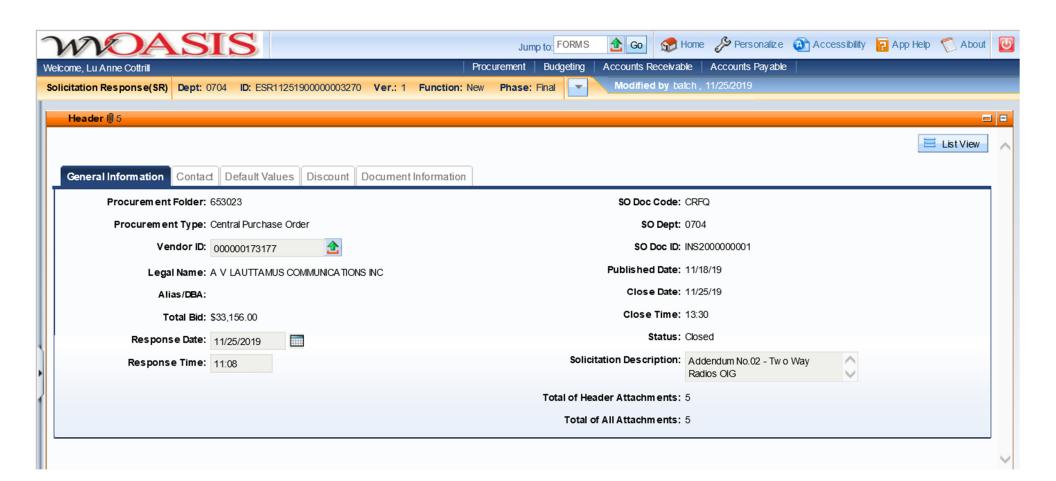


2019 Washington Street, East Charleston, WV 25305 Telephone: 304-558-2306 General Fax: 304-558-6026

Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.





## State of West Virginia Solicitation Response

Proc Folder: 653023

Solicitation Description: Addendum No.02 - Two Way Radios OIG

Proc Type: Central Purchase Order

Date issued So	olicitation Closes	Solicitation Response		Version
	2019-11-25 13:30:00	SR (	0704 ESR11251900000003270	1

VENDOR

000000173177

A V LAUTTAMUS COMMUNICATIONS INC

Solicitation Number: CRFQ 0704 INS2000000001

**Total Bid :** \$33,156.00 **Response Date:** 2019-11-25 **Response Time:** 11:08:45

**Comments:** 

FOR INFORMATION CONTACT THE BUYER

Brittany E Ingraham (304) 558-2157 brittany.e.ingraham@wv.gov

Signature on File FEIN # DATE

All offers subject to all terms and conditions contained in this solicitation

Page: 1 FORM ID: WV-PRC-SR-001

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Two Way Mobile Radios	22.00000	EA	\$1,275.000000	\$28,050.00

Comm Code	Manufacturer	Specification	Model #	
43191510				

Extended Description: 3.1.1 Two-way mobile radios must be SIRN level 2

Comments: Price includes a \$85.00 rebate per radio

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Two Way Handheld Radios	2.00000	EA	\$1,332.000000	\$2,664.00

Comm Code M	Manufacturer	Specification	Model #		
43191510					
Extended Description: 3.1.2 Two-way handheld radios must be SIRN level 2					

Comments: Price Includes a \$85.00 rebate per radio

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Two Way Base Station Radio	1.00000	EA	\$1,430.000000	\$1,430.00

Comm Code	Manufacturer	Specification	Model #	
43191510				

Extended Description: 3.1.3 Two-way Base Station radio must be SIRN level 2

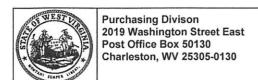
Comments: Price includes a \$85.00 rebate & power supply

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Wide Band Mobile Antenna	22.00000	EA	\$46.000000	\$1,012.00

Model #	Specification	Manufacturer	Comm Code
			43221706
			10221100

Extended Description :

3.1.4 Wide Band Mobile Antenna PCTEL Maxrad BMWU4002S or Equal.



#### State of West Virginia Request for Quotation 27 — Miscellaneous

Proc Folder: 653023

Doc Description: Addendum No.02 - Two Way Radios OIG

Proc Type: Central Purchase Order

Date Issued	e Issued Solicitation Closes Solicitation No			Version
2019-11-18	2019-11-25 13:30:00	CRFQ 0704	INS2000000001	3

**BID RECEIVING LOCATION** 

**BID CLERK** 

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

#### VENDOR

Vendor Name, Address and Telephone Number:

A.V Lauttamus Communications Todd Wotring Senior Account Manager 3007 Fallen Oak Road Morgantown WV 26508

FOR INFORMATION CONTACT THE BUYER

Brittany E Ingraham (304) 558-2157

brittany.e.ingraham@wv.gov

Signature X Todd Wot

FEIN# 31-1416652

DATE 11/25/19

All offers subject to all terms and conditions contained in this solicitation

Page: 1

FORM ID: WV-PRC-CRFQ-001

#### ADDITIONAL INFORMATION:

#### Addendum

Addendum No.02 issued to publish and distribute the attached to the vendor community.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### Request for Quotation

The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Offices of the Insurance Commissioner to establish a contract for the one-time purchase of two way radios, twenty-two (22) mobile units, two (2) hand held units, one (1) base station, and twenty-two (22) each wideband antennas, per the bid requirements, specifications, terms and conditions attached to this solicitation.

ANY RADIOS SUBMITTED BY THE VENDOR ON THE PRICING PAGES MUST BE CURRENTLY APPROVED by the STATEWIDE INTEROPERABLE EXECUTIVE COMMITTEE In accordance with Governor's Executive Order 2-1.

For a list of approved radios for use on the Statewide Interoperable Radio Network (SIRN), visit http://www.sirn.wv.gov/information/downloads/Pages/default.aspx. The list is attached to this RFQ as Attachment A.

INVOICE TO		SHIP TO			
ACCOUNTS PAYABLE MA	ANAGER				
OFFICES OF THE INSURANCE COMMISSIONER PO BOX 50540		OFFICES OF THE INSURA 900 PENNSYLVANIA AVE	OFFICES OF THE INSURANCE COMMISSIONER 900 PENNSYLVANIA AVE		
CHARLESTON	WV25305-0540	CHARLESTON	WV 25302		
US		US			

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Two Way Mobile Radios	22.00000	EA	\$1,275.00	\$28,050.00

Comm Code	Manufacturer	Specification	Model #	
43191510	Kenwood	Meets All Specs	NX-5800	

#### **Extended Description:**

3.1.1 Two-way mobile radios must be SIRN level 2

#### Price Above Includes a \$85.00 Rebate Per Radio

INVOICE TO		SHIP TO			
ACCOUNTS PAYABLE MA	ANAGER				
OFFICES OF THE INSUR	ANCE COMMISSIONER	OFFICES OF THE INSURANCE	OFFICES OF THE INSURANCE COMMISSIONER		
PO BOX 50540		900 PENNSYLVANIA AVE	900 PENNSYLVANIA AVE		
CHARLESTON	WV25305-0540	CHARLESTON	WV 25302		
US		US			

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Two Way Handheld Radios	2.00000	EA	\$1,332.00	\$2,664.00

Comm Code	Manufacturer	Specification	Model #	
43191510	Kenwood	Meets All Specs	NX-5300	

#### **Extended Description:**

3.1.2 Two-way handheld radios must be SIRN level 2

Price Above Includes a \$85.00 Rebate Per Radio

INVOICE TO		SHIP TO	
ACCOUNTS PAYABLE MA	NAGER		
OFFICES OF THE INSURA PO BOX 50540	ANCE COMMISSIONER	OFFICES OF THE INSURA 900 PENNSYLVANIA AVE	
CHARLESTON	WV25305-0540	CHARLESTON	WV 25302
us		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price	
3	Two Way Base Station Radio	1.00000	EA	\$1,430.00	\$1,430.00	

Comm Code	Manufacturer	Specification	Model #	
43191510	Kenwood	Meets All Specs	NX-5800	

**Extended Description:** 

Price Above Includes a \$85.00 Rebate Per Radio

3.1.3 Two-way Base Station radio must be SIRN level 2

Also includes Power Supply

INVOICE TO		SHIP TO	
ACCOUNTS PAYABLE M.	ANAGER		
OFFICES OF THE INSUR	ANCE COMMISSIONER	OFFICES OF THE INSURANCE COMM	MISSIONER
PO BOX 50540		900 PENNSYLVANIA AVE	
CHARLESTON	WV25305-0540	CHARLESTON	WV 25302
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Wide Band Mobile Antenna	22.00000	EA	\$46.00	\$1,012.00

Comm Code	Manufacturer	Specification	Model #	
43221706	Maxrad	Meets All Specs	BMWU4002S	

#### **Extended Description:**

3.1.4 Wide Band Mobile Antenna PCTEL Maxrad BMWU4002S or Equal.

## SOLICITATION NUMBER: CRFQ INS2000000001 Addendum Number: No.02

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

	]	Modify bid opening date and time
[ 🗸		Modify specifications of product or service being sought
[ 🗸	l	Attachment of vendor questions and responses
[	l	Attachment of pre-bid sign-in sheet
	1	Correction of error

#### **Description of Modification to Solicitation:**

Addendum issued to publish and distribute the attached documentation to the vendor community.

The purpose of this addendum is to:

[ | Other

**Applicable Addendum Category:** 

- 1. Publish modified specifications.
- \*\*Vendors are encouraged to read the revised specifications in their entirety.
- 2. Publish vendor questions and agency responses.

No other changes.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

#### **Terms and Conditions:**

- 1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
- 2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

## ATTACHMENT A

# Two Way Radios CRFQ INS200000001 Vendor Questions and Agency Answers

- Q1.) Does the WV Office of Insurance Commissioner already have installers for the mobile radios, or does this service need to be quoted as well?
- A1.) WVOIC has a contract with the WV State Police to install new radios and to remove the old radios.
- Q2.) For the pricing of the (22) mobile radios, (22) antennas, (2) portable radios, and (1) base station, should I respond and price only the requirements per the bid? Or does the end-user want software, P25 programing, batteries, chargers, install kit, etc., included in the bid price?
- A2.) Please see the revised specifications attached to Addendum No.02. Vendors are encouraged to read the revised specifications in their entirety.

#### **SPECIFICATIONS**

1. PURPOSE AND SCOPE: The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia Offices of the Insurance Commissioner to establish a contract for the one-time purchase of two way radios, twenty-two (22) mobile units, two (2) hand held units, one (1) base station, and twenty-two (22) each wideband antennas.

ANY RADIOS SUBMITTED BY THE VENDOR ON THE PRICING PAGES MUST BE CURRENTLY APPROVED by the STATEWIDE INTEROPERABLE EXECUTIVE COMMITTEE In accordance with Governor's Executive Order 2-1.

For a list of approved radios for use on the Statewide Interoperable Radio Network (SIRN), visit <a href="http://www.sirn.wv.gov/information/downloads/Pages/default.aspx">http://www.sirn.wv.gov/information/downloads/Pages/default.aspx</a>. The list is attached to this RFQ as Attachment A.

- **2. DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
  - **2.1 "Contract Item"** means 22 Mobile two-way radios, 2 each hand held two way radio, one base station two way radio and 22 wideband antennas as more fully described by these specification
  - **2.2 "Pricing Page"** means the pages, contained in wvOASIS, upon which Vendor should list its proposed price for the Contract Items.
  - **2.3 "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
  - **2.4 "Mobile Unit" means** refer to wireless communications systems and devices which are based on radio frequencies, and where the path of communications is movable on either end
  - **2.5 "Handheld" means** more commonly known as a walkie-talkie, is a **handheld radio** transmitter/receiver device used for two-way communication based on shortwave **radio** technology.
  - **2.6 "Wideband antennas" means.** A wideband antenna is one with approximately or exactly the same operating characteristics over a very wide Passband.
  - **2.7 "Trunking" means** is a complex type of computer-controlled two-way radio system that allows sharing of relatively few radio frequency channels among a large group of users.

**2.8 "AES Encryption"** means a symmetric -key block cipher algorithm and U.S Government standard for secure and classified data encryption and decryption. These stands may be found online at: https://www.cscr.nist.gov

#### 3. GENERAL REQUIREMENTS:

- 3.1 Mandatory Contract Item Requirements: Vendor shall provide Agency with the Contract Items listed below. Contract Item must meet or exceed the mandatory requirements listed below.
  - 3.1.1 Two-way mobile radios must be SIRN level 2. Level 2 Radios must meet or exceed the specifications below.
    - **3.1.1.1** Two-way mobile Radios must have an operational frequency range of 400-470MHZ
    - **3.1.1.2** Two-way mobile radios must be capable of AES Encryption with multi key.
    - **3.1.1.3** Two-way mobile radios must have a minimum of 512 channels.
    - **3.1.1.4** Two-way mobile radio must be capable of mixing conventional and Trunking in the same zone.
    - **3.1.1.5** Two-way mobile radio must be capable of Scanning Conventional Trunking in Same List.
    - 3.1.1.6 Two-way mobile radio must be P-25 compliant
    - **3.1.1.7** Two-way mobile radio must have the latest version of firmware.
    - **3.1.1.8** Two-way mobile radio must include installation kit for the model radio being bid.
    - **3.1.1.9** Two-way mobile must include the necessary software for operation.
    - **3.1.1.10** All equipment must be new and factory sealed. Refurbished equipment will not be accepted. Proof of authorization may be required.
  - 3.1.2 Two-way handheld radios must be SIRN level 2. Level 2 Radios must or meet exceed the specifications below.
    - **3.1.2.1** Two-way Handheld Radios must have an operational frequency range of 400-470MHZ.

- **3.1.2.2** Two-way handheld radios must be capable of AES Encryption with multi key.
- **3.1.2.3** Two-way Handheld radios must have a minimum of 512 channels.
- **3.1.2.4** Two-way Handheld radio must be capable of mixing conventional and Trunking in the same zone.
- **3.1.2.5** Two-way Handheld radio must be capable of Scanning Conventional Trunking in Same List.
- 3.1.2.6 Two-way Handheld Radio must be P-25 compliant
- 3.1.2.7 Two-way Handheld Radio must have the latest version of firmware
- **3.1.2.8** Two-way mobile must include the necessary software for operation
- **3.1.2.9** Two-way Handheld Radio must include battery and chargers for the model radio being bid.
- **3.1.2.10** All equipment must be new and factory sealed. Refurbished equipment will not be accepted. Proof of authorization may be required.
- 3.1.3 Two-way Base Station radio must be SIRN level 2. Level 2 Radios must or meet exceed the specifications below.
  - **3.1.3.1** Two-way Base Station Radio must have an operational frequency range of 400-470MHZ.
  - **3.1.3.2** Two-way Base Station Radio must be capable of AES Encryption with multi key.
  - **3.1.3.3** Two-way Base Station Radio must have a minimum of 512
  - **3.1.3.4** Two-way Base Station Radio must be capable of mixing conventional and Trunking in the same zone.
  - **3.1.3.5** Two-way Base Station Radio must be capable of Scanning Conventional Trunking in Same List.
  - **3.1.3.6** Two-Way Base Station Radio must be P-25 compliant
  - **3.1.3.7** Two-Way Base Station Radio must have the latest version of firmware

- **3.1.3.8** Two-way mobile must include the necessary software for operation.
- **3.1.3.9** All equipment must be new and factory sealed. Refurbished equipment will not be accepted. Proof of authorization may be required.

#### 3.1.4 Wide Band Mobile Antenna PCTEL Maxrad BMWU4002S or Equal

- **3.1.4.1** Must be able to cover the frequency MHZ between 380-520
- 3.1.4.2 Must have a usable band of 140 MHZ
- **3.1.4.3** All equipment must be new and factory sealed. Refurbished equipment will not be accepted. Proof of authorization may be required.

#### 4. CONTRACT AWARD:

- **4.1 Contract Award:** The Contract is intended to provide Agencies with a purchase price for the Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest Total Bid Amount as shown on the Pricing Pages.
  - **4.1.1** Vendor should include with their bid a copy of any Software Terms and Conditions or licenses that the State of West Virginia or the Agency will have to agree or accept as a part of this solicitation. **This information will be required before Purchase Order is issued.**
  - **4.1.2** Vendor should include a copy of Maintenance Terms and Conditions or Licenses that the State of West Virginia or the Agency will be required to agree or accept as a part of this solicitation. **This information will be required before the Purchase Order is issued.**
- **4.2 Pricing Page:** Vendor should complete the Pricing Page by inserting a Unit Price for each item. Unit Price should be multiplied (x) by the Quantity to equal (=) the Extended Cost. Vendor should complete the Pricing Page in full as failure to complete the Pricing Page in its entirety may result in Vendor's bid being disqualified.

Vendors who wish to respond to a centralized Request for Quotation (CRFQ) online may submit information through the state's wvOASIS vendor self-service (VSS). If unable to respond online, vendor must submit their pricing page with their submitted bid prior to the scheduled bid opening date.

Vendor should electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. Vendor can download the electronic copy of the Pricing Pages from the wvOASIS Vendor Self-Service (VSS) website. If responding with a paper bid, Vendors should download and/or print the assembled CRFQ document (with the highest version number) from wvOASIS and insert their unit price and extended cost for each line item.

## 4.2.1 <u>If the Vendor is submitting an or 'or Equal,' this information including</u> Brand and Model Number must be submitted with their bid submission.

Any product brochures to support vendor's product should be submitted with vendor's bid response. Vendor should identify those sections where product meets required specifications. These brochures and any supporting documentation may be required before award of contract.

#### 5. PAYMENT:

**5.1 Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

#### 6. DELIVERY AND RETURN:

6.1 Shipment and Delivery: Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order or notice to proceed. Vendor shall deliver the Contract Items within fourteen (14) working days after receiving a purchase order or notice to proceed. Contract Items must be delivered to Agency at:

### WV Offices of the Insurance Commissioner 900 Pennsylvania Ave. Charleston, WV 25302

**6.2 Late Delivery:** The Agency placing the order under this Contract must be notified in writing if the shipment of the Contract Items will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the Contract, and/or obtaining the Contract Items from a third party.

Any Agency seeking to obtain the Contract Items from a third party under this provision must first obtain approval of the Purchasing Division.

- **6.3 Delivery Payment/Risk of Loss:** Vendor shall deliver the Contract Items F.O.B. destination to the Agency's location.
- **6.4 Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense

and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

6.5 Return Due to Agency Error: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

#### 7. VENDOR DEFAULT:

- 7.1 The following shall be considered a vendor default under this Contract.
  - **7.1.1** Failure to provide Contract Items in accordance with the requirements contained herein.
  - 7.1.2 Failure to comply with other specifications and requirements contained herein.
  - **7.1.3** Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.
  - **7.1.4** Failure to remedy deficient performance upon request.
- 7.2 The following remedies shall be available to Agency upon default.
  - **7.2.1** Immediate cancellation of the Contract.
  - **7.2.2** Immediate cancellation of one or more release orders issued under this Contract.
  - **7.2.3** Any other remedies available in law or equity.

### ADDENDUM ACKNOWLEDGEMENT FORM SOLICITATION NO.: CRFQ INS20\*01

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendun	n N	umbers Received:			
	_	x next to each addendum rece	ived	l)	
[x	]	Addendum No. 1	[	]	Addendum No. 6
[ X	]	Addendum No. 2	[	]	Addendum No. 7
[	]	Addendum No. 3	[	]	Addendum No. 8
[	]	Addendum No. 4	[	]	Addendum No. 9
[	]	Addendum No. 5	[	]	Addendum No. 10
I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.  A.V Lauttamus Communications Todd Wotring					
					Company
					Jodd Wot
					Authorized Signature
					11/25/19
					Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing. Revised 6/8/2012



August 1, 2019

To Concerned,

This letter certifies that Lauttamus Communications located at 1344 Cove Rd Weirton, WV 26062 is an authorized sales and servicing dealer for our products in West Virginia. If you have any questions or concerns please feel free to contact me directly.

Sincerely,

Regards,

Adam Strode

Kenwood USA-Communications Sector

Eastern Region Sales Manager

Can Stula

404-304-6939

## **NEXEDGE®**

# NX-5200/5300/5400

#### VHF/UHF/700-800MHz MULTI-PROTOCOL DIGITAL & ANALOG PORTABLE RADIOS

The NX-5000 Series offers unsurpassed interoperability for a wide variety of users as it supports three digital CAIs — NXDN, DMR and P25 (Phase 1 & 2) — plus FM analog in a single radio. Best of all, a desired CAI can be selected at will, giving you the freedom to migrate at your own pace — whether you are intent on going fully digital, undecided about which digital system to pick, or just wanting to maintain both digital and analog for a while. A NX-5000 radio can simultaneously support two digital protocols plus analog, offering the following combinations: FM/DMR/NXDN, FM/NXDN/P25, and FM/DMR/P25.

#### **FEATURES**

- Multi-Digital operation in NXDN, DMR, and P25 (Phase 1 & 2)
- Any combination of two digital protocols may be selected from NXDN, DMR, and P25
- · Mixed Digital & FM Analog Operation allows intelligent migration in
- mixed sites and easy migration with digital radios in other sites
   Large, Color 1.74" (240 x 180 pixels) Transflective TFT Display for better interface even in direct sunlight and with use of polarized sunglasses
- Easy to follow GUI for at-a-glance operational status and Multi-line Text to convey information
- · 4-way Directional-pad (D-pad) and 2-Position Lever Switch for intuitive control
- Built-In GPS Receiver/Antenna for effective fleet management
- Bluetooth® Module Built-in for hands-free operation
- Renowned KENWOOD Audio Quality achieved with Active Noise Reduction (ANR) that utilizes built-in DSP with two microphones for suppression of ambient noise
- Built-in 56-bit DES Encryption
- Optional 256-bit AES Encryption
- Built-in Motion Sensor for man down detection
- microSD/microSDHC Up to 2GB/32GB Memory Card Slot for increased memory capacity for "Voice & Data"
- IP67/68 and MIL-STD-810 C/D/E/F/G
- 6 W (136-174 MHz ) Models
- 5 W (380-470, 450-520 MHz) Models
- 3 W (700/800 MHz) Models
- Full Key Models (w/numeric keypad) and Standard Key Models (w/o numeric keypad)
- Maximum of 1024 CH, 128 Zones (4000 Ch. Opt)
- 1 W Speaker Audio

#### **DIGITAL - NXDN® MODE**

- Gen2 & NXDN® Type-C Trunked Operation
- NXDN Conventional Operation 6.25 & 12.5 kHz Channels
- Over-the-Air Alias
- Over-the-Air Programming
- Paging Call
- Emergency Call
- All Group Call
- Status Messaging Remote Stun/Kill
- Remote Check Short & Long Data Messages
- NXDN Digital Scrambler

#### **DIGITAL - DMR MODE**

- Complies with ETSI DMR Tier II standards
- Two-slot TDMA in 12.5kHz channels
- Call Interruption
- Dual-slot Direct Mode
- Energy Efficient

#### **DIGITAL - P25 MODE**

- P25 Phase 1 Conventional/Trunked Operation
- P25 Phase 2 Trunked Operation
- Talk Group ID Lists
- Individual ID Lists
- Caller ID Display
- Remote Monitor/Remote Check
- Radio Inhibit
- Encryption Key Zeroize & Retention
- P25 Over-the-Air Re-keving
- P25 Over-the-Air Programming

#### FM MODES – GENERAL

- Conventional & ITR Zones
- NPSPAC (USA only) Channels (±4.0 Modulation)
- FleetSync\*/II: PTT ID ANI / Caller ID Display, Selective
- Group Call, Emergency Status / Text Messages MDC-1200: PTT ID ANI / Caller ID Display,
- Emergency, Radio Check / Inhibit
- OT / DOT & Two-Tone
- Built-in Voice Inversion Scrambler

#### INTELLIGENT BATTERY SYSTEM (Option)

- System consists of the optional high-capacity Battery Series (KNB-L1/L2/L3/N4/LS5), Rapid Charger (KSC-Y32), and Battery Reader (KAS-12) software
- Up to 60 Rapid Chargers can be chain-connected to a PC installed with the KAS-12
- KAS-12 Battery Reader software can display and manage information including battery type, model name, voltage, temperature, discharge cycle, expected life, and remaining capacity
- Up to 5,000 batteries can be managed at a time (requires an additional option)



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B C

Unsurpassed interoperability for Public Safety and Enterprise radio users with the freedom to migrate at your own pace.



Scalable server-based system architecture for management of NEXEDGE wide area digital communications systems.



The ultimate level of sound clarity technology combining Optimization, advanced Sound Analysis and Active Noise Reduction.



Dispatch CH 1

бина

Full Keypad & Standard Models













## NX-5200/5300/5400 Portable Radios



## **Specifications**

All accessories may not be available in all markets. Contact an authorized Kenwood dealer for details and complete list of all accessories.

	NX-5200	NX-5300	NX-5400		NX-5200	NX-5300	NX-5400
GENERAL				RECEIVER			
Frequency Range			RX: 763-776, 851-870 MHz	Sensitivity			
	136-174 MHz	Type 1: 450-520 MHz	TX: 763-776, 793-806,	NXDN® 6.25 kHz Digital (3% BER)		0.20 μV	
		Type 2: 380-470 MHz	806-825, 851-870 MHz	NXDN®12.5 kHz Digital (3% BER)		0.25 μV	
Max. Channels Per Radio	1024 (Up to 4000 CH with option)			DMR Digital (5% BER)		0.25 μV	
Number of Zones	128			DMR Digital (1% BER)	0.40 μV		
Max. Channels per Zone	512		P25 Digital (5% BER)	0.25 μV			
Channel Spacing			P25 Digital (1% BER)	0.40 μV			
Analog	12.5/15/20/25*/30* kH	z 12.5/25* kHz	12.5/25 kHz	Analog (12dB SINAD)		0.25 μV	
Digital	6.25 kHz/12.5 kHz	6.25 kHz/12.5 kHz	12.5 kHz (6.25 kHz)	Selectivity		ID.	C.A. ID
Power Supply		7.5V DC ± 20%		Analog @ 12.5 kHz			64 dB
Battery Life		(5-5-90/10-10-80 duty cycle	e)	Analog @ 25 kHz	73 dB 75 dB		75 10
KNB-L1 (2,000 mAh)	10 hours / 6.5 hours		Intermodulation			75 dB	
KNB-L2 (2,600 mAh)	12.5 hours / 8.5 hours			Spurious Rejection	80 dB 75 dB		
KNB-L3 (3,400 mAh)	17 hours / 11 hours			Audio Distortion	3%		
KNB-N4 (2,500 mAh)	12 hours / 8.5 hours			Audio Output Power	500 mW/8 $\Omega$ (3% Distortion) / 1,000 mW/8 $\Omega$ (5% Distortion)		
KBP-8 (w/AA x12)	High Power 11 hours / 8 hours / Low Power 26 hours / 18.5 hours			TRANSMITTER			
Operating Temperature	-2	2°F to +140°F (-30°C to +6	0°€)	RF Power Output Power	6 W to 1 W	5 W to 1 W	3 W to 1 W
Frequency Stability	±2.0 ppm	±1.0 ppm	±1.5 ppm	Spurious Emission		-70 dB	
Dimensions/Weight Radio w/battery	(W:	H x D) Projections Not Inclu	ded	FM Hum & Noise			
KNB-L1 (2,000 mAh)	2.28 x 5.47 x 1.44 in. (	58.0 x 138.9 x 36.5 mm)	13.5 oz (382 g)	Analog @ 12.5 kHz		40 dB	
KNB-L2 (2,600 mAh)	2.28 x 5.47 x 1.56 in. (	58.0 x 138.9 x 39.5 mm)	14.3 oz (406 g)	Analog @ 25 kHz		45 dB	
KNB-L3 (3,400 mAh)	2.28 x 5.47 x 1.77 in. (	58.0 x 138.9 x 44.9 mm)	15.8 oz (449 g)	Audio Distortion	2%		
KNB-N4 (2,500 mAh)	2.28 x 6.55 x 1.78 in. (	58.0 x 166.4 x 45.2 mm)	20.4 oz (579 g)	Emission Designator			16K0F3E, 14K0F3E
KBP-8	2.64 x 8.59 x 2.12 in. (	67.0 x 218.3 x 53.9 mm)	5.1 oz (712 g)				11K0F3E, 8K10F1E
FCC ID					16K0F3E, 11K0F3E	, 8K10F1E, 8K10F1D,	8K10F1D, 8K10F1V
Type 1	K44431400	K44431500	ALH442000			, 8K30F1D, 8K30F7W,	8K30F1E, 8K30F1D
Type 2		K44431501				D, 4K00F1E, 4K00F1D,	8K30F7W, 7K60FXE
IC Certification					4K00F7W,	4K00F2D	7K60FXD,4K00F1E
Type 1	282F-431400	-	282D-442000				4K00F1D, 4K00F7V
Type 2		282F-431501					4K00F2D

Analog measurements made per TIA 603 and specifications shown are typical. P25 Digital measurements made per TIA 102CAAA and specifications shown are typical. Specifications are subject to change without notice, due to advancements in technology.

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#### MIL-STD & IP

MIL Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures	MIL 810G Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II	500.5/Procedure I, II
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II	501.5/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II	502.5/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II	503.5/Procedure I
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I	505.5/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III	506.5/Procedure I, III
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4	507.5/Procedure II
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4	509.5
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III	510.5/Procedure I
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I	514.6/Procedure I
Shock	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV	516.5/Procedure I, IV	516.6/Procedure I, IV
Immersion	-	-	-	512.4/Procedure I	512.5/Procedure I
International Protection Standard					
Dust & Water Protection	IP54/55			· · · · · · · · · · · · · · · · · · ·	•
Immersion	IP6768*				

\*Conditions: Portable radio immersed for 2 hours at a depth of 1 meter (IP68=1m/2H)



#### JVCKENWOOD USA Corporation

Communications Sector Headquarters 3970 Johns Creek Court, Suite 100, Suwanee, GA 30024-1265

Order Administration/Distribution

P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745 www.kenwood.com/usa







## **NEXEDGE®**

# NX-5700/5800/5900

### VHF/UHF/700-800MHz MULTI-PROTOCOL DIGITAL & ANALOG MOBILE RADIOS

The NX-5000 Series offers unsurpassed interoperability for a wide variety of users as it supports three digital CAIs — NXDN, DMR and P25 (Phase 1 & 2) — plus FM analog in a single radio. Best of all, a desired CAI can be selected at will, giving you the freedom to migrate at your own pace — whether you are intent on going fully digital, undecided about which digital system to pick, or just wanting to maintain both digital and analog for a while. A NX-5000 radio can simultaneously support two digital protocols plus analog, offering the following combinations: FM/DMR/NXDN, FM/NXDN/P25, and FM/DMR/P25.

#### **FEATURES**

- Multi-Digital operation in NXDN, DMR, and P25 (Phase 1 & 2) protocols
- Any combination of two digital protocols may be selected from NXDN. DMR, and P25
- Mixed Digital & FM Analog Operation allows intelligent migration in mixed sites and easy migration with digital radios in other sites
- Large, Color 2.55" (154 x 422 pixels) TFT Display for at-a-glance operational status
- Fasy to follow GUI and Multi-line Text to convey information
- Dual Remote Control Head and Multi-Band (Multi RF Deck) Control Option providing scalable configurations for various operations and applications
- Built-In GPS Receiver for effective fleet management
- Bluetooth® Module Built-in for hands-free operation
- Renowned KENWOOD Audio Quality achieved with Active Noise Reduction (ANR) that utilizes built-in DSP with two microphones for suppression of ambient noise
- Built-in 56-bit DES Encryption
- Optional 256-bit AES Encryption
- microSD/microSDHC Up to 2GB/32GB Memory Card Slot for increased memory capacity for "Voice & Data"
- 50 W to 5 W (136-174 MHz) Models
- 45 W to 5 W (380-470, 450-520 MHz) Models
- 30 W to 2 W (700 MHz) Model 35 W to 2 W (800 MHz) Model
- Maximum of 1024 CH/Zone, 128 Zones (4000 CH. Opt)
- DB-25 Accessory Connector
- AMBE+2™ Enhanced Vocoder
- 4 W Speaker Audio

#### **DIGITAL – NXDN® MODE**

- Gen2 & NXDN Type-C Trunked Operation
- NXDN Conventional Operation
- 6.25 & 12.5 kHz Channel Spacing
- Over-the-Air Alias
- Over-the-Air Programming
- Paging Call
- Emergency Call
- All Group Call
- Status Messaging
- Remote Stun/Kill
- Remote Check
- Short & Long Data Messages
- NXDN Digital Scrambler Included

#### **DIGITAL – DMR MODE**

- Complies with ETSI DMR Tier II standards
- Two-slot TDMA in 12.5kHz channels
- Call Interruption
- Dual-slot Direct Mode
- Energy Efficient

#### DIGITAL – P25 MODE

- P25 Phase 1 Conventional/Trunked Operation
- P25 Phase 2 Trunked Operation
- Talk Group ID Lists

- Individual ID Lists
- Caller ID Display
- · Remote Monitor/Remote Check
- Radio Inhibit
- Encryption Key Zeroize & Retention
- P25 Over-the-Air Re-keving
- P25 Over-the-Air Programming

#### **FM MODES – GENERAL**

- Conventional & LTR Zones
- FleetSync\*/II: PTT ID ANI / Caller ID Display, Selective Group Call, Emergency Status / Text Messages
- MDC-1200: PTT ID ANI / Caller ID Display, Emergency, Radio Check / Inhibit
- OT / DOT & Two-Tone
- Built-in Voice Inversion Scrambler

#### MULTIPLE CONFIGURATIONS (Option)

The NX-5000 mobile series allows users to create a variety of configurations to suit different requirements by combining different options. Some of the standard configurations are:

- Single Remote Control Head x Single RF Deck
- Dual Remote Control Heads x Single RF Deck • Dual Remote Control Heads x Multi RF Decks
- · Other combinations are available. Consult your local KENWOOD dealer for more





#### **Multi-Protocol**

Unsurpassed interoperability for Public Safety and Enterprise radio users with the freedom to migrate at your own pace.



Scalable server-based system architecture for management of NEXEDGE wide area digital communications systems.



The ultimate level of sound clarity technology combining Optimization, advanced Sound Analysis and Active Noise Reduction.

















## **Specifications**

All accessories may not be available in all markets. Contact an authorized Kenwood dealer for details and complete list of all accessories.

	NX-5700	NX-5800	NX-5900			
GENERAL	'					
Frequency Range			RX: 763-776, 851-870 MHz			
	136-174 MHz	Type 1 450-520 MHz	TX: 763-776, 793-806			
		Type 2 380-470 MHz	806-825, 851-870 MHz			
Max. Channels Per Radio	1,	,024 (Up to 4,000 CH wit	th option)			
Number of Zones		128				
Max. # of P25 Trunked Group ID's		512				
Channel Spacing						
Analog	12.5/15/25*/30* kHz	12.5/25* kHz	12.5/25 kHz			
Digital	6.25/12.5 kHz	6.25/12.5 kHz	6.25/12.5 kHz			
Power Supply		13.6 V DC ±15%				
Current Drain						
Standby		0.45 A				
RX		2.3 A				
TX		13 A				
Operating Temperature	-2	2°F to +140°F (-30°C to	+60°C)			
Frequency Stability		±1.0 ppm				
Dimensions (W x H x D)	6.69 x 1.	89 x 6.93 in.	6.73 x 1.89 x 7.72 in.			
Radio w/Control Head	(170 x 48.	0 x 176 mm.)	(171 x 48 x 196 mm.)			
Weight (net)	3.53 lbs	(1.6 kg)	3.53 lbs (1.6 kg)			
Radio w/Control Head						
FCC ID						
Type 1	K44471100	K44471200	K44478500			
Type 2	-	K44471201	-			
IC Certification						
Type 1	282F-471100	-	282F-478500			
Type 2	-	282F-471201	-			

<sup>\*25</sup> and 30 kHz are not included in the models sold in the USA or US territories. Analog measurements made per IIA 603 and specifications shown are typical. P25 Digital measurements made per IIA 102CAAA and specifications shown are typical. Specifications are subject to change without notice, due to advancements in technology.

	NX-5700	NX-5800	NX-5900			
RECEIVER	_					
Sensitivity						
NXDN® 6.25 kHz Digital (3% BER)		0.20 μV				
NXDN®12.5 kHz Digital (3% BER)		0.25 μV				
DMR Digital (5% BER)		0.25 μV				
DMR Digital (1% BER)		0.40 µV				
P25 Digital (5% BER)		0.25 μV				
P25 Digital (1% BER)		0.40 μV				
Analog (12dB SINAD)		0.25 μV				
Selectivity						
Analog @12.5 kHz	71	dB	70 dB			
Analog @ 25 kHz	81	dB	78 dB			
Intermodulation		80 dB				
Spurious Rejection	85 dB					
Audio Distortion	2 %					
Audio Output Power	4 W/4 $\Omega$ (Remote Control Head: 3 W/4 $\Omega$ )					
TRANSMITTER	'					
RF Power Output	50 W to 5 W	45 W to 5 W	30 W to 2 W (700 MHz			
			35 W to 2 W (800 MHz)			
Spurious Emission	-73 dB	-75 dB	-80 dB			
FM Hum & Noise						
Analog @ 12.5 kHz	45 dB		40 dB			
Analog @ 25 kHz	50 dB		45 dB			
Audio Distortion		2%				
Emission Designator	16K0F3E, 14K0F3E*	* 11K0F3E, 8K10F1E,	BK10F1D, 8K10F1W,			
	8K30F1E, 8K30F1D, 8K30F7W, 7K60FXE, 7K60FXD 4K00F1E, 4K00F1D,					
		4K00F7W, 4K00F2	D			

<sup>\*\*</sup>NX-5900 model only.

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#### MIL-STD & IP

MIL Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures	MIL 810G Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II	500.5/Procedure I, II
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II	501.5/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II	502.5/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II	503.5/Procedure I
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I	505.5/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III	506.5/Procedure I, III
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4	507.5/Procedure II
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4	509.5
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III	510.5/Procedure I
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I	514.6/Procedure I
Shock	516.2/Procedure I, II, V	516.3/Procedure I, IV, V	516.4/Procedure I, IV, V	516.5/Procedure I, IV, V	516.6/Procedure I, IV, V
International Protection Standard					
Dust & Water	IP54/55*1				

1: IP54: RF Deck; IP55: Remote Control Head



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## STATE OF WEST VIRGINIA Purchasing Division

## **PURCHASING AFFIDAVIT**

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS**: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

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

#### **DEFINITIONS:**

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

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

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

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

#### WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: AV. Lauttamus Comm. TWC.
Authorized Signature: Date: 11 / 25 / 19
State of West Virginia
County of HAN COCK, to-wit:
Taken, subscribed, and sworn to before me this as day of November, 2019.
My Commission expires October 3, 2021.
AFFIX SEAL HERE NOTARY PUBLIC Cecilia Remucal
OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA  Purchasing Affidavit (Revised 01/19/2018)

CECILLA REZNICAK
Lauttamus Communications & Security
1344 Cove Hill Road
Weirlon, West Virginia 26062
My Commission Expires Oct. 3, 2021