entity that has four or fewer officers, or service as one of the four officers most highly compensated by a business entity that has more than four officers.

"Interested party" means: (1) a person who has a controlling interest in a business entity with whom a governmental entity or state agency contracts; or (2) a person who actively participates in facilitating a contract or negotiating the terms of a contract with a governmental entity or state agency, including a broker, intermediary, adviser, or attorney for the business entity.

"Intermediary", for purposes of this rule, means a person who actively participates in the facilitation of the contract or negotiating the contract, including a broker, adviser, attorney, or representative of or agent for the business entity who:

(1) receives compensation from the business entity for the person's participation;

(2) communicates directly with the governmental entity or state agency on behalf of the business entity regarding the contract; and

(3) is not an employee of the business entity.

NON-DISCRIMINATION_EXHIBIT 1

Non-Discrimination. As a party to this contract, {Contractor or Vendor} understands and agrees to comply with the Non-Discrimination Policy of the City of San Antonio contained in Chapter 2, Article X of the City Code and further, shall not discriminate on the basis of race, color, national origin, sex, sexual orientation, gender identity, veteran status, age or disability, unless exempted by state or federal law, or as otherwise established herein.

EXHIBIT 2
INSURANCE AND INDEMNIFICATION REQUIREMENTS

INSURANCE

A) Prior to the commencement of any work under this Agreement, Vendor shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City's Finance Department, which shall be clearly labeled "Professional Services Agreement for Radio Testing" in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. The City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must be signed by the Authorized Representative of the carrier, and list the agent's signature and phone number. The certificate shall be mailed, with copies of all applicable endorsements, directly from the insurer's authorized representative to the City. The City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by the City's Finance Department. No officer or employee, other than the City's Risk Manager, shall have authority to waive this requirement.

B) The City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City's Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereby City may incur increased risk.

C) A Vendor's financial integrity is of interest to the City; therefore, subject to Vendor's right to maintain reasonable deductibles in such amounts as are approved by the City, Vendor shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension hereof, at Vendor's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

TYPE	AMOUNTS
1. Commercial General Liability Insurance to include coverage for the following: a. Premises/Operations b. Products/Completed Operations c. Personal/Advertising Injury	For Bodily Injury and Property Damage of $1,000,000 per occurrence; $2,000,000 General Aggregate, or its equivalent in Umbrella or Excess Liability Coverage
2. Professional Liability (Claims-made basis) To be maintained and in effect for no less than two years subsequent to the completion of the professional service.	$1,000,000 per claim, to pay on behalf of the insured all sums which the insured shall become legally obligated to pay as damages by reason of any act, malpractice, error, or omission in professional services.

D) Vendor agrees to require, by written contract, that all subcontractors providing goods or services hereunder obtain the same categories of insurance coverage required of Vendor herein, and provide a certificate of insurance and endorsement that names the Vendor and the CITY as additional insureds. Policy limits of the coverages carried by subcontractors will be

determined as a business decision of Vendor. Respondent shall provide the CITY with said certificate and endorsement prior to the commencement of any work by the subcontractor. This provision may be modified by City's Risk Manager, without subsequent City Council approval, when deemed necessary and prudent, based upon changes in statutory law, court decisions, or circumstances surrounding this agreement. Such modification may be enacted by letter signed by City's Risk Manager, which shall become a part of the contract for all purposes.

E) As they apply to the limits required by the City, the City shall be entitled, upon request and without expense, to receive copies of the policies, declaration page, and all required endorsements. Vendor shall be required to comply with any such requests and shall submit requested documents to City at the address provided below within 10 days. Vendor shall pay any costs incurred resulting from provision of said documents.

City of San Antonio
Attn: Finance Department
P.O. Box 839966
San Antonio, Texas 78283-3966

F) Vendor agrees that with respect to the above required insurance, all insurance policies are to contain or be endorsed to contain the following provisions:

- Name the City, its officers, officials, employees, volunteers, and elected representatives as additional insureds by endorsement, as respects operations and activities of, or on behalf of, the named insured performed under contract with the City, with the exception of the workers' compensation and professional liability policies;

- Provide for an endorsement that the "other insurance" clause shall not apply to the City of San Antonio where the City is an additional insured shown on the policy;

- Workers' compensation, employers' liability, general liability and automobile liability policies will provide a waiver of subrogation in favor of the City.

- Provide advance written notice directly to City of any suspension or non-renewal in coverage, and not less than ten (10) calendar days advance notice for nonpayment of premium.

G) Within five (5) calendar days of a suspension, cancellation or non-renewal of coverage, Vendor shall provide a replacement Certificate of Insurance and applicable endorsements to City. City shall have the option to suspend Vendor's performance should there be a lapse in coverage at any time during this contract. Failure to provide and to maintain the required insurance shall constitute a material breach of this Agreement.

H) In addition to any other remedies the City may have upon Vendor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, the City shall have the right to order Vendor to stop work hereunder, and/or withhold any payment(s) which become due to Vendor hereunder until Vendor demonstrates compliance with the requirements hereof.

I) Nothing herein contained shall be construed as limiting in any way the extent to which Vendor may be held responsible for payments of damages to persons or property resulting from Vendor's or its subcontractors' performance of the work covered under this Agreement.

J) It is agreed that Vendor's insurance shall be deemed primary and non-contributory with

respect to any insurance or self insurance carried by the City of San Antonio for liability arising out of operations under this Agreement.

K) It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of the City shall be limited to insurance coverage provided..

L) Vendor and any Subcontractors are responsible for all damage to their own equipment and/or property.

INDEMNIFICATION

VENDOR covenants and agrees to FULLY INDEMNIFY, DEFEND and HOLD HARMLESS, the CITY and the elected officials, employees, officers, directors, volunteers and representatives of the CITY, individually and collectively, from and against any and all costs, claims, liens, damages, losses, expenses, fees, fines, penalties, proceedings, actions, demands, causes of action, liability and suits of any kind and nature, including but not limited to, personal or bodily injury, death and property damage, made upon the CITY directly or indirectly arising out of, resulting from or related to VENDOR' activities under this Agreement, including any acts or omissions of VENDOR, any agent, officer, director, representative, employee, vendor or subcontractor of VENDOR, and their respective officers, agents employees, directors and representatives while in the exercise of the rights or performance of the duties under this Agreement. The indemnity provided for in this paragraph shall not apply to any liability resulting from the negligence of CITY, it s officers or employees, in instances where such negligence causes personal injury, death, or property damage. IN THE EVENT VENDOR AND CITY ARE FOUND JOINTLY LIABLE BY A COURT OF COMPETENT JURISDICTION, LIABILITY SHALL BE APPORTIONED COMPARATIVELY IN ACCORDANCE WITH THE LAWS FOR THE STATE OF TEXAS, WITHOUT, HOWEVER, WAIVING ANY GOVERNMENTAL IMMUNITY AVAILABLE TO THE CITY UNDER TEXAS LAW AND WITHOUT WAIVING ANY DEFENSES OF THE PARTIES UNDER TEXAS LAW.

The provisions of this INDEMNITY are solely for the benefit of the parties hereto and not intended to create or grant any rights, contractual or otherwise, to any other person or entity. VENDOR shall advise the CITY in writing within 24 hours of any claim or demand against the CITY or VENDOR known to VENDOR related to or arising out of VENDOR' activities under this AGREEMENT and shall see to the investigation and defense of such claim or demand at VENDOR's cost. The CITY shall have the right, at its option and at its own expense, to participate in such defense without relieving VENDOR of any of its obligations under this paragraph.