Western States Contracting Alliance
Current Contract Information

PHASE 1 SOLE SOURCE/INSTALLED BASE AWARD **Phase I Awards**
PHASE 2 COMPETITIVELY BID EQUIPMENT **Phase II Awards**

Effective Date: September 10, 2004

Contract number:	**02702** (replaces 03599, 08497, 02899)	**Commodity code:**	**5820**
Contract title:	WSCA Public Safety Communication Equipment		
Purpose:	To add the State of South Dakota as a WSCA participating state.		
Original award date:	October 30, 2003		
Current extension period:	October 30, 2003 **through:** October 29, 2006		
Contract term:	Not to exceed 10 years		
Contract type:	This contract is designated as **convenience** use.		
Scope of contract	This contract is awarded to **multiple** contractor(s).		

Washington State Department of General Administration
Office of State Procurement, PO Box 41017, Olympia, WA 98504-1017

The State of Washington is an equal opportunity employer. To request this information in alternative formats call (360) 902-7400, or TDD (360) 664-3799.

Primary user agency(ies): **Western States Contracting Alliance State and local agencies.**

For use by: **General use**: All State Agencies, Political Subdivisions of: Alaska, Arizona, Hawaii, Idaho, Minnesota, Montana and Oregon, Oklahoma, South Dakota, Utah and Washington, and Qualified Non-profit Corporations, Materials Management Center, Participating Institutions of Higher Education (College and Universities, Community and Technical Colleges).**Various use**: All governmental agency

Term worth:	**$500,000,000**			
Current participation:	**$0.00 MBE**	**$0.00 WBE**	**$500,000,000.00**	**$0.00 EXEMPT**
	MBE 0%	**WBE 0%**	**OTHER 0%**	**EXEMPT 0%**
Current Participation:	**Contract vendors are providing sub-contractors who are qualified WBE's.**			
Recovered material:	**Contact contractor's for returning recoverable materials at the end of the equipment life cycle.**			

This page contains key contract features. Find detailed information on succeeding pages. For more information on this contract, or if you have any questions, please contact your local agency Purchasing Office, or you may contact our office at the numbers listed below.

State Procurement Officer:	Guy Cranor	Office Assistant:	Carolyn Nadeau
Phone Number:	(360) 902-7369	Phone Number:	(360) 902-7426
Fax Number:	(360) 586-2426	Fax Number:	(360) 586-2426
Email:	gcranor@ga.wa.gov	Email:	cnadeau@ga.wa.gov

Purchasing Manager	Servando Patlan	Assistant Director	Bill Joplin

Visit our Internet site: *http://www.ga.wa.gov/purchase*

WESTERN STATES CONTRACTING ALLIANCE CONTRACT: 02702 PUBLIC SAFETY COMMUNICATIONS EQUIPMENT AND SERVICE CONTRACT.

SCOPE OF THE CONTRACT

The purpose of this convenience, multi-state, contract is for the purchase of Public Safety Communication Equipment, and programs as they are needed. The WSCA directors may authorize state and local governmental entities throughout the nation (NASPO) the use of this contract subject to approval of the local state purchasing director and local statutory provisions. The selected contractors shall accept purchase orders from and deliver products to approved purchasing entities. Contractors are required to offer warranty and maintenance services on products purchased under these agreements. Only Manufacturers submit proposals for products and/or services that they themselves produce in Phase I and/or Phase II. Phase I and Phase II are as follows:

Phase I is a sole source and/or installed base contract.

Phase II is competitively bid contract.

"WSCA" Means the Western States Contracting Alliance, a cooperative group contracting consortium for state government departments, institutions, agencies and political subdivisions (i.e., colleges, school districts, counties, cites, etc.) for the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Minnesota, Montana, Nevada, New Mexico, Oregon, South Dakota, Utah, Washington, and Wyoming.

WSCA Background Information: WSCA was formed in October 1993. The purpose of WSCA is to establish the means by which participating states may join together in cooperative multi-state contracting, to ensure the commitment of each participating state and to provide regular and ongoing assistance to participating states in researching, developing, and administering procurement and contractual specifications and requirements. WSCA maintains a cooperative relationship with the National Association of State Purchasing Officials (NASPO). The mission of WSCA is to implement multi-state contracts to achieve cost-effective and efficient acquisition of quality products and services and to promote interoperability and sharing amongst the WSCA participants.

Products/Services available:	Public Safety Communication Equipment
Related product contracts:	Radio, Gateway devices, Towers, Microwave, Waveguides, Antennas, Power Supplies

NOTES:

State Agencies: Submit Order directly to Contractor for processing. Political Subdivisions: Submit orders directly to Contractor referencing State of Washington contract number. If you are unsure of your status in the State Purchasing Cooperative call (360) 902-7415.

Only authorized purchasers included in the Western States Contracting Alliance (WSCA) there local governments, poly-sub, and non-profits may use the contract.

Contract Terms: This Document includes by reference all terms and conditions published in the original **RFP and Specification Documents.**

SPECIAL CONDITIONS:

Refer to the original RFP, Amendments and Specifications for all terms, conditions and equipment specifications.

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Phase I

Phase I Awards

PHASE 1, WAS NOT COMPETITIVELY BID AND CONTRACTS WERE BASED ON SOLE SOURCE, SPECIAL MARKET CONDITIONS:

All purchase entities must check with there laws governing sole source, special market conditions before using the Phase 1 contract. Phase 1 contract was based on special market conditions, an installed base and only vendor able to provide the replacement equipment.

Equipment Category	Status of Award	Date of Award
Category 1, Radios	**Awarded**	**November 25, 2003**
Category 2, Aviation Radios	**Awarded**	**November 25, 2003**
Category 3, Dual Receiver Radio	**Re-bid 2004**	**First Qtr 2004**
Category 4, Gateway Devices:	**Awarded**	**November 25, 2003**
Category 5, Microwave	**Awarded**	**November 25, 2003**
Category 6, Towers	**Awarded**	**November 25, 2003**
Category 7 Microwave Antennas, Waveguide & Associated Hardware	**Awarded**	**November 25, 2003**
Category 8, Test Equipment	**Awarded**	**November 25, 2003**

Contractors:	Aeroflex	Page 13
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	Ceragon Networks	Page 34
	Daniels Electronics	Page 37
	EF Johnson Company	Page 40
	Eltek	Page 107
	General Dynamics	Page 111
	Harris Corporation	Page 117
	Icom America, Inc.	Page 129
	JPS/Raytheon	Page 136
	Kenwood	Page 141
	MA/COM	Page 155
	Motorola	Page 178
	Radian Communication Services, Inc	Page 193
	Radio Frequency System	Page 200
	RELM (King)	Page 221
	Sinclair Technologies	Page 224
	SmartLink Radio Networks	Page 228
	Tait North America, Inc.	Page 233
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Phase II

Phase II Awards

PHASE 2, WAS COMPETITIVELY BID AND ALL PROCUREMENT PRACITICES WERE FOLLOWED.

PHASE 2 AWARDS:

Equipment Category	Status of Award	Date of Award or Proposed date of Award
Category 1, Radios	**Awarded**	**October 30, 2003**
Category 2, Aviation Radios	**Awarded**	**October 30, 2003**
Category 3, Dual Receiver Radio	**Re-bid**	**1st QTR 2004**
Category 4, Gateway Devices:	**Awarded**	**October 30, 2003**
Category 5, Microwave	**Awarded**	**October 30, 2003**
Category 6 Communication Towers	**Awarded**	**October 30, 2003**
CATEGORY 7 Waveguides and Antennas	**Awarded**	**October 30, 2003**
Category 8, Test Equipment	**Awarded**	**October 30, 2003**

Contractors:	Aeroflex	Page 13
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	Communications-Applied Technology	Page 26
	EF Johnson Company	Page 40
	Harris Corporation	Page 117
	Icom America, Inc.	Page 129
	JPS/Raytheon	Page 136
	Kenwood	Page 141
	MA/COM	Page 155
	Northern Airborne Technology Ltd	Page 188
	Radian Communication Services, Inc	Page 193
	Radio Frequency System	Page 200
	SmartLink Radio Networks	Page 228

Category 1, Radios

Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category1.zip

NA - Not awarded and will be added after these items are re-bid.

Equipment	Link to Contractor
Portable Analog	
High VHF 136-174 Quality Category A	EF Johnson Company
High VHF 136-174 Quality Category B	EF Johnson Company
High VHF 136-174 Quality Category C	MA/COM
High VHF 136-174 Quality Category D	Kenwood
Portable Analog	
UHF 450-470 Quality Category A	EF Johnson Company
UHF 450-470 Quality Category B	EF Johnson Company
UHF 450-470 Quality Category C	Kenwood
UHF 450-470 Quality Category D	EF
Portable Analog	
UHF 806-870 Quality Category A	EF Johnson Company
UHF 806-870 Quality Category B	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company
Desktop Analog	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	NA
High VHF 136-174 Quality Category C	NA
High VHF 136-174 Quality Category D	NA
Desktop Analog	
UHF 450-470 Quality Category A	NA
UHF 450-470 Quality Category B	NA
UHF 450-470 Quality Category C	NA
UHF 450-470 Quality Category D	NA
Desktop Analog	
UHF 806-870 Quality Category A	NA
UHF 806-870 Quality Category B	NA
UHF 806-870 Quality Category C	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company
Mobile Analog	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	EF Johnson Company
High VHF 136-174 Quality Category C	EF Johnson Company

Equipment	Link to Contractor
High VHF 136-174 Quality Category D	EF Johnson Company
Mobile Analog UHF 450-470	
UHF 450-470 Quality Category A	NA
UHF 450-470 Quality Category B	NA
UHF 450-470 Quality Category C	MA/COM
UHF 450-470 Quality Category D	NA
Mobile Analog	
UHF 806-870 Quality Category A	MA/COM
UHF 806-870 Quality Category B	NA
UHF 806-870 Quality Category C	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company
Remote Base/Repeater Station Analog	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	NA
High VHF 136-174 Quality Category C	NA
High VHF 136-174 Quality Category D	MA/COM
Remote Base/Repeater Station Analog	
UHF 450-470 Quality Category A	NA
UHF 450-470 Quality Category B	NA
UHF 450-470 Quality Category C	NA
UHF 450-470 Quality Category D	MA/COM
Remote Base/Repeater Station Analog	
UHF 806-870 Quality Category A	NA
UHF 806-870 Quality Category B	NA
UHF 806-870 Quality Category C	NA
UHF 806-870 Quality Category D	NA
Portable Digital	
High VHF 136-174 Quality Category A	EF Johnson Company
High VHF 136-174 Quality Category B	EF Johnson Company
High VHF 136-174 Quality Category C	EF Johnson Company
High VHF 136-174 Quality Category D	EF Johnson Company
Portable Digital	
UHF 450-470 Quality Category A	EF Johnson Company
UHF 450-470 Quality Category B	EF Johnson Company
UHF 450-470 Quality Category C	EF Johnson Company
UHF 450-470 Quality Category D	EF Johnson Company
Portable Digital	
UHF 806-870 Quality Category A	EF Johnson Company
UHF 806-870 Quality Category B	EF Johnson Company
UHF 806-870 Quality Category C	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company

Equipment	Link to Contractor
Desktop Digital	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	NA
High VHF 136-174 Quality Category C	NA
High VHF 136-174 Quality Category D	EF Johnson Company
Desktop Digital	
UHF 450-470 Quality Category A	NA
UHF 450-470 Quality Category B	NA
UHF 450-470 Quality Category C	NA
UHF 450-470 Quality Category D	NA
Desktop Digital	
UHF 806-870 Quality Category A	NA
UHF 806-870 Quality Category B	NA
UHF 806-870 Quality Category C	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company
Mobile Digital	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	MA/COM
High VHF 136-174 Quality Category C	EF Johnson Company
High VHF 136-174 Quality Category D	EF Johnson Company
Mobile Digital	
UHF 450-470 Quality Category A	NA
UHF 450-470 Quality Category B	MA/COM
UHF 450-470 Quality Category C	NA
UHF 450-470 Quality Category D	NA
Mobile Digital	
UHF 806-870 Quality Category A	NA
UHF 806-870 Quality Category B	NA
UHF 806-870 Quality Category C	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company
Remote Bass/Repeater Station Digital	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	NA
High VHF 136-174 Quality Category C	NA
High VHF 136-174 Quality Category D	NA
Remote Bass/Repeater Station Digital	
UHF 450-470 Quality Category A	NA
UHF 450-470 Quality Category B	NA
UHF 450-470 Quality Category C	NA
UHF 450-470 Quality Category D	NA
Remote Bass/Repeater Station Digital	

Equipment	Link to Contractor
UHF 806-870 Quality Category A	NA
UHF 806-870 Quality Category B	NA
UHF 806-870 Quality Category C	NA
UHF 806-870 Quality Category D	NA
Mobile Trunked Digital	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	NA
High VHF 136-174 Quality Category C	EF Johnson Company
High VHF 136-174 Quality Category D	EF Johnson Company
Mobile Trunked Digital	
UHF 450-470 Quality Category A	NA
UHF 450-470 Quality Category B	NA
UHF 450-470 Quality Category C	NA
UHF 450-470 Quality Category D	NA
Mobile Trunked Digital	
UHF 806-870 Quality Category A	NA
UHF 806-870 Quality Category B	NA
UHF 806-870 Quality Category C	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company
Portable Trunked Digital	
High VHF 136-174 Quality Category A	NA
High VHF 136-174 Quality Category B	EF Johnson Company
High VHF 136-174 Quality Category C	EF Johnson Company
High VHF 136-174 Quality Category D	EF Johnson Company
Portable Trunked Digital	
UHF 450-470 Quality Category A	EF Johnson Company
UHF 450-470 Quality Category B	EF Johnson Company
UHF 450-470 Quality Category C	EF Johnson Company
UHF 450-470 Quality Category D	EF Johnson Company
Portable Trunked Digital	
UHF 806-870 Quality Category A	NA
UHF 806-870 Quality Category B	EF Johnson Company
UHF 806-870 Quality Category C	EF Johnson Company
UHF 806-870 Quality Category D	EF Johnson Company

Category 2, Aviation Radios	
Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category2.doc	
Equipment	**Link to Contractor**
FM Band Aircraft Radio	Northern Airborne Technology Ltd
AM Band Aircraft Radio	Icom America, Inc.

Category 3, Dual Receiver, In-Band Repeater	
Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category3.doc	
Equipment	**Link to Contractor**

Category 4, Gateway Devices:	
Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category4.doc	
Equipment	**Link to Contractor**
Category 4, Specifications for ICRI audio switch	Communications-Applied Technology
Category 4, Specifications for ACU1000	JPS/Raytheon
Category 4, IP Base Solution M/A COM	MA/COM
Category 4 IP Base Solution SmartLink	SmartLink Radio Networks

Category 5, Microwave

Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category5.doc

Equipment	Capacity	Link to Contractor
Hot Standby - Terminal – 6 GHz	8T, 16T	Alcatel
Hot Standby - Terminal – 6 GHz	28T, OC3	Harris Corporation
Non-Hot Standby – Terminal – 6 GHz	8T, 16T, OC3	Alcatel
Non-Hot Standby - Terminal – 6 GHz	28T, OC3	Harris Corporation
Hot Standby – Terminal – 11 GHz	12T, 16T	Alcatel
Hot Standby - Terminal – 11 GHz	28T, OC3	Harris Corporation
Non-Hot Standby – Terminal – 11 GHz	12T	Alcatel
Non-Hot Standby – Terminal – 11 GHz	16T, 28T, OC3	Harris Corporation
Hot Standby - Terminal – 18 GHz	16T, 28T	Alcatel
Hot Standby - Terminal – 18 GHz	OC3	Harris Corporation
Non-Hot Standby – Terminal – 18 GHz	16T	Alcatel
Non-Hot Standby – Terminal – 18 GHz	28T, OC3	Harris Corporation
Hot Standby – Terminal – 23 GHz	16T, 28T, OC3	Alcatel
Non-Hot Standby - Terminal – 23 GHz	16T	Alcatel
Non-Hot Standby - Terminal – 23 GHz	28T, OC3	Harris Corporation
Hot Standby – Repeater – 6 GHz	8T, 16T	Alcatel
Hot Standby – Repeater – 6 GHz	28T, OC3	Harris Corporation
Non-Hot Standby – Repeater – 6 GHz	8T, 16T, OC3	Alcatel
Non-Hot Standby – Repeater – 6 GHz	28T	Harris Corporation
Hot Standby – Repeater – 11 GHz	16T, 28T, OC3	Harris Corporation
Non-Hot Standby – Repeater – 11 GHz	16T, 28T, OC3	Harris Corporation
Hot Standby – Repeater – 18 GHz	16T, 28T	Alcatel
Hot Standby – Repeater – 18 GHz	OC3	Harris Corporation
Non-Hot Standby – Repeater – 18 GHz	16T	Alcatel
Non-Hot Standby – Repeater – 18 GHz	28T, OC3	Harris Corporation
Hot Standby – Repeater – 23 GHz	16T, 28T, OC3	Alcatel
Non-Hot Standby - Repeater – 23 GHz	16T	Alcatel
Non-Hot Standby - Repeater – 23 GHz	28T, OC3	Harris Corporation

Category 6 Communication Towers

Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category6.doc

Equipment	Link to Contractor
3-LEGGED TRIANGULAR SELF SUPPORT TOWERS	Radian Communication Services, Inc
GUYED TOWERS	Radian Communication Services, Inc

Category 7 Waveguides and Antennas

Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category7.doc

Equipment	Link to Contractor
Category 7 Waveguides and Antennas	Radio Frequency System

Category 8, Test Equipment

Link to Specifications: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category8.doc

Equipment	Link to Contractor
2975 Digital PROJECT 25 2	Aeroflex
120C TEST SET	Aeroflex

Aeroflex

CONTRACTOR INFORMATION

Contractor:	**Aeroflex**		
Page number			
Contact:	John Rankin	**Alternate Contact:**	Chad Knudson
Phone:	316-529-5204		800-835-2352 Ext 579
Fax:	316-522-3676		316-524-2623
Email:	John.rankin@aeroflex.com		Chad.knudson@aeroflex.com
Internet address:	www.aeroflex.com		
Web catalog address:			
Federal ID No.:	48-0777904		
Supplier No.:	945		
Total Contract worth:	$500,000,000.00		
Payment address:	Aeroflex 10200 West York St Wichita, KS 67215	**Order placement address**:	Aeroflex 10200 West York St Wichita, KS 67215
Customer Service:	Rhonda Bundy		
Telephone:	800-835-2352 ext 407		
Fax:	316-524-2623		
Ordering procedures:			
Credit card acceptance:	Visa, MasterCard, American Express		
Minimum orders:			
Delivery time:	6 to 8 weeks After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	**CATEGORY 8, TEST EQUIPMENT**		
Equipment Line items			
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category8.doc		
Awarded Phase(s)	Phase I & II		

Volume Discount Program - Phase 1 and Phase 2 all categories

The volume discount will be cumulative and over the term of the contract.
(Initial Term of Three [3] Years)

Additional Discount off Net Contract Unit Price	**Cumulative Total Sales from:**	**Cumulative Total Sales to:**
1 %	$5,000,000	$9,999,999
1 %	$10,000,000	$14,999,999
1 %	$15,000,000	$19,999,999
0 %	$20,000,000	$29,999,999
0 %	$30,000,000	$39,999,999
0 %	$40,000,000	$49,999,999
0 %	$50,000,000	$59,999,999
0 %	$60,000,000	$69,999,999
0 %	$70,000,000	$79,999,999
0 %	$80,000,000	$89,999,999
0 %	$90,000,000	$99,999,999
0 %	$100,000,000	$100,000,000+

Aeroflex – Phase II

Category 8, Test Equipment
Price Sheets

2975 Digital PROJECT 25 2

Req. Item	Part #	Description	Manufacturer List Price
1 or 2 Units for a Single Order: Discount = 3% off Manufacturer List Price **3 or more Units for a Single Order: Discount 5% off Manufacturer List Price**			
		2975 Project 25 Radio Test Set	**$19,950**
		Options For 2975:	
	2975OPT3	Smartnet/Smartzone Testing Option	$4,000
	2975OPT4	P25 Trunking Radio Test Option	$2,400
	2975OPT6	Control Channel Logger (Requires 2975OPT4 or 2975OPT14)	$3,000
	2975OPT8	Smartnet/Smartzone 900MHz (Req's Option 3)	$900
	2975OPT9	Autotest 1	$4,000
	2975OPT10	AES	$2,000
	2975OPT11	LMS/P25 Phase 2	$2,000
	2975OPT12	KVL Keyloader Option	$2,000
	2975OPT13	LSM Advanced / P25 - 2 Advanced	$6,800
	2975OPT14	P25 Trunking VHF/UHF/ 700MHz	$2,400
		Extended Warranties For 2975	
	W2975/203	Warranty Extension 1 Yr (Total Warranty 3 Yrs)	$798
	W2975/204	Warranty Extension 2 Yr (Total Warranty 4 Yrs)	$1,397
	W2975/205	Warranty Extension 3 Yr (Total Warranty 5 Yrs)	$1,995
		Accessories For 2975	
	AC25006	Manual, Getting Started, 2975 (Supplied As Standard)	$50
	AC25008PP	2975 Operation Manual - Paper (Supplied As Standard)	$50
	AC25008CD	2975 Operation Manual - CD-Rom (Supplied As Standard)	$50
	AC25007	Microphone \Audio Adapter	$300
	AC25009PP	Maintenance Manual/No Software	$350
	AC25011	Case, Tranist W/Wheels	$795
	AC25012	Case, Soft Padded Carrying	$159
	AC25013	Kit, 10/20 db Pads, TNC	$117
	AC25014	Scope Probe Kit	$85
	AC25015	UHF Antenna (Supplied As Standard)	$55
	AC25022	Front/Rear Cover (Supplied As Standard)	$99
	AC25024	AC/DC Converter	$695
	AC25026	RF Cable	$25
	AC25027	TNC To BNC Adapter	$25
	AC25029	Accessory Pouch	$40
	AC25100	FAA Kit (Includes AC25007, AC25012, AC25023, AC25027, AC25029)	$498
	AC4103	Return Loss Bridge Kit (5 MHz - 2 GHz)	$2,173
	AC4105	Return Loss Bridge (1.3 GHz)	$1,219
	CALFB2975	Calibration Certificate	$495

Aeroflex – Phase II

120C TEST SET

Req. Item	Part #	Description	**Manufacturer List Price**
1 or 2 Units for a Single Order: Discount = 3% off Manufacturer List Price **3 or more Units for a Single Order: Discount 5% off Manufacturer List Price**			
		Com-120C Communications Service Monitor – USA	
		Versions For Com-120C	
	120C-3-110	Com-120C Communications Service Monitor W/ Tracking Generator, 30 kHz if Filter,110V	**$17,495**
	120C-3-220	Com-120C W/ Tracking Generator, 30 kHz if Filter, 220v	$17,495
	120C-3T-110	Com-120C W/ Tracking Generator, 30 kHz if Filter, 0.01 Pm OCXO,110v	$18,055
	120C-3T-220	Com-120C W/ Tracking Generator, 30 kHz if Filter, 0.01 Pm OCXO, 220V	$18,055
	120C-8-110	Com-120C W/ Tracking Generator, SSB Receive Filter,110V	$17,737
	120C-8-220	Com-120C W/ Tracking Generator, SSB Receive Filter, 220V	$17,737
	120C-8T-110	Com-120C W/ Tracking Generator, SSB Receive, 0.01 PPM OCXO,110V	$18,585
	120C-8T-220	Com-120C W/ Tracking Generator, SSB Receive, 0.01 PPM OCXO, 220V	$18,585
		Options For Com-120C	
	120OPT1	Internal Rechargeable Battery	$148
	120OPT7	Data Generator/BER Meter	$933
	120OPT9	RCC Signalling	$1,000
	120OPT11	Digital/Analog Signalling	$1,166
	120OPT13	IEEE-488	$965
	120OPT14	Clear Channel LTR	$1,092
	120OPT15	Amps Mobile Station Test (Requires 120C-3 or 120C-3t)	$2,025
	120OPT16	EDACS	$1,919
	120OPT17	MPT-1327 Trunking	$1,744
	120OPT20	7.5 kHz if Filter	$572
	120OPT21	Autocell-NT (Requires 120C-3 or 120C-3t)	$2,327
	CALFB120	Com-120C Factory Based Certificate of Calibration	$335
		Extended Warranties For 120C	
	W120C/203	Warranty Extension 1 Yr (Total Warranty 3 Yrs)	$630
	W120C/204	Warranty Extension 2 Yr (Total Warranty 4 Yrs)	$1,076
	W120C/205	Warranty Extension 3 Yr (Total Warranty 5 Yrs)	$1,405
		Accessories for Com-120C	
	AC0601	Maintenance Manual	$350
	AC0602	Com-120C TMAC User's Manual	$100
	AC0604	Application Guide	$53
	AC1022	Easycom-B	$694
	AC1023	Applications Library	$345
	AC1025	Easysweep	$583
	AC1061	Nortel Autocell Cable Kit	$1,108
	AC1109U	Easyspan II -Windows Update For Existing AC1009W Users	$295
	AC1109W	Easyspan II –Windows	$695
	AC1201	Telescoping Antenna	$34
	AC2202	Rackmount Kit	$323

Aeroflex – Phase II

Req. Item	Part #	Description	**Manufacturer List Price**
1 or 2 Units for a Single Order: Discount = 3% off Manufacturer List Price **3 or more Units for a Single Order: Discount 5% off Manufacturer List Price**			
	AC3018	PCMCIA Card XXMB Com120C	$110
	AC4105	Return Loss Bridge (1.3 gHz)	$1,219
	AC8645	Microphone	$48
	AC8753	Heavy Duty Ship Case with Tag-Along Combo	$742
	AC9925	Carrying Case	$175

Alcatel

CONTRACTOR INFORMATION

Contractor:	**Alcatel**		
Page number	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category5.doc		
Contact:	Merle Watt	**Alternate Contact:**	Glenn Estes
Phone:	307-775-9806		972-477-5009
Fax:	972-477-1408		972-477-8288
Email:			Glenn.i.estes@alcatel.com
Internet address:	http://www.alcatel.com/		
Web catalog address:			
Federal ID No.:	75-2016914		
Supplier No.:	11639		
Total Contract worth:	$500,000,000.00		
Payment address:	Alcatel USA CRCL1 PB7 Beth Rager 3400 W. Plano Pkwy Plano, TX 75075	**Order placement address**:	Alcatel USA COO1 PB7 Vicki Wright 3400 W. Plano Pkwy Plano, TX 75075
Customer Service:	Vickie Wright		
Telephone:	972-477-8094		
Fax:	972-519-5080		
Ordering procedures:	Contact Local Sales Rep		
Credit card acceptance:	None		
Minimum orders:	None		
Delivery time:	90 days After Receipt of Order (ARO) All Specialized Configurations orders shall not exceed 120 days.		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 5, Microwave		
Equipment Line items			
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category5.doc		
Awarded Phase(s)	Phase I & II		

Alcatel

National Territory Sales

Bob Neiman - Director of Sales

Neal Salzman - Director of Sales 312-543-0559

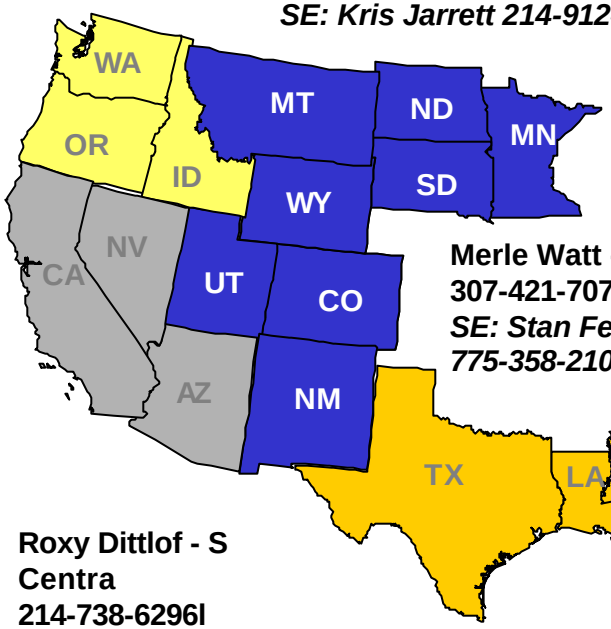
Rich Bistritz - Great Lakes 440-463-5105
SE: Walt Mitchell 856-464-6787

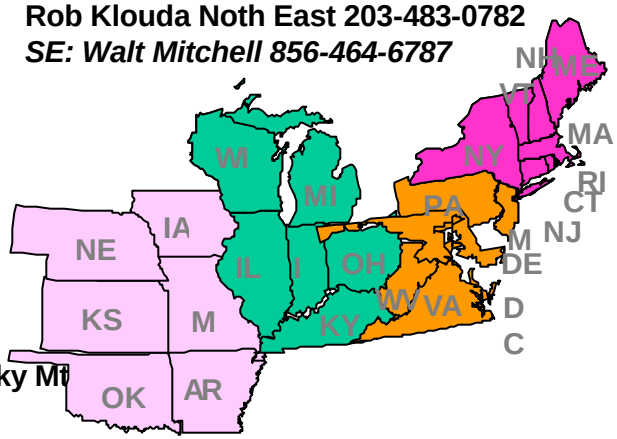
US Cellular *SE: Kris Jarrett 214-912-3016*

Rob Klouda Noth East 203-483-0782
SE: Walt Mitchell 856-464-6787

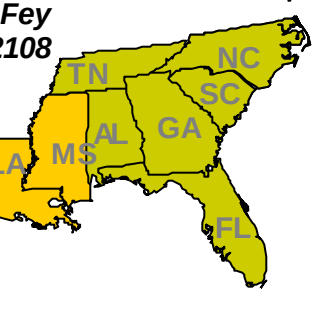
Todd Nate - Midwest 303-506-3764
SE: Kris Jarrett 214-912-3016

Scott Mehal - Northwest
206-465-7453t
SE: Stan Fey
925-895-9424





Merle Watt - Rocky Mt
307-421-7077
SE: Stan Fey
775-358-2108



Bill Rooker Mid Atlantic 301-802-2111
SE: Craig Debbo 770-992-3221

Tom Hamilton - Southwest
949-374-1238
SE: Mike Meierle
949-932-8031

Roxy Dittlof - S Centra
214-738-6296l
SE: Kamal Ballout
214-675-3396

Al Tilley - Southeast & M/Acom
214-402-5871
SE: Harold Shiroma
214-850-3569

Jay Sungu - Utilities/West
559-360-7971SE: *Mike Meierle 949-932-8031*

Additional Assignments:
Kamal Ballout: *IP/ATM SME*
Bloomberg, ConED, Major IP customers
Kris Jarrett: *SONET/TDM SME*
US Cellular, Major SONET customers
Harold Shiroma: *Microwave SME*
Major Microwave customers

Alcatel

PHASE 1

MDR-8000 DIGITAL RADIO	**25% DISCOUNT FOR ALL OPTIONS**
MDR-8706s 6GHz – SONET (OC-3)	**50% DISCOUNT**
MDR-8711s 11GHz – SONET (OC-3)	**50% DISCOUNT**
MDR-8605u-5.8GHz NORTH AMERICAN	
(DS3) SIGNAL INTERFACE	**50% DISCOUNT**
MDR-8606 – 6GHz—NORTH AMERICAN	
(DS3) SIGNAL INTERFACE	**50% DISCOUNT**
MDR-8611-11GHz NORTH AMERICAN	
(DS3) SIGNAL INTERFACE	**50% DISCOUNT**
MDR-8505u-5.8GHz-UNLICENSED –	
NORTH AMERICAN	
(DS1) SIGNAL INTERFACE	
8 DS-1 RADIOS	**52% DISCOUNT**
16 DS-1 RADIOS	**54% DISCOUNT**
MDR-8X06-6GHz	
NORTH AMERICAN	
(DS1) SIGNAL INTERFACE	
8 DS-1 RADIOS	**52% DISCOUNT**
12 DS-1 RADIOS	**55% DISCOUNT**
16 DS-1 RADIOS	**56% DISCOUNT**
MDR-8x10 10/11GHz	
NORTH AMERICAN	
(DS1) SIGNAL INTERFACE	
8 DS-1 RADIOS	**52% DISCOUNT**
12 DS-1 RADIOS	**55% DISCOUNT**
16 DS-1 RADIOS	**56% DISCOUNT**
RACK OPTIONS	**25% DISCOUNT**
RADIO NETWORK MANAGEMENT	**25% DISCOUNT**

Alcatel

Phase II **Category 5, Microwave Alcatel**

Manufacturer	Freq. Band	Capacity in T1's	Part number	Total Price
Hot Standby - Terminal – 6 GHz				
Alcatel	6 Ghz	8T	MDR-8706-8-29-HS	$21,266
Alcatel	6 Ghz	16T	MDR-8706-16-29-HS	$22,709
Non-Hot Standby – Terminal – 6 GHz				
Alcatel	6 Ghz	8T	MDR-8706-8-29	$12,410
Alcatel	6 Ghz	12T	MDR-8706-12-29-NS	$12,570
Alcatel	6 Ghz	16T	MDR-8706-16-29-NS	$13,007
Hot Standby – Terminal – 11 GHz				
Alcatel	11 GHz	12T	MDR-8710-12-27-HS	$24,765
Alcatel	11 GHz	16T	MDR-8710-16-27-HS	$25,699
Non-Hot Standby – Terminal – 11 GHz				
Alcatel	11 GHz	12T	MDR-8710-12-27-NS	$14,282
Hot Standby - Terminal – 18 GHz				
Alcatel	18 GHz	16T	9418-AWY-16-HS	$11,406
Alcatel	18 GHz	28T	9418-AWY-28-HS	$14,233
Non-Hot Standby – Terminal – 18 GHz				
Alcatel	18 GHz	16T	9418-AWY-16-NS	$6,996
Hot Standby – Terminal – 23 GHz				
Alcatel	23 GHz	16T	9423-AWY-16-HS (with 1 ft. antenna)	$12,006
Alcatel	23 GHz	28T	9423-AWY-28-HS (with 1 ft. antenna)	$14,833
Alcatel	23 GHz	SONET-OC3	MDR-9X23S-HS (no DS1 access)	$29,262
Non-Hot Standby - Terminal – 23 GHz				
Alcatel	23 GHz	16T	9423-AWY-16-NS (with 1 ft. antenna)	$7,596
Hot Standby – Repeater – 6 GHz				
Alcatel	6 GHz	8T	MDR-8706-8-29-HS	$41,970
Alcatel	6 GHz	16T	MDR-8706-16-29-HS	$44,855
Non-Hot Standby – Repeater – 6 GHz				
Alcatel	6 GHz	8T	MDR-8706-8-29-NS	$24,258
Alcatel	6 GHz	16T	MDR-8606-16-29-NS	$25,451
Alcatel	6 GHz	SONET-OC3	MDR-8706s-155-29-NS	$31,911
Hot Standby – Repeater – 18 GHz				
Alcatel	18 GHz	16T	9418-AWY-16-HS	$21,726
Alcatel	18 GHz	28T	9418-AWY-28-HS	$25,664
Non-Hot Standby – Repeater – 18 GHz				
Alcatel	18 GHz	16T	9418-AWY-16-NS	$12,906
Hot Standby – Repeater – 23 GHz				
Alcatel	23 GHz	16T	9418-AWY-16-NS	$22,926
Alcatel	23 GHz	28T	9423-AWY-28-HS (with 1 ft. antenna)	$26,864
Alcatel		SONET-OC3	MDR-9X23S-HS (No DS1 access)	$57,438

Alcatel

Manufacturer	Freq. Band	Capacity in T1's	Part number	Total Price
Non-Hot Standby - Repeater – 23 GHz				
Alcatel	23 GHz	16T	9423-AWY-16-NS (with 1 ft. antenna)	$14,106

WSP System Rack Configuration & Management

Each rack pricing shall contain and/or include:

- 3 ea. WSCA compliant 6 GHz Sonet-OC3, space diversity capable microwave terminal.
- 1 ea. Multi-Service Platform (ATM)Router with 2ea 1-Port OC3, 1ea 3-port DS3, 1ea 4-Port Ethernet and 1ea 8-Port T1 Cards as a standard configuration.
- 2 ea. T1/E1 Channel Bank Multiplexer with 2 FXO, 2 FXS and 12 4-wire E&M Channel Cards as a standard configuration.
- 1ea 1RU Fuse Panel
- 1ea Rack Isolation and Bracing Kit (per R56 Standard)
- Option to add DS3 WSCA compliant Microwave radio

Each rack will need to reserve room for:

- VF Jackfield (2RU)
- T1 / Ethernet RJ045 Jackfield (1RU)
- Wayside T1 Router (1RU)
- Wayside Ethernet 16 port switch (1 RU)

Network Management:

- **All OC3 & DS3 Radios, Multi-Service Platform (ATM) Routers and T1/E1 Channel Bank Multiplexers must be managed by a single Network Management System.**

Req. Item	Description	*Qty	Unit	Unit Price	Total Price
1.	Complete Microwave Rack Description *Qty Unit Unit Price Total Price				
	• 3 each 6 GHz OC-3, space diversity radios with +29 dBm power output, 7' Seismic rack, 19" wide, with PDU, and grounding kit.	1	EA	$60,361	$60,361
	• 1 ea. 7270 Multi-Service Platform (ATM)Router with 2ea 1-Port OC3, 3ea 1-port DS3, 1ea 4-Port Ethernet and 1ea 8-Port T1 Cards as a standard configuration. **Please see Attachment C for 7270 configuration details**	1	EA	$43,455	$43,455
	• 2 ea. 3630 T1/E1 Channel Bank Multiplexer with 2 FXO, 2 FXS and 12 4-wire E&M Channel ports as a standard configuration. Please see Attachment D for configuration details.	1	EA	$8,540	$8,540
	• Not included in Microwave rack, but included in solution is the 5620 Network Management. This price reflects network management for 55 racks as described above. Please see Attachment E for configuration details	1	EA	$5,355.45	$5,355.45
				Total price	**$117,711.45**

Response on the 18 and 23 Ghz Space Diversity pricing.
The 18 and 23 Ghz space diversity configurations are non-standard. The configuration is accomplished by combining two non-standby ODU's with a Hot-standby IDU. The manufacturing build cost is similar to the cost to build two non-standby terminals so the pricing has been set up to reflect the non-standby pricing. The pricing for a 18 Ghz OC3 terminal discounted is $15,701 per the WSCA pricing. Doubling it for the space diversity configuration brings us to the $31,402. the other 18 and 23 Ghz configurations are similarly priced.

Alcatel

Req. Item	Description Not for bid award, this pricing will be use to add and remove equipment as require per site location.	Qty	Unit	Unit Price	Total Price
1.	6 GHz Sonet-OC3, space diversity capable microwave terminal +29 dBm, Non Standby, Space Diversity	1	EA	$20,363*	$20,363*
2.	11 GHz Sonet-OC3, space diversity capable microwave terminal +27 dBm, Non Standby, Space Diversity	1	EA	$21,838*	$21,838*
3.	18 GHz Sonet-OC3, space diversity capable microwave terminal	1	EA	$31,402*	$31,402*
4.	23 GHz OC3 Sonet-OC3, space diversity capable microwave terminal	1	EA	$32,484*	$32,484*
5.	6 GHz DS3 space diversity capable microwave terminal +29 dBm, Non Standby, Space Diversity	1	EA	$17,725*	$17,725*
6.	11 GHz DS3 space diversity capable microwave terminal +27 dBm, Non Standby, Space Diversity	1	EA	$19,200*	$19,200*
7.	18 GHz DS3 space diversity capable microwave terminal	1	EA	$9,700*	$9,700*

8.	23 GHz DS3 space diversity capable microwave terminal	1	EA	$9,700*	$9,700*
9.	Multi-Service Platform (ATM) Router with 2ea 1-Port OC3, 1ea 3-port DS3, 1ea 4-Port Ethernet and 1ea 8-Port T1 Cards as a standard configuration.	1	EA	$43,455*	$43,455*
10.	T1/E1 Channel Bank Multiplexer with 2 FXO, 2 FXS and 12 4-wire E&M Channel Cards as a standard configuration.	1	EA	$4,270*	$4,270*
11.	1RU Fuse Panel	1	EA	$341*	$341*
12.	Rack Isolation and Bracing Kit (per R56 Standard	1	EA	$113*	$113*
13.	5620 EN Values: • 7470 = 40 points • 7270 = 20 points • 3600 = 10 points • 3630 = 5 points • MDR8000s = 2 points	1pt	EA	$125*	$125*

***Pricing from the WSCA Contract.**

Communications – Applied Technology

CONTRACTOR INFORMATION

Contractor:	Communications-Applied Technology		
Page number			
Contact:	Seth Leyman	**Alternate Contact:**	Josie Leyman
Phone:	800-229-3925		800-229-3925
Fax:	703-471-4428		703-471-4428
Email:	leymans@c-at.com		leymanj@c-at.com
Internet address:	www.c-at.com		
Web catalog address:			
Federal ID No.:	54-1215868		
Supplier No.:	111325		
Total Contract worth:	$500,000,000.00		
Payment address:	Communications-Applied Techlology 11250 – 14 Roger Bacon Dr Reston, VA 20190-5202	**Order placement address**:	Communications-Applied Techlology 11250 – 14 Roger Bacon Dr Reston, VA 20190-5202
Customer Service:	Seth Leyman		
Telephone:	800-229-3925		
Fax:	703-471-4428		
Ordering procedures:			
Credit card acceptance:	Visa, MasterCard		
Minimum orders:			
Delivery time:	60 days After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 4, Gateway Devices; Item B, ICR Unit		
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase II		

The purpose of this section is to purchase an audio switch unit(s) that has interface adapters for a variety of communications devices and mediums (VHF/UHF radio, telephone or Satcom, HF radio, local operator, etc.). The switch shall consist of a small portable control unit containing all audio and switching circuitry, medium interface connectors, controls and indicators. Accessory adapters for a variety of external communications devices and mediums shall be supported.

Category 4, Specifications for ICRI audio switch

Description
ICRI Ordering/Part No.: 500.9250 with single talk group; 500.9260 with two talk groups for all ports with external control switches
ICRI RX Audio Input
Input Impedance: Unbalanced, 80 ohms nominal.
Input level: -32 dBm to + 12 dBm, no adjustment required.
Frequency Response: 280 Hz to 3400 kHz ± 2dB.
VOX Attack Time: Less than 2 ms, nominal, for typical speech.
VOX Threshold: Adjustable –32 to –6 dBm.
VOX Hang Time (Tail Time): Adjustable 0.5 to 2 seconds.
VOX Timeout Timer: Adjustable 30 to 90 seconds.
ICRI TX Audio Output
Output Impedance: Unbalanced, 1000 ohms nominal.
Output Level: -40 to -18 dBm, adjustable.
Frequency Response: 280 to 3400 Hz ± 2dB
Audio Delay: Both nets, individually adjustable; 0, 50, 100,150, 200, 250, 300, 350, 400 and 500 ms.
ICRI PTT Output
Output Type: Dual, (a) open drain; (b) open drain shunting 6.65 K control resistor (Motorola Saber/AstroSaber compatibility).
Polarity: Active low.
Maximum Sink Current: 200 ma.
Maximum Open Circuit Voltage: + 60 vdc.
Acoustic Coupler Interface
Compatibility: C-AT part no. 179.0655, with electret microphone.
VOX Attack Time: Less 2 ms, nominal, for typical speech
VOX Hang Time: Adjustable 0.5 to 2 seconds.
Cellular/Auxiliary Input
Input Type: Unbalanced
Input Range/VOX Threshold: -50 to +10 dBm, adjustable.
VOX Attack Time: Less 2 ms, nominal, for typical speech
VOX Hang Time: Adjustable 0.5 to 2 seconds.
VOX Timeout Timer: Adjustable 30 to 90 seconds.
Output Type: Unbalanced.
Output Range: -40 to +3 dBm, adjustable.

Communications – Applied Technology – Phase II

Description
Handset
Compatibility: C-AT part number 280.0125 handset with noise canceling electret microphone and PTT bar.
Handset Volume Control: 70 dB range.
Initiation: PTT bar.
General/Environmental
ICRI Controls: Guarded**,** power on/off switch; switches (7), handset volume control., Talk Group1/OFF/Talk Group 2 (ICRI 500.9260 only)
ICRI Indicators: Power "OK" LED, power "LOW" LED, channel active LEDs (7).
ICRI connectors: Positive lock**,** Radio channel I/O (5), Coupler/Cellular/auxiliary input connector, handset connector, power connector.
DC Input Power: +6.5 to + 20 VDC @ 0.15A maximum.
AC Input Power: 115 to 230 VAC ± 15%, 47-63 Hz, 3 VA maximum (with 320.0431 ac adapter).
Weight: 3.3 lbs. (1.5 kg), without adapters and accessories.
Size: 3.5" H X 10.0" W X 7.0" D (8.9 X 25.4 X 17.8 cm), excluding control panel connectors/switch protrusions.
Temperature: Operating: -20 to +60 degrees C; storage: -40 to +85 degrees C.
Humidity: Up to 95% @ 55 degrees C.
Shock: Suitable for mobile and portable environments.
Vibration: Suitable for mobile and vehicular environments
Provide product support for 7 years after last unit being purchase from this RFP.

Communications – Applied Technology – Phase II

PRICE SHEETS

Req. Item	Comm. Code	Description	Unit Price
1.		C-AT ICRI with dual talk group capability Product Bid State: Mfg.: Communications-Applied Technology Model: 500.9260	$7,500
2.		C-AT ICRI with single talk group capability Product Bid State: Mfg.: Communications-Applied Technology Model: 500.9250	$4,500
3.		ICRI Audio buffer/delay for ICRI models 500.9250 and 500.9260 when used with trunked radios Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 500.9311	$250
4.		Battery pack (8 “AA” batteries not provided) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 160.3611	$75
5.		Adapter/cable for ICRI to 8 “AA” battery pack Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 180.0450	$120
6.		ICRI DC input cable, dual mode Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0730	$75
7.		ICRI 115V AC power supply Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 320.0431	$120
8.		ICRI Waterproof case (based on Pelican 1550) with die-cut foam insert Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 990.9602	$275
9.		ICRI Waterproof case (based on Pelican 1600) with die-cut foam insert Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 990.9601	$300

Communications – Applied Technology – Phase II

Req. Item	Comm. Code	Description	Unit Price
10.		ICRI 250' universal audio extension cable on reel Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.6206	$350
11.		ICRI Handset with P-T-T and coiled cord Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 280.0125	$200
12.		Bracket for mounting ICRI in a 19" rack, 2U space required (hardware included) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 200.7000	$175
13.		Cable, ICRI-to-ICRI link to expand # of participants in a talk group, 6' Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0656	$60
14.		Cable, acoustic coupler, ICRI-to-cellular phone/Satellite phone/ land-line telephone handsets Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0655	$165
15.		Cable, 2.5mm jack, ICRI-to-cell phones & Nextel in telephone mode Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0672	$55
16.		Cable, ICRI-to-Nextel i90 and similar models. Nextel operation 2-way radio mode Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0677	$150
17.		Cable, ICRI-to-Nextel i1000 and similar models. Nextel operation 2-way radio mode Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0678	$110

Communications – Applied Technology – Phase II

Req. Item	Comm. Code	Description	Unit Price
18.		Cable, universal ICRI-to-portable radio (requires radio speaker-mic assembly to be provided for temporary disassembly) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0734	$70
19.		Cable, ICRI-to-Bendix King LMH radio Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0670	$133
20.		Cable, ICRI-to-Bendix King LPH radio Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0671	$133
21.		Cable, ICRI-to-Bendix King EPH radio Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0673	$136
22.		Cable, ICRI-to-Ericsson Jaguar (includes in-line amplifier) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0733	$230
23.		Cable, ICRI-to-Ericsson LPE-200 (includes in-line amplifier) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0662	$230
24.		Cable, ICRI-to-Ericsson M-PA (includes in-line amplifier) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0660	$230
25.		Cable, ICRI-to-Ericsson M-RK (includes in-line amplifier) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0661	$230
26.		Cable, ICRI-to-Ericsson Panther 500 & KPC Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0732	$230

Communications – Applied Technology – Phase II

Req. Item	Comm. Code	Description	Unit Price
27.		Cable, ICRI-to-military radio (radios compatible with H-250/U or H-350/U handsets incl. PRC-119/117, MBITR, SINCGARS) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0600	$125
28.		Cable, ICRI-to-military PRC-127 radio Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0600	$125
29.		Cable, ICRI-to-Motorola Jedi Series radios incl. HT-1000, MT-2000, XTS-3000/3500/5000 Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0630	$230
30.		Cable, ICRI-to-Motorola radios incl. MT-1000, HT-600, P-200 (Radius) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0640	$230
31.		Cable, ICRI-to-Motorola GP-350 radio Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.6018	$160
32.		Cable, ICRI-to-Motorola radios incl. GTX, LTS2000, GP300, P1225 (Radius) Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0634	$160
33.		Cable, ICRI-to-Motorola radios incl. HT-1250, HT-750 Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0735	$160
34.		Cable, ICRI-to-Motorola Saber & AstroSaber Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.0710	$230

Req. Item	Comm. Code	Description	Unit Price
35.		Cable, ICRI-to-radios compatible with Hirose 6-pin connector Product Bid State: Mfg.: Communications-Applied Technology C-AT p/n 179.1910	$120
36.		Cable, ICRI-to-Kenwood series 280,290,380,390,480 (UHF and VHF) Product Bid State: Mfg.: Communications-Applied Technology C-AT P/N 179.0136	$160
37.		Cable, ICRI-to-Kenwood series 208,220,240,248,250,260,360 (UHF and VHF) Product Bid State: Mfg.: Communications-Applied Technology C-AT P/N 179.6013	$160

VOLUME DISCOUNT PROGRAM - PHASE 2 ALL CATEGORIES

The volume discount will be cumulative and over the term of the contract.
(Initial Term of Three [3] Years)

Additional Discount off Net Contract Unit Price	Cumulative Total Sales from:	Cumulative Total Sales to:
25 %	$ 5,000,000	$ 9,999,999
25 %	$ 10,000,000	$ 14,999,999
25 %	$ 15,000,000	$ 19,999,999
25 %	$ 20,000,000	$ 29,999,999
25 %	$ 30,000,000	$ 39,999,999
25 %	$ 40,000,000	$ 49,999,999
25 %	$ 50,000,000	$ 59,999,999
25 %	$ 60,000,000	$ 69,999,999
25 %	$ 70,000,000	$ 79,999,999
25 %	$ 80,000,000	$ 89,999,999
25 %	$ 90,000,000	$ 99,999,999
25 %	$100,000,000	$ 100,000,000+

Ceragon

Contractor:	**Ceragon Networks**		
Contact:	Scott Sweetland	**Alternate Contact:**	Jeffrey Sarasohn
Phone:	603-886-8503		201-529-4444 x14
Fax:	603-886-8523		201-529-4559
Email:	ssweetland@ceragon-us.com		Jsarasohn@ceragon-us.com
Internet address:	www.ceragon.com		
Web catalog address:			
Federal ID No.:	22-3642164		
Supplier No.:	111290		
Total Contract worth:			
Payment address:	777 Corporate Drive Mahwah, NJ 07430	**Order placement address**:	777 Corporate Drive Mahwah, NJ 07430
Customer Service:	Yael Zilberman		
Telephone:	201-529-4444 x 10		
Fax:	201-529-4559		
Ordering procedures:			
Credit card acceptance:	No		
Minimum orders:			
Delivery time:	60 Days ARO		
Payment terms:	Net 30		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:			
Category			
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I		

Ceragon – Phase I

CONTRACTOR WAREHOUSE Proposer(s) shall indicate below each warehouse location at which material, equipment or supplies will be stored.

ADDRESS: Ceragon Networks
777 Corporate Drive
Mahwah, NJ 07430

PHONE: (201) 529-4444
CONTACT: Yael Zilberman

ADDRESS: HUTTON Communications
945 Spice Islands, Suite B
Sparks, NV 89431

PHONE: (877) 648-8866
CONTACT:

SERVICING: Indicate below the names and addresses of sales representatives and specific territories covered. Proposer's ability to service state agencies including local sales representation may be a factor in the award. Contractor must provide immediate attention to problem areas as they arise regardless of location. Submit an attached letter if necessary.

NAME: Scott Sweetland
ADDRESS: One Chestnut St., #337
Nashua, NH 03060
TERRITORY: VP Sales, US&Canada
PHONE: 603-886-8503

NAME: Kelly Smith
ADDRESS: 25744 SE 37th St.
Issaquah, WA 98029
TERRITORY: Sales Support, Western Region
PHONE: 425-961-0207

FACTORY AUTHORIZED SERVICE:
Factory authorized service must be available in the destination area. List your service centers including name and address of each.

FIRM NAME: Ceragon Networks, Inc.
ADDRESS: 777 Corporate Drive
Mahwah, NJ 07430

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Support Services	Hourly	EA	$
2.		Installation Services	Hourly	EA	$
3.		Repair Services	Hourly	EA	$
4.		Accessories Antennas		EA	25%
5.		List other Equipment Additional Radios		EA	35%

Daniels Electronics

Contractor:	**Daniels Electronics**		
Contact:	Douglas Bigrigg	**Alternate Contact:**	Mark Waldie
Phone:	1-800-664-4066		1-800-664-4066
Fax:	1-877-750-0004		1-877-750-0004
Email:	douglas_bigrigg@danelec.com		mark_waldie@danelec.com
Internet address:			
Web catalog address:			
Federal ID No.:			
Supplier No.:	111920		
Total Contract worth:			
Payment address:	Daniels Electronics Ltd. 43 Erie Street, Victoria, BC, Canada V8V 1P8	**Order placement address**:	Daniels Electronics Ltd. 43 Erie Street, Victoria, BC, Canada V8V 1P8
Customer Service:	Rich Sanchez		
Telephone:	1-800-664-4066		
Fax:	1-877-750-0004		
Ordering procedures:			
Credit card acceptance:	VISA, MasterCard		
Minimum orders:			
Delivery time:	120 Days ARO		
Payment terms:	2% Net 20		
Shipping destination:	Free on Board (FOB) Destination		
Freight:	Prepaid and included		
Palletization:			
Category			
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I		

Daniels Electronics

SERVICING: Indicate below the names and addresses of sales representatives and specific territories covered. Proposer's ability to service state agencies including local sales representation may be a factor in the award. Contractor must provide immediate attention to problem areas as they arise regardless of location. Submit an attached letter if necessary.

NAME:	Manon Engineering	NAME:	Aurora Marketing
ADDRESS:	10605 NE 68th St. Suite 201	ADDRESS:	2018 South Pontiac Drive
	Kirkland, WA 98033		Denver, CO 80224
TERRITORY:	AK, WA, OR, ID, HI, MT	TERRITORY:	MT, ID, WY, UT, CO, NM, TX
PHONE:	(425) 827-7449	PHONE:	(303) 758-3051
NAME:	DacoM	NAME:	GVT Marketing
ADDRESS:	6119-A 27th St	ADDRESS:	P.O. Box 390459
	Sacramento, CA 95822		Anza, CA 92539
TERRITORY:	Northern CA, Northern NV	TERRITORY:	Southern CA, Southern NV, AZ
PHONE:	(916) 422-3453	PHONE:	(909) 763-1001
NAME:	Edward J. Gordon	NAME:	
ADDRESS:	2970 Marine Circle P.O. Box 283	ADDRESS:	
	Stillwater, MN 55082		
TERRITORY:	Northern CA, Northern NV	TERRITORY:	
PHONE:	(916) 422-3453	PHONE:	

FACTORY AUTHORIZED SERVICE:
Factory authorized service must be available in the destination area. List your service centers including name and address of each.

FIRM NAME:	Daniels Electronics Ltd.
ADDRESS:	43 Erie Street , Victoria, BC
	V8V 1P8 Canada

SERVICE CENTERS

Daniels Electronics Ltd., 43 Erie Street, Victoria BC, Canada, 1-800-664-4066
Ship to:

Daniels Electronics Ltd.
c/o The Victoria Clipper
2701 Alaskan Way, Pier 69
Seattle, WA 98121

Phase 1 Price Sheet

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Base Station	1-4 5-10 11+	EA EA EA	40% 40% 40%
2.		Repeater	1-4 5-10 11+	EA EA EA	40% 40% 40%
3.		Repair Services	Hourly	EA	$85.00
4.		Accessories Low Band – Model MT-3		EA	40%
5.		List other Equipment AM Base/Repeater – Model MT-3		EA	40%
6.		List other Equipment P25 Base/Repeaters – Model MT-4		EA	40%

EF Johnson Company

CONTRACTOR INFORMATION

Contractor:	**EF Johnson Company**		
Contact:	Elizabeth Cramm	**Alternate Contact:**	Tim Gwin
Phone:	507 835-6364		303-451-6340
Fax:	507-835-6283		507-835-6485
Email:	ecramm@efjohnsn.com		Tgwin@efjohnson.com
Internet address:	www.efjohnson.com		
Web catalog address:			
Federal ID No.:	41-0436849		
Supplier No.:	7812		
Total Contract worth:	$500,000,000.00		
Payment address:	E.F. Johnson 299 Johnson Avenue P.O. Box 1249 Waseca, MN 5603-0514	**Order placement address**:	E.F. Johnson 299 Johnson Avenue P.O. Box 1249 Waseca, MN 5603-0514
Customer Service:	Tim Gwin		
Telephone:	800-328-3911 x6340		
Fax:	507-835-6485		
Ordering procedures:			
Credit card acceptance:	None		
Minimum orders:			
Currently Installed Systems, upgrade equipment, radio equipment and accessories	20% off Manufacturer List Price		
Support Services	$125 per hour		
Installation Services	$125 per hour		
Repair Services	$125 per hour		
Delivery time:	Negotiated days After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 1		
Equipment Line items			
Link to bid Specifications			
Awarded Phase(s)	Phase I & II		

EF Johnson Company – Phase II

EF JOHNSON Price Sheet

ITEM	Mfg Name	Brand/Model#	Total Price
Portable Analog			
High VHF 136-174 Quality Category A	EF Johnson	5112-610-10	$1,495.00
High VHF 136-174 Quality Category B	EF Johnson	5112-610-10	$1,495.00
UHF 450-470 Quality Category A	EF Johnson	5132-410-10	$1,484.60
UHF 450-470 Quality Category B	EF Johnson	5132-410-10	$1,484.60
UHF 450-470 Category D	EF Johnson	5132-410-10	$1,484.60
UHF 806-870 Quality Category A	EF Johnson	5182-810-10	$1,484.60
UHF 806-870 Quality Category B	EF Johnson	5182-810-10	$1,484.60
UHF 806-870 Quality Category C	EF Johnson	7780-302	$718.25
UHF 806-870 Quality Category D	EF Johnson	7780-302	$718.25
Desktop Analog			
UHF 806-870 Quality Category C	EF Johnson	9883-303	$1,326.65
UHF 806-870 Quality Category D	EF Johnson	9883-302	$1,196.65
Mobile Analog			
High VHF 136-174 Quality Category B	EF Johnson	5317-11-10	$1,764.75
High VHF 136-174 Category C	EF Johnson	5317-11-10	$1,764.75
High VHF 136-174 Category D	EF Johnson	5317-11-10	$1,764.75
UHF 806-870 Quality Category C	EF Johnson	9883-303	$848.25
UHF 806-870 Quality Category D	EF Johnson	9883-302	$718.25
Portable Digital			
High VHF 136-174 Quality Category A	EF Johnson	5112-610-20	$1,762.80
High VHF 136-174 Quality Category B	EF Johnson	5112-610-20	$1,762.80
High VHF 136-174 Quality Category C	EF Johnson	5112-610-20	$1,762.80
High VHF 136-174 Category D	EF Johnson	5112-610-20	$1,762.80
UHF 450-470 Quality Category A	EF Johnson	5132-410-20	$1,754.40
UHF 450-470 Quality Category B	EF Johnson	5132-410-20	$1,754.40
UHF 450-470 Quality Category C	EF Johnson	5132-410-20	$1,754.40
UHF 450-470 Quality Category D	EF Johnson	5132-410-20	$1,754.40
UHF 806-870 Quality Category A	EF Johnson	5182-810-20	$1,754.40
UHF 806-870 Quality Category B	EF Johnson	5182-810-20	$1,754.40
UHF 806-870 Quality Category C	EF Johnson	5182-810-20	$1,754.40
UHF 806-870 Cateogry D	EF Johnson	5182-810-20	$1,754.40
Desktop Digital			
High VHF 136-174 Quality Category D	EF Johnson	5317-11-20	$2,190.50
UHF 806-870 Quality Category C	EF Johnson	5337-11-20	$2,190.50
UHF 806-870 Quality Category D	EF Johnson	5337-11-20	$2,190.50
Mobile Digital			
High VHF 136-174 Quality Category C	EF Johnson	5137-11-20	$1,901.25
High VHF 136-174 Quality Category D	EF Johnson	5137-11-20	$1,901.25
UHF 806-870 Quality Category C	EF Johnson	5387-11-20	$1,901.25

EF Johnson Company – Phase II

ITEM	Mfg Name	Brand/Model#	Total Price
UHF 806-870 Quality Category D	EF Johnson	5387-11-20	$1,901.25
Mobile Trunked Digital			
High VHF 136-174 Quality Category C	EF Johnson	5317-11-21	$2,158.65
High VHF 136-174 Quality Category **D**	EF Johnson	5317-11-21	$2,158.65
UHF 806-870 Quality Category C	EF Johnson	5387-11-21	$2,158.65
UHF 806-870 Quality Category D	EF Johnson	5387-11-21	$2,158.65
Portable Trunked Digital			
High VHF 136-174 Quality Category B	EF Johnson	5112-610-21	$1,732.90
High VHF 136-174 Quality Category C	EF Johnson	5112-610-21	$1,732.90
High VHF 136-174 Quality Category D	ED Johnson	5112-610-21	$1,732.90
UHF 450-470 Quality Category A	EF Johnson	5100 Series	$1,722.50
UHF 450-470 Quality Category B	EF Johnson	5100 Series	$1,722.50
UHF 450-470 Quality Category C	EF Johnson	5100 Series	$1,722.50
UHF 450-470 Quality Category D	EF Johnson	5100 Series	$1,722.50
UHF 806-870 Quality Category B	EF Johnson	5132-410-21	$1,722.50
UHF 806-870 Quality Category C	EF Johnson	5132-410-21	$1,722.50
UHF 806-870 Quality Category D	EF Johnson	5132-410-21	$1,722.50

Discount percentage represented by bid prices is		35% off of List
Delivery - expressed in days after Receipt of Order		Varies by Order
Warranty Period - in excess of that required by the specifications (in days)		0
% Tax required		Varies by State
Components added to the above models to meet required specifications:		None

EF Johnson Company – Phase II

Portable Analog

High VHF 136-174 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-66	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-65	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-78
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	3	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ		
Price FOB Destination freight prepaid & included in price		**$1,495.00**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
2	Secure Encryption Option	$375.70
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

High VHF 136-174 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	48	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-65	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-65	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-78
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	3	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$1,495.00**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
2	Secure Encryption Option	$375.70
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

UHF 450-470 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-65	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-73/-63	-75
Spurious and Image Rejection, dB	-73	-75
Intermodulation, dB	-73	-77
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	3	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$1,484.60**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
2	Secure Encryption Option	$375.70
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

UHF 450-470 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	40	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-65	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-73/-63	-75
Spurious and Image Rejection, dB	-73	-75
Intermodulation, dB	-73	-77
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	3	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$1,484.60**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
2	Secure Encryption Option	$375.70
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$97.50
51S3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

UHF 450-470 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	2.0
Channel Spacing, kHz	12.5 / 25	12.5/25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+3, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-77
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$1,484.60**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

EF Johnson Company – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$97.50
included	Position Rotary Channel/Mode Select Switch Option	n/c
included	Low Battery Alert Tone Option	n/c
Included	Alphanumeric Display Option	n/c
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	n/c
585-5100-120	Leather Carrying Case Option	$160.55
589-0015-057	External Speaker/Microphone Option	$45.50
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
	Flashing EEPROM	available
	Provision for Field Software Upgrade	available
-2	Secure Encryption Option	$375.70
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
included	Emergency Button/Switch Option	
included	Programmable Button/Switch Option	
included	Push-to-talk ID Transmission Option	
See Attached	**See Price Pages attached form complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

UHF 806-870 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	± 1.5	± 1.5
Channel Spacing, kHz	12.5/20/25	12.5/25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-48	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-72/-63	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-72	-74
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	3	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$1,484.60**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
2	Secure Encryption Option	$375.70
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

UHF 806-870 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	48	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	± 1.5	± 1.5
Channel Spacing, kHz	12.5/20/25	12.5/25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-48	-75
FM Noise, dB	-40	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-72/-63	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-72	-74
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	3	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ		
Price FOB Destination freight prepaid & included in price		**$1,484.60**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
2	Secure Encryption Option	$375.70
250-05100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 1.5
Channel Spacing, kHz	12.5/20/25	25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-45	-60
FM Noise, dB	-40	-40
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-63	-68
Spurious and Image Rejection, dB	-70	-68
Intermodulation, dB	-70	-68
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ		
Price FOB Destination freight prepaid & included in price		**$718.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		7700 Series
Prices are based on price list quoted above dated:		1/4/2002

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
585-5020-020/021	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$79.30
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Alphanumeric Display Option	
n/c	Dual Tone Multi Frequency encoder and Key Pad Option	
585-5000-052	Leather Carrying Case Option	$52.00
589-0015-047	External Speaker/Microphone Option	$81.25
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
n/a	Secure Encryption Option	n/a
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
included	Emergency Button/Switch Option	
included	Programmable Button/Switch Option	
included	Push-to-talk ID Transmission Option	
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Analog

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 1.5
Channel Spacing, kHz	12.5/20/25	25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-45	-60
FM Noise, dB	-40	-40
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-63	-68
Spurious and Image Rejection, dB	-70	-68
Intermodulation, dB	-70	-68
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	
Price FOB Destination freight prepaid & included in price		**$718.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		7700 Series
Prices are based on price list quoted above dated:		1/4/2002

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
585-5020-020/021	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$73.30
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
Included	Alphanumeric Display Option	
n/c	Dual Tone Multi Frequency encoder and Key Pad Option	
585-5000-052	Leather Carrying Case Option	
589-0015-047	External Speaker/Microphone Option	$52.00
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
	Flashing EEPROM	Available
	Provision for Field Software Upgrade	Available
n/a	Secure Encryption Option	n/a
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
included	Emergency Button/Switch Option	
included	Programmable Button/Switch Option	
included	Push-to-talk ID Transmission Option	
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Desktop Analog

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	35	30
Radiated Spurious & Harmonic Emission, dB	-60	-60
FM Noise, dB	-35	-45/-38
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-70/-60
Spurious and Image Rejection, dB	-70	-70
Intermodulation, dB	-68	-70
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$1,326.65**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		9800 Series
Prices are based on price list quoted above dated:		1/4/2002

OPTIONAL OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	available
	Provision for Field Software Upgrade	available
n/a	Secure Encryption Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Desktop Analog

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	15	30
Radiated Spurious & Harmonic Emission, dB	-55	-70
FM Noise, dB	-35	-45/-38
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-70/-60
Spurious and Image Rejection, dB	-70	-70
Intermodulation, dB	-68	-70
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$1,196.65**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		9800 Series
Prices are based on price list quoted above dated:		1/4/2002

OPTIONAL OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	available
	Provision for Field Software Upgrade	available
n/a	Secure Encryption Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Analog

High VHF 136-174 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	2.5
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	50	50
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-40	-45
Audio Distortion, % maximum	3	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-65	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-75
Speaker Audio Output, watts	5	12
Audio Distortion, % maximum	3	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm		
Price FOB Destination freight prepaid & included in price		**$1,764.75**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Flashing EEPROM	available
	Provision for Field Software Upgrade	available
-2	Secure Encryption Option	$617.50
585-4001-202	Desktop/Mobile Conversion Option	$139.75
OPTIONAL OPTIONS		
n/a	Second Programmable Receiver with Separate Speaker	
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Analog

High VHF 136-174 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	2.5
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	40	50
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$1,764.75**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Alphanumeric Display Option	-
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	-
n/a	Second Programmable Receiver with Separate Speaker	n/a
	Flashing EEPROM	available
	Provision for Field Software Upgrade	available
-2	Secure Encryption Option	$617.50
included	Emergency Button/Switch Option	-
included	Programmable Button/Switch Option	-
included	Push-to-talk ID Transmission Option	-
See Attached	See Price Pages attached for complete Accessories and Options	

EF Johnson Company – Phase II

Mobile Analog

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	2.5
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	25	50
Radiated Spurious & Harmonic Emission, dB	-55	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+3, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$1,764.75**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
-13	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	-
n/a	Second Programmable Receiver with Separate Speaker	n/a
	Flashing EEPROM	available
	Provision for Field Software Upgrade	available
-2	Secure Encryption Option	$617.50
included	Emergency Button/Switch Option	-
included	Programmable Button/Switch Option	-
included	Push-to-talk ID Transmission Option	-
included	Alphanumeric Display Option	-
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Analog

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	35	30
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-35	-45/-38
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-70/-60
Spurious and Image Rejection, dB	-70	-70
Intermodulation, dB	-68	-70
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$848.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		9800 Series
Prices are based on price list quoted above dated:		1/4/2002

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
239-0226-113	Desktop/Mobile Conversion Option	$357.50
included	Alphanumeric Display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
	Flashing EEPROM	
	Provision for Field Software Upgrade	available
n/a	Secure Encryption Option	n/a
included	**Emergency Button/Switch Option**	
included	**Programmable Button/Switch Option**	
included	**Push-to-talk ID Transmission Option**	
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Analog

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	15	30
Radiated Spurious & Harmonic Emission, dB	-55	-70
FM Noise, dB	-35	-45/-38
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-70/-60
Spurious and Image Rejection, dB	-70	-70
Intermodulation, dB	-68	-70
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$718.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		9800 Series
Prices are based on price list quoted above dated:		1/4/2002

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n /a	Separate Data Connector Option	n/a
239-0026-113	Desktop/Mobile Conversion Option	$357.50
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
	Flashing EEPROM	available
	Provision for Field Software Upgrade	available
n/a	Secure Encryption Option	n/a
included	**Emergency Button/Switch Option**	
included	**Programmable Button/Switch Option**	
included	**Push-to-talk ID Transmission Option**	
included	**Alphanumeric Display Option**	
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Digital

High VHF 136-174 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-67	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-78
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,762.80**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Digital

High VHF 136-174 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	48	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-67	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-78
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,762.80**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Digital

High VHF 136-174 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-43	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-78
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,762.80**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		

n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Digital

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-57	-70
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-60	-78
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,762.80**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS

Part Number	Description	Price
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	-
included	Position Rotary Channel/Mode Select Switch Option	-
included	Low Battery Alert Tone Option	-
included	Programmable Button Option	-
included	Push-to-talk ID Transmission Option	-
included	Alphanumeric Display Option	-
included	Adaptive Transmitter Power Control Option	-
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50

OPTIONAL OPTIONS

n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Digital

UHF 450-470 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	2	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-68	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-77
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,754.40**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
5890015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Digital

UHF 450-470 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	40	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	2	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-68	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-77
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,754.40**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ*	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Digital

UHF 450-470 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	5	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-43	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-77
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,754.40**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-0058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		

n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Digital

UHF 450-470 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	5	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-77
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,754.40**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		

n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Digital

UHF 806-870 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	1.5	± 1.5
Channel Spacing, kHz	12.5/25	12.5/25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-63	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-74	-74
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,754.40**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Digital

UHF 806-870 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	48	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	1.5	± 1.5
Channel Spacing, kHz	12.5/25	12.5/25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-63	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-74	-74
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,754.40**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ*	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Digital

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	± 1.5
Channel Spacing, kHz	12.5/25	12.5/25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-45	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-74
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,754.40**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		

n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Digital

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	± 1.5
Channel Spacing, kHz	12.5/25	12.5/25
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-45	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-60/-55	-75
Spurious and Image Rejection, dB	-65	-75
Intermodulation, dB	-65	-74
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,754.90**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	-
included	Position Rotary Channel/Mode Select Switch Option	-
included	Low Battery Alert Tone Option	-
included	Programmable Button Option	-
included	Push-to-talk ID Transmission Option	-
included	Alphanumeric Display Option	-
included	Adaptive Transmitter Power Control Option	-
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	
589-0015-058	External Speaker/Microphone Option	
OPTIONAL OPTIONS		

n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Desktop Digital

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	5	2.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	25	100
Radiated Spurious & Harmonic Emission, dB	-55	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-65	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-70	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-116
Price FOB Destination freight prepaid & included in price		**$2,190.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

OPTIONAL OPTIONS		
Part Number	**Description**	**Price**
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Desktop Digital

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	35	35
Radiated Spurious & Harmonic Emission, dB	-60	-60
FM Noise, dB	-35	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-75
Spurious and Image Rejection, dB	-70	-73
Intermodulation, dB	-68	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-116
Price FOB Destination freight prepaid & included in price		**$2,190.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

OPTIONAL OPTIONS		
Part Number	**Description**	**Price**
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Desktop Digital

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	15	35
Radiated Spurious & Harmonic Emission, dB	-55	-60
FM Noise, dB	-35	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-65/-60	-75
Spurious and Image Rejection, dB	-70	-73
Intermodulation, dB	-65	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-115	-116
Price FOB Destination freight prepaid & included in price		**$2,190.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Digital

High VHF 136-174 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	5	2.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	40	50
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-116
Price FOB Destination freight prepaid & included in price		**$1,901.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Digital

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	5	2.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	25	50
Radiated Spurious & Harmonic Emission, dB	-55	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-116
Price FOB Destination freight prepaid & included in price		**$1,901.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Digital

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	35	35
Radiated Spurious & Harmonic Emission, dB	-60	-60
FM Noise, dB	-35	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-73
Intermodulation, dB	-68	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-115	-116
Price FOB Destination freight prepaid & included in price		**$1,901.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Digital

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	15	35
Radiated Spurious & Harmonic Emission, dB	-55	-60
FM Noise, dB	-35	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-73
Intermodulation, dB	-68	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-115	-116
Price FOB Destination freight prepaid & included in price		**$1,901.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Trunked Digital

High VHF 136-174 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	5	2.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	40	50
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-116
Price FOB Destination freight prepaid & included in price		**$2,158.65**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
Part Number	**Description**	**Price**
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a

EF Johnson Company – Phase II

Mobile Trunked Digital

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	5	2.5
Number of Channels/Modes/Personalities	12.5 / 25	12.5 / 25 / 30
RF Input/Output Impedance, Ohms	50	50
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	25	50
Radiated Spurious & Harmonic Emission, dB	-55	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-116
Price FOB Destination freight prepaid & included in price		**$2,158.65**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Trunked Digital

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	35	35
Radiated Spurious & Harmonic Emission, dB	-60	-60
FM Noise, dB	-35	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-73
Intermodulation, dB	-68	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-115	-116
Price FOB Destination freight prepaid & included in price		**$2,158.65**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Separate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Mobile Trunked Digital

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	16	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	15	35
Radiated Spurious & Harmonic Emission, dB	-55	-60
FM Noise, dB	-35	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-115	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-73
Intermodulation, dB	-68	-75
Speaker Audio Output, watts	3	12
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-115	-116
Price FOB Destination freight prepaid & included in price		**$2,158.65**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5300 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Sewparate Data Connector Option	n/a
585-4001-202	Desktop/Mobile Conversion Option	$139.75
included	Emergency Button Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric display Option	
OPTIONAL OPTIONS		
included	Single Unit Dash Mount Option	
n/a	Second Programmable Receiver with Separate Speaker	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Trunked Digital

High VHF 136-174 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	48	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-70	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-78
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,732.90**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ*	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Trunked Digital

High VHF 136-174 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-43	-45
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-78
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,732.90**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

EF Johnson Company – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Trunked Digital

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.0
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-57	-70
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-60	-78
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,732.90**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

EF Johnson Company – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Trunked Digital

UHF 450-470 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	2	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-77
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,722.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ*	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
Part Number	**Description**	**Price**
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Trunked Digital

UHF 450-470 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	40	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	2	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-45	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-68	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-75	-77
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,722.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages attached for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Trunked Digital

UHF 450-470 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	5	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-43	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-77
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,722.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

EF Johnson Company – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Trunked Digital

UHF 450-470 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	5	± 2.0
Channel Spacing, kHz	12.5/20/25	12.5 / 25
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-77
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,722.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

EF Johnson Company – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Trunked Digital

UHF 806-870 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	48	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	1.5	± 1.5
Channel Spacing, kHz	12.5/25	12.5/25
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-119	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-63	-75
Spurious and Image Rejection, dB	-75	-75
Intermodulation, dB	-74	-74
Speaker Audio Output, milliwatts	500	500
Audio Distortion, % maximum	2	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-119	-119
Price FOB Destination freight prepaid & included in price		**$1,722.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ*	$97.50
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
n/a	RF Power Amplifiers Option	n/a
589-0015-058	External Speaker/Microphone Option	$84.50
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
n/a	Vehicular Charger/Console Option	n/a
See Attached	**See Price Pages for complete Accessories and Options**	

EF Johnson Company – Phase II

Portable Trunked Digital

UHF 806-870 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	± 1.5
Channel Spacing, kHz	12.5/25	12.5/25
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-45	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-75
Spurious and Image Rejection, dB	-70	-75
Intermodulation, dB	-70	-74
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,722.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

EF Johnson Company – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-510	Battery Charger/Dual Power Option	$ 97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

EF Johnson Company – Phase II

Portable Trunked Digital

UHF 806-870 Quality Category D

	STANDARD SPECIFICATION	**BIDDER'S SPECIFICATION**
GENERAL		
Number of Channels/Modes/Personalities	2	256
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	± 1.5
Channel Spacing, kHz	12.5/25	12.5/25
APCO P-25 TRUNKED STANDARDS		
TRANSMITTER		
RF Power Output, Watts	1/3 selectable (Low/High)	1/3 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-45	-60
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-60/-55	-75
Spurious and Image Rejection, dB	-65	-75
Intermodulation, dB	-65	-74
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-116	-119
Price FOB Destination freight prepaid & included in price		**$1,722.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		5100 Series
Prices are based on price list quoted above dated:		6/16/2003

EF Johnson Company – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
250-5100-210	Battery Charger/Dual Power Option	$97.50
included	Emergency Button Option	
included	Position Rotary Channel/Mode Select Switch Option	
included	Low Battery Alert Tone Option	
included	Programmable Button Option	
included	Push-to-talk ID Transmission Option	
included	Alphanumeric Display Option	
included	Adaptive Transmitter Power Control Option	
51X3	Dual Tone Multi Frequency encoder and Key Pad Option	$160.55
585-5100-120	Leather Carrying Case Option	$45.50
589-0015-058	External Speaker/Microphone Option	$84.50
OPTIONAL OPTIONS		
n/a	RF Power Amplifiers Option	n/a
n/a	Paging Decoder Option	n/a
n/a	Vehicular Charger/Console Option	n/a

Eltek

Contractor:	**Eltek**		
Contact:	Ms. Helen Woosley	**Alternate Contact:**	Mr. Robert Johnson
Phone:	(209) 599-4877		(815) 444-4079
Fax:	(209) 599-1198		(815) 459-9118
Email:	helen.woosley@eltekenergy.com		rob.Johnson@eltekenergy.com
Internet address:	www.eltekenergy.com		
Web catalog address:			
Federal ID No.:	36-4233439		
Supplier No.:	111921		
Total Contract worth:	$500,000,000.00		
Payment address:	Eltek Energy, LLC LBX 619764 Chicago, IL 60680-6197	**Order placement address**:	Eltek Energy, LLC 115 Erick St Crystal Lake, IL 60014-4533
Customer Service:	Ms. Chris Lima		
Telephone:	(815) 444-4089		
Fax:	(800) 526-2524		
Ordering procedures:			
Credit card acceptance:	VISA, MasterCard		
Minimum orders:			
Delivery time:	30 to 45 days ARO		
Payment terms:	Net 30		
Shipping destination:	Free on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:			
Category			
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I		

Eltek

CONTRACTOR WAREHOUSE Proposer(s) shall indicate below each warehouse location at which material, equipment or supplies will be stored.

ADDRESS:	**Eltek Energy, LLC**	PHONE:	**(800) 447-3484**
	115 Erick Street	CONTACT:	**Robert B. Johnson**
	Crystal Lake, IL 60014-4533		**Product Manager**

SERVICING: Indicate below the names and addresses of sales representatives and specific territories covered. Proposer's ability to service state agencies including local sales representation may be a factor in the award. Contractor must provide immediate attention to problem areas as they arise regardless of location. Submit an attached letter if necessary.

NAME:	Precision Power Mr. Dave Cunningham	NAME:	Mountain Power & Comm. Mr. Mike Rayburn
ADDRESS:	5801 Silverado Way, Suite J12	ADDRESS:	2727 W. Second Ave.
	Anchorage, AK 99518		Denver, CO 80219
TERRITORY:	Alaska	TERRITORY:	Montana, Idaho, Wyoming, Utah, Colorado
PHONE:	(907) 561-7797	PHONE:	(303) 935-5901

FACTORY AUTHORIZED SERVICE:
Factory authorized service must be available in the destination area. List your service centers including name and address of each.

All authorized factory service is handled from our North American headquarters.

FIRM NAME:	Eltek Energy, LLC
ADDRESS:	115 Erick Street
	Crystal Lake, IL 60014-4533

Eltek – Phase I

Price Sheets

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Support Services Eltek offers a toll-free 24-hour no charge help line that is available exclusively for customer service assistance. The help line is answered 24 hours a day, seven days a week and 365 days a year.	Hourly	EA	N/C
2.		Installation Services Pricing for installation services is quoted on a job specific basis. Labor rates for installation services are as follows:	Hourly	EA	
		1. Transit rate to and from work site	1	HR	$50.00
		2. Hourly labor rate (7:00 AM to 6:00 PM -Monday thru Friday)	1	HR	$100.00
		3. Overtime labor rate: (Applies to labor after 6:00 PM Monday thru Friday and Saturdays.)	1	HR	$135.00
		4. Sunday and Holiday Labor Rate:	1	HR	$175.00

Eltek – Phase I

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
3.		Repair Services Note: Certain products being proposed have flat repair rates associated with them. They are as follows: Partial Warranty: - SSD2 Alarm Panel - TwinPack Plus Rectifier - SMPS 1000 Rectifier - AL 175 Controller Out of Warranty: - SSD2 Alarm Panel - TwinPack Plus Rectifier - SMPS 1000 Rectifier - AL 175 Controller - MCU Controller - Flatpack Rectifier	Hourly	EA	$ 100.00 $ 100.00 $ 200.00 $ 155.00 $ 175.00 $ 300.00 $ 450.00 $ 225.00 $ 250.00 $ 130.00 $ 250.00
4.		List other Equipment DC Power Systems, Model Flatpack, TwinPack Plus, MPSU 4000		EA	25%

General Dynamics

Contractor:	**General Dynamics**		
Contact:	Terrell G. Thomas	**Alternate Contact:**	Al Lopez
Phone:	(480) 441-7032		(480) 441-4246
Fax:	(480) 441-2515		(480) 441-8864
Email:	Terry.Thomas@gdds.com		Al.Lopez@gdds.com
Internet address:	www.gdds.com		
Web catalog address:			
Federal ID No.:	54-2051330		
Supplier No.:	111844		
Total Contract worth:			
Payment address:	General Dynamics P.O. Box 845342 Dallas, TX 75284-5342	**Order placement address**:	General Dynamics 8201 E. McDowell Rd, MD6206 Scottsdale AZ 85257
Customer Service:	Scott Kenwright		
Telephone:	(480) 441-3591		
Fax:	(480) 441-7196		
Ordering procedures:			
Credit card acceptance:	VISA, MasterCard, American Express		
Minimum orders:			
Delivery time:	60 days ARO		
Payment terms:	Net 30		
Shipping destination:	Free on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:			
Category			
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I		

General Dynamics

CONTRACTOR WAREHOUSE Proposer(s) shall indicate below each warehouse location at which material, equipment or supplies will be stored.

ADDRESS: General Dynamics Decision Systems
8201 E. McDowell Rd
Scottsdale, AZ 85257

PHONE: (480) 441-3591
CONTACT: Scott Kenwright

SERVICING: Indicate below the names and addresses of sales representatives and specific territories covered. Proposer's ability to service state agencies including local sales representation may be a factor in the award. Contractor must provide immediate attention to problem areas as they arise regardless of location. Submit an attached letter if necessary.

Authorized Sales Representatives

Name	Don Werner	Don Simon
Address	Wallace & Wallace 2600 California Ave, Ste F Monrovia CA 91016	Mountain State Marketing 1714 SW 23rd St San Leandro CA 94579
Telephone	626-305-8800 / Cell 818-429-9925	970-962-9998
Territory Covered	S. California, S. Nevada, Arizona	E. Montana, Wyoming, E. Idaho, Utah, Colorado, New Mexico
Name	Ron Seitz	Ron Serrao
Address	Procomm Marketing 655 Lewelling Blvd #351 San Leandro CA 94579	The Sales Group PO BOX 7289 Hilo, HI 96720-8942
Telephone	510-383-9191	808 966-4478 / Cell 808-987-3613
Email		ron@thesalesgroup.com
Territory Covered	N. California, N. Nevada	Hawaii
Name	Rick Hinthorne	Dana Hanford
Address	The Sales Group 17879 SW Hillside Drive Lake Oswego, OR 97034	The Sales Group 755 Winslow Way E, Suite 203 Bainbridge Island WA 98110
Telephone	503 638-6923/ Cell 503-805-1967	206-842-9076 Work 206-660-7147 Cell
Email	rick@thesalesgroup.com	dana@thesalesgroup.com
Territory Covered	Oregon, S. Washington	N, Washington, W. Montana, N, Idaho, Alaska
Name	Darwin Niss	
Address	Mink Marketing 22976 Greenland Elysian MN 56028	

Telephone	507-420-8643	
Territory Covered	S Dakota, Minnesota	

FACTORY AUTHORIZED SERVICE:
Factory authorized service must be available in the destination area. List your service centers including name and address of each.

FIRM NAME:	**Motorola Test Equipment Service Center**	**General Dynamics Decision Systems**
ADDRESS:	2216 Galvin Drive	Communications Test Equipment
	Elgin, IL 60123	8201 E. McDowell Road
		Scottsdale, AZ 85252

SERVICE CENTERS

General Dynamics Decision Systems Communications Test Equipment has two repair facilities in the United States. Both have been in business for more than 20 years and provide unsurpassed service and rapid turn-around times.

For the R2590 series of communication system analyzers and all other products in use in the state of Arizona:
General Dynamics Decision Systems
8201 E. McDowell Road
Scottsdale, AZ 85257
Phone: 480-441-3182
Contact: Becky Watts

Factory trained personnel and years of qualifying service:
Cheryl Zuber, 5 years
George Patterson, 6 years
Steve Beverly, 4 years
Kim Smith, 1year

For all General Dynamics test equipment products excluding the R2590 Series.
Motorola Test Equipment Service Center
2216 Galvin Drive
Elgin, Illinois 60123
Phone: 800-323-6967
Contact: Harold Kriese

Factory trained personnel and years of qualifying service:

Ray Fude, 25 years	Jim Cogdill, 21 years	Barry Hendrix, 18 years
Ricardo Rivera, 15 years	Mike Wonogas, 2 years	Ron Rychlowksi, 2 years
Harold Kriese, 16 years	Larry Huro, 17 years	Levi Jackson, 7 years
Barbara Brustowicz, 18 years		

General Dynamics – Phase I

Categroy 8 Equipment: P Test Equipment, Analog and Digital 2% From list price

Item	Part #	Description	Qty	Unit	Unit Price
1.		**R2670b Project 25 Radio Test Set**	1	EA	$14,651
1.1.		**Options For R2670B:**			
	RLN4497A	Smartnet/Smartzone Testing Option	1	EA	$7,300
	CM714	P25 Trunking Radio Test Option	1	EA	$1,520
		Control Channel Logger			NA
		LSM Basic (Included with CM714)			
		Smartnet/Smartzone 900MHz (Req's Option 3)			Included in RLN4497A
	CM701	Hardware Module	1	EA	$2,450.00
	CM702	DES-OFB Encryption	1	EA	$931.00
	CM707	AES	1	EA	$1,225.00
	CM708	DES, DES-XL Encryption	1	EA	$1,225.00
	CM709	DVP-XL Encryption	1	EA	$1,225.00
	CM710	DVI-XL Encryption	1	EA	$1,225.00
	CM711	Securenet	1	EA	$1,225.00
	CM712	VSELP	1	EA	$1,225.00
	CM713	P25 Phase 2	1	EA	$1,225.00
	RLN4034A	C-Message Filter with 600 Ohn Meter Load	1	EA	$ 490.00
	RLN4361A	CCITT Filter with 600 Ohn Meter Load	1	EA	$ 490.00
	RLN4484A	Phase Modulation / Demodulation	1	EA	$ 681.00
	RLN4329A	IEEE 488.2 Remote Interface	1	EA	$ 583.00
		KVL Keyloader Option			Included in CM713
	TBD	LSM Advanced / P25 - 2 Advanced			
	RLN4498A	Smartnet/Smartzone	1	EA	$6,321.00
		P25 Trunking VHF/UHF/ 700MHz			Included in CM714
1.2.		**Extended Warranties For R2670B**			
	RLN4501A	3 Year Extended Warranty, Includes 2 Calibrations Total Warranty 3 Years	1	EA	$1,127.00
	RLN4502A	5 Year Extended Warranty, Includes 4 Calibrations Total Warranty 5 Years	1	EA	$1,936.00
1.3.		**Accessories For R2670B**	1	EA	
	6880309F17	Manual, R2670B (Supplied As Standard)	1	EA	$ 39.00
	RLN5237A	Maintenance Maual on CD Rom	1	EA	$343.00
	A001	Heavy Duty Case	1	EA	$583.00
	A002	Heavy Duty Case with wheels	1	EA	$858.00
	1580357B77	Case Soft Padded Carrying	1	EA	$122.00
	5880345B96	RF Detector Probe, 50 Ohn Termination	1	EA	$285.00
	RTA4000A	Telescoping Antenna (Supplies as Standard)	1	EA	$23.00
	RPX4097A	DC Power Connector	1	EA	$14.00
	0982578B01	BNC RF 'T'	1	EA	$16.00

General Dynamics – Phase I

Item	Part #	Description	Qty	Unit	Unit Price
	RPN4000A	Internal Rechageable Battery (External)	1	EA	$515.00

Harris Corporation

Contractor:	**Harris Corporation**		
Page number			
Contact:	Ron Adams	**Alternate Contact:**	Ali Hirsa
Phone:	206-340-1015		650-594-3000
Fax:	206-340-0612		650-594-3664
Email:	radams@harris.com		ahirsa@harris.com
Internet address:	www.harris.com		
Web catalog address:			
Federal ID No.:	34-0276860		
Supplier No.:	34095		
Total Contract worth:	$500,000,000.00		
Payment address:	350 Twin Dolphin Dr. Redwood Shores, CA 94065	**Order placement address**:	350 Twin Dolphin Dr. Redwood Shores, CA 94065
Customer Service:	Ron Adams		
Telephone:	206-340-1015		
Fax:	206-340-0612		
Ordering procedures:			
Credit card acceptance:	Visa, MasterCard		
Minimum orders:			
Delivery time:	days After Receipt of Order (ARO): Aurora: 30 days, Constellation, MegaStar, Microstar: 60 days, SPR Series, TBD		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 5, Digital Microwave Radios		
Equipment Line items			
Link to bid Specifications			
Awarded Phase(s)	Phase I & II		

Harris Corporation

State of Washington - Office of State Procurement
Microwave Radio Bid Response Price Sheet

Optional Items-Technical Services[1]			
Item	**Description**		**Price (Per Price Book)**
1.00	**Frequency Coordination**		
1.10	**Frequency Bands-6 and 11 GHz**		
1.11	First Frequency Pair		$1,400.00
1.12	Additional Frequency pairs coordinated at the same time.		$900.00
1.20	**Frequency Bands-10, 18 and 23 GHz**		
1.21	First Frequency Pair		$1,300.00
1.22	Additional Frequency pairs coordinated at the same time.		$850.00
1.30	**Renewal Notices**-Required to protect coordinated paths when license filings haven't been submitted.		
1.31	For first path		$320.00
1.32	For each additional path at the same time		$70.00
1.40	**FCC License Preparation**		
1.41	Per site location		$400.00
1.50	**FCC License Submittal Fee**		

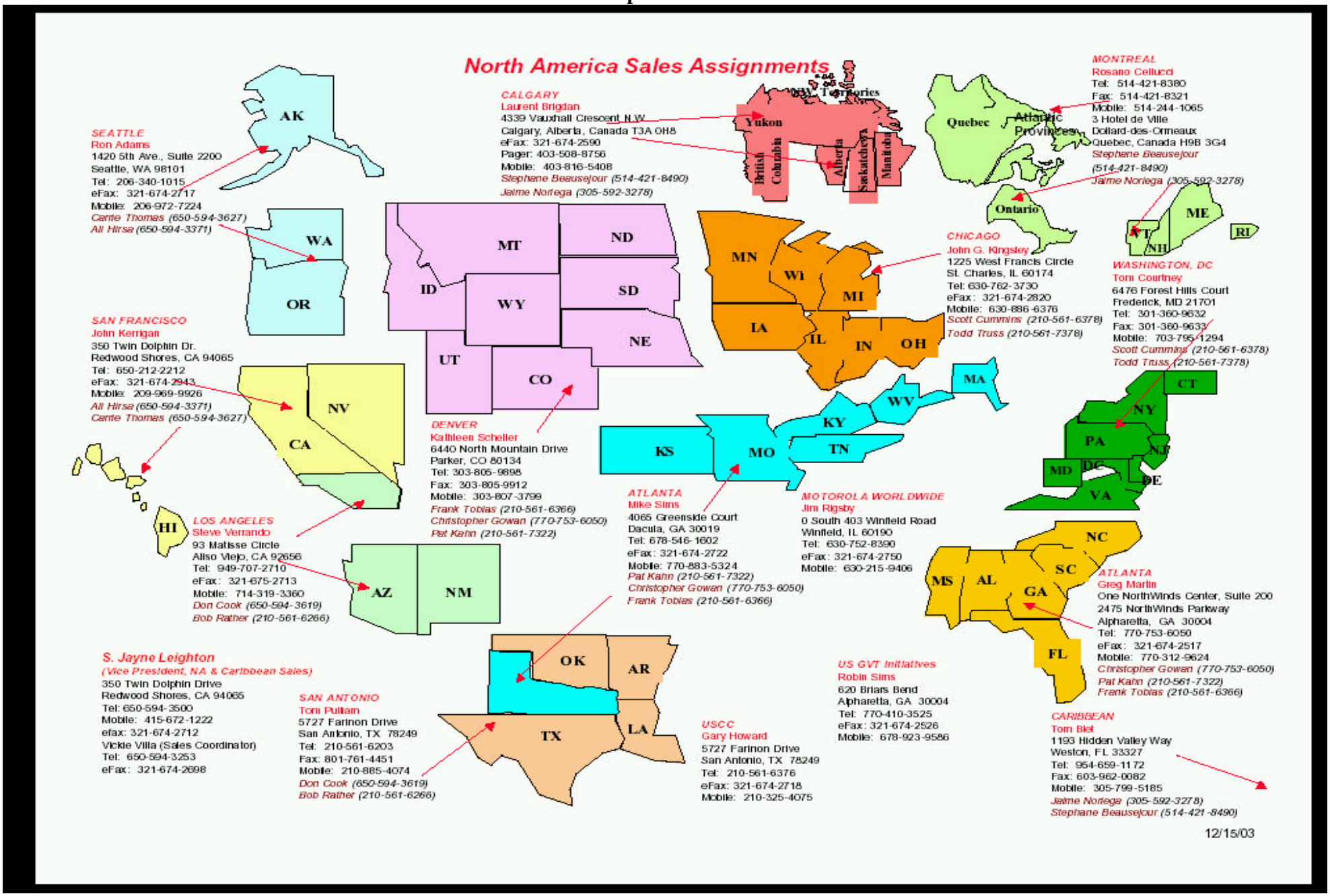
Harris Corporation

1.51	New License-per site location		$480.00
1.52	Modification to License per site		$295.00
1.60	**Verbal Coordination Expedite**		
1.61	For first path		$850.00
1.62	For each additional path at the same time		$200.00
2.00	**Field Engineering**		
2.10	Field Service Enginner (rate per man day)		$1,200.00
2.20	Field Living Expenses (rate per calender day)		$152.00
3.00	**Installation Services (Per Man Day)**		
3.10	EF&I Project Engineering		$800.00
3.20	Program Management		$1,126.00
3.30	Field Engineer		$880.00
3.40	Network Engineering		$1,100.00
3.50	Application Engineering		$900.00
3.60	Transmission Engineering		$1,100.00
			$2,700.00

Harris Corporation

3.70	Path Survey (for up to 3 paths; over 3 paths obtain quote)		$2,700.00
3.70	Path Survey (for up to 3 paths; over 3 paths obtain quote)		
	[1] **Please see Harris Price Book, Volume II for more details and conditions for above items**		

Harris Corporation



Harris Corporation Phase I

PHASE I

HARRIS MCD DISCOUNT SCHEDULE FOR WSCA PHASE I INCL. ACCESSORIES			
1	Constellation 6 GHz	8 x T1	59%
2	Constellation 6 GHz	16 x T1	59%
3	Constellation 6 GHz	28 x T1	60%
4	Constellation 6 GHz	OC3	61%
5	Constellation 6 GHz	3 DS3	60%
6	Constellation 10/11 GHz	8 x T1	60%
7	Constellation 10/11 GHz	16 x T1	60%
8	Constellation 11GHz	28 x T1	61%
9	Constellation 11 GHz	OC3	65%
10	Constellation11 GHz	3 DS3	63%
11	MegaStar 155-6 GHz	OC-3	53%
12	MegaStar 155-11 GHz	OC-3	52%
13	MegaStar 155-6 GHz	3 DS3	54%
14	MegaStar 155-11 GHz	3 DS3	52%
	(See Constellation above for OC3 and 3 DS3 radios. MegaStar available for system expansions)		
15	MicroStar 18 ext mux	28 x T1	50%
16	MicroStar 18 ext mux	28 x T1	50%
17	MicroStar 18 ext mux	16 x T1	50%
18	MicroStar 18 ext mux	16 x T1	50%
19	MicroStar 23 ext mux	28 x T1	44%
20	MicroStar 23 ext mux	28 x T1	44%
21	MicroStar 23 ext mux	16 x T1	44%
22	MicroStar 23 ext mux	16 x T1	44%
23	Galaxy 18 GHz	OC3	37%
24	Galaxy 23 GHz	OC3	36%
25	Aurora 5.8, unprotected	1 X T1	47%
26	Aurora 5.8, unprotected	2 X T1	56%
27	StarView	NMS	10%
28	FarScan for Windows	SW	NO CHARGE
29	CAU remote alarm unit	32 alarms	$1,920
30	MicroStar order wire		$225
31	Constellation order wire		$625
32	MegaStar order wire		$625
33	Rack and fuse panel*		$500
34	M13 mux		$2,519
35	OEM equipment		Per price list attached
	** Space Diversity additional cost		

Harris Corporation Phase I

Frequency Band: 6 GHz					Radio Configuration: Non-Hot Standby - Terminal					Date: 7/24/03
Capacity in T1s	**Model Number Constellation**	**Radio List Price**	**Discount**	**Mux Price**	**MW Equip (Radio w/ DS1 Mux) Price First Year3**	**MW Equip (Radio w/ DS1 Mux) Price Second/Third Year3, 6**	**No DS1 Multiplex4 (per Section 1.22 (4) of Phase 2 Tech Specs)**	**Orderwire Price**	**Alarm and Control Price**	**Total Line Price, 1st Year**
DS34	RC306AESTPZ#B000B	$30,675.00	58.00%		$12,883.50	$10,122.75	$12,883.50	$625.00	included	$13,508.50
3xDS34	RY106AGTPV##0000B	$41,650.00	60.00%		$16,660.00	$12,911.50	$16,660.00	$625.00	included	$17,285.00
2xDS3 + 28DS14	RY106AGTPW##0000B	$47,775.00	63.00%		$17,676.75	2nd Year: $17,676.75 3rd Year: $13,377.00	$17,676.75	$625.00	included	$18,301.75
4xDS34	RY106AGTPY#P0000B	$54,425.00	69.00%		$16,871.75	2nd Year: $16,871.75 3rd Year: $11,973.50	$16,871.75	$625.00	included	$17,496.75
3xDS3 + 28DS14	RY106AGTPZ##0000B	$60,550.00	71.00%		$17,559.50	2nd Year: $17,559.50 3rd Year: $12,110.00	$17,559.50	$625.00	included	$18,184.50

Notes:

[1]Power shall be measured at top of flange in dBm.

[2]Based on 10^{-3} Bit Error Rate receiver sensitivity.

[3]Prices include a fully functional assembly with all standard industry interfaces for the signal payload, power connections, alarm I/O connections and any required data or service channel interfaces.

[4]This space is reserved for vendors to add either equipment configurations or additional options.

[5]Provide physical interfaces for radio bid, ie Fast Ethernet, T1, DS3 etc

[6] Second (2nd) year discounts do not apply to 2xDS3+28DS1, 4xDS3 and 3xDS3+28DS1 capacity radios. The quantity break discounts are only valid in year three (3).

This is an expamle of Phase I pricing

Harris Corporation Phase I

Frequency Band: 6 GHz					**Radio Configuration: Hot Standby - Terminal**					**Date: 7/24/03**
Capacity in T1s	**Model Number Constellation**	**Radio List Price**	**Radio Discount**	**Mux Price (No Discount)**	**MW Equip (Radio w/ DS1 Mux) Price First Year3**	**MW Equip (Radio w/ DS1 Mux) Price Second/Third Year3, 6**	**No DS1 Multiplex4 (per Section 1.22 (4) of Phase 2 Tech Specs)**	**Orderwire Price**	**Alarm and Control Price**	**Total Line Price, 1st Year**
DS34	RC306EESTPZ#B000B	$58,000.00	58.00%		$24,360.00	$19,140.00	$24,360.00	$625.00	**included**	$24,985.00
3xDS34	RY106EGTPV##0000B	$70,725.00	60.00%		$28,290.00	$21,924.75	$28,290.00	$625.00	**included**	$28,915.00
2xDS3 + 28DS14	RY106EGTPW##0000B	$77,725.00	63.00%		$28,758.25	2nd Year: $28,758.25 3rd Year: $21,763.00	$28,758.25	$625.00	**included**	$29,383.25
4xDS34	RY106EGTPY#P0000B	$83,500.00	69.00%		$25,885.00	2nd Year: $25,885.00 3rd Year: $18,370.00	$25,885.00	$625.00	**included**	$26,510.00
3xDS3 + 28DS14	RY106EGTPZ##0000B	$90,500.00	71.00%		$26,245.00	2nd Year: $26,245.00 3rd year: $18,100.00	$26,245.00	$625.00	**included**	$26,870.00

Notes:

[1]Power shall be measured at top of flange in dBm.

[2]Based on 10^{-3} Bit Error Rate receiver sensitivity.

Harris Corporation Phase I

[3]Prices include a fully functional assembly with all standard industry interfaces for the signal payload, power connections, alarm I/O connections and any required data or service channel interfaces.

[4]This space is reserved for vendors to add either equipment configurations or additional options.

[5]Provide physical interfaces for radio bid, ie Fast Ethernet, T1, DS3 etc

[6] Second (2nd) year discounts do not apply to 2xDS3+28DS1, 4xDS3 and 3xDS3+28DS1 capacity radios. The quantity break discounts are only valid in year three (3).

This is an expamle of Phase I pricing

Harris Corporation – Phase II

Category 5, Microwave
Harris

Manufacturer	Freq. Band	Capacity in T1's	Part number	Total Price
Hot Standby - Terminal – 6 GHz				
Harris	6 GHz	28T	RC306EESTPH#B000B	$26,425
Harris	6 GHz	SONET-OC3	RY106EGTPB##000B	$27,544
Non-Hot Standby - Terminal – 6 GHz				
Harris	6 GHz	28T	RC306AESTPH#B000B	$15,145
Harris	6 GHz	SONET-OC3	RY106AGTBP##000B	$16,205
Hot Standby - Terminal – 11 GHz				
Harris	11 GHz	28T	RC311EESTPH#B030B	$27,340
Harris	11 GHz	SONET-OC3	RY111EGTPB##1030b	$28,118
Non-Hot Standby - Terminal – 11 GHz				
Harris	11 GHz	16T	RC311ACSTPE#B030B	$14,538
Harris	11 GHz	28T	RC311AESTPH#B030B	$15,562
Harris	11 GHz	SONET-OC3	RY111AGTPB##1030B	$16,428
Hot Standby - Terminal – 18 GHz				
Harris	18 GHz	SONET-OC3	Galaxy RX118GZM209D#22	$24,570
Non-Hot Standby – Terminal – 18 GHz				
Harris	18 GHz	28T	Microstar M/H RK118AZS####0B001 + M13 MUX	$7,737
Harris	18 GHz	SONET-OC3	Galaxy RX118AZM209D#22	$13,230
Non-Hot Standby - Terminal – 23 GHz				
Harris	23 GHz	28T	Microstar M RF223EZS####0B41#B + M13 MUX	$8,616
Harris	23 GHz	SONET-OC3	Galaxy RB123ADS##56B40A	$15,168
Hot Standby – Repeater – 6 GHz				
Harris	6 GHz	28T	RC306ECSAPEEB000B RC306ECSB####000A	$48,975
Harris	6 GHz	SONET-OC3	RY106EGTPB##0000B RY106EGCPB##0000a	$55,090
Non-Hot Standby – Repeater – 6 GHz				
Harris	6 GHz	28T	RC306ACSAPEEB000B RC306ACSB####000A	$26,765
Hot Standby – Repeater – 11 GHz				
Harris	11GHz	16T	RC311ECSAPCCB030B RC311ECSB####030A	$49,521
Harris	11GHz	28T	RC311ACSAPEEB030B RC311ACSB####030A	$50,886
Harris	11GHz	SONET-OC3	RY111EGTPB#P0030b RY111EGCPB#P0030A	$56,235
Non-Hot Standby – Repeater – 11 GHz				
Harris	11GHz	16T	RC311ACSAPCCB030B RC311ACSB####030A	$26,307
Harris	11GHz	28T	RC311ACSAPEEB030B RC311ACSB####030A	$27,330
Harris	11GHz	SONET-OC3	RY111AGTPB#P0030B RY111AGCPB#PB#0030a	$32,855
Hot Standby – Repeater – 18 GHz				
Harris	18 GHz	SONET-OC3	Galaxy RX118GZM209D#20 RX118GZM209D#20	$49,140
Non-Hot Standby – Repeater – 18 GHz				

Harris Corporation – Phase II

Manufacturer	Freq. Band	Capacity in T1's	Part number	Total Price
Harris	18 GHz	28T	Microstar M/H RK118AZS####0B001 RK118AZS####0B001 + M13 MUX	$13,887
Harris	18 GHz	SONET-OC3	Galaxy RX118AZM209D#22 RX118AZM209D#22	$26,460
Non-Hot Standby - Repeater – 23 GHz				
Harris	23 GHz	28T	Microstar M RF223AZS####0B41#B RF223AZS####0B41#B + M13 MUX	$15,645
Harris	23 GHz	SONET-OC3	Galaxy RB123ADS##56B40A RB123ADS##56B40A	$30,336

ICOM

CONTRACTOR INFORMATION

Contractor:	**Icom America, Inc.**		
Page number			
Contact:	Etsi Tamura	**Alternate Contact:**	Bob Shropshire
Phone:	425-450 6090		425-450-6033
Fax:	425-454-1509		425-450-6065
Email:	wsca@icomamerica.com	bobshropshire@icomamerica.com	
Internet address:	http://www.icomamerica.com/governmentsales/wsca/		
Web catalog address:			
Federal ID No.:	91-1083924		
Supplier No.:	32709		
Total Contract worth:	$500,000,000.00		
Payment address:	ICOM America, Inc. Dept. #407 PO Box 34935 Seattle, WA 98124	**Order placement address**:	ICOM America, Inc. 2380 116th Avenue NE Bellevue, WA 98004
Customer Service:	Etsi Tamura		
Telephone:	425-450-6069		
Fax:	425-454-1509		
Ordering procedures:			
Credit card acceptance:	Visa, MasterCard, American Express		
Minimum orders:			
Delivery time:	30-60 days After Receipt of Order (ARO)		
Payment terms:	3% - 30 days net 45		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 2 Aircraft Band Radios		
Equipment Line items			
Support Services	$71.25 per hour		
Repair Services	$71.25 per hour		
Installation Services	$33.25 per radio		
Programming Services	$33.25 per radio		
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category2.doc		
Link to Price Sheets	http://www.icomamerica.com/governmentsales/wsca/		
Awarded Phase(s)	Phase I & II		

Land-mobile Division Products and Accessories	36% Off	Manufacturer List Price
Avionics Division Products and Accessories	49% Off	Manufacturer List Price

ICOM – Phase II

SPECIFICATIONS

AM Band Aircraft Radio

Description
One panel mounted VHF-AM Aeronautical Transceiver (VHF-1)
Two panel mounted VHF-AM Aeronautical Transceiver (VHF-1 and VHF-2)
Operating in the frequency band of 118.00 to 135.975 MHz
with a minimum of 760 channels in no greater than 25 Khz increments
Minimum of 5 watt carrier output power
Must be TSO certified

PRICE SHEETS

Req. Item	Comm. Code	Description	Unit	Unit Price
2.	5820	One Panel Mounted VHF – AM Aeronautical Transceiver (VHF-1) Product Bid State: Mfg.: ICOM Model: A200 100 Panel Mount	EA	$817.08
3.	5820	Mobile Product Bid State: Mfg.: ICOM Model: A110 05 Mobile	EA	$730.80

Avionics Division 49% Off Manufacturer List Price
Products and Accessories

ICOM – Phase II

Commercial Air Band Transceiver
20 PC Programmable Channels
36W P.E.P., 9W Carrier (typ.)
Backlit Alpha-Numeric LCD Display
HM-100N Hand Microphone Included
Dual Watch
Five scan modes
Adjustable display illumination
10W Audio to external speaker
Mobile antenna not included.
MIL-STD810C/D/E Approved (shock, vibration, humidity, high and low temperature)

Weight	Dimensions	Warranty
3.5 lbs	6" x 2" X 7"	2 Years

Model	Description	Retail	WSCA
A110 04	VHF Airband Mobile Transceiver. 20 Channel Version: PC Programmable / Includes the radio, hand mic., DC power cable, fuses, mounting bracket kit and mic. hanger kit. Requires Programming Software and cables: CSA110, OPC478 and OPC592.	$ 1,440.00	$ 730.80
A110 05	VHF Air Band Mobile Transceiver. 760 Channel Version Open VFO / Includes the radio, hand mic., DC power cable, fuses, mounting bracket kit and mic. hanger kit.	$ 1,440.00	$ 730.80
Optional Accessories		**Retail**	**WSCA**
Antennas			
BANT	Base Station Antenna	$ 262.00	$ 167.03
K220A	Airband Mobile Antenna with Magnetic Trunk Mount	$ 65.00	$ 41.44
K220C	Airband Mobile Antenna with Rooftop Mount	$ 42.00	$ 26.78
Software & Cables			
CSA110	Programming software (requires OPC 478 & OPC 592)	$ 40.00	$ 25.50
OPC478	Programming Cable for PC to Transceiver - (Requires OPC-	$ 45.00	$ 28.69

ICOM – Phase II

	592)		
OPC591	Programming Cloning Cable (Transceiver to Transceiver)	$ 12.00	$ 7.65
OPC592	Adapter for Programming Cable (Requires OPC-478)	$ 16.00	$ 10.20
OPC871	Headset Adapter (Fits Most General Aviation Headsets)	$ 140.00	$ 89.25
OPC344	A110 Std Power Cord	$ 12.00	$ 7.65
Microphones			
SM25	Microphone - Desk	$ 155.00	$ 98.81
HM100N	Hand Microphone	$ 39.00	$ 24.86
Speakers			
SP5	Remote Speaker - Mobile	$ 54.00	$ 34.43
SP10	Remote External Speaker	$ 69.00	$ 43.99
Manuals			
98813332	Owners Manual	$ 12.00	$ 7.65
97713330	Service Manual	$ 44.00	$ 28.05
94413329	Service Manual on CD ROM	$ 44.00	$ 28.05
Miscellaneous			
PTT SW	Avionic PTT Switch	$ 28.00	$ 17.85

Aviation WSCA Price Sheet - ICOM America, Inc. A200 100

PANEL MOUNT TSO VERSION

Features

Compact Panel Mount Transceiver
Active / Standby Channel Control
Backlit Display and
Controls
Direct Frequency Input
9 Memory Channels
7 Watt Output Carrier (32w P.E.P.)

Weight	Dimensions
2.4 lbs	6.3" x 1.3" x 10.7"

Warranty

2 Years

Model	Description	Retail	WSCA
A200 100	Transceiver - Panel Mount TSO Version / Includes Panel Mount only	$ 1,610.00	$ 817.08

Optional Accessories

Model	Description	Retail	WSCA
Antennas			
B ANT	Base Station Antenna	$ 262.00	$ 167.03

ICOM – Phase II

K220A	Mobile Antenna w/Trunk Mount (magnetic)	$ 65.00	$ 41.44
K220C	Mobile Antenna w/Rooftop Hole Mount	$ 42.00	$ 26.78
Miscellaneous			
MB53	Vehicle Mounting Kit	$ 415.00	$ 264.56
PS80 03	Base Station Power Supply	$ 920.00	$ 586.50

CONTRACTOR INFORMATION

Contractor:	JPS/Raytheon		
Page number			
Contact:	Bonnie Harward	**Alternate Contact:**	Marcia Gatlin
Phone:	919-790-1011 X1154		919 790 1011 X1140
Fax:	919 790 1456		919 790 1456
Email:	bonnie.harward@jps.com		marcia.gatlin@jps.com
Internet address:	www.jps.com		
Web catalog address:			
Federal ID No.:	56-1621866		
Supplier No.:	1794		
Total Contract worth:	$500,000,000.00		
Payment address:	Raytheon/JPS 5800 Departure Drive Raleigh, NC 27616	**Order placement address**:	Raytheon/JPS 5800 Departure Drive Raleigh, NC 27616
Customer Service:	Marica Gatlin		
Telephone:	919 790 1011 X1140		
Fax:	919 790 1456		
Ordering procedures:			
Credit card acceptance:	Master Card, Visa		
Minimum orders:			
Delivery time:	30 days After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	ACU1000		
Equipment Line items			
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category4.doc		
Awarded Phase(s)	Phase I & II		

The purpose of this section is to purchase an audio switch unit(s) that has components that are interface modules, each designed to connect a specific communications medium (VHF/UHF radio, telephone or Satcom, HF radio, local operator, ect.), a control module, a power supply module, a chassis to accommodate the modules, and a backplane to route audio and control signals between modules.

Category 4, Specifications for ACU1000

Description
RDI-1/DSP-1/AP-1 RX Audio Input
Input Impedance: Balanced or unbalanced 600 ohms or 10k ohms.
Input level: -30 dBm to + 10 dBm, adjustable.
Frequency Responses: 100 Hz to 3200 kHz ± 2dB
RDI-1/DSP-1 TX Audio Output RDI-1/DSP-1/AP-1 TX Audio Output
Output Impedance: Balanced or unbalanced 600 ohms.
Output Level: -20 to +11 dBm, adjustable.
Frequency Response: 100 to 3200 Hz ± 2dB
RDI-1/DSP-1/AP-1 COR Input
Input Impedance: 47K ohm pullup to + 5V.
Polarity: Active low or high, selectable.
Threshold: + 2.5V nominal.
Protection: up to ± 100 VDC
RDI-1/DSP-1/AP-1 PTT Output
Output Type: Open drain, 47k ohm pullup to +5V.
Polarity: Active low or high, selectable.
Maximum Sink Current: 100 mA
Maximum Open Circuit Voltage: + 60 VDC
PSTN-1 Telephone Interface
Telephone Line Levels: Adjustable –24 dBm to 0 dBm in 3 dB steps.
Hybrid Type: DSP adaptive hybrid; -30 dB broadband balance.
Frequency Response: 100 Hz to 3200 Hz ± 2 dB
VOX Threshold: Selectable –19, -16, -13, and –10 dB relative to telephone line level.
VOX Hangtime: Selectable 0.5, 1.0, 1.5, and 2.0 seconds.
General/ Environmental
Control Processor Module Serial Port: RS-232 DCE connector (female DB0). Baud rates: 1200, 2400, 4800, or 9600, software selectable.
Power Supply Front Panel (PSM-1A): Power on/off Switch; AC on, DC on, +12 VDC, - 12 VDC LEDs.
Handset/Speaker Fount Panel (HSP-2): Speaker, Speaker on/off switch, 1/8 inch Headphone jack, Volume control, PTT LED, Fault LED, Handset jack, 3X4 Keypad.
Control Processor Front Panel (SPM-2): Master, Slave, and Fault LEDs.
Radio Interface Front Panel (RDI-1): Signal, COR, PTT, and Fault LEDs.

Description
Tel Interface Front Panel (PSTN-1): Monitor, Ring, Connect, VOX, and Fault LEDs: L1 and L2 RJ11C Connectors.
Local Phone Front Panel (LP-1): Monitor, Ring, Off Hook, VOX, and Fault LEDs: L1 and L2 RJ11C Connectors.
Audio Processor Front Panel (AP-1): Bypass, PTT, Normal, Peak LEDs, Bypass switch.
Rear Panel: DC fuse holder, AC filter module, connectors to interface up to 12 modules, Serial remote connector, Expansion connector.
AC Input Power: 115 to 230 VAC ± 15%, 47-63 Hz, 100 VA typical, 130 VA maximum.
DC Input Power: + 11 to + 15 VDC @ 5A nominal.
Size: 5.25 in H X 19 in W X 11 in D (13.3X48.3X28 cm)
Temperature: Operation: -20 to +60 degrees C. Storage: -40 to +85 degrees C.
Humidity: Up to 95% @ 55 degrees C.
Shock: MIL-STD-810D, method 516.3, procedure VI
Vibration: MIL-STD-810D, Method 514.3, Category I.
Provide product support for 7 years after last unit being purchase from this IFB.
Provide Required Firmware, Software updates or improvements at no cost for 7 years after last unit being purchase from this IFB.

PRICE SHEETS

Req. Item	Comm. Code	Description	Total Price
1.		JPS ACU-1000 Required Equipment Bundle – Includes the ACU-1000 Card Cage, PSM-1A Power Supply Module, CPM-4 Control Processor Module, and HSP-2 Handset Speaker Module For Product Bid State: Mfg.: Raytheon/JPS Brand/Model: 5961-220000	$7,150.00
2.		PSM-1A Power Supply Module – 60W Power Supply, Spare Module for ACU-1000 Required Equipment Bundle Brand/Model: 5951-813000	$855.00
3.		CPM-4 Control Processor Module – Spare Module for ACU-1000 Required Equipment Bundle, provides a network interface for remote control and programming Brand/Model: 5961-213000	$1,280.00

Req. Item	Comm. Code	Description	Total Price
4.		HSP-2 Handset Speaker Module – Spare Module for ACU-1000 Required Equipment Bundle Brand/Model: 5962-314000	$1,805.00
5.		ACU-1000 Chassis – Spare Chassis for ACU-1000 Required Equipment Bundle Brand/Model: 5961-200000	$3,210.00
6.		DSP-2 Radio/4-Wire Interface Module – used with the ACU-1000 and ACU-T, provides VoIP/RoIP compatibility Brand/Model: 5961-818000	$1,125.00
7.		PSTN-1 Public Switched Telephone Interface Module – used with the ACU-1000 and ACU-T Brand/Model: 5961-215000	$1,125.00
8.		LP-1 Local Phone Set Module – used with the ACU-1000 and ACU-T Brand/Model: 5961-217000	$1,125.00
9.		RX AP-1 RX Audio Processor Module Assembly – used with the ACU-1000 Brand/Model: 5961-294001	$1,125.00
10.		TX AP-1 TX Audio Processor Module Assembly – used with the ACU-1000 Brand/Model: 5961-294002	$1,125.00
11.		ACU-T Tactical Package – AC/DC Powered, Includes Card Cage, HSP-4 and CPM-4 Modules, and Accessory Kit Brand/Model: 5030-200000	$5,980.00
12.		ACU-T Bundle Kit – Includes the ACU-T Tactical Package and Case Option Kit with Battery Five Interface Modules are already included in price of Bundle Kit. Select five modules in any combination from the following - DSP-2, PSTN-1, LP-1, RX AP-1, or TX AP-1 modules. Anything less is not a Bundle Kit. Brand/Model: 5030-210000	$11,605.00

Req. Item	Comm. Code	Description	Total Price
13.		Primary/Secondary Option Cable – used with the ACU-1000 Brand/Model: 0314-037000	$255.00
14.		NXU-2 Network eXtension Unit – Desktop, 110V AC to +12V DC Powered Brand/Model: 5000-600000	$1,500.00

VOLUME DISCOUNT PROGRAM - PHASE 1 AND PHASE 2 ALL CATEGORIES

The volume discount will be cumulative and over the term of the contract.
(Initial Term of Three [3] Years)

Additional Discount off Net Contract Unit Price	Cumulative Total Sales from:	Cumulative Total Sales to:
2 %	$ 5,000,000	$ 9,999,999
3 %	$ 10,000,000	$ 14,999,999
3 %	$ 15,000,000	$ 19,999,999
4 %	$ 20,000,000	$ 29,999,999
5 %	$ 30,000,000	$ 39,999,999
5 %	$ 40,000,000	$ 49,999,999
5 %	$ 50,000,000	$ 59,999,999
5 %	$ 60,000,000	$ 69,999,999
5 %	$ 70,000,000	$ 79,999,999
5 %	$ 80,000,000	$ 89,999,999
5 %	$ 90,000,000	$ 99,999,999
5 %	$100,000,000	$ 100,000,000+

Kenwood

CONTRACTOR INFORMATION

Contractor:	**Kenwood**		
Page number			
Contact:	Barry Morris	**Alternate Contact:**	Cheryl Daly
Phone:	800-752-0986 x8280		800-752-0986 x4469
Fax:	360-761-8246		360-761-8246
Email:	bmorris@kenwoodusa.com		cdaly@kenwoodusa.com
Internet address:	http://www.kenwood.net		
Web catalog address:			
Federal ID No.:	95-2948901		
Supplier No.:	100830		
Total Contract worth:	$500,000,000.00		
Payment address:	Listed Dealer Locations	**Order placement address**:	Listed Dealer Locations
Customer Service:	Donetha Willis		
Telephone:	800-752-0986 x8343		
Fax:	310-761-8246		
Ordering procedures:			
Credit card acceptance:	Visa		
Minimum orders:			
Delivery time:	days After Receipt of Order (ARO)		
Payment terms:	2% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 1, Analog & Digital Portables, Digital Trunked Mobiles.		
Equipment Line items			
Link to bid Specifications			
Currently Installed Systems, upgrade equipment, radio equipment and accessories	27% off Manufacturer List Price		
Support Services	$65.00 per hour		
Installation Services	$65.00 per hour		
Repair Services	$90.00 per hour		
Awarded Phase(s)	Phase I & II		

HAWAII

CQ Communications, Inc.,
1111 Dillingham Boulevard, Suite E7
Honolulu, HI 96817
Ph. (808) 841-9696
Fx. (808) 841-9494

STARRCOMM Communications
650 Kohou Street Suite A
Honolulu, HI 96817
Ph. (808) 845-7822
Fx. (808) 845-1722

Kenwood

IDAHO

All Wireless Communications
1112 Oakley Ave
Burley, ID 83318
Mike Butler
Ph. (208) 878-3537
Fx. (208) 878-4700

American Communications
578 E 49 South
Idaho Falls, ID 83404
Vance Hawley
Ph. (208) 522-9296
Fx. (208) 524-7099

Clark Radio Electronics
550 W. Pacific St.
Blackfoot, ID 83221
Aaaron Clark
Ph. (208) 785-1430
Fx. (208) 785-0001

J&R Electronics
7560 North Government Way Ste. 3
Dalton Gardens, Id 83815
Jim Lemm
Ph. (208) 762-8181
Fx. (208) 762-4047

Northwest Communications
1301 Grelle Ave
Lewiston, ID 83501
Collin Matoon
Ph. (208) 746-0433
Fx. (208) 743-5147

Teton Communications
545 S. Utah
Idaho Falls, ID 83402
Tony Hafala
Ph. (208) 522-0750
Fx. (208) 525-3400

Mountain West Communications
8004 Woodlark
Boise, ID 83709
Ed Flagen
Ph. (208) 362-8700
Fx. (208) 362-8900

Kenwood

OREGON

Cagle Communications
1941 NW Mullholland Drive
Rosenburg, OR 97470
Shannon Pickett
Ph. (541) 672-1233
Fx. (541) 672-0020

Cascade Communications
333 Spring Street
Klamath Falls OR 97601
Roger Brown
(541) 883-3322
(541) 884-1494

Central Mountain
62910 Boyd Acres Rd #5
Bend OR 97708
Mark Ernst
(541) 385-9101
(541) 388-8933

Communications Northwest
1430 NW Glisan
Portland OR 97209
Ron Postman
(503) 243-3355
(503) 227-5449

My-Com
985 Conger # 2
Eugene OR 97402
Craig Meyers
(541) 686-1873
(541) 687-9567

Radio Communication Service
Dba Complete Wireless Solutions
1245 Washington Street SW
Albany OR 97321
Mark Schumacher
(541) 928-1631
(541) 928-4221

Silke Communications
680 Tyler
Eugene OR 97402
Mike Smith
(541) 687-1611
(541) 687-1613

Prevailing Communications
14205 Ekroth Rd.
Bay City, OR 97107
Tim Roach
Ph. (503) 322-2468
Fx. (503) 322-3746

Slater Communications
1724 Southeast 23rd Street
Salem OR 97309
Stu Slater
(503) 399-7010
(503) 371-6545

Sis-Q Communications
1825 NE 6th Street
Grants Pass OR 97526
Steve Porter
(541) 479-0417
(541) 479-0391

Schumacher Sales & Service
7987 Boedigheimer Rd. SE
Sublimity, OR 97385
Richard Schumacher
Ph. (503) 769-2451
Fx. (503) 769-6752

Kenwood

MONTANA

Acorn Technologies
2110 Overland Ave Ste 118
Billings MT 59108
Mark Morgan
(406) 652-1515
(406) 652-1550

Advanced Communications
1540 S. Central Ave
Sidney MT 59270
Lary Denowh
(406) 482-1659
(406) 482-1662

Bridger Communications
516-A Bryant Street
Bozeman MT 59715
Jeff Tong
(406) 587-5080
(406) 587-8084

Crum Electronics
665 Faw Road
Helena MT 59602
Glenn Crum
(406) 422-9110

Dunne Communications
204 E. Commercial Street
Anaconda MT 59711
Tom Dunne
(406) 563-7115
(406) 563-6065

East-Mont Communications
1819 Main Street
Miles City MT 59301
Blaine Carlson
(406) 232-6732
(406) 232-6732

Maki Communications
8259 FM Road
Libby MT 59923
Terry Maki
(406) 293-7140
(406) 293-6784

Mobilefone
15-18 Street E
Kalispell, MT 59901
Scott Richardson
Ph. (406) 752-5373
Fx. (406) 752-5390

WASHINGTON

A-1 TV Hi-Fi Service
100 W. Pioneer Street
Harrah, WA 98933
John Morrell
Ph. (509) 848-2343
Fx. (509) 848-2343

Action Communications
12414 Hwy. 99 S A-14
Everett, WA 98204
Perry Wheeler
Ph. (425) 486-9121
Fx. (425) 712-8076

Addy Telecommunications
2016 Marble Valley Basin Rd.
Addy, WA 99101
John O'Keefe
Ph. (509) 935-6200
Fx. (509) 935-7930

Americell Communications
115 NW Main
Wilbur, WA 99158
Jason Horstman
Ph. (509) 647-2421
Fx. (509) 647-2426

Business Radio
205 N. Volland
Kennewick, WA 99336
Bill Holesworth
Ph. (509) 783-9592
Fx. (509) 735-3860

County Communications
823 "E" Street
Washougal, WA 98671
Jim O'Donohue
Ph. (360) 835-3772
Fx. (360) 835-0331

Friday Harbor
1574 Gulf Road
Point Roberts, WA 98281
Peter Van Baggen
Ph. (360) 945-2053
Fx. (360) 945-2058

Industrial Communications
E 16610 Sprague
Veradale, WA 99037
Dick Ackerman
Ph. (509) 928-0322
Fx. (509) 928-5583

Industrial Communications LLC
625 S. Lander
Seattle, WA 98134
Kevin Berry
Ph. (206) 264-0970
Fx. (206) 264-0971

Pacific Electronics Spokane, Inc.
N. 111 Vista Rd.
Spokane, WA 99213
Kathy Cross
Ph. (509) 922-4632
Fx. (509) 891-5905

WASHINGTON Cont.

Puget Sound
11206 51st Ave. NE
Marysville, WA 98271
Phil Perry
Ph. (360) 659-2408
Fx. (360) 651-2495

Quality Mobile Communications
12200 NE 60th Way #A-108
Vancouver, WA 98682
Nick Ruark
Ph. (360) 254-9505
Fx. (360) 254-9514

Starcomm Communications
130 Hillcrest Ave.
Electric City, WA 99123
Lee Atarr
Ph. (509) 633-0702
Fx. (509) 633-0702

Spectrum Communications
526 S. Locust Ave.
Moses Lake, WA 98837
Doug Vines
Ph. (509) 765-7773
Fx. (509) 765-1943

Switzer Communications
9514 E. Montgomery Ave. Ste. 33
Spokane, WA 99206
Wes Hamilton
Ph. (509) 927-5079
Fx. (509) 927-5608

Wentz Electronics
38523 SE King Street
Snoqualmie, WA 98065
Ed Wentz
Ph. (425) 888-0939
Fx. (425) 888-3373

Western Communications
4239 201 Ave. NE
Bellevue, WA 98006
Jim Fridlund
Ph. (425) 868-2957
Fx. (206) 878-1006

Whisler Communications
2875 RW Johnson Blvd. SW
Olympia, WA 98512
Les Whisler
Ph. (360) 352-8777
Fx. (360) 357-4462

Wiztronics Inc.
1800 Ekllis Street
Bellingham, WA 98225
Bob Baker
Ph. (360) 733-5560
Fx. (360) 734-9073

Kenwood

PHASE I PRICING

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Base Station	1-4 5-10 11+	EA EA EA	27% 27% 27%
2.		Repeater	1-4 5-10 11+	EA EA EA	27% 27% 27%
3.		Portable Radio	1-49 50+	EA EA	27% 27%
4.		Mobile Radio	1-20 21-100 101+	EA EA EA	27% 27% 27%
5.		Desktop	1-20 21-100 101+	EA EA EA	27% 27% 27%
6.		Console Unit	1-9 10+	EA EA	
7.		Support Services	1	HR	$65.00
8.		Installation Services	1	HR	$65.00
9.		Repair Services	1	HR	$90.00
10.		Accessories		EA	27%
11.		List other Equipment		EA	

Phase I Equipment

TK-190	TK-931
TK-260	TK-980
TK-270	TK-981
TK-272	TK-2100
TK-280	TK-2140
TK-290	TK-2160
TK-360	TK-3100
TK-370G	TK-3130
TK-372G	TK-3131
TK-373	TK-3140
TK-380	TK-3160
TK-390	TK-6100
TK-480	TK-7150
TK-481	TK-8150
TK-690 (H)	TKB-720
TK-760G (H)	TKR-720
TK-762G (H)	TKR-750
TK-790 (H)	TKR-820
TK-780	TKR-850
TK-860G (H)	KDS-100
TK-863G	GPS
TK-880	FLEETSYNC
TK-890(H)	PASSPORT
TK-930	SYSTEMS

Kenwood – Phase II

Kenwood Price Sheets

ITEM	Mfg Name	Brand/Model#	Total Price
Portable Analog			
High VHF 136-174 Quality Category D	Kenwood	TK-280K / K2	$498.50
UHF 450-470 Quality Category C	Kenwood	TK-380K	$498.50

Kenwood – Phase II

Portable Analog

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	2	250
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	2.5
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25 / 30
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/5
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-40	-45
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-75/-65
Spurious and Image Rejection, dB	-70	-70
Intermodulation, dB	-70	-70
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	5
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$498.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Kenwood USA
Prices are based on price list quoted above dated:		7/1/2003
Discount percentage represented by this price is		27%
Delivery - expressed in days after Receipt of Order		Less than 60 Days
Warranty Period - in excess of that required by the specifications (in days)		365 Days
% Tax required		0%
Components added to the above model to meet required specifications:		

Kenwood – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
KSC-19	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$25.55
INCLUDED	Position Rotary Channel/Mode Select Switch Option	
INCLUDED	Low Battery Alert Tone Option	
TK-280K3 / K4	Dual Tone Multi Frequency encoder and Key Pad Option	$24.09
KLH-75B / 76B	Leather Carrying Case Option	$30.66
KMC-25	External Speaker/Microphone Option	$67.16
OPTIONAL OPTIONS		
KVC-5	Vehicular Charger/Console Option	$248.20
INCLUDED	Flashing EEPROM	
INCLUDED	Provision for Field Software Upgrade	
NO	Secure Encryption Option	
KVC-8A	RF Power Amplifiers Option	$646.05
INCLUDED	Paging Decoder Option	
INCLUDED	Emergency Button/Switch Option	
INCLUDED	Programmable Button/Switch Option	
INCLUDED	Push-to-talk ID Transmission Option	
INCLUDED	Alphanumeric Display Option	

Kenwood – Phase II

Portable Analog

UHF 450-470 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	14	250
Operational Bandwidth/Maximum Frequency Separation, MHz	20	40
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	± 2.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/4 selectable (Low/High)	1/4 selectable (Low/High)
Radiated Spurious & Harmonic Emission, dB	-60	-70
FM Noise, dB	-40	-40
Audio Distortion, % maximum	5	3
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-119
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-70/-62
Spurious and Image Rejection, dB	-70	-70
Intermodulation, dB	-70	-70
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	5
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$498.50**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Kenwood USA
Prices are based on price list quoted above dated:		7/1/2003
Discount percentage represented by this price is		27%
Delivery - expressed in days after Receipt of Order		Less than 60 Days
Warranty Period - in excess of that required by the specifications (in days)		365 Days
% Tax required		0%
Components added to the above model to meet required specifications:		

Kenwood – Phase II

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
KSC-19	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$25.55
INCLUDED	Position Rotary Channel/Mode Select Switch Option	
INCLUDED	Low Battery Alert Tone Option	
INCLUDED	Alphanumeric Display Option	
TK-380K4	Dual Tone Multi Frequency encoder and Key Pad Option	$36.50
KLH-75B / 76B	Leather Carrying Case Option	$30.66
KMC-25	External Speaker/Microphone Option	$67.16
OPTIONAL OPTIONS		
KVC-5	Vehicular Charger/Console Option	$248.20
INCLUDED	Flashing EEPROM	
INCLUDED	Provision for Field Software Upgrade	
NO	Secure Encryption Option	
KVC-8A	RF Power Amplifiers Option	$646.05
INCLUDED	Paging Decoder Option	
INCLUDED	Emergency Button/Switch Option	
INCLUDED	Programmable Button/Switch Option	
INCLUDED	Push-to-talk ID Transmission Option	

CONTRACTOR INFORMATION

Contractor:	**MA/COM**		
Page number	155		
Contact:	Ramona Brunswick	**Alternate Contact:**	Kit Eldredge
Phone:	480-839-2500		425-269-1853
Fax:	623 321-1442		480-839-2524
Email:	brunswir@tycoelectronics.com		eldredgec@tycoelectronics.com
Corporate Contact:	Roger Boucher	**Alternate Contact:**	Cristal Huyghe
Phone:	434-455-9425		434-455-9451
Fax:			
Email:	boucherro@tycoelectronics.com		huyghec@tycoelectronics.com
Internet address:	http://www.macom.com/		
Web catalog address:			
Federal ID No.:	65-0916944		
Supplier No.:	111922		
Total Contract worth:	$500,000,000.00		
Payment address:	**Dallas Lockbox** M/A-COM, Inc. PO Box 121013 Dallas, TX 75312-1013	**-OR-** **Atlanta Lockbox** M/A-COM, Inc. DEPT AT 40432 Atlanta, GA 31192-0432**OR**	**Order placement address**: 950 W. Elliot Rd., #109 Tempe, AZ 85284
Customer Service:	Ramona Brunswick		
Telephone:	480-839-2500		
Fax:	480-839-2524		
Ordering procedures:	Call Sales Contact above with Purchase Order		
Credit card acceptance:	MasterCard, Visa		
Delivery time:	Approximately 4 to 6 weeks after receipt of required information and contingent upon on backlog at the time of order		
Payment terms:	1% 10 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 1; Category 4, Gateway Devices.		
Equipment Line items			
Accessory Equipment	25% discount off Manufacturer Statndard Retail Price (manufactured products and accessories in category "N" or "C" within the M/A COM Wireless Systems, Product and Services Catelog).		
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category4.doc http://www.ga.wa.gov/pca/bids/02702-Phase2-Category1.zip		
Link to Price Sheets	**Price sheet** **Category 4, IP Solution,**		

	M/A COM
Awarded Phase(s)	Phase I & II

M/ACom Phase II

ITEM
Portable Analog
High VHF 136-174 Quality Category C
Mobile Analog
UHF 450-470 Quality Category C
UHF 806-870 Quality Category A
Remote Base Analog
High VHF 136-174 Quality Category D
UHF 450-470 Quality Category D
Mobile Digital
High VHF 136-174 Quality Category B
UHF 450-470 Quality Category B

Portable Analog

High VHF 136-174 Quality Category C

	STANDARD SPECIFICATION	**BIDDER'S SPECIFICATION**
GENERAL		
Number of Channels/Modes/Personalities	14	100
Operational Bandwidth/Maximum Frequency Separation, MHz	38	70
Frequency Stability (-30 °C to + 60 °C), PPM	± 2.5	±2.5
Channel Spacing, kHz	12.5 / 25 / 30	12.5 / 25
TRANSMITTER		
RF Power Output, Watts	1/5 selectable (Low/High)	1/2.5/4
Radiated Spurious & Harmonic Emission, dB	-60	-66
FM Noise, dB	-40	-38/-34
Audio Distortion, % maximum	5	<5
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-117/-117
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-60	-70/-65
Spurious and Image Rejection, dB	-70	-65
Intermodulation, dB	-70	-70
Speaker Audio Output, milliwatts	350	500
Audio Distortion, % maximum	5	5
Static BER sensitivity @ 5% referenced @ 12.5 KHZ	-	-
Price FOB Destination freight prepaid & included in price		**$560**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Products & Svcs Catalog
Prices are based on price list quoted above dated:		7/22/2003
Discount percentage represented by this price is		25%
Delivery - expressed in days after Receipt of Order		14*
Warranty Period - in excess of that required by the specifications (in days)		0
% Tax required		_____ %
Components added to the above model to meet required specifications:		
GP605STX, GPNC5V, GPPA9G (qty 2), GPCH9F		

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
n/a	Flashing EEPROM	n/a
n/a	Provision for Field Software Upgrade	n/a
n/a	Secure Encryption Option	n/a
GPCH9F	Battery Charger/Vehicular Battery or Nominal 120 VAC, 60 HZ *	$60
included	Dual Tone Multi Frequency encoder and Key Pad Option - included	$0
	Leather Carrying Case Option	
GPHC9F	BELT LOOP, LEATHER	$21
GPHC9G	D-SWIVEL	$14
n/a	RF Power Amplifiers Option	n/a
	External Speaker/Microphone Option	
GPAE9A	MICROPHONE, LAPEL/ANTENNA PROVISION, High/Low Volume, Earphone Jack, MIL-STD. ~~Order antenna separately.~~	$173
GPAE7Z	MICROPHONE, LAPEL, High/Low Volume, Earphone Jack, MIL-STD.	$149
GPAE3Z	EARPHONE, LAPEL MICROPHONE	$45
GPAE5Z	HEADSET, BEHIND THE HEAD, 2 PIN (must be used with GPCN7B)	$488
GPAE5Y	HEADSET, OVER THE HEAD, 2 PIN (must be used with GPCN7B)	$392
GPAE5X	HEADSET, LIGHTWEIGHT, WITH IN-LINE PTTT, 2 PIN (must be used with GPCN7B)	$137
GPAE5W	MICROPHONE, LAPEL, 3 WIRE, 2 PIN (must be used with GPCN7B)	$134
GPAE5U	MICROPHONE, LAPEL, HIGH/LOW VOLUME, 2 PIN (must be used with GPCN7B)	$116
GPAE5V	MICROPHONE, 2 WIRE PALM, 2 PIN (must be used with GPCN7B)	$86
GPCN7B	ADAPTER, ACCESSORY, 2 PIN	$28
n/a	Paging Decoder Option	n/a
OPTIONAL OPTIONS		
	Vehicular Charger/Console Option	
GPZN3X	CHARGER, VEHICULAR, ENHANCED Includes external speaker & mobile style microphone (not compatible withh PANTHER 400P, 600P, or 625P or with NiMH battery option GPPA9H) Requires Hardware Mounting Kit (GPMA5L)	$344
GPCH9K	CHARGER, VEHICULAR (not compatible with PANTHER 400P, 600P, or 625P or with NiMH battery option GPPA9H) Required Hardware Mounting Kit (GPMA5L)	$296
GPMA5L	KIT, MOUNTING HARDWARE, VEHICULAR CHARGER (GPCH9K and GPZN3X)	$48
GPMA5M	CABLE, REMOTE PTT For Vehicular Charger (GPZN3X)	$30

Mobile Analog

UHF 450-470 Quality Category C

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	32	128
Operational Bandwidth/Maximum Frequency Separation, MHz	20	30
Frequency Stability (-30 °C to + 60 °C), PPM	5	1.5
Channel Spacing, kHz	12.5 / 25	12.5/25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	35	40
Radiated Spurious & Harmonic Emission, dB	-60	-85
FM Noise, dB	-45	-45
Audio Distortion, % maximum	5	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-70/-65	-80/-70
Spurious and Image Rejection, dB	-70	-90
Intermodulation, dB	-70	-80/-70
Speaker Audio Output, watts	3	15
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$1,458.75**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Products & Svcs Catalog
Prices are based on price list quoted above dated:		7/22/2003
Discount percentage represented by this price is		25%
Delivery - expressed in days after Receipt of Order		42*
Warranty Period - in excess of that required by specifications (in days)		0
% Tax required		
Components added to the above model to meet required specifications: D2UMCXE, D2CP5M, D2MC7T, D2ZN1A		

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Separate Data Connector Option	
D2ZN1B	KIT, ACCESSORY, FRONT MOUNT WITH EXTENDED OPTION CABLE	$113
	Desktop/Mobile Conversion Option	
DSDX06	DESKTOP BASE, CONVENTIONAL ORION WITH TONE REMOTE AND CLOCK/VU METER (4-Channel Tx/Rx only)	$1,305
DSDX05	DESKTOP BASE, CONVENTIONAL ORION WITH DC REMOTE AND CLOCK/VU METER (1-Channel Tx/Rx only)	$1,275
DSDX03	DESKTOP BASE, CONVENTIONAL ORION WITH TONE REMOTE (4-Channel Tx/Rx only)	$1,166
DSDX02	DESKTOP BASE, CONVENTIONAL ORION WITH DC REMOTE (1-Channel Tx/Rx only)	$1,136
DSDX08	DESKTOP BASE, CONVENTIONAL ORION WITH CLOCK/VU METER, LOCAL CONTROL	$1,110
DSDX01	DESKTOP BASE, CONVENTIONAL ORION, LOCAL CONTROL	$971
D2MC5A	MICROPHONE, DESK	$90
INCLUDED	ALPHANUMERIC DISPLAY OPTION - INCLUDED WITH RADIO	$0

OPTIONAL OPTIONS		
INCLUDED	SINGLE UNIT DASH MOUNT OPTION - INCLUDED WITH RADIO	$0
N/A	SECOND PROGRAMMABLE RECEIVER WITH SEPARATE SPEAKER	$0
INCLUDED	FLASHING EEPROM - INCLUDED WITH RADIO	$0
INCLUDED	PROVISION FOR FIELD SOFTWARE UPGRADE - INCLUDED WITH RADIO	$0
	SECURE ENCRYPTION OPTION	
D2VS	ENCRYPTION, DIGITAL VOICE, DES, AEGIS - EXTENDED OPTION CABLE REQUIRED	$713
D2ZN1B	KIT, ACCESSORY, FRONT MOUNT WITH EXTENDED OPTION CABLE	$113
INCLUDED	EMERGENCY BUTTON/SWITCH OPTION - INCLUDED	$0
INCLUDED	PROGRAMMABLE BUTTON/SWITCH OPTION - INCLUDED	$0
N/A	PUSH-TO-TALK ID TRANSMISSION OPTION - INCLUDED	N/A
	DUAL TRANSCEIVER OPTION; SECONDARY TRANSCEIVER TIED TO SINGLE CONTROL HEAD REQUIRES THE FOLLOWING:	
D2HMCX	MOBILE, CONVENTIONAL ORION	$765
D2ZN1F	KIT, ACCESSORY, REMOTE MOUNT WITH STANDARD OPTION CABLE	$146
D2VE	KIT, ACCESSORY, DUAL RADIO, 50W TX AND BELOW	$113
	DUAL CONTROL HEAD OPTION REQUIRES THE FOLLOWING:	
D2ZN1V	DUAL CONTROL, SYSTEM CONTROL UNIT	$581
D2MC7T	MICROPHONE, MOBILE	$56
D2ZN5S	CONTROL UNIT, DUAL CONTROL, HAND HELD CONTROLLER W/SIREN	$581
D2ZN5R	CONTROL UNIT, DUAL CONTROL, HAND HELD CONTROLLER W/O SIREN	$581
D2MC5N	MICROPHONE, DTMF	$131
D2MC5L	MICROPHONE, NOISE CANCELING	$94
D2ZN1B	KIT, ACCESSORY, FRONT MOUNT WITH EXTENDED OPTION CABLE	$113
D2ZN1F	KIT, ACCESSORY, REMOTE MOUNT WITH STANDARD OPTION CABLE	$146
D2ZN1W	KIT, ACCESSORY, DUAL RADIO, 50W TX AND BELOW	$113
D2MK3F	KEYCAP KIT, SYSTEM CONTROL UNIT,	$56
TQ3389	SOFTWARE, CONVENTIONAL ONLY PROGRAMMER	$250
TQ3370	KIT, PROGRAMMING INTERFACE MODULE, 110 VAC	$250
TQ3377	CABLE, PROGRAMMING, FOR ORION	$180

Mobile Analog
UHF 806-870 Quality Category A

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	250
Operational Bandwidth/Maximum Frequency Separation, MHz	64	64
Frequency Stability (-30 °C to + 60 °C), PPM	1.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	35	10-35
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-40	-40
Audio Distortion, % maximum	2	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-117	-117
Selectivity, adj. channel (dB), 25/12.5 kHz	-80	-80
Spurious and Image Rejection, dB	-90	-90
Intermodulation, dB	-80	-80
Speaker Audio Output, watts	10	12
Audio Distortion, % maximum	3	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$1,983.75**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Products & Srvcs. Catalog
Prices are based on price list quoted above dated:		7/22/2003
Discount percentage represented by this price is		25%
Delivery - expressed in days after Receipt of Order		14*
Warranty Period - in excess of that required by specifications (in days)		0
% Tax required		
Components added to the above model to meet required specifications:		
HB8MCX, HBCP7V, HBZN3B, HBMC7T		

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
included	Flashing EEPROM	$0
included	Provision for Field Software Upgrade	$0
included	Secure Encryption Option	$0
	Desktop/Mobile Conversion Option (Jaguar 725M uses Orion parts for desktop conversion)	
DSDX06	DESKTOP BASE, CONVENTIONAL ORION WITH TONE REMOTE AND CLOCK/VU METER (4-Channel Tx/Rx only)	$1,305
DSDX05	DESKTOP BASE, CONVENTIONAL ORION WITH DC REMOTE AND CLOCK/VU METER (1-Channel Tx/Rx only)	$1,275
DSDX03	DESKTOP BASE, CONVENTIONAL ORION WITH TONE REMOTE (4-Channel Tx/Rx only)	$1,166
DSDX02	DESKTOP BASE, CONVENTIONAL ORION WITH DC REMOTE (1-Channel Tx/Rx only)	$1,136
DSDX08	DESKTOP BASE, CONVENTIONAL ORION WITH CLOCK/VU METER, LOCAL CONTROL	$1,110
DSDX01	DESKTOP BASE, CONVENTIONAL ORION, LOCAL CONTROL	$971
D2MC5A	MICROPHONE, DESK	$90

OPTIONAL OPTIONS		
Part Number	**Description**	**Price**
	Second Programmable Receiver with Separate Speaker (see below)	
HBZN3H	CONTROL UNIT, DUAL CONTROL, SYSTEM	$581
HBZN3G	CONTROL UNIT, DUAL CONTROL, SCAN	$431
HBZN3V	CONTROL UNIT, DUAL CONTROL, HAND HELD CONTROLLER WITHOUT SIREN, includes microphone	$581
HBZN3W	CONTROL UNIT, DUAL CONTROL, HAND HELD CONTROLLER WITH SIREN, includes microphone	$581
HBMC5N	MICROPHONE, DTMF	$131
HBMC5L	MICROPHONE, NOISE CANCELING	$94
HBMC5A	MICROPHONE, DESK	$90
MBMC7T	MICROPHONE, MOBILE	$56
HBMK3F	KIT, KEYCAP, SYSTEM CONTROL UNIT 72 keys and extractor tool	$49
MGMK3E	KIT, KEYCAP, SCAN CONTROL UNIT 11 keys and extractor tool	$19
HBZN3J	KIT, ACCESSORY, DUAL RADIO, 50W TX AND BELOW	$113
HBEN	FEATURE, EXTENDED NETWORK Includes 800 Systems/Groups/ProScan™/ProFile™	$413
HBPL1X	FEATURE, ProScan™	$225
HBPL5K	FEATURE, ProFile™	$225
HBCC	FEATURE, CRITICAL COMMUNICATIONS, EMERGENCY/DYNAMIC REGROUP	$150
HBPL3R	FEATURE, 800 EDACS SYSTEMS/GROUPS	$150
HBPL3Y	FEATURE, STATUS/MESSAGE	$75
HBPL1Y	FEATURE, PRIORITY SYSTEM SCAN	$75
HBPL7G	FEATURE, EDACS SECURITY KEY	$75
HBPL5L	FEATURE, P25 OVER-THE-AIR RE-KEYING (OTAR)	$488
HBPL3X	FEATURE, PROJECT 25 DATA (Conventional only)	$150
HBAN1L	ANTENNA, 800 MHZ, 1/4 WAVE, ROOF MOUNT	$19
HBCL1X	CABLE, DATA INTERFACE	$49
HBMA5W	SUPPORT, CONNECTOR Supports the radio control cable at the rear of the radio for VRC (vehicular repeater) applications.	$18
1016	SIREN, ELECTRONIC, WITH LIGHT CONTROL, SS2000 Provides a serial-to-parallel interface to the Orion Control Units for generation of the siren and control of 8 light functions	$788
1020	SPEAKER, 100W, TS100 For use with Light Bars or Concealed Mounting	$184

Remote Base Analog

High VHF 136-174 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels	4	4 frequencies
Operational Bandwidth/Maximum Frequency Separation, MHz	38	14.8 / 23.2
Frequency Stability (-30 °C to + 60 °C), PPM	5	1.5
Channel Spacing, kHz	12.5 / 25	12.5/25
TRANSMITTER		
RF Power Output, Watts	25	110
Radiated Spurious & Harmonic Emission, dB	-57	-66
FM Noise, dB	-40	-55
Audio Distortion, % maximum	5	<3%
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-75	-95/-80
Spurious and Image Rejection, dB	-80	-100
Intermodulation, dB	-75	-90/-75
Speaker Audio Output, milliwatts	500	1000
Line Output, 1 kHz @ 60% RSD, dBm	-20 to 0	-19 to 11
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		$5,505.76
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Products & Svcs. Catalog
Prices are based on price list quoted above dated:		7/22/2003
Discount percentage represented by this price is		25%
Delivery - expressed in days after Receipt of Order		42*
Warranty Period - in excess of that required by the specifications (in days)		0
% Tax required		
Components added to the above model to meet required specifications:		
SXHMCXE, SXSF1W, SXMN3Y, SXMN9C, SXPS5G, SXMN9M, SXSU3A, SXMC3B, MM120SX, MM210SX		

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
included	Flashing EEPROM	$0
included	Provision for Field Software Upgrade	$0
N/A	Duplex Operation Option	N/A

	Secure Encryption Option	
SXVW1J	KIT, DES ENCRYPTION SHELF	$2,535

Remote Base Analog

UHF 450-470 Quality Category D

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels	4	4 frequencies
Operational Bandwidth/Maximum Frequency Separation, MHz	20	20
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1
Channel Spacing, kHz	12.5 / 25	12.5/25
TRANSMITTER		
RF Power Output, Watts	20	100
Radiated Spurious & Harmonic Emission, dB	-57	-66
FM Noise, dB	-40	-55
Audio Distortion, % maximum	5	<3%
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-116	-116
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-70	-90/-80
Spurious and Image Rejection, dB	-75	-100
Intermodulation, dB	-75	-85/-75
Speaker Audio Output, milliwatts	500	1000
Line Output, 1 kHz @ 60% RSD, dBm	-20 to 0	-19 to 11
Audio Distortion, % maximum	5	3
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-	-
Price FOB Destination freight prepaid & included in price		**$6,255.75**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Products & Svcs. Catalog
Prices are based on price list quoted above dated:		7/22/2003
Discount percentage represented by this price is		25%
Delivery - expressed in days after Receipt of Order		42*
Warranty Period - in excess of that required by the specifications (in days)		0
% Tax required		
Components added to the above model to meet required specifications:		
SXHMCXE, SXSF1W, SXMN3Y, SXMN9C, SXPS5G, SXMN9M, SXSU3A, SXMC3B, MM120SX, MM210SX		

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
included	Flashing EEPROM	$0
included	Provision for Field Software Upgrade	$0
N/A	Duplex Operation Option	N/A

	Secure Encryption Option	
SXVW1J	KIT, DES ENCRYPTION SHELF	$2,535

Mobile Digital

High VHF 136-174 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	255
Operational Bandwidth/Maximum Frequency Separation, MHz	38	38
Frequency Stability (-30 °C to + 60 °C), PPM	2.5	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	50	50-110
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-40	-40
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-117	-117
Selectivity, adj. channel (dB), 25/12.5 kHz	-75/-70	-85/-70
Spurious and Image Rejection, dB	-75	-90
Intermodulation, dB	-75	-80
Speaker Audio Output, watts	5.0	12
Audio Distortion, % maximum	3	2%
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-117	-116
Price FOB Destination freight prepaid & included in price		**$2,456.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Products & Svcs. Catalog
Prices are based on price list quoted above dated:		7/22/2003
Discount percentage represented by this price is		25%
Delivery - expressed in days after Receipt of Order		_____
Warranty Period - in excess of that required by the specifications (in days)		0
% Tax required		
Components added to the above model to meet required specifications*:		
HG7100HH1E, HGCV, HGPL7H, HGCP7V, HGMC7T, HGZN3B		
*equipment security key locking device not included		

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Desktop/Mobile Conversion Option	
HGMC5A	DESK MICROPHONE	$90
DSDX01	DESKTOP BASE, LOCAL CONTROL	$971
DSCE3G	CABLE	$32
OPTIONAL OPTIONS		
n/a	Second Programmable Receiver with Separate Speaker	$0
HGMS	FEATURE, ADD DES ENCRYPTION TO P25 MOBILE	$375
HGFP	Option, FIPS-140-2 Operation	$225
HGPL5L	Feature, Over the Air Rekeying	$488
HGAN1R	Antenna,VHF-UHF, 1/4 wave whip	$19
HGCL1X	Cable,Data Interface	$49

Mobile Digital

UHF 450-470 Quality Category B

	STANDARD SPECIFICATION	BIDDER'S SPECIFICATION
GENERAL		
Number of Channels/Modes/Personalities	160	255
Operational Bandwidth/Maximum Frequency Separation, MHz	20	62
Frequency Stability (-30 °C to + 60 °C), PPM	2	1.5
Channel Spacing, kHz	12.5 / 25	12.5 / 25
RF Input/Output Impedance, Ohms	50	50
TRANSMITTER		
RF Power Output, Watts	40	15-50
Radiated Spurious & Harmonic Emission, dB	-70	-70
FM Noise, dB	-40	-40
Audio Distortion, % maximum	3	2
Audio Response (per TIA/EIA 603)	+1, -3	+1, -3
RECEIVER		
Sensitivity, EIA 12 dB Sinad, dBm	-117	-117
Selectivity, adj. channel (dB), 25/12.5 kHz		-80/-70
Spurious and Image Rejection, dB	0.35	-90
Intermodulation, dB	-80	-80
Speaker Audio Output, watts	5	12
Audio Distortion, % maximum	7.5	2
Static BER sensitivity @ 5% referenced @ 12.5 KHZ, dBm	-117	-116
Audio Distortion, % =/<	3	2
Static ber sensitivity @ 5% referenced @ 12.5 KHZ	0.25	-116
Price FOB Destination freight prepaid & included in price		**$2,306.25**
OTHER INFORMATION:		
Prices are based on Manufacturer's price list entitled:		Products & Svcs. Catalog
Prices are based on price list quoted above dated:		7/22/2003
Discount percentage represented by this price is		25%
Delivery - expressed in days after Receipt of Order		42*
Warranty Period - in excess of that required by the specifications (in days)		0
% Tax required		
Components added to the above model to meet required specifications:		
HT7100MU1E, HGCV, HGPL7H, HGCP7V, HGMC7T, HGZN3B		
*security key locking device not included		

REQUIRED OPTIONS		
Part Number	**Description**	**Price**
	Desktop/Mobile Conversion Option	
HGMC5A	DESK MICROPHONE	$90
DSDX01	DESKTOP BASE, CONVENTIONAL, LOCAL CONTROL	$971
DSCE3G	CABLE	$32
OPTIONAL OPTIONS		
N/A	Second Programmable Receiver with Separate Speaker	$0
HGMS	FEATURE, ADD DES ENCRYPTION TO P25 MOBILE	$375
HGFP	Option, FIPS-140-2 Operation	$225
HGPL5L	Feature, Over the Air Rekeying	$488
HGAN1R	Antenna,VHF-UHF, 1/4 wave whip	$19
HGCL1X	Cable,Data Interface	$49

Category 4, IP Base Solution M/A COM

The purpose of this section is to purchase an IT Based solution that has interface adapters for a variety of communications devices and mediums (VHF/UHF radio, telephone or Satcom, HF radio, local operator, etc.). The switch shall consist of a control unit containing all audio and switching circuitry, medium interface connectors, controls and indicators. Accessory adapters for a variety of external communications devices and mediums shall be supported.

See complete specifications at: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category4.doc

PRICE SHEET

Category 4, IP Solution,
M/A COM

1. Required Equipment Quantities

Table 0-1: Summary of Basic Equipment Quantities

	Typical Small System Quantities	Typical Medium System Quantities	Typical Large System Quantities
Interoperability Operation Center	1	1	2
System Management Console	1	1	2
Remote Management Console	1	1	2
PSTN Interface	2	10	50
Audio Interface Card	8	40	150
Audio Interface Chassis	2	10	50
Optional Dispatch Consoles	--	--	--
Remote Dispatch Facility (if required)	--	--	--

2. PRICING

Bidders shall provide pricing information on the following price forms:

2.1. Basic System Pricing (backbone)

Item	Qty	Equipment Description	Price Each	Price Extended
1	Small	Interoperability Operations Center and Audio Interface Interoperability Solution Pricing	$950,003.00	$950,003.00
	Medium		$1,900,013.00	$1,900,013.00
	Large		$7,385,050.00	$7,385,050.00
2a	Small	System Management Equipment and Software	Included above (#1)	Included above (#1)
b	Medium		Included above (#1)	Included above (#1)
c	Large		Included above (#1)	Included above (#1)
3a	Small	Installation and Site Maintenance	$171,940.00	$171,940.00
b	Medium		$368,500.00	$368,500.00
c	Large		$1,093,000.00	$1,093,000.00

Item	Qty	Equipment Description	Price Each	Price Extended
4	Lot	Training Including:		
	Small	Operator/User	$25,440.00	$25,440.00
	Medium		$64,680.00	$64,680.00
4 (cont'd)	Large		$221,000.00	$221,000.00
	Small	Technician (Included with Installation)	Included above (#3)	Included above (#3)
	Medium		Included above (#3)	Included above (#3)
	Large		Included above (#3)	Included above (#3)
	Small	Administrator (Customer Employee)	Customer Furnished	Customer Furnished
	Medium		Customer Furnished	Customer Furnished
	Large		Customer Furnished	Customer Furnished
	Small	Console	Not Required	Not Required
	Medium		Not Required	Not Required
	Large		Not Required	Not Required
5	Small	Documentation	Include above (#1)	Include above (#1)
	Medium		Include above (#1)	Include above (#1)
	Large		Include above (#1)	Include above (#1)
6	Small	Project Management	$49,280.00	$49,280.00
	Medium		$104,000.00	$104,000.00
	Large		$309,000.00	$309,000.00
7	Small	Project Engineering (System Engineering)	$87,080.00	$87,080.00
	Medium		$188,600.00	$188,600.00
	Large		$578,000.00	$578,000.00
8	Small	(Optional) Software Services	Please see Pricing Note "E"	Please see Pricing Note "E"
	Medium		Please see Pricing Note "E"	Please see Pricing Note "E"
	Large		Please see Pricing Note "E"	Please see Pricing Note "E"

Item	Qty	Equipment Description	Price Each	Price Extended
9	Small	(Optional) Maintenance (Basic System) – Site Maintenance include in with Item #3.	Included above (#3)	Included above (#3)
	Medium		Included above (#3)	Included above (#3)
	Large		Included above (#3)	Included above (#3)
10	Small	(Optional) Spare Parts (Basic System)	Please see Pricing Note "F"	Please see Pricing Note "F"
	Medium		Please see Pricing Note "F"	Please see Pricing Note "F"
	Large		Please see Pricing Note "F"	Please see Pricing Note "F"
11	Small	(Optional) Test Equipment	N/A- M/A-COM Responsibility	N/A- M/A-COM Responsibility
	Medium		N/A - M/A-COM Responsibility	N/A - M/A-COM Responsibility
	Large		N/A - M/A-COM Responsibility	N/A - M/A-COM Responsibility

2.2. Optional System Equipment Pricing

Item	Qty	Equipment Description	Price Each	Price Extended
1	1	Optional Dispatch Equipment (Conventional Desktop Station, if required per final system configuration.)	$4,875.00	$4,875.00

Grand Total for Small System	**$1,283,743.00**
Grand Total for Medium System	**$2,625,933.00**
Grand Total for Large System	**$9,586,050.00**

NetworkFirst (Small, Medium and Large) System Pricing Notes:

A. The price of the first Network Switching Center (NSC), as well as all necessary Interoperability Gateway chassis and routers, is included with the prices quoted in Item #1 – Interoperability Operations Center and Audio Interface Interoperability Solution Pricing

B. NetworkFirst system pricing does not include costs for "last mile" connectivity.

C. NetworkFirst system pricing does not include costs for connecting to the customer's LAN/WAN Backbone.

D. NetworkFirst system pricing does not include prices for M/A-COM trunked or conventional radios and/or other manufacturers' radios that the customer requires for interoperability network communications.

E. (Optional) Software Services: A NetworkFirst software services agreement price quotation will be submitted after completion of the final design review.

F. (Optional) Spare Parts (Basic System): The NetworkFirst system pricing submitted in Item #1 (Interoperability Operations Center and Audio Interface Interoperability Solution Pricing) and Item #2 (System Management Equipment and Software) accommodates various system bills of material. A specific bill of material will be selected once the final system configuration has been determined, typically during the final design review. A NetworkFirst spare parts price list, tailored to the customer's specific system configuration requirement, will be supplied after the final design review.

G. NetworkFirst System implementation lead-time: 8 - 10 weeks, when preceded by a current customer forecast. Lead-times are a function of lot size and type of equipment requested.

H. M/A-COM agrees to provide the customer with retrofits / upgrades needed to correct deficiencies identified during M/A-COM's standard warranty period.

I. New models may be added to the contract under the same pricing discounts above based on their MSRP value. M/A-COM may discontinue a product without adding a replacement model.

J. Post Contract Award, M/A-COM ensures that changes to equipment or system upgrades will continue to meet published specs. Changes are typically component or board level changes that do not impact radio performance, thus M/A-COM will not send product samples for existing products. M/A-COM agrees to send samples of new products for evaluation.

K. M/A-COM's standard service life is one year. M/A-COM extends to WSCA customers the option to purchase post warranty maintenance services.

Contractor:	**Motorola**		
Contact:	Fred Radovich	**Alternate Contact:**	Bruce Marley
Phone:	425-487-5862		858-404-4326
Fax:	425-483-3400		858-404-2594
Email:	Fred.Radovich@motorola.com		Bruce.Marley@motorola.com
Internet address:	www.motorola.com		
Web catalog address:			
Federal ID No.:	36-1115800		
Supplier No.:	1074		
Total Contract worth:	$500,000,000.00		
Payment address:	**Customers in Alaska, Idaho, Oregon, California, Hawaii, Oklahoma, and Washington will be requested to remit their payments to the following address:** **Motorola, Inc. 13108 Collections Center Drive, Chicago, IL 60693**		
Payment address: For Montana	Motorola, Inc. PO Box 404059 Atlanta, GA 30384-4059	**Order placement address**:	Motorola, Inc. 24000 35th Avenue SE Bothell, WA 98021
Customer Service:	Fred Radovich		
Telephone:	425-487-5862		
Fax:	425-483-3400		
Ordering procedures:			
Credit card acceptance:	Visa, MasterCard		
Minimum orders:			
Delivery time:	Please refer to individual category for delivery schedule, which varies by product and category bid.		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category			
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			

Awarded Phase(s) Phase I

MOTOROLA WESTERN DIVISION SALES OFFICES

WA16 - Bothell, WA
24000 35th Ave. Southeast
Bothell, WA 98007
425 487-5782
fax 425 483-3400

CA25 - San Diego, CA (Div HQ)
6420 Sequence Drive
San Diego, CA 92121
800 445-3620 toll-free
858 578-2222 direct

TX09 - Houston, TX
1140 Cypress Station Suite 300
Houston, TX 77090
281 537-3600
fax 281 537-3617

CA18 - Van Nuys, CA
7720 Sepulveda Blvd., Suite B
Van Nuys, CA 92450
818 786-1092
fax 818 786-1294

CA57 - Irvine, CA (warehouse)
17835 Skypark Circle, Suite C
Irvine, CA 92614
949 442-1644
fax 949 474-0196

Las Vegas, Nevada
PO Box 98098
Las Vegas, Nevada 89193
775-853-7862
fax 775-853-0924

Layton, Utah
PMB#194
2146 North Main Street, Suite 530
Layton, Utah 84051
801-571-7649
fax 801-571-7258

Boise, Idaho
11548 W. Rader Dr.
Boise, ID 83713
208-377-2080
fax 208-377-2085

OR02 - Lake Oswego, OR
4900 S.W. Meadows Rd, #475
Lake Oswego, OR 97035
No main phone number.
fax 503 697-4670

CO01 - Engelwood, CO
9800 Mount Pyramid Ct. Suite 200
Englewood, CO 80112
303 689-2800
fax 303 689-2900

TX32 - Austin, TX
7700 W. Parmer Lane
Bldg., B-PL34
Austin, TX 78729
512 996-6974

CA78 - Motorola FSO California
10061 Riverside Dr., PMB 1046
Toluca Lake, CA 91602
818 843-3068
fax (same as above)

NM01 - Albuquerque, NM
2501 San Pedro N.E., Suite 202
Albuquerque, NM 87110
505 875-1999
fax 505 875-1888

CA67 - Los Angeles, CA
725 S Figueroa Ave, Suite 1870
Los Angeles, CA 90017
213 362-6726
fax 213 627-3379

Billings, Montana
4603 Alkali Creek Road
Billings, MT 59106
406-245-3309
fax 406-245-1567

AZ43 - Phoenix, AZ
2900 South Diablo Wy.
Tempe, AZ 85282
602 271-7500
fax 602 438-1608

TX48 Dallas, TX
2410 Luna Road, Ste 132
Carrollton, TX 75006
972 277-4600 or 800 635-0200
fax 972 277-4611

CA08 - Los Angeles, CA
312 E. 1st. Street, Suite 520
Los Angeles, CA 90012
No main phone number.
fax 213 628-2470

CA36 - Irvine, CA
1900 Main Street, Suite 300
Irvine, CA 92614
949 399-4000
fax 949 437-4240

CA69 - Mountain View, CA
805 E. Middlefield Rd
Mountain View, CA 94043
650 318-3200
fax 650-318-3310

Shawnee, OK
2309 Troon Circle
Shawnee, OK 74801
405-395-9448
fax 405-878-6841

Anchorage, Alaska
PO Box 230882
Anchorage, AK 99532
907-261-5170
fax 907-346-4303

Req. Item	Comm. Code	Description	Unit	Percentage off Mfg List Price
1.		Digital Mobile/Desktop Radios		
		Astro Spectra Plus	EA	18.5%
		Astro Spectra	EA	25.5%
		XTL5000	EA	10%
2.		Digital Portables		
		Astro XTS5000	EA	18.5%
		Astro XTS3000	EA	27%
		Astro XTS2500	EA	23.5%
		Astro XTS1500	EA	5%
3.		Analog Mobile/Desktop Radios		
		MCS2000	EA	26.5%
		CDM SERIES (750, 150, 1550)	EA	25%
		LCS2000	EA	20%
4.		Analog Portable Radios		
		MTS2000	EA	28%
		HT1000	EA	36%
		HT1250	EA	35%
		HT750	EA	35%
		EX500/EX600	EA	20%
5.		Infrastructure/Fixed Equipment		
		Quantar Base/Repeater Stations	EA	20%
		MTR2000 Base/Repeater Stations	EA	27%
		DIU-3000 Digital Interface Units	EA	15%
		Astro-TAC 3000 Voting System	EA	15%
		Spectra-TAC Voting System	EA	15%
		Quantar Voting Receivers	EA	15%
		Gold Elite Consoles	EA	15%
		Trunked Controllers	EA	18.5%
			EA	18.5%
6.		Support Services	EA	$168.75
7.		Installation Services	EA	$168.75
8.		Repair Services	EA	$168.75

Motorola – Phase I

MOTOROLA REPRESENTATIVE WSCA CONTRACT RADIO MODELS

The following Motorola radio models are representative examples of the VHF radios available on the WSCA contract. Contract users are requested to contact Motorola for other versions & frequency bands of each series of radio model. The WSCA RFP required Manufacturer price pages for the complete line of Motorola radios available on the WSCA contract are on file with WSCA Purchasing.

MODEL NO.	DESCRIPTION	CONTRACT PRICE
P25 DIGITAL TRUNKED PORTABLE RADIOS:		
H18KEF9PW6_N w/options: Q806,H38,Q361,H14,H301,NTN8923,NTN1667	XTS5000, VHF, 6 watt, 512 channel, with charger & spare battery	$3,873.70
H46KDC9PW5_N w/options: Q574,H301,NTN9815,NTN1667	XTS2500, VHF, 5 watt, 48 channel, with charger & spare battery	$2,153.48
H66KDC9PW5_N w/options: Q574,H301,NTN9815,NTN1667	XTS1500, VHF, 5 watt, 16 channel, with charger & spare battery	1.776.50
P25 DIGITAL TRUNKED MOBILE RADIOS:		
T04KLF9SW5_N w/options: G806,G51,G361,G114,W81,W70	ASTRO SPECTRA PLUS, VHF, 110 watt, 512 channel, model W5, remote mount	$4,004.91
D04KKF9SW5_N w/options: G806,G51,G361,G114,W81,W70,W496	ASTRO SPECTRA PLUS, VHF, 50 watt, 512 channel, model W5, remote mount	$3,858.21
D04KKF9SW5_N w/options: G806,G51,G361,W70	ASTRO SPECTRA PLUS, VHF, 50 watt, 512 channel, model W5, front mount	$3,528.14
P25 DIGITAL CONVENTIONAL PORTABLE RADIOS:		
H09KDF9PW7_N w/options: G806,H35,H14,H301,NTN8294,NTN1667	XTS3000, VHF, 5 watt, 255 channel, with charger & spare battery	$2,725.09
H46KDC9PW5_N w/options: H35,H301,NTN9815,NTN1667	XTS2500, VHF, 5 watt, 48 channel, with charger & spare battery	$1,836.00

Motorola – Phase I

MODEL NO.	DESCRIPTION	CONTRACT PRICE
H66KDC9PW5_N w/options: Q811,H301,NTN9815,NTN1667	XTS1500, VHF, 5 watt, 16 channel, with charger & spare battery	$1,409.80
P25 DIGITAL CONVENTIONAL MOBILE RADIOS:		
T99DX/093W w/options: G806,G48,G114,W81,W70	ASTRO SPECTRA, VHF, 110 watt, 255 channel, model W7, remote mount	$3,254.16
T99DX/092W w/options: G806,G48,G114,W81,W70,W496	ASTRO SPECTRA, VHF, 50 watt, 255 channel, model W7, remote mount	$3,102.18
T99DX/086W w/options: G806,G48,W70	ASTRO SPECTRA, VHF, 50 watt, 128 channel, model W4, front mount	$2,521.08
P25 DIGITAL CONVENTIONAL BASE/REPEATER STATION RADIOS:		
T5365 w/options: X530,X806_D,X580,X432	QUANTAR, VHF, 125 watt, 16 channel	$11,629.60
T5365 w/options: X330,X806_D,X580,X432	QUANTAR, VHF, 25 watt, 16 channel	$10,661.60
ANALOG CONVENTIONAL PORTABLE RADIOS:		
H01QX/194W w/options: H35,H301,NTN1174,NTN7144	MTS2000, VHF, 5 watt, 160 channel, with charger & spare battery, model 2	$1,850.96
H01KDC9AA3_N w/options: H301,NTN7143	HT1000, VHF, 5 watt, 16 channel, with charger & spare battery,	$826.88
AAH25KDH9AA6_N w/options: H301,HNN9008_R	HT1250, VHF, 5 watt, 128 channel, with charger & spare battery,	$681.85
AAH25KDC9AA2_N w/options: H301,HNN9008_R	HT750, VHF, 5 watt, 4 channel, with charger & spare battery,	$529.10

Motorola – Phase I

MODEL NO.	DESCRIPTION	CONTRACT PRICE
ANALOG CONVENTIONAL MOBILE RADIOS:		
M01HX/427W w/options: H35,G325,B81	MCS2000, VHF, 110 watt, 160 channel, model 2, remote mount	$1,953.63
M01HX/523W w/options: H35,G325,B81	MCS2000, VHF, 25 watt, 160 channel, model 2, front mount	$1,269.35
AAM25KKD9AA2_N	CDM1250, VHF, 45 watt, 64 channel, front mount	$556.50
ANALOG CONVENTIONAL BASE/REPEATER STATION RADIOS:		
T5365 w/options: X530,X597_A,X580,X432	QUANTAR, VHF, 125 watt, 16 channel	$10,049.60
T5544 w/options: X330,X597,X580,X436,X153	MTR2000, VHF, 40 watt, 32 channel	$3,858.05
P25 MIGRATION PLAN GATEWAY SOLUTIONS:		
To be determined for each application	TYPICAL MEDIUM SYSTEM, PER RFP SPECS, AS BID	$2,488,183.78
To be determined for each application	TYPICAL SMALL SYSTEM, PER RFP SPECS, AS BID	$1,785,195.50
To be determined for each application	TYPICAL ALTERNATE SMALL SYSTEM, AS BID FOR PHASE 1	$244,473.89

WSCA RFP DISCOUNTS

RADIO MODEL SERIES (REFER TO MANUF. PRICE PAGES):	DISCOUNT %
DIGITAL MOBILE/DESKTOP RADIOS:	
ASTRO SPECTRA PLUS	18.5%
ASTRO SPECTRA	25.5%
XTL5000 MOBILE	10%
XTL5000 HIGH PERFORMANCE MOBILE DATA MODEMS	10%
DIGITAL PORTABLE RADIOS:	
ASTRO XTS5000	18.5%
ASTRO XTS3000	27%
ASTRO XTS2500	23.5%
ASTRO XTS1500	5%
ANALOG MOBILE/DESKTOP RADIOS:	
MCS2000	26.5%
CDM SERIES (750, 1250, 1550)	25%
LCS2000	20%
ANALOG PORTABLE RADIOS:	
MTS2000	28%
HT1000	36%
HT1250	35%
HT750	35%
EX500/EX600	20%
INFRASTRUCTURE / FIXED EQUIPMENT:	
QUANTAR BASE/REPEATER STATIONS	20%
MTR2000 BASE/REPEATER STATIONS	27%
DIU-3000 DIGITAL INTERFACE UNITS	15%
ASTRO-TAC 3000 VOTING SYSTEM	15%
SPECTRA-TAC VOTING SYSTEM	15%
QUANTAR VOTING RECEIVERS	15%
GOLD ELITE CONSOLES (Gateway)	18.5%
TRUNKED CONTROLLERS (Gateway)	18.5%
STR3000 SIMULCAST / DATA BASE STATIONS	15%

WSCA RFP 02702

VOLUME DISCOUNT PROGRAM - PHASE 1 ALL CATEGORIES

The volume discount will be cumulative and over the term of the contract.
(Initial Term of Three [3] Years)

Additional Discount off Net Contract Unit Price	Cumulative Total Sales from:	Cumulative Total Sales to:
0%	$ 5,000,000	$ 9,999,999
0%	$ 10,000,000	$ 14,999,999
0%	$ 15,000,000	$ 19,999,999
1%	$ 20,000,000	$ 29,999,999
2%	$ 30,000,000	$ 39,999,999
3 %	$ 40,000,000	$ 49,999,999
3 %	$ 50,000,000	$ 59,999,999
3 %	$ 60,000,000	$ 69,999,999
3 %	$ 70,000,000	$ 79,999,999
3 %	$ 80,000,000	$ 89,999,999
3 %	$ 90,000,000	$ 99,999,999
3.%	$100,000,000	$ 100,000,000+

CONTRACTOR INFORMATION

Contractor:	**Northern Airborne Technology Ltd**		
Page number			
Contact:	Ray Lewis	**Alternate Contact:**	
Phone:	250-763-2232		
Fax:	250-762-3374		
Email:			
Internet address:	www.northernairborne.com		
Web catalog address:			
Federal ID No.:			
Supplier No.:	111923		
Contract Worth	$		
Payment address:	Edmo distributors, Inc. 12830 E. Mirabeau Parkway Spokane WA. 99216	**Order placement address**:	Contact Edmo Distributors, Inc. Ted Augustine 1 800 828-0623 T(oll Free Fax)
Customer Service:	Joel Johnston (EDMO Distributors, Inc)		
Telephone:	1 800 235-3300 509-535-8280		
Fax:	800 828-0623		
Ordering procedures:	All orders must include the term '**WSCA CONTRACT ORDER**" prominently shown and be direct to the ATTN: Ted Augustine via EDMO Toll Free Fax at (800)828-0623 or USPS mail.		
Credit card acceptance:	Visa - MC		
Minimum orders:			
Delivery time:	60 days After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	**Category 2, FM Aircraft Radios**		
Equipment Line items			
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category2.doc		

Link to Price Sheets

Awarded Phase(s) Phase I & II

SPECIFICATIONS

Description
One panel mounted VHF-FM Aeronautical Transceiver (FM-1)
Two-panel mounted VHF-FM Aeronautical Transceiver (FM-1 and FM-2).
Transceiver shall provide operator selection of both wide-band (25 kHz bandwidth/5 kHz modulation) and narrow-band (12.5 kHz bandwidth/2.5 kHz modulation) operation by channel for MAIN and GURARD operation.
Transceiver shall meet the specifications provided in Section J, FS/OAS A-19, AERONUTICAL VHF-FM RADIO TRANSCEIVER SPECIFICATIONS and Section J, FS/OAS A-24; AVIONICS OPERATIONAL TEST PROCEDURES.
Transceiver's operational controls shall be mounted in a location that is convenient to both pilot and co-pilot/observer.
Aircraft having two or more aeronautical VHF-FM radio transceivers need only have a GUARD receiver in the first transceiver (FM-1) unless one is Project 25 digital compliant and the other is not.
The radio MUST have a Supplemental Type Certification (STC) OR have FAA approval to be installed in FAA certified Part 91 aircraft.
The radio shall be capable or operating on up to 255 channels.
The 255 channels shall be any quantity mixture of APCO 25 digital trunked simulcast talk groups and separate conventional mode RF frequencies. It is acceptable for channel capability to be reduced for analog features.

Northern Airborne Technology Ltd – Phase II

PRICE SHEETS

FM Band Aircraft Radio

Req. Item	Comm. Code	Description	Unit	Unit Price
1.	5820	One Panel Mounted VHF – FM Aeronautical Transceiver (FM-1) (One per aircraft) Product Bid State: Mfg.: Northern Airborne Technology Model: NPX136D-070 (with guard receiver)	EA	$10,233.00
2.	5820	Two Panel Mounted VHF – FM Aeronautical Transceiver (FM-1 and FM-2) (Two per Aircraft) Product Bid State: Mfg.: Northern Airborne Technology Model: NPX136D-070 (with guard receiver)	EA	$10,233.00
3.	5820	VHF-FM (in Two panel Installation) Product Bid State: Mfg.: Northern Airborne Technology Model: NPX136D-000 (without guard)	EA	$8,343.00

The vendor shall include pricing for all STC or FAA approved optional configurations of transceivers, control head display, aircraft interconnections, control cables, power cables, installation/mounding hardware, programming devices and/or software, and other approved available items not specifically listed here.

VOLUME DISCOUNT PROGRAM - PHASE 2 ALL CATEGORIES

The volume discount will be cumulative and over the term of the contract.
(Initial Term of Three [3] Years)

Additional Discount off Net Contract Unit Price	Cumulative Total Sales from:	Cumulative Total Sales to:
5 %	$ 5,000,000	$ 9,999,999
5 %	$ 10,000,000	$ 14,999,999

Northern Airborne Technology Ltd – Phase II

5 %	$ 15,000,000	$ 19,999,999
5 %	$ 20,000,000	$ 29,999,999
5 %	$ 30,000,000	$ 39,999,999
5 %	$ 40,000,000	$ 49,999,999
5 %	$ 50,000,000	$ 59,999,999
5 %	$ 60,000,000	$ 69,999,999
5 %	$ 70,000,000	$ 79,999,999
5 %	$ 80,000,000	$ 89,999,999
5 %	$ 90,000,000	$ 99,999,999
5 %	$100,000,000	$ 100,000,000+

Radian Communication Services Inc

CONTRACTOR INFORMATION

Contractor:	**Radian Communication Services, Inc**		
Page number	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category6.doc		
Contact:	Mark Triplett	**Alternate Contact:**	Pat Healy
Phone:	972 669-5175		425-398-5556
Fax:	972 669-1653		425-398-2566
Cell Phone	214 417-8777		206 310-3554
Email:	Mark.Triplett@radiancorp.com	Pat.Healy@radiancorp.com	
Alternate Contact:	Kris Powell		
Phone:	425-398-5556		
Fax:	425-398-2566		
Email:	Kris.Powell@radiancorp.com		
Internet address:	http://www.radiancorp.com/		
Web catalog address:	http://www.radiancorp.com/		
Federal ID No.:	51-0273912		
Supplier No.:	111924		
Total Contract worth:	$500,000,000.00		
Payment address:	Radian PO Box 17322 Denver, CO 80217	**Order placement address**:	Radian 22125 17th Ave SE #117 Bothell, WA 98021
Customer Service:	Pat Healey		
Telephone:	425-398-5556		
Fax:	425-398-2566		
Ordering procedures:	See the next pages		
Credit card acceptance:	None		
Minimum orders:			
Delivery time:	45 days After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 6 Communication Towers		
Equipment Line items	Radian Products 20% off list price Rohn Products 40% off list price		
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category6.doc		
Link to Price Sheets	**3-LEGGED TRIANGULAR SELF SUPPORT TOWERS** Page 196 **GUYED TOWERS** Page 198		
Engineering Hourly Rate	$100.00 per hour		
Manufacturing Hourly	$70.00 per hour		
Field Installation Hourly Rate	$65.00 per hour		
Material at cost + 15%			

Awarded Phase(s) Phase I & II

Category 6 Communication Towers

SPECIAL TERMS AND CONDITIONS

1. MATERIALS AND WORKMANSHIP

The Contractor shall be required to furnish all materials, equipment and/or services necessary to perform contractual requirements. Materials and workmanship in the construction of equipment for this contract shall conform to all codes, regulations and requirements for such equipment, specifications contained herein, and the normal uses for which intended. Materials shall be manufactured in accordance with the best commercial practices and standards for this type of equipment. Materials used in the production of any tower must be new.

2. WARRANTY(IES)

All materials provided shall be guaranteed by the contractor against mechanical, electrical and workmanship defects. In the event defects become evident within the warranty period, the contractor shall furnish replacement parts and materials at no additional cost to the state. The warranty period shall commence with the date of the communications tower's acceptance and remain in effect for one (1) calendar year, except for expendable items.

The contractor shall provide, within the warranty period and at the bid price, the necessary parts, labor and transportation to maintain the equipment in sufficient state of repair to continue system performance in compliance with the specification contained herein. The contractor shall provide qualified personnel, replacement parts and material to service the equipment at the installed site location within eight (8) hours after the notification of equipment failure. Repairs must be complete within 48 hours.

This warranty period maintenance shall be on a working hour basis as follows: 24 hours per day, 7 days per week.

Radian Communication Services Inc – Phase II

3-LEGGED TRIANGULAR SELF SUPPORT TOWERS

Tower in 20 ft Section, top down Line Item	Mfg stock number	Tower Costs Material & Freight Only	Climbing Ladder & Anti-Climb Device Material & Labor	Obstruction Lighting System Medium Intensity Material & Labor	Soils Report Costs	Grounding of Tower Base & WG Ladder	Tower Installation Costs Labor Only	Standard Safety Climb Cable Device includes harness, sleeve + Top & Bottom Stops + Install Labor	Rose Safety Climb Rail Device includes sleeve + Top & Bottom Stops + Install Labor	Total $
1. 20 ft	**RS70**	**$9,935.00**	**$1,161.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$2,440.00**	**$302.00**	**$394.00**	**$17,682.00**
2. 40 ft	**RS70**	**$11,850.00**	**$1,464.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$3,393.00**	**$268.00**	**$426.00**	**$20,851.00**
3. 60 ft	**RS70**	**$13,110.00**	**$1,822.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$3,813.00**	**$455.00**	**$692.00**	**$23,342.00**
4. 80 ft	**RS70**	**$15,306.00**	**$2,140.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$5,408.00**	**$294.00**	**$620.00**	**$27,218.00**
5. 100 ft	**RS70**	**$18,444.00**	**$2,483.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$6,674.00**	**$600.00**	**$976.00**	**$32,627.00**
6. 120 ft	**RS70**	**$21,695.00**	**$2,815.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$9,989.00**	**$325.00**	**$794.00**	**$39,068.00**
7. 140 ft	**RS70**	**$24,892.00**	**$3,144.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$12,597.00**	**$749.00**	**$1,287.00**	**$46,119.00**
8. 160 ft	**RS70**	**$30,077.00**	**$3,576.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$16,886.00**	**$359.00**	**$887.00**	**$55,235.00**
9. 180 ft	**RS70**	**$34,290.00**	**$3,805.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$18,513.00**	**$898.00**	**$1,584.00**	**$62,540.00**
10. 200 ft	**RS70**	**$42,998.00**	**$4,175.00**	**$0.00**	**$3,450.00**	**INCLUDED**	**$22,079.00**	**$388.00**	**$1,126.00**	**$74,216.00**
11. 220 ft	**RS70**	**$47,799.00**	**$4,317.00**	**$3,889.00**	**$3,450.00**	**INCLUDED**	**$25,735.00**	**$929.00**	**$1,765.00**	**$87,884.00**
12. 240 ft	**RS75**	**$66,113.00**	**$4,626.00**	**$3,944.00**	**$3,450.00**	**INCLUDED**	**$30,887.00**	**$421.00**	**$1,334.00**	**$110,775.00**
13. 260 ft	**RS75**	**$76,334.00**	**$4,896.00**	**$3,993.00**	**$3,450.00**	**INCLUDE**	**$32,817.0**	**$1,077.00**	**$2,056.00**	**$124,623.0**

Radian Communication Services Inc – Phase II

						D	**0**			**0**
14. 280 ft	**RS75**	**$95,144.00**	**$5,303.00**	**$4,060.00**	**$3,450.00**	**INCLUDED**	**$37,024.00**	**$447.00**	**$1,527.00**	**$146,955.00**
15. 300 ft	**RS75**	**$102,712.00**	**$5,595.00**	**$4,090.00**	**$3,450.00**	**INCLUDED**	**$39,390.00**	**$1,226.00**	**$2,355.00**	**$158,818.00**

Radian Communication Services Inc – Phase II

GUYED TOWERS

Tower in 20 ft Section, top down Line Item	Mfg stock number	Tower Costs Material & Freight Only	Climbing Ladder & Anti-Climb Device Material & Labor	Obstruction Lighting System Medium Intensity Material & Labor	Soils Report Costs	Grounding of Tower Base & WG Ladder	Tower Installation Costs Labor Only	Standard Safety Climb Cable Device includes harness, sleeve + Top & Bottom Stops + Install Labor	Rose Safety Climb Rail Device includes sleeve + Top & Bottom Stops + Install Labor	Total $
1. 20 ft	**RG33**	**$10,684.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$1,470.00**	**$302.00**	**$297.00**	**$18,178.00**
2. 40 ft	**RG33**	**$12,011.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$3,184.00**	**$250.00**	**$388.00**	**$21,258.00**
3. 60 ft	**RG33**	**$13,220.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$4,082.00**	**$451.00**	**$692.00**	**$23,870.00**
4. 80 ft	**RG33**	**$15,142.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$5,187.00**	**$532.00**	**$849.00**	**$27,135.00**
5. 100 ft	**RG33**	**$16,430.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$6,365.00**	**$600.00**	**$989.00**	**$29,809.00**
6. 120 ft	**RG33**	**$18,634.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$6,765.00**	**$668.00**	**$1,148.00**	**$32,640.00**
7. 140 ft	**RG33**	**$21,157.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$7,084.00**	**$751.00**	**$1,287.00**	**$35,704.00**
8. 160 ft	**RG33**	**$23,078.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$8,577.00**	**$838.00**	**$1,474.00**	**$39,392.00**
9. 180 ft	**RG33**	**$24,699.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$9,861.00**	**$898.00**	**$1,584.00**	**$42,467.00**
10. 200 ft	**RG33**	**$26,573.00**	**$1,515.00**	**$0.00**	**$3,910.00**	**INCLUDED**	**$11,873.00**	**$921.00**	**$1,689.00**	**$46,481.00**
11. 220 ft	**RG33**	**$28,372.00**	**$1,515.00**	**$3,889.00**	**$3,910.00**	**INCLUDED**	**$11,093.00**	**$929.00**	**$1,765.00**	**$51,473.00**
12. 240 ft	**RG33**	**$32,441.00**	**$1,515.00**	**$3,944.00**	**$3,910.00**	**INCLUDED**	**$13,534.00**	**$1,005.00**	**$1,920.00**	**$58,269.00**

Radian Communication Services Inc – Phase II

13. 260 ft	**RG33**	**$37,528.00**	**$1,515.00**	**$3,993.00**	**$3,910.00**	**INCLUDED**	**$14,525.00**	**$1,077.00**	**$2,056.00**	**$64,604.00**
14. 280 ft	**RG33**	**$42,041.00**	**$1,515.00**	**$4,060.00**	**$3,910.00**	**INCLUDED**	**$15,367.00**	**$1,168.00**	**$2,248.00**	**$70,309.00**
15. 300 ft	**RG33**	**$45,449.00**	**$1,515.00**	**$4,090.00**	**$3,910.00**	**INCLUDED**	**$16,136.00**	**$1,226.00**	**$2,355.00**	**$74,681.00**

Radio Frequency System

CONTRACTOR INFORMATION

Contractor:	**Radio Frequency System**		
Contact:	Richard Bogue	**Alternate Contact:**	Ken Wood
Phone:	203-630-3311 x1223		630-790-8930 x1172
Fax:	203-821-3852		630-790-8954
Email:	Richard.bogue@rfsworld.com		Ken.wood@rfsworld.com
Internet address:	http://www.rfsworld.com/		
Web catalog address:			
Federal ID No.:	56-1569264		
Supplier No.:	10355		
Total Contract worth:	$500,000,00.00		
Payment address:	First Union National Bank PO Box 601000 M/F: Radio Frequency Systems Charlotte, NC 28260-1000	**Order placement address**:	Radio Frequency Systems, Inc. 1688 Glen Ellyn Road Glendale Heights, IL 60139
Customer Service/Order Placement:	Carla Salas or Rachel Tonos		
Customer Service:	Carla Salas or Rachel Tonos		
Telephone:	630-790-8930; Carla Salas (ext. 1162), Rachel Tonos (ext. 1164)		
Fax:	630-790-8954		
Ordering procedures:	**Contact Customer Service/Order Placement/or Hutton Communications**		
Credit card acceptance:	Visa, Master Card, American Express		
Minimum orders:	None		
Delivery time:	30 days After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	**CATEGORY** 7 Waveguides and Antennas		
Equipment Line items	See Price Sheets		
Link to bid Specifications	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category7.doc		
Link to Price Sheets	**Category 7 Waveguides and Antennas**		
Awarded Phase(s)	Phase I & II		
Additional Distributors	**HUTTON COMMUNICATIONS**	**Page 181**	
	TESSCO	**Page 181**	

Radio Frequency System

Category 7 Microwave Antennas, Waveguide & Associated Hardware

REPAIR FACILITIES

In the event that an item should need repair, the Sales Administrator will provide the customer with a Return Material Authorization (RMA) number. The sales administrator then records all pertinent information into RFS' database and advises the customer of the correct location to which the material must be shipped. Note that the RMA number must be clearly marked on the outside of the shipping container.

When the material arrives at the designated location, the receiving department updates the system showing the return as "Received". The material is then forwarded for evaluation. After the evaluation is complete, the database is again updated. Computer generated reports are issued on a daily basis to advise sales of the status of all returns.

Once sales has received the evaluation, a course of action takes place based on the reason for the return and the quality assurance evaluation. The customer is then notified and the item is either repaired or replaced. All repairs are made by RFS employees at RFS facilities.

All returns should be sent to the following locations:

Antennas and Dehydrators

Radio Frequency Systems, Inc
175 Corporate Court
Meriden, CT 06450

Cable, Connectors, Jumpers & Accessories

Radio Frequency System, Inc.
29 Research Parkway
Wallingford, CT 06492

CONTACTS AND PHONE NUMBERS (Revised)

STATE	CONTACT NAME	PHONE NUMBER
Alaska	Laura Damiani	630-790-8930 ext 1175
Arizona	Laura Damiani	630-790-8930 ext 1175
Northern California	Carla Salas	630-790-8930 ext 1162
Southern California	Laura Damiani	630-790-8930 ext 1175
Colorado	Laura Damiani	630-790-8930 ext 1175
Georgia	Rick Barbieri	203-630-3311 ext 1096
Hawaii	Laura Damiani	630-790-8930 ext 1175
Idaho	Laura Damiani	630-790-8930 ext 1175
Minnesota	Kim Contreras	630-790-8930 ext 1166
Montana	Laura Damiani	630-790-8930 ext 1175
Northern Nevada	Carla Salas	630-790-8930 ext 1162
Southern Nevada	Laura Damiani	630-790-8930 ext 1175
New Mexico	Laura Damiani	630-790-8930 ext 1175
Oklahoma	Carla Salas	630-790-8930 ext 1162
Oregon	Carla Salas	630-790-8930 ext 1162
South Dakota	Kim Contreras	630-790-8930 ext 1166
Utah	Laura Damiani	630-790-8930 ext 1175
Washington	Carla Salas	630-790-8930 ext 1162
Wyoming	Laura Damiani	630-790-8930 ext 1175

Radio Frequency System

HUTTON COMMUNICATIONS		
Main Contact (inside): **Lisa Hensley** **866-270-8808** **henslyl@huttoncom.com**	**Sencondary Contact:** **Tammy Coones** **877-648-8866** **coonest@huttoncom.com**	**Customer Service MGR:** **Spencer Peart** **972-417-0266** **peartp@huttoncom.com**
Payment address: **Hutton Communications** **P.O. Box 201439** **Dallas, TX 75320**	**Order placement address: Hutton Communications** **2520 Marsh Lane** **Carrollton, TX 75006** **Order placement fax:** **877-762-8274**	**Internet address:** **http://www.huttononline.com**
TESSCO		
Main Contact:	**John Hunt**	
Address:	**4775 Aircenter Cr.** **Reno, NV 89502**	
Phone Numbers: **Fax:**	**1 -888 821 0591** **1 775-689 5557**	
Email:	huntj@tessco.com	

Radio Frequency System

General

This specification covers the latest state of the art Microwave Antennas and Associated Equipment of ruse in specified frequency bands to meet the needs of the State of Washington, its departments and agencies, universities, colleges, community colleges and schools and all political subdivisions.

Classification

All antennas, transmission line connectors and associated hardware selected as suitable for purchase will be given classification within the frequency band groups as follows:

Frequency Band			
0932	-	0960	MHz
2110	-	2200	MHz
2290	-	2500	MHz
5725	-	5850	MHz
5925	-	6875	MHz
10.7	-	11.7	GHz
17.7	-	19.7	GHz
21.8	-	23.6	GHz

Standards

1. Part 101, Federal Communications Commission (FCC) Rules and Regulations and amendments; E. I. A. Standards and amendments, RS222.(Latest Version)
2. These specifications are exclusive of any and all equipment with proprietary items, components or devices inclusive therein. All technical tolerances, ratings, or any technically specified criteria contained within this specification are within the current state-of-the-art and are currently being met by commercially available equipment.
3. All material and workmanship will be of the type and grade most suitable for the application. All material will be free from defects, of current design, of recent manufacture and unused.
4. The State of Washington reserves the right to reject any bid proposing equipment that has proven in actual use and properly documented to be unreliable or unsuitable for the work to be accomplished and /or has shown that the operating or maintenance costs of which have been excessive in comparison with other makes of similar equipment working under like conditions.
5. All material and equipment furnished will be subject to approval by the State of Washington, Department of General Administration, Office of State Procurement, including engineers selected to review the products with regard to design, operation, performance and requirements of this specification. The acceptance of equipment or parts thereof will in no way relieve the contractor of responsibility for furnishing equipment that meets this specification in all detail.
6. Should any of the inspections, tests, or operation of the equipment under service conditions show the equipment does not meet the requirements of the specifications, the State will reject the equipment or parts thereof and require the contractor to make changes as necessary to meet the requirements of the specifications at the expense of the contractor.
7. The contractor(s) will hold and save the State, its officers, agents, servants, and employees harmless from liability of any nature of kind, including costs and expense, for or on account of any patented or unpatented invention, articles, or appliance manufactured or used in the performance of any and all contracts encompassing theses specifications.

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8. Unless specifically excepted by the terms of these specifications, any part or accessories ordinarily furnished or required to make the equipment, herein specified, a complete operating unit will be furnished by the contractor whether identified in these specifications or not.
9. All units will be delivered to the purchaser with any and all equipment modifications intact and installed.

Technical Manuals

1. The contractor will make available equipment documentation to purchasers in any quantity specified by the purchaser over and above the quantity specified herein. This documentation will accompany the equipment at the time of delivery or may be delivered prior to equipment delivery. Documentation costs for purchaser specified manuals will be included as separate bid items. A copy of radiation patterns will be provided at not cost if requested.

Service, Installation and Operation Manuals

Installation and or operator manuals will be furnished with each order. Each manual will contain:

1. Complete diagrams including information outlining method of operation, supply voltages and currents and power requirements for each model of dehydrators.
2. Detailed drawings or clear photographs showing location of parts and hardware associated with antenna assembly or mounting.

Equipment Service Life

1. All equipment covered by these specifications and any resultant contracts will have a minimum service life of ten (10) years from date of delivery to the purchaser. The contractor will guarantee replacement parts stocking by the vendor and/or authorized distributor for this service life period.

Equipment and Parts Warranty

1. Each contractor will guarantee repair or replacement of any equipment or part thereof that fails in operation during normal and proper use within two (2) years from the date of purchaser's receipt due to defects in design, material or workmanship, consummation of final acceptance and payment notwithstanding. These replacements will be made with celerity and without charge to the purchaser. The cost of installation of these replacements will be borne by the contractor for the period of the warranty.
2. Any equipment or part replaced under the provisions of this warranty becomes the property of the contractor. If the vendor desires the defective equipment or part returned, the contractor will pay all transportation charges and make all arrangements for the return. If the contractor does not specifically request return of such replaced parts within thirty (30) days from the date of replacement, the equipment for parts become property of the purchaser.
3. Replacement parts will be regularly stocked by the contractor and/or authorized distributor. Delay in purchaser's receipt of replacement parts will not exceed ten (10) consecutive days from contractor's or distributor's receipt of order.
4. The contractor will guarantee delivery of emergency orders within forty-eight (48) hours from receipt of order. Emergency orders will be transported by the most expedient manner available with the transportation cost born by the purchaser less normal shipping cost.
5. The contractor will supply the purchaser, free of charge for the service life of the equipment, with all data, drawings, and specifications of modifications, plans or experiments by which the equipment may be improved or modernized.

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General Equipment characteristics

The following characteristics apply to all equipment unless otherwise specified.

Environmental

1. All antennas will survive wind velocities of 125 miles per hour with one (1) inch of radial ice and no more than 0.1 degree of deflection in 70 mile per hour wind.
2. All antennas will remain operational within the temperature range of -58°F to 155°F.
3. All antennas and associated hardware will be non-corrosive, non-rust material. This can be accomplished by supplying Hot Dipped Galvanized or Stainless Steel hardware. Plated steel will not be accepted. Aluminum antennas will be painted with corrosion resistant paint.
4. Field assembly of all antennas shall only be between antenna parabola, feed, antenna mount and fixed and/or slide assemblies. **There shall be no field assembly parabola for that is too time consuming.** Antenna mount assembly is permitted.
5. Parabolic solid antennas shall be equipped to include mounting hardware for a 4.5” vertical O.D. mounting pipe. Parabolic grid antennas shall be equipped to include mounting hardware for either a 1.9” – 3.5” or a 4.5” vertical O.D.(Outside Diameter) mounting pipe.
6. For parabolic solid antenna shall have a reflector surface tolerance designed to 15GHz so that antenna feeds could be interchanged between 2GHz and 10 GHz without loss to antenna gain. The same like between antenna feeds in the 18GHz and 23GHz bands.

Operational Characteristics

Material and workmanship will be of the type and grade most suitable for the application and will conform as a minimum unless otherwise specified to the latest applicable standards, specifications, recommended practices and procedures of such standardizing bodies as the I.E.E.E., E.I.A., N.E.M.A., F.C.C.

Radio Frequency System – Phase II

CATEGORY 7 PRICE SHEETS

Contractor	**Category 7 Waveguides and Antennas**
Radio Frequency Systems	http://www.ga.wa.gov/pca/bids/02702-Phase2-Category7.doc

ANTENNAS

The specifications listed herein are minimum requirements; a range variance of up to a maximum of .9DB has been identified as acceptable.

A. Welded Grid Antenna. 928-960 MHz. Type "N" Female input connector.

Diameter in Feet	Gain DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam width in °s	Cross Pol Disc. DB	F/B Ratio DB	VSRW	**RFS P/N**	**PRICE EACH**
4.0	18.3	18.6	19.1	B	17.4	25	21	1.4	**MGA4-082N**	**$632.50**
6.0	212	21.3	21.6	A	12.6	25	30	1.4	**MGA6-082N**	**$1,144.00**
8.0	23.7	24.4	25.0	A	9.0	26	24	1.35	**GKL8-082N**	**$1,628.00**
10.0	25.6	26.3	27.0	A	7.2	26	27	1.35	**GKL10-082N**	**$1,974.50**
12.0	27.4	28.2	28.8	A	5.9	26	30	1.3	**GKA12-082M**	**$3,184.50**

B. Solid Parabolic Reflector Standard Antenna, 928-960 MHz, 7/8" EIA Flange or Type "N" Female Input Connector

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH.**
4.0	18.1	18.4	18.8	B	19.5	10	22	1.3	**PAF4-890AE**	**$777.60**
6.0	21.6	22.1	22.3	A	13.0	15	25	1.3	**PAF6-890AE**	**$931.20**
8.0	24.1	24.5	24.8	A	9.7	15	27	1.3	**PAF8-890AE**	**$1,382.40**
10.0	26.1	26.4	26.7	A	7.7	15	29	1.3	**PAF10-890AE**	**$2,112.00**
12.0	27.6	28.0	28.3	A	6.4	15	30	1.3	**PAF12-890AE**	**$3,686.40**

C. Welded Grid Antenna 2.1-2.2 GHz, 7/8" EIA Flange or Type "N" Female Input Connector. "AIR DIELECTRIC FEED"

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	25.6	26.8	27.2	B	8.0	29	34	1.3	**MGA4-19N**	**$632.50**
606	28.5	29.3	30.1	A	5.4	32	35	1.2	**MGA6-19N**	**$1,144.00**
8.0	31.0	31.8	32.6	A	4.1	35	41	1.2	**GKL8-19N**	**$1,628.00**
10.0	32.9	33.8	34.6	A	3.2	35	45	1.2	**GKL10-19N**	**$1,974.50**
12.0	34.7	35.6	36.4	A	2.6	40	47	1.2	**GKA12-19N**	**$3,184.50**
15.0	36.6	37.5	38.3	A	2.1	40	49	1.2	**GPW15-19N**	**$12,223.75**

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D. Welded Grid Antenna 2.1-2.2 GHz, 7/8" EIA Flange or Type "N" Female Input Connector. "FOAM FEED"

NOTE: NON PRESSURIZED FEEDS ARE NOT AVAILABLE SEE ABOVE

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	26.5	26.7	26.9	B	7.9	29	32	1.3	**N/A**	$
6.0	30.3	30.5	30.7	A	5.3	32	35	1.2	**N/A**	$
8.0	32.0	32.2	32.4	A	4.0	35	39	1.2	**N/A**	$
10.0	33.8	34.0	34.2	A	3.2	35	41	1.2	**N/A**	$
12.0	35.3	35.5	35.7	A	2.6	40	44	1.2	**N/A**	$
15.0	37.3	37.5	37.7	A	2.1	40	46	1.2	**N/A**	$

E. Solid Parabolic Standard Antenna 2.1-2.2 GHz, 7/8" EIA Type "N" Female Input Connector.

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	24.8	25.7	26.6	B	8.1	27	33	1.2.	**PAL4-19AN**	**$844.80**
6.0	28.7	29.6	30.5	B	5.5	30	37	1.15	**PAL6-19AN**	**$1,017.60**
8.0	31.2	32.1	33.0	A	4.1	30	40	1.1	**PAL8-19AN**	**$1,449.60**
10.0	33.1	34.0	34.9	A	3.3	30	43	1.1	**PAL10-19AN**	**$2,198.40**
12.0	34.7	35.6	36.5	A	2.8	30	45	1.1	**PAL12-19AN**	**$3,979.20**
15.0	36.4	37.3	38.3	A	2.2	30	49	1.0	**PAL15-19AN**	**$10,512.00**

F. Solid Parabolic Standard Antenna 6.425-7.125 GHz, CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	35.9	36.4	36.8	-	2.5	30	43	1.08	**PAL4-65AC**	**$844.80**
6.0	39.4	39.9	40.3	B	1.7	30	47	1.06	**PAL6-65AC**	**$1,017.60**
8.0	41.6 42.0	42.1 42.4	42.5 42.9	A B	1.3 1.2	30 30	59 49	1.06 1.06	**PAD8-65AC** **PAL8-65AC**	**$1,608.00** **$1,449.60**
10.0	43.5 43.7	43.9 44.1	44.3 44.6	A B	1.0 1.1	30 30	52 63	1.06 1.06	**PAD10-65AC** **PAL10-65AC**	**$2,304.00** **$2,198.00**
12.0	45.3	45.8	46.2	A	0.8	30	70	1.06	**DA12-65AC**	**$6,020.00**

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G. Solid Parabolic Dual Polarized Standard Antenna 6.425-7.125 GHz, CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
6.0	39.2	39.7	40.1	B	1.7	30	47	1.06	**PAX6-65AC**	**$1,670.40**
8.0	41.4	41.9	42.3	A	1.2	30	59	1.06	**PADX8-65AC**	**$2,145.60**
10.0	43.5	43.9	44.4	A	1.0	30	52	1.06	**PADX10-65AC**	**$2,832.00**
12.0	45.1	45.6	46.0	A	0.8	30	71	1.06	**DAX12-65AC**	**$6,468.00**

H. Single Polarized Antenna, 6.425-7.125 GHz, CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	35.6	36.0	36.5	-	2.5	30	58	1.08	**DA4-65AC**	**$1,536.00**
6.0	39.4	39.8	40.2	B	1.7	30	64	1.06	**DA6-64AC**	**$2,820.00**
8.0	41.9	42.3	42.8	A	1.3	30	66	1.06	**DA8-65AC**	**$3,498.00**
10.0	43.7	44.1	44.6	A	1.0	30	69	1.06	**DA10-65AC**	**$4,444.00**
12.0	45.3	45.8	46.2	A	0.8	30	70	1.06	**DA12-65AC**	**$6,020.00**

I. Dual Polarized Antenna, 6.425-7.125 GHz, CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	34.8	35.3	35.7	-	2.5	30	58	1.10	**DAX4-65AC**	**$1,794.00**
6.0	39.1 39.2	39.5 39.7	39.9 40.1	A B	1.7 1.7	30 30	64 47	1.07 1.06	**DAX6-65AC** **PAX6-65 AC**	**$2,990.00** **$1,670.40**
8.0	41.6 41.8	42.0 42.2	42.4 42.7	A B	1.3 1.3	34 30	68 52	1.06 1.06	**DAX8-65AC** **PAX8-65 AC**	**$3,684.00** **$1,987.20**
10.0	43.6 43.5	44.0 43.9	44.4 44.4	A B	1.0 1.0	34 30	70 58	1.06 1.06	**DAX10-65AC** **PAX10-65AC**	**$4,804.00** **$2,515.20**
12.0	45.1	45.6	46.0	A	0.8	30	71	1.06	**DAX12-65AC**	**$6,468.00**

J. Single Polarized Parabolic Antenna, 10.7-11.7 GHz, CPR 90G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	40.1	40.5	40.9	B	1.6	30	62	1.08	**DA4-107AC**	**$1,536.00**
6.0	43.5	43.9	44.3	B	1.0	30	60	1.06	**PAD6-107AC**	**$1,080.00**
8.0	46.0	46.4	46.8	A	0.7	30	62	1.06	**PAD8-107AC**	**$1,608.00**

10.0	47.9	48.3	48.5	A	0.7	30	64	1.06	**PAD10-107AC**	**$2,304.00**
12.0	49.4	49.8	50.0	A	0.5	30	71	1.06	**DA12-107AC**	**$6,020.00**

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K. Dual Polarized Parabolic Antenna, 10.7-11.7 GHz, CPR 90G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	40.0	40.4	40.8	A	1.5	30	64	1.10	**DAX4-107AC**	**$1,794.00**
6.0	43.4	43.8	44.2	A	1.0	30	60	1.08	**PADX6-107AC**	**$1,728.00**
8.0	45.9	46.3	46.7	A	0.8	30	62	1.08	**PADX8-107AC**	**$2,145.60**
10.0	47.8	48.2	48.4	A	0.7	30	64	1.08	**PADX10-107AC**	**$2,832.00**
12.0	49.2	49.6	49.9	A	0.5	30	72	1.06	**DAX12-107AC**	**$6,468.00**

L. Single Polarized Parabolic Antenna, 10.7-11.7 GHz, CPR 90G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	40.1	40.5	40.9	A	1.6	30	62	1.08	**DA4-107AC**	**$1,536.00**
6.0	43.7	44.0	44.5	A	1.0	30	70	1.06	**DA6-107AC**	**$2,820.00**
8.0	46.1	46.4	46.9	A	0.8	30	71	1.06	**DA8-107AC**	**$3,498.00**
10.0	48.0	48.4	48.6	A	0.7	30	71	1.06	**DA10-107AC**	**$4,444.00**
12.0	49.4	49.8	50.0	A	0.5	30	72	1.06	**DA12-107AC**	**$6,020.00**

M. Dual Polarized Parabolic Antenna, 10.7-11.7 GHz, CPR 90G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	40.0	40.4	40.8	A	1.5	30	64	1.10	**DAX4-107AC**	**$1,794.00**
6.0	43.5	43.8	44.3	A	1.0	30	68	1.08	**DAX6-107AC**	**$2,990.00**
8.0	45.9	46.2	46.7	A	0.8	30	69	1.06	**DAX8-107AC**	**$3,684.00**
10.0	47.8	48.2	48.4	A	0.7	30	70	1.06	**DAX10-107AC**	**$4,804.00**
12.0	49.2	49.6	49.9	A	0.5	30	72	1.06	**DAX12-107AC**	**$6,468.00**

N. Single Polarized Parabolic Antenna, 17.7-19.7 GHz, UG-595/U Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
2.0	38.1	38.6	39.1	A	1.9	32	62	1.20	**SU2-190AZ**	**$360.00**
4.0	44.1 44.3	44.6 44.8	45.1 45.3	A	0.9 0.9	32 32	67 53	1.20 1.20	**SU4-190AZ** **SP4-190AZ**	**$896.00** **$739.00**
6.0	47.5 47.7	48.0 48.2	48.5 48.7	A	0.7 .07	32 32	71 57	1.20 1.20	**SU6-190AZ** **SP6-190AZ**	**$1,596.00** **$852.00**

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O. Single Polarized Parabolic Antenna, 21.2-23.6 GHz, UG-595/U Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
2.0	39.6	40.1	40.6	A	1.6	32	66	1.20	**SU2-220AZ**	**$360.00**
4.0	45.6 45.8	46.1 46.3	46.6 46.8	A	0.8 0.8	32 32	72 58	1.20 1.20	**SU4-220AZ** **SP4-220AZ**	**$896.00** **$739.20**
6.0	49.0	49.5	50.0	A	0.5	32	75	1.15	**SU6-220AZ** **SP6-220AZ**	**$1,596.00** **$852.00**

HIGH Performance and Ultra High Performance

A. High Performance, 6.425-7.125 GHz, Single Polarization, CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	35.4	36.0	36.5	-	2.5	30	58	1.08	**DA4-65AC**	**$1,536.00**
6.0	39.4	39.8	40.2	A	1.7	30	64	1.06	**DA6-65AC**	**$2,820.00**
8.0	41.9	42.3	42.8	A	1.3	30	66	1.06	**DA8-65AC**	**$3,498.00**
10.0	43.7	44.1	44.6	A	1.0	30	70	1.06	**DA10-65AC**	**$4,444.00**
12.0	45.3	45.8	46.2	A	0.8	30	71	1.05	**DA12-65AC**	**$6,020.00**
15.0	47	47.5	47.9	A	0.7	30	71	1.06	**DA15-65AC**	**$9,780.00**

B. High Performance, 6.425-7.125 GHz, Dual Polarization, CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	34.8	35.3	35.7	-	2.5	30	58	1.08	**DAX4-65AC**	**$1,794.00**
6.0	39.2	39.7	40.1	A	1.7	30	64	1.06	**DAX6-65AC**	**$2,990.00**
8.0	41.8	42.2	42.7	A	1.3	30	68	1.06	**DAX8-65AC**	**$3,684.00**
10.0	43.5	43.9	44.4	A	1.0	30	70	1.06	**DAX10-65AC**	**$4,804.00**
12.0	45.1	45.6	46.0	A	0.8	30	71	1.05	**DAX12-65AC**	**$6,468.00**
15.0	47	47.5	47.9	A	0.7	30	71	1.06	**DAX15-65AC**	**$10,864.00**

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C. High Performance, 6.425-7.125 GHz, Dual Polarization, Super Cross Polarization CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
6	39.2	39.7	40.1	A	1.7	40	69	1.08	**UXA6-65AC**	**$3,900.00**
8	41.8	42.2	42.7	A	1.3	40	71	1.06	**UXA8-65AC**	**$4,900.00**
10	43.5	43.9	44.4	A	1.0	40	74	1.06	**UXA10-65AC**	**$5,940.00**
12	45.1	45.6	46.0	A	0.8	40	76	1.06	**UXA12-65AC**	**$8,094.00**
15	47.0	47.5	47.9	A	0.7	40	77	1.05	**UXA15-65AC**	**$12,296.00**

D. Ultra High Performance, 6.425-7.125 GHz, Dual Polarization, CPR 137G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
6	39.2	39.7	40.1	A	1.7	30	69	1.08	**UDA6-65AC**	**$2,408.00**
8	41.8	42.2	42.7	A	1.3	30	71	1.06	**UDA8-65AC**	**$3,900.00**
10	43.5	43.9	44.4	A	1.0	30	73	1.06	**UDA10-65AC**	**$5,940.00**
12	45.1	45.6	46.0	A	0.8	30	75	1.06	**UDA12-65AC**	**$8,094.00**
15	47.0	47.5	47.9	A	0.7	30	76	1.05	**UDA15-65AC**	**$12,296.00**

E. High Performance, 10.7-11.7 GHz, Single Polarization, CPR 90G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4	40.1	40.5	40.9	A	1.6	30	61	1.08	**DA4-107AC**	**$1,536.00**
6	43.7	44.0	44.5	A	1.0	30	70	1.06	**DA6-107AC**	**$2,820.00**
8	46.1	46.4	46.9	A	0.8	30	71	1.06	**DA8-107AC**	**$3,498.00**
10	48.0	48.4	48.6	A	0.7	30	70	1.06	**DA10-107AC**	**$4,440.00**
12	49.4	49.8	50.0	A	0.5	30	70	1.05	**DA12-107AC**	**$6,020.00**

F. High Performance, 10.7-11.7 GHz, Dual Polarization, CPR 90G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4	39.8	40.4	40.8	A	1.5	30	64	1.08	**DAX4-107AC**	**$1,794.00**
6	43.5	43.8	44.3	A	1.0	30	68	1.06	**DAX6-107AC**	**$2,990.00**
8	45.9	46.2	46.7	A	0.8	30	69	1.06	**DAX8-107AC**	**$3,684.00**
10	47.8	48.2	48.4	A	0.7	30	70	1.06	**DAX10-107AC**	**$4,804.00**
12	49.2	49.6	49.9	A	0.5	30	72	1.05	**DAX12-107AC**	**$6,468.00**

Radio Frequency System – Phase II

G. High Performance, 10.7-11.7 GHz, Dual Polarization, Super High Cross Polarization CPR 90G Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	**RFS P/N**	**PRICE EACH**
4	40.0	40.4	40.3	A	1.5	40	70	**UXA4-107AC**	**$2,408.00**
6	43.5	43.8	44.3	A	1.1	40	73	**UXA6-107AC**	**$3,900.00**
8	45.9	46.2	46.7	A	0.8	40	75	**UXA8-107AC**	**$4,900.00**
10	47.8	48.2	48.4	A	0.7	40	77	**UXA10-107AC**	**$5,940.00**
12	49.2	49.6	49.9	A	0.5	40	78	**UXA12-107AC**	**$8,094.00**

H. Ultra High Performance, 10.7-11.7 GHz Dual Polarization, CPR90G

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	**RFS P/N**	**PRICE EACH**
4	40.0	40.4	40.8	A	1.5	40	70	**UXA4-107AC**	**$2,408.00**
6	43.5	43.8	44.3	A	1.1	40	73	**UXA6-107AC**	**$3,900.00**
8	45.9	46.2	46.7	A	0.8	30	75	**UDA8-107AC**	**$4,900.00**
10	47.8	48.2	48.4	A	0.7	30	77	**UDA10-107AC**	**$5,940.00**
12	49.2	49.6	49.9	A	0.5	30	78	**UDA12-107AC**	**$8,094.00**

I. High Performance, 17.7-19.7 GHz, Singal Polarization, UG595/U Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	**RFS P/N**	**PRICE EACH**
8	49.9	50.3	50.8	A	0.45	30	74	**DA8-190AZ**	**$3,498.00**

J. High Performance, 17.7-19.7 GHz, Super, Dual Polarization, UG595/U Input Flange

Diameter in Feet	Gain–DB Bottom	Gain-DB Mid Band	Gain-DB Top	FCC Category	Beam Width °s	Cross Pol Disc. DB	F/B Ratio DB	**RFS P/N**	**PRICE EACH**
1	32.7	33.3	33.8	-	3.4	30	55	**SBX1-190AZ**	**$379.20**
2	37.8	38.3	38.7	A	1.9	36	66	**UXA2-190BZ**	**$1,910.00**
4	44.0	44.5	44.9	A	1.0	36	72	**UXA4-190BZ**	**$2,408.00**
6	47.5	48.0	48.4	A	0.7	36	76	**UXA6-190AZ**	**$3,900.00**

Radio Frequency System – Phase II

Radomes PRICING

Radome Type	Diameter in Feet	Attenuation 2 GHz	Attenuation 6 GHz	Attenuation 11 GHz	Attenuation 18 GHz	**RFS P/N**	**PRICE EACH**
Standard	2.0	0.10 dB	0.30dB	.9dB	2.0db	**RANDOME_2**	**$184.80**
Standard	4.0	0.10 dB	0.30dB	1.0dB	2.0db	**RANDOME_4**	**$285.60**
Standard	6.0	0.10 dB	0.40dB	1.0dB	2.1db	**RANDOME_6**	**$393.60**
Standard	8.0	0.10 dB	0.50dB	1.1dB	--	**RANDOME_8**	**$621.60**
Standard	10.0	0.20dB	0.80dB	1.5dB	--	**RANDOME_10**	**$912.00**

Transmission Line PRICING

Transmission line or COAXIAL cable will be will be available according to the sizes listed below:

SIZE	DESCRIPTION	**PRICE per foot**
½”	Diameter Foam Dielectric Coaxial Cable	**$.93**
7/8”	Diameter Foam Dielectric Coaxial Cable	**$2.13**
1-1/4”	Diameter Foam Dielectric Coaxial Cable	**$4.14**
7/8”	Diameter Air Dielectric Coaxial Cable	**$3.20**
1-5/8”	Diameter Foam Dielectric Coaxial Cable	**$5.28**
¼”	Diameter Super Flexible Foam Dielectric Coaxial Cable	**$.61**
½”	Diameter Super Flexible Foam Dielectric Coaxial Cable	**$1.36**

Elliptical and Rigid waveguide will be supplied according to the sizes and/or frequency band listed below:

TYPE	RANGE		**PRICE per foot**
Elliptical Waveguide for	5.925 – 7.125 GHz	**E65**	**$6.01**
Rigid Waveguide for	5.925 – 7.125 GHz		**$N/A**
Elliptical Waveguide for	10.70 – 11.70 GHz	**E105**	**$5.42**
Ridid Waveguide for	10.7 – 11.70 GHz		**$N/A**
Elliptical Waveguide for	17.70 – 19.70 GHz	**E185**	**$3.89**
Rigid Waveguide for	17.70 – 19.70 GHz		**$N/A**
Elliptical Waveguide for	21.20 – 23.60 GHz	**E220**	**$3.50**
Rigid Waveguide for	21.20 – 23.60 GHz		**$N/A**

Radio Frequency System – Phase II

Connectors PRICING

Connectors for Foam

½" Connector	**Price Each**	**7/8" Connector**	**Price Each**	**1-¼' Connector**	**Price Each**	**1-5/8 Connector**	**Price Each**	**¼" Super Flexible Connetor**	**Price Each**	**½" Super Flexible Connector**	**Price Each**
"N" Male	**$14.46**	"N" Male	**$18.94**	"N" Male	**$58.98**	"N" Male	**$83.34**	"N" Male	**$15.75**	"N" Male	**$14.67**
"N" Female	**$14.46**	"N" Female	**$18.94**	"N" Female	**$58.98**	"N" Female	**$83.34**	"N" Female	**$10.82**	"N" Female	**$12.78**
UHF Male	**$18.20**	UHF Male	**$25.90**	UHF Male	**N/A**	UHF Male	**N/A**	UHF Male	**$20.41**	UHF Male	**$14.63**
UHF Female	**$18.20**	UHF Female	**$25.90**	UHF Female	**NA/**	UHF Female	**NA/**	DIN Male	**$17.15**	DIN Male	**$14.67**
7/16 DIN Male	**$14.46**	7/16 DIN Male	**$18.94**	7/16 DIN Male	**$58.98**	7/16 DIN Male	**$83.34**	DIN Female	**$20.48**	DIN Female	**$14.67**
7/16 DIN Female	**$14.46**	7/16 DIN Female	**$18.94**	7/16 DIN Female	**$58.98**	7/16 DIN Female	**$83.34**	DIN Male Right Angle	**N/A**	DIN Male Right Angle	**$20.79**
7/8" EIA	**$41.02**	7/8" EIA	**$42.42**	7/8" EIA	**$84.70**	7/8" EIA	**$121.28**				

7/8" Connectors for Air Dielectric

TYPE	**PRICE EACH**
"N" Male **738247**	**$43.75**
"N" Female **738226**	**$41.65**
7/8" EIA Flange **738229 (GB) OR 738230 (GB)**	**$68.25 (GB) $ 46.20 (GP)**

Connectors for Waveguide

DESCRIPTION	**RFS P/N**	**PRICE EACH**
EWP 63, Tunable, CPR and EW 63, Standard, CPR 137G	**C137-065TG Tunable** **C137-065FG Standard**	**$112.00** **$99.75**
EWP 90, Tunable, CPR and EW 90, Standard, CPR 90G	**C90-105TG Tunable** **C90-105FG Standard**	**$119.00** **$108.50**
EWP 180, Tunable, UG595/U and EW 180, Standard, UG595/U	**G595-185TG Tunable**	**$120.75**
EW 220, Fixed Tuned	**B220-220FP PBR FLANGE PLAST 2000 SEAL**	**$87.50**

Radio Frequency System – Phase II

Dehydrators

Flow Rate SCFM	Pressure PSIG	Dew Point	Recom. Volume ft^3	Type	Voltage	Power	Alarms	RFS P/N	Price
0.9	3-8	-33	0-10	D	115 VAC	230	none	SPD-10	**$553.90**
0.05	5	-50	0-20	M	115 Vac	184	LP	APD-20	**$1,046.90**
0.05	5	-50	0-20	M	115 Vac	184	Full	APD-20W/ALARMS*	**$2,162.38**
0.2	5	-50	0.01-60	M	115/230 Vac	350/390	LP	APD-22	**$1,191.90**
0.2	5	-50	0.01-60	M	115 Vac	350-550	LP	APD-20	**$1,046.90**
0.2	5	-50	0.01-60	M	115 Vac	350-550	LP	APD-20	**$1,046.90**
0.3	3-8	-50	2-80	M	115 Vac	390	LP	APD-20	**$1,046.90**
0.3	3-8	-50	2-80	M	115 Vac	390	LP	APD-20	**$1,046.90**
0.3	3-8	-50	2-80	M	115 Vac	390	Full	APD-20 W/ALARMS*	**$2,162.38**
0.3	3-8	-50	2-80	M	115	390	Full	APD-20 W/ALARMS*	**$2,162.38**

*Run Time Alarm Kit is P/N 914976 *Pressure & Humidity Alarm is P/N 920717-001

Radio Frequency System – Phase II

Spread Spectrum

A. Welded Grid Antenna. 2300-2500 MHz "Spread Spectrum" Type "N" Female Input connector or 7/8" EIA Flange

Diameter in Feet	Gain – DB Bottom	Gain – DB Mid Band	Gain – DB Top	Beamwidth Degrees	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	26.8	27.0	27.2	7.0	32	1.35	**MGAR4-23N**	**$522.50**
6.0	29.6	30.1	30.4	4.5	38	1.35	**MGAR6-23N**	**$940.50**
8.0	32.0	32.4	32.8	3.4	41	1.35	**GKLR8-23N**	**$1,441.00**
10.0	33.9	34.3	34.6	2.7	45	1.35	**GKLR10-12N**	**$1,881.00**
12.0	36.0	36.4	36.7	2.6	47	1.35	**GKAR12-23N**	**$2,992.00**
15.0	38.1	38.6	39.1	1.9	48	1.35	**NO BID**	**$**

B. Solid Parabolic Reflector Standard Antenna, 2290-2450 MHz, "Spread Spectrum" Type "N" Female Input Connector or 7/8" EIA Flange.

Diameter in Feet	Gain – DB Bottom	Gain – DB Mid Band	Gain – DB Top	Beamwidth Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
4.0	26.7	27.1	27.3	6.9	25	36	1.3	**SPF4-23AJ**	**$720.00**
6.0	30.2	30.6	30.9	4.6	25	39	1.1	**SPF6-23AJ**	**$852.00**
8.0	32.9	33.3	33.3	3.5	30	40	1.1	**PAF8-23AE**	**$1,430.40**
10.0	34.9	35.2	35.3	2.8	30	43	1.1	**PAF10-23AE**	**$2,112.00**
12.0	36.5	36.8	37.2	2.3	30	45	1.1	**PAF12-23AE**	**$3,686.40**

C. Solid Parabolic Reflector Standard Antenna, 5725-5850 MHz, "Spread Spectrum" CPR 137G Flange

Diameter in Feet	Gain – DB Bottom	Gain – DB Mid Band	Gain – DB Top	Beamwidth Degrees	Cross Pol Disc. DB	F/B Ratio DB	VSWR	**RFS P/N**	**PRICE EACH**
2.0	27.4	27.9	28.4	6.2	25	34	1.5	**SPF2-52AN**	**$408.00**
3.0	30.9	31.4	31.9	4.2	25	38	1.5	**SPF3-52AN**	**$669.60**
4.0	33.4	33.9	34.4	3.1	28	40	1.5	**SPF4-52AN**	**$739.20**
6.0	37.0	37.4	37.9	2.1	30	44	1.5	**SPF6-52AN**	**$936.00**

Radio Frequency System – Phase II

Accessory price discount off manufacturer price list

Discount off Manufacturer Price List: See Below for rate

RADIO FREQUENCY SYSTEMS, INC.

PURCHASE DISCOUNTS

FOR

STATE OF WASHINGTON
AND OTHER WSCA STATES

Phase I

High Performance Microwave Antennas		60%
Standard Performance Microwave Antennas		52%
Grid Microwave Antennas		45%
Flexwell® Elliptical Waveguide	65%	
Flexwell® Elliptical Waveguide Connectors		65%
Flexwell® Elliptical Waveguide Accessories	65%	
CELLFLEX® LCF Foam Dielectric Coaxial Cables		65%
CELLFLEX® LCF Coaxial Cable Connectors	65%	
CELLFLEX® Installation Accessories	65%	
Flexwell® Air Dielectric Coaxial Cables		60%
Pressurization Equipment		42%

Note: All pricing is FOB Destination with full standard surface freight allowed.

Per Section 32.a. of the RFP, Radio Frequency Systems is also offering a contractual project discount of three percent (3%) off the total value for any single purchase order or combination of purchase orders over $100,000, submitted at one time by a purchasing entity, or multiple entities, conducting a cooperative purchase for delivery.

The above discounts shall be applied to the prices listed in the most current
Radio Frequency Systems published price list and are subject to annual review.

7/24/03

Price List Dated 2003 included with all binders.

Radio Frequency System – Phase II
RADIO FREQUENCY SYSTEMS, INC.

Volume Discount Program - Phase 1 and Phase 2 all categories
The volume discount will be cumulative and over the term of the contract.
(Initial Term of Three [3] Years)

Additional Discount off Net Contract Unit Price	Cumulative Total Sales from:	Cumulative Total Sales to:
1.0%	$ 5,000,000	$ 9,999,999
2.5%	$ 10,000,000	$ 14,999,999
3.5%	$ 15,000,000	$ 19,999,999
5.0%	$ 20,000,000	$ 29,999,999
6.0%	$ 30,000,000	$ 39,999,999
7.0%	$ 40,000,000	$ 49,999,999
7.5%	$ 50,000,000	$ 59,999,999
8.0%	$ 60,000,000	$ 69,999,999
8.5%	$ 70,000,000	$ 79,999,999
9.0%	$ 80,000,000	$ 89,999,999
9.5%	$ 90,000,000	$ 99,999,999
10.0%	$100,000,000	$ 100,000,000+

Relm (King)

Contractor:	**RELM (King)**		
Contact:	Shari Sharp	**Alternate Contact:**	Roberta Gran
Phone:	321-953-7952		321-953-7703
Fax:	321-676-4403		800-704-3177
Email:	ssharp@relm.com		robgran@relm.com
Internet address:	www.relm.com		
Web catalog address:	www.relm.com		
Federal ID No.:	59-3486297		
Supplier No.:	6391		
Total Contract worth:			
Payment address:	RELM Wireless Corporation Dept. AT 952187 Atlanta, GA 31192-2187	**Order placement address**:	7100 Technology Dr W Melbourne FL 32904
Customer Service:	Roberta Gran		
Telephone:	800-821-2900		
Fax:	800-704-3177		
Ordering procedures:	Call 800-821-2900 (Order Entry @ RELM), E-mail robgran@relm.com or Fax hard copy purchase order to 800-821-2900 All w/ contract #02702 referenced.		
Credit card acceptance:	Visa, MasterCard, Discover & American Express		
Minimum orders:	N/A		
Delivery time:	60 Days ARO		
Payment terms:	0% 30 Days		
Shipping destination:	Free on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	YES		
Category			
Equipment Line items			
Link to Equipment Specifications	www.relm.com		
Link to Price Sheets			
Awarded Phase(s)	Phase I		

Relm (King)

CGS DEALERS FOR WSCA CONTRACT

REP	CGS Name	City	State	Contact	Telephone	
PMG	Cherrington Communications	Phoenix	AZ	Mike Cherrington	623 780-8242	chercom@cox.ne
PMG	Procomm	Phoenix	AZ	Randy Power	602 674-3000	rlpower@wedoradios.cor
Sales Group	Nida Communications	La Cresenta	CA	Kevin Nida	818 957-1248	krnida@krnida.cor
Sales Group	49er Communications	Nevada City	CA	Holley Masch	530 477-2590	Hmasch@49ercom.cor
Sales Group	Vincent Communications	Fresno	CA	Jim Vincent	559 292-7010	jvincent@vincentcom.cor
Sales Group	Timberline Communications	Pioneer	CA	Warren Kocker	209 295-4940	timberline@volcano.ne
Sales Group	Silverado Avionics	Napa	CA	Bob Samo	707 255-5588	rsamo@silveradoavionics.cor
Sales Group	Applied Technology	Bakersfield	CA	Steve Grove	661 322-8650	sgrove@atg1.cor
Sales Group	Diamond Fire Resources	Banning	CA	Jim Butler	909 849-7447	dfrinc@hotmail.cor
Sales Group	Valley Industrial Comm.	Redding	CA	Eric Marler	530 241-6025	eric@valleyindustrial.cor
PMG	Two Way Comm., Inc.	Grand Junction	CO	Denny Eschlmann	970 243-9823	tcigj@ac
PMG	Wideband Comm.	Denver	CO	Mike Hunziker	303 300-9539	mikeh@colowideband.cor
Alster/TK	Intermountain Communications	Mountain Home	ID	Jeff Berger	208-587-7122	jeff.berger@att.ne
Alster/SS	Bridger Communications	Bozeman	MT	Jeff Tong	406 587-5080	brcomm@imt.ne
Alster/SS	Stine Electronics	Seeley Lake	MT	Bob Stine	406 677-2148	slk2948@blackfoot.ne
Alster/SS	Comm Shop	Kalipell	MT	Tom Witham	406 756-6938	commshop@centurytel.ne
Alster/SS	Vancomm Ent. LLC	Great Falls	MT	Bob VanLuchene	406 727-2085	bobv@fgn.ne
PMG	Advanced Comm. & Elect.	Albuq.	NM	Tom Whaley	505 244-3321	twhaley@advtwoway.cor
Sales Group	Lambda Communications	Winnemucca.	NV	Sheila Crawford-Bunch	775 623-0202	sbunch@lambdacom.cor
Alster/TK	Slater Communications	Salem	OR	Stu Slater	503-399-7010	sce@wvi.cor
Alster/TK	MyComm	Eugene	OR	Craig Myers	541-686-1873	mycominc@aol.cor
Alster/TK	Mike's Two-Way	Milton-Freewater	OR	Mike Greer	541-938-5183	mgreer@bmi.ne
Alster/TK	Cascade Telecom	Klamath Falls	OR	Roger Brown	541-883-3322	ctel@cascadetele.cor
PMG	Dwyer Comm	Murray	UT	Wayne Dwyer	801 263-8758	wayne@dwyerscommunications.cor
Alster/KT	Action Communications	Everett	WA	Perry Wheeler	425-486-9121	actcominc@mindspring.cor
Alster/KT	Pacific Electronics	Lacey	WA	Gary Palmer	360-459-5212	palmg@pacificelectronicsinc.cor
Alster/KT	Sine Communications	Tacoma	WA	Reggie Hesse	253-475-9430	rdhesse@earthlink.ne
Alster/KT	Wiztronics	Bellingham	WA	Bob Baker	360-733-5560	rpbaker@unidial.cor
Alster/PM	Tom Ferri	Fairbanks	WA	Tom Ferri	907-457-1560	tomferri@mosquitonet.cor
Alster/TP	Advanced Paging	Spokane	WA	Del Blaine	509-456-5102	delblaine@brandxwireless.cor
Alster/TP	Business Radio	Kennewick	WA	Bill Holesworth	509-783-9592	radioman@bizrad.cor
Alster/TP	Quality Mobile	Vanouver	WA	Nick Raurk	360-254-9505	nbruark@qualitymobile.cor

lanufactures Representatives: **Alster Communications - 800 365-1272 Progress Markting Group- 800 368-8165 The Sales Group - 818 222-0880**

Relm (King) – Phase I

Price Sheet

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Base Station	1-4 5-10 11+	EA EA EA	34% 34% 34%
2.		Repeater	1-4 5-10 11+	EA EA EA	34% 34% 34%
3.		Portable Radio	1-49 50+	EA EA	34% 34%
4.		Mobile Radio	1-20 21-100 101+	EA EA EA	34% 34% 34%
5.		Desktop	1-20 21-100 101+	EA EA EA	34% 34% 34%
6.		Console Unit	1-9 10+	EA EA	NA
7.		Support Services	1	HR	NA
8.		Installation Services	1	HR	NA
9.		Repair Services	FLAT RATE	EA	$145.00 GPH/DPH & GMH Flat Rate
10.		Accessories		EA	34%
11.		List other Equipment		EA	34%

Sinclair Technologies

Contractor:	**Sinclair Technologies**		
Contact:	Jeffrey A. Chrastka	**Alternate Contact:**	Bobbie Traina
Phone:	360-893-4963		716-874-3682 x238
Fax:	360-893-4972		716-874-8736
Email:	jchrastka@sinctech.com		btraina@sinctech.com
Internet address:	www.sinctech.com		
Web catalog address:			
Federal ID No.:	16-0845791		
Supplier No.:	30589-1		
Total Contract worth:	$500,000,000.00		
Payment address:	Sinclair Technologies 55 Oriskany Dr Tonawanda, NY 14150	**Order placement address**:	Sinclair Technologies 55 Oriskany Dr Tonawanda, NY 14150
Customer Service:	Arlene Gerfin		
Telephone:	716-874-3682 x243		
Fax:	716-874-8736		
Ordering procedures:			
Credit card acceptance:	(NONE SPECIFIED, BUT ANSWERED YES THEY ACCEPT THEM)		
Minimum orders:			
Delivery time:	30 days After Receipt of Order (ARO)		
Payment terms:	1% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category			
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I		

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Support Services	Hourly	EA	$
2.		Installation Services	Hourly	EA	$
3.		Repair Services	Hourly	EA	$
4.		Accessories		EA	
5.		List other Equipment			
6.		**Cavity Ferrite Tx Combiners** Brand/Model: **CT & TJ Series (Catalog pg. 52-53)**		EA	35%
7.		**Excaliber Mobile Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **Excal Series (Catalog pg. 43-45)**		EA	35%
8.		**Cavity Filters** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **FP/FR/FQ Series (Catalog pg. 100-104)**		EA	35%
9.		**Isolators** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **I Series (Catalog pg. 68-69)**			35%
10.		**Mobile Duplexers** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **MR Series (Catalog pg. 96-99)**			35%
11.		**Band Pass Duplexer** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **P Series (Catalog pg. 86)**		EA	35%
12.		**IM Suppression Panels** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **PC Series (Catalog pg. 67)**		EA	35%
13.		**Preselectors** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **FP & PH Series (Catalog pg. 82-83)**		EA	35%

Sinclair Technologies – Phase I

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
14.		**Q-Circuit Base Station Duplexers** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **Q-201G / Q-202G Series (Catalog pg. 89-90)**		EA	35%
15.		**Res-Lok 'Q' Series Duplexers** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **Q Series (Catalog pg. 91-95)**		EA	35%
16.		**Receiver Multicouplers** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **RM Series (Catalog pg. 73-76)**		EA	35%
17.		**Exposed Dipole Array Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL- 110 / 210 / 222 / 224 / 235 / 310 / 335 Series (Catalog pg. 7, 9-12, 17-19)**		EA	35%
18.		**VHF Corner Reflector** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-227 (Catalog pg. 40)**		EA	35%
19.		**Omnidirectional Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-238 (Catalog pg. 8)**		EA	35%
20.		**Yagi Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-206 / SRL-212 / SRL-307 / SRL-406 (Catalog pg. 36, 37, 39)**		EA	35%
21.		**Cellular/Trunking Exposed Dipole Array Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-410 Series (Catalog pg. 21)**		EA	35%

Sinclair Technologies – Phase I

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
22.		**Cellular/Trunking Omnidirectional Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-420 / SRL-480 Series (Catalog pg. 30)**		EA	35%
23.		**Data Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-441 Series (Catalog pg. 46-47)**		EA	35%
24.		**Transmitter Combiners** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **TC Series (Catalog pg. 58-59)**		EA	35%
25.		**Fiberglass Collinear Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-229 / SRL-320 (Catalog pg. 13, 16)**		EA	35%
26.		**Ground Plane Antennas** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **SRL-101 / SRL-301 (Catalog pg. 5, 15)**		EA	35%
27.		**Harmonic Filters** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **AF Series (Catalog pg. 72)**		EA	35%
28.		**Power Monitor/Alarm Systems** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **AMV-6A (Catalog pg. 84)**		EA	35%
29.		**Clamps and Mounting Hardware** Mfg.: **Sinclair Technologies Inc.** Brand/Model: **Clamps (Catalog pg. 118-125)**		EA	35%

SmartLink Radio Networks

Contractor:	SmartLink Radio Networks		
Page number			
Contact:	Joan Wathen	**Alternate Contact:**	Aline Dwyer
Phone:	203-741-5608		203-741-5611
Fax:	203-269-2378		203-236-2378
Email:	jwathen@smrlink.com		adwyer@smrlink.com
Internet address:			
Web catalog address:			
Federal ID No.:	06-1528550		
Supplier No.:	111925		
Total Contract worth:	$500,000,000.00		
Payment address:	SmartLink Radio Networks, Inc. 1269 So. Broad Street Wallingford, CT 06492	**Order placement address**:	SmartLink Radio Networks, Inc. 1269 So. Broad Street Wallingford, CT 06492
Customer Service:	Danielle Bradley		
Telephone:	203-741-5602		
Fax:	203-269-2378		
Ordering procedures:			
Credit card acceptance:	None		
Minimum orders:			
Delivery time:	15 days After Receipt of Order (ARO)		
Payment terms:	0% 30 days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category			
Equipment Line items	Category 4, IP Base Gateway Solution		
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I & II		

Specification

Category 4 IP Base Solution SmartLink

The purpose of this section is to purchase an IT Based solution that has interface adapters for a variety of communications devices and mediums (VHF/UHF radio, telephone or Satcom, HF radio, local operator, etc.). The switch shall consist of a control unit containing all audio and switching circuitry, medium interface connectors, controls and indicators. Accessory adapters for a variety of external communications devices and mediums shall be supported.

SmartLink flexibility and low cost aspects of this solution make it ideal for metropolitan scale internet protocol based solutions. See full list of specifications at: http://www.ga.wa.gov/pca/bids/02702-Phase2-Category4.doc

Price Sheet

3. Required Equipment Quantities

Table 0-1: Summary of Basic Equipment Quantities

	Typical Small System Quantities	Typical Medium System Quantities
Interoperability Operation Center	1	1
System Management Console	1	1
Remote Management Console	See Footnote 1	See Footnote 1
PSTN Interface	6	0
Audio Interface Card	90	186
Audio Interface Chassis	18	34
Optional Dispatch Consoles	4	0
Remote Dispatch Facility (if required)		

1. A dedicated remote console is not required as any PC equipped with the appropriate software may provide remote access to for management or diagnostic purposes the ANP throught a direct, dial-up or LAN connection.

4. PRICING

Bidders shall provide pricing information on the following price forms:

4.1. Basic System Pricing (backbone)

Item	Qty	Equipment Description	Price Each	Price Extended
1	Small	Interoperability Operations Center and Audio Interface Interoperability Solution Pricing		$201,787
	Medium			$547,165
2a	Small	System Management Equipment and Software		$491,910
b	Medium			$1,130,544
3a	Small	Installation		$211,649

SmartLink Radio Networks – Phase II

Item	Qty	Equipment Description	Price Each	Price Extended
b	Medium			$266,929
4	Lot	Training Including:		
	Small	Operator/User		$1,250
	Medium			$1,250
	Small	Technician		$4,000
	Medium			$4,000
	Small	Administrator		$2.000
	Medium			$2,000
	Small	Console		$79,980
	Medium			$19,995
5	Small	Documentation		$14,000
	Medium			$14,000
6	Small	Project Management		$40,000
	Medium			$40,000
7	Small	Project Engineering		$16,000
	Medium			$16,000
8	Small	(Optional) Software Services	Software maintenance will be assessed at 15 to 20% of the SmartLink site and channel license costs billed on an annual basic	
	Medium			
9	Small	(Optional) Maintenance (Basic System)		TBD
	Medium			TBD
10	Small	(Optional) Spare Parts (Basic System)	See section 4 of the bid submittals	
	Medium			
11	Small	(Optional) Test Equipment	See section 4 of the bid submittals	
	Medium			

4.2. Optional System Equipment Pricing

Item	Qty	Equipment Description	Price Each	Price Extended
1	1	Optional Dispatch Equipment		$19,995

Grand Total for Small System	**$1,062,578**
Grand Total for Medium System	**$2,041,883**

Tait North America INC.

Contractor:	**Tait North America, Inc.**		
Contact:	Jack Roche	**Alternate Contact:**	Jerry Bradford
Phone:	949-858-7600		281-829-3300
Fax:	949-635-9086		281-829-3320
Email:	Jack.roche@taitmobile.com		Jerry.bradford@taitmobile.com
Internet address:	www.taitworld.com		
Web catalog address:	www.taitworld.com		
Federal ID No.:	74-2209324		
Supplier No.:	33221		
Total Contract worth:			
Payment and Legal address:	Controller: Tanya Pal 15740 Park Row, #450 Houston TX 77084	**Order placement address**:	Operations Mgr 15740 Park Row, #450 Houston TX 77084
Customer Service:	Logistic & order processing Dept		
Telephone:	281-829-3300		
Fax:	281-829-3320		
Ordering procedures:			
Credit card acceptance:	Visa, MasterCard		
Minimum orders:	None		
Delivery time:	30 Days ARO		
Payment terms:			
Shipping destination:	Free on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:			
Category			
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I		

Tait North America INC. – Phase I

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Base Station TB800 II Series	1-4 5-10 11+	EA EA EA	25% 25% 25%
1a		Base Station TB8000	1-4 5-10 11+	EA EA EA	15% 17% 22%
2.		Repeater T800 II	1-4 5-10 11+	EA EA EA	25% 25% 25%
2a		Repeater TB8000	1-4 5-10 11+	EA EA EA	10% 12% 15%
3.		Portable Radio	1-49 50+	EA EA	25% 25%
4.		Mobile Radio	1-20 21-100 101+	EA EA EA	25% 25% 25%
5.		TB8100 Products	1	EA	25%
6.		Support Services (excluding travel & accommodation) Training costsper student per hour During office hours Outside office hours	 1 1 1	 HR HR HR	 $85.00 $85.00 $150.00
7.		Repair Services During office hours Outside office hours	 1 1	 HR HR	 $85.00 $150.00
8.		Accessories All accessories Items for radio in Tait North America Inc WSCA price book	1	EA	20%
9.		List other Equipment All other items in the Tait North America Inc WSCA price book, except equipment for items above	1	EA	20%

Vertex

Contractor:	**Vertex**		
Contact:	Jim Driscoll	**Alternate Contact:**	Scott Henderson
Phone:	508-435-3905		714-827-7600
Fax:	508-435-0525		714-827-8100
Email:	j.driscoll@vxstdusa.com		s.henderson@vxstdusa.com
Internet address:	http://www.vxstd.com		
Web catalog address:	http://www.vxstd.com		
Federal ID No.:	95-2815202		
Supplier No.:	1573		
Total Contract worth:	$500,000,000.00		
Payment address:	Vertex Standard PO Box 31001-1624 Pasadena, CA 91110-1624	**Order placement address**:	Vertex Standard 10900 Walker Street Cypress, CA 90630
Customer Service:	Tofu Leiatauna		
Telephone:	800-283-7839		
Fax:	800-477-9237		
Ordering procedures:	Contact Customer Service		
Credit card acceptance:	Visa, MasterCard		
Minimum orders:	None		
Delivery time:	30 days After Receipt of Order (ARO)		
Payment terms:	Net 30 Days		
Shipping destination:	Freight on Board (FOB) destination		
Freight:	Prepaid and included		
Palletization:	N/A		
Category	Category 1, Radio Equipment		
Equipment Line items			
Link to bid Specifications			
Link to Price Sheets			
Awarded Phase(s)	Phase I		

Vertex – Phase I

Req. Item	Comm. Code	Description	Qty	Unit	Percentage off Mfg List Price
1.		Base Station	1-4 5-10 11+	EA EA EA	28% 28% 28%
2.		Repeater	1-4 5-10 11+	EA EA EA	28% 28% 28%
3.		Portable Radio	1-49 50+	EA EA	28% 28%
4.		Mobile Radio	1-20 21-100 101+	EA EA EA	28% 28% 28%
5.		Desktop	1-20 21-100 101+	EA EA EA	28% 28% 28%
6.		Support Services	1	HR	$75.00
7.		Installation Services	1	HR	$75.00
8.		Repair Services	1	HR	$75.00
9.		Accessories		EA	28%
10.		List other Equipment All products on our enclosed retail price list		EA	28%
11.		List other Equipment		EA	
12.		List other Equipment		EA	

PERFORMANCE REPORT FOR
PURCHASING & CONTRACT ADMINISTRATION

To OSP Customers:
Please take a moment to let us know how our services have measured up to your expectations on this contract. Please copy this form locally as needed and forward to the Office of State Procurement Purchasing Manager. For any comments marked unacceptable, please explain in remarks block.

Procurement services provided:	**Excellent**	**Good**	**Acceptable**	**Unacceptable**
Timeliness of contract actions	☐	☐	☐	☐
Professionalism and courtesy of staff	☐	☐	☐	☐
Services provided met customer needs	☐	☐	☐	☐
Knowledge of procurement rules and regulations	☐	☐	☐	☐
Responsiveness/problem resolution	☐	☐	☐	☐
Timely and effective communications	☐	☐	☐	☐

Comments: _____

_____

_____

Agency: _____ Prepared by: _____

Contract No.: 02702 Title: _____

Contract Title: _____ Date: _____

Phone: _____

Send to:

Purchasing Manager
Office of State Procurement
PO Box 41017
Olympia, Washington 98504-1017

PERFORMANCE REPORT FOR
CONTRACTOR PRODUCT/SERVICE

Complete this form to report problems with suppliers or to report unsatisfactory product or services. You are also encouraged to report superior performance. Agency personnel should contact suppliers in an effort to resolve problems themselves prior to completion and submission of this report.

Contract number and title: **WSCA Public Safety Communication Contract**

Supplier's name: _____ Supplier's representative: _____

PRODUCT/SERVICE

- ☐ Contract item quality higher than required
- ☐ Contract item quality lower than required.
- ☐ Damaged goods delivered
- ☐ Item delivered does not meet P.O./contract specifications
- ☐ Other:

SUPPLIER/CONTRACTOR PERFORMANCE

- ☐ Late delivery
- ☐ Incorrect invoice pricing.
- ☐ Other:
- ☐ Slow response to problems and problem resolution
- ☐ Superior performance

CONTRACT PROVISIONS

- ☐ Terms and conditions inadequate
- ☐ Specifications need to be revised
- ☐ Other:
- ☐ Additional items or services are required.
- ☐ Minimum order too high.

Briefly describe situation: _____

Agency Name:		Delivery Location:	
Prepared By:	Phone Number:	Date:	Supervisor:
Address:	Email:		

Send To:

GUY CRANOR
STATE PROCUREMENT OFFICER
OFFICE OF STATE PROCUREMENT
PO BOX 41017
OLYMPIA WA 98504-1017