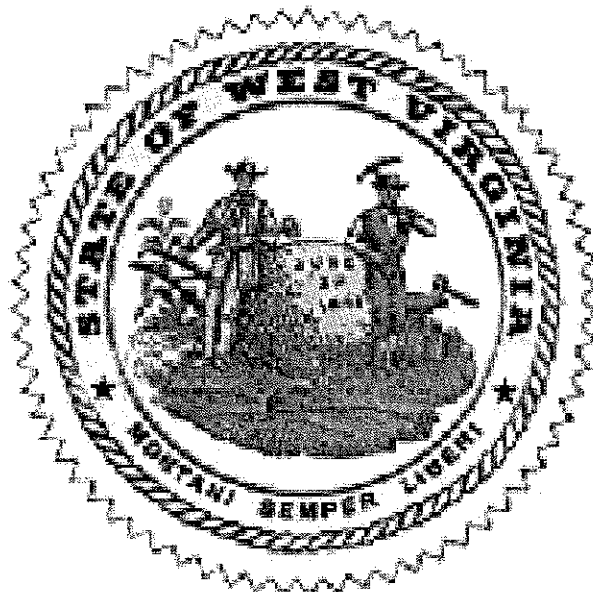


**State Of West Virginia**  
**Two-Way Digital Mobile Radios**  
**Request For Quotation**  
**Number DSP0816**

Due: January 9, 2008 at 1:30 PM



**KENWOOD**

RECEIVED

2008 JAN -8 A 8:11

PURCHASING DIVISION  
STATE OF WV




# KENWOOD

Listen to the Future


January 4, 2008

Mr. John Abbott  
West Virginia State Police  
4124 Kanawha Turnpike  
South Charleston, WV 25309

Dear Mr. Abbott,



Kenwood USA Corporation would like to thank you and your staff for the opportunity to respond to your Request for Quotation for Two-Way Digital Mobile Radios, DSP0816. Kenwood has been producing and distributing high quality two-way radio equipment worldwide since 1946. Kenwood is an ISO 9001 & JQA-1205 certified company and all of our radios are designed, engineered and produced at Kenwood's own manufacturing facilities by Kenwood employees. The radio equipment offered in this proposal is currently in use by several Federal agencies and many state and local agencies throughout the country. The equipment has recently been accepted by the City of Charleston, WV and we are in the process of delivering equipment. Additional references are listed in this letter.



With this response we have included specification sheets and service manuals for the equipment represented in our proposal. We have also included a unique price page that lists many options for the equipment that were not requested in your RFQ. We believe that by making our entire digital mobile radio product line available through this proposal, the State and local agencies in West Virginia will have access to options for their equipment that will serve them the best. An example of the options available is a Dual Control Head Kit that will allow agencies to install the radios in vehicles such as mobile command posts and tactical vehicles, allowing two control points for the radio.

Kenwood recognizes West Virginia Code 5A-3-37 related to preferences offered to qualified bidders. We understand the importance of acknowledging local businesses and enticing them to participate in State business. Kenwood also values the expertise and responsiveness of local businesses and understand they have a vested interest in the project.

Kenwood USA Corporation currently works directly with eight Authorized Kenwood Sales and Service Centers, "affiliates" throughout the State of West Virginia. Each of these affiliates have been in business in West Virginia for many years and cumulatively employ well over 100 sales and support professionals who are residents of West Virginia. It is Kenwood's intention to utilize these affiliate companies to support the anticipated contract award from this proposal. We will empower our dealer affiliates to act as our agent, communicate with agencies, articulate the agencies needs and act as liaison for Kenwood in support of the contract. We will financially compensate our dealer affiliates for their involvement and continued product support to agencies on a local level. We support the idea of local communications professionals supporting local public safety communications needs, supported by a capable national corporation and qualified vendor. The practice described will also contribute to the State economy by way of contributing to employee salaries across our dealer network. Based on this support model, Kenwood is applying for, and requests preference based West Virginia Code 5A-3-37 as indicated in our response.

Kenwood USA Corporation is compliant with all Terms and Conditions of the RFQ and meet the radio equipment specifications with the exception of the two items listed below.

**1. Bandwidth:** Specification 1.1.1 and 2.1.1 require the equipment operate from 380-470 MHz. The radio equipment offered is capable of operating from 400-470 MHz. The equipment proposed was designed specifically for U.S. public safety agencies and the FCC has allocated 380-400 MHz for military use only. Therefore, the Kenwood design team focused on achieving the best specifications possible within the public safety assignable frequency spectrum. We have attempted to identify 380-400 MHz channels

licensed to public safety agencies in the State but cannot. In order to help us understand this requirement, we contacted Enterprise Wireless Alliance and talked with Mr. Ron Franklin. Mr. Franklin indicated that there are no assigned public safety channels between 380-400 MHz in the State and there is fierce competition from the federal government to obtain any available channels that may exist. We have included a correspondence from Mr. Franklin to qualify this topic. Due to the lack of assignable or current channels within the bandwidth, Kenwood requests this specification exception be accepted.

**2. Receiver Audio:** Specification 2.1.9 and 2.2.9 require 5 watts of receiver audio from and internal speaker. The equipment offered has an internal speaker capable of 4 watts of output power and we believe this one watt deficiency may not be detectable by the average person. Kenwood is a world leader in audio quality from our consumer business and the volume or audibility of the internal speaker used on this equipment has never been challenged. Additionally, the specifications require the equipment will be supplied with an external speaker. Kenwood's proposed external speaker provides 13 watts of output power. Due to the inclusion of an external speaker and the deficiency of only one watt of output power, we request this specification exception be accepted.

As an option, we have offered a more full featured control head for the radio that eliminates the internal speaker and provides more functionality and greater alpha-numeric characters in the radio's display. This upgraded control head can be substituted at no additional cost.

We have identified an irregularity in your specifications vs. your price quotation page and the following will articulate how we addressed it.

Page 1 of the specifications identifies 1.1 ITEM#1 as a UHF radio. Your price quotation, page 21, identifies Item #1 as a VHF radio.

Page 3 of the specifications identifies 1.2 ITEM#2 as a VHF radio. Your price quotation page 21, identifies Item #2 as a UHF radio.

Page 4 of the specifications identifies 2.1 ITEM#3 as a UHF radio. Your price quotation, page 21, identifies Item #3 as a VHF radio.

Page 6 of the specifications identifies 2.2 ITEM#4 as a VHF radio. Your price quotation, page 21, identifies Item #4 as a UHF radio.

We have added to your price quotation page and changed the required frequency band to correspond with your specifications. Our additions to your price quotation page are in blue print for ease of identification.

We look forward to discussing this proposal in detail. We are eager to support the State of West Virginia and partner with our dealer affiliates to fulfill the needs of all State and local agencies. If you or your staff have any questions or comments, please do not hesitate to contact me at (800) 752-0986, X8280 or via my cellular telephone at (310) 779-1381.

Again, thank you for the opportunity to provide this quotation.

Respectfully,



Barry Morris

Public Safety Sales Manager

KENWOOD USA CORPORATION

Kenwood User references are listed below and contact information can be provided upon request.

BECHTEL BETTIS, PITTSBURG, PA  
CITY OF CHARLESTON, WV  
DODDRIDGE COUNTY 911, WV  
LINCOLN COUNTY 911, WV  
BROOK COUNTY, WV  
HAMPSHIRE COUNTY, WV  
GRANDVILLE POLICE DEPARTMENT, WV  
PERKINS TWP. SANDUSKY, OH  
KENTUCKY PARKS DEPARTMENT  
KENTUCKY DEPARTMENT OF MILITARY AFFAIRS  
HARDIN COUNTY, KY  
HARDIN COUNTY, KY  
KENTUCKY DEPARTMENT OF MILITARY AFFAIRS  
WISCONSON DEPARTMENT OF NATURAL RESOURCES

## Barry Morris

---

**From:** Matt Baker  
**Sent:** Monday, January 07, 2008 4:14 PM  
**To:** Barry Morris  
**Subject:** West Virginia  
**Attachments:** ntia Manual.335.4 to 399.9 MHz.pdf

Barry

Pursuant to your request for information regarding 380-400Mhz spectrum with-in the state of West Virginia, I contacted EWA for their interpretation of the FCC rules and regulations. Please see their response below.

Thanks

Matt Baker

----- Original Message -----

**From:** Ron Franklin

**To:** [mattc.baker@comcast.net](mailto:mattc.baker@comcast.net)

**Cc:** Mark Crosby

**Sent:** Monday, January 07, 2008 8:49 AM

**Subject:** West Virginia

Mr. Baker,

Good morning. Here is an extract from the U.S. Government Table of Frequency Allocations from the **Manual of Regulations and Procedures for Federal Radio Frequency Management (Redbook)** maintained by the National Telecommunications and Information Administration (NTIA).

The extract shows that Under the UNITED STATES TABLE frequencies 335.4 to 399.9 MHz are allocated to the Federal side for Fixed and Mobile operations.

Plus here is a link to NTIA and the rules.

<http://www.ntia.doc.gov/osmhome/redbook/redbook.html>

If you have any questions please let me know.

**Regards,**  
**Ron Franklin**

Director, Wireless Solutions

Enterprise Wireless Alliance

Vox: 703 797 5166

Fax: 703 524 1074

Email: [ron@enterprisewireless.org](mailto:ron@enterprisewireless.org)

EWA has expanded it's Customer Service with the addition of a second phone line to assist you with

1/7/2008

requests for licensing, application status and fee quotes. The new telephone number is 1-800-886-4222

**EWA now offers a "Premier" membership level that includes  
5 great services to enhance your business!  
Call Karin Norton, V.P., Membership, at 703.797.5127 for details.**



Table of Frequency Allocations					267-410 MHz (VHF/UHF)	
International Table		United States Table			FCC Rule Part(s) - Remarks	
Region 1 Table	Region 2 Table	Region 3 Table	Federal Table	Non-Federal Table		
267-272 FIXED MOBILE Space operation (space-to-Earth)			267-322 FIXED MOBILE	267-322		
5.254 5.257						
272-273 SPACE OPERATION (space-to-Earth) FIXED MOBILE						
5.254						
273-312 FIXED MOBILE						
5.254						
312-315 FIXED MOBILE						
Mobile-satellite (Earth-to-space) 5.254 5.255						
315-322 FIXED MOBILE						
5.254			G27 G100			
322-328.6 FIXED MOBILE RADIO ASTRONOMY			322-328.6 FIXED MOBILE	322-328.6		
5.149			US342 G27	US342		
328.6-335.4 AERONAUTICAL RADIONAVIGATION 5.258			328.6-335.4 AERONAUTICAL RADIONAVIGATION 5.258			
5.259						
335.4-387 FIXED MOBILE			335.4-399.9 FIXED MOBILE	335.4-399.9		
5.254						
387-390 FIXED MOBILE						
Mobile-satellite (space-to-Earth) 5.208A 5.254 5.255						
390-399.9 FIXED MOBILE						
5.254			G27 G100			

**GENERAL TERMS & CONDITIONS  
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125.00 registration fee.
5. All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA Business Associate Addendum** - The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Covered Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

---

**INSTRUCTIONS TO BIDDERS**

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in cases of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications.

**SIGNED BID TO:**

Department of Administration  
Purchasing Division  
2019 Washington Street East  
Post Office Box 50130  
Charleston, WV 25305-0130



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

## Request for Quotation

RFQ NUMBER
DPS0816

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

### RFQ COPY

TYPE NAME/ADDRESS HERE  
Kenwood USA Corporation  
P.O. Box 22745  
2201 E. Dominguez Street  
Long Beach CA 90801-5745

WEST VIRGINIA STATE POLICE

4124 KANAWHA TURNPIKE  
SOUTH CHARLESTON, WV  
25309 304-746-2141

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOR	FREIGHT TERMS
12/17/2007	2% 20, Net 30 Days	Surface delivery	Destination	PrePaid
BID OPENING DATE: 01/09/2008		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		725-74	See Price Quote Page 21	See Price Quote Page 21
TWO-WAY DIGITAL MOBILE RADIOS						
OPEN-END CONTRACT TO PROVIDE TWO-WAY MOBILE DIGITAL VHF & UHF RADIOS FOR THE WEST VIRGINIA STATE POLICE PER THE SPECIFICATIONS.						
EXHIBIT 3						
LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON ..... AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.						
UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.						
RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
Barry Morris <i>Barry Morris</i>	(800)752-0986, X8280	01/03/08
TITLE	FAX	ADDRESS CHANGES TO BE NOTED ABOVE
Public Safety Sales Manager	95-2948901	

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



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

## Request for Quotation

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304-558-2544

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25309 304-746-2141

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12/17/2007	2% 20, Net 30 Days	Surface delivery	Destination	PrePaid

BID OPENING DATE:

01/09/2008

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS.						
CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.						
OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)						
QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.						
ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.						
BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	Barry Morris	TELEPHONE	(800)752-0986, X8280	DATE	01/03/08
TITLE	Public Safety Sales Manager	FAX	95-2948901	ADDRESS CHANGES TO BE NOTED ABOVE	

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

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**VENDOR**  
TYPE NAME/ADDRESS HERE  
Kenwood USA Corporation  
P.O. Box 22745  
2201 E. Dominguez Street  
Long Beach CA 90801-5745

**SHIP TO**  
WEST VIRGINIA STATE POLICE  
  
4124 KANAWHA TURNPIKE  
SOUTH CHARLESTON, WV  
25309 304-746-2141

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/17/2007	2% 20, Net 30 Days	Surface delivery	Destination	PrePaid
BID OPENING DATE: 01/09/2008		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ORDER.						
THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.						
REV. 04/11/2001 EXHIBIT 4						
LOCAL GOVERNMENT BODIES: UNLESS THE VENDOR INDICATES IN THE BID HIS REFUSAL TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO COUNTY, SCHOOL, MUNICIPAL AND OTHER LOCAL GOVERNMENT BODIES, THE BID SHALL EXTEND TO POLITICAL SUBDIVISIONS OF THE STATE OF WEST VIRGINIA. IF THE VENDOR DOES NOT WISH TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO ALL POLITICAL SUBDIVISIONS OF THE STATE, THE VENDOR MUST CLEARLY INDICATE SUCH REFUSAL IN HIS BID. SUCH REFUSAL SHALL NOT PREJUDICE THE AWARD OF THIS CONTRACT IN ANY MANNER.						
REV. 3/88 PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.						
VENDOR PREFERENCE CERTIFICATE						
CERTIFICATION AND APPLICATION* IS HEREBY MADE FOR						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

NATURE	Barry Morris	TELEPHONE	(800)752-0986, X8280	DATE	01/03/08
TITLE	Public Safety Sales Manager	FAX	95-2948901	ADDRESS CHANGES TO BE NOTED ABOVE	

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BID OPENING DATE:

01/09/2008

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
PREFERENCE IN ACCORDANCE WITH WEST VIRGINIA CODE, 5A-3-37 (DOES NOT APPLY TO CONSTRUCTION CONTRACTS).						
A. APPLICATION IS MADE FOR 2.5% PREFERENCE FOR THE REASON CHECKED:						
( ) BIDDER IS AN INDIVIDUAL RESIDENT VENDOR AND HAS RESIDED CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR						
( ) BIDDER IS A PARTNERSHIP, ASSOCIATION OR CORPORATION RESIDENT VENDOR AND HAS MAINTAINED ITS HEAD-QUARTERS OR PRINCIPAL PLACE OF BUSINESS CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR 80% OF THE OWNERSHIP INTEREST OF BIDDER IS HELD BY ANOTHER INDIVIDUAL, PARTNERSHIP, ASSOCIATION OR CORPORATION RESIDENT VENDOR WHO HAS MAINTAINED ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS CONTINUOUSLY IN WEST VIRGINIA FOR FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION; OR						
(XXX) BIDDER IS A CORPORATION NONRESIDENT VENDOR WHICH HAS AN AFFILIATE OR SUBSIDIARY WHICH EMPLOYS A MINIMUM OF ONE HUNDRED STATE RESIDENTS AND WHICH HAS MAINTAINED ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS WITHIN WEST VIRGINIA CONTINUOUSLY FOR THE FOUR (4) YEARS IMMEDIATELY PRECEDING THE DATE OF THIS CERTIFICATION.						
B. APPLICATION IS MADE FOR 2.5% PREFERENCE FOR THE REASON CHECKED:						
( ) BIDDER IS A RESIDENT VENDOR WHO CERTIFIES THAT, DURING THE LIFE OF THE CONTRACT, ON AVERAGE AT LEAST						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

NATURE	Barry Morris	TELEPHONE	(800)752-0986, X8280	DATE	01/03/08
TITLE	Public Safety Sales Manager	FEIN	95-2948901	ADDRESS CHANGES TO BE NOTED ABOVE	

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LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
	<p>75% OF THE EMPLOYEES WORKING ON THE PROJECT BEING BID ARE RESIDENTS OF WEST VIRGINIA WHO HAVE RESIDED IN THE STATE CONTINUOUSLY FOR THE TWO YEARS IMMEDIATELY PRECEDING SUBMISSION OF THIS BID; OR (XXX) BIDDER IS A NONRESIDENT VENDOR EMPLOYING A MINIMUM OF ONE HUNDRED STATE RESIDENTS OR IS A NONRESIDENT VENDOR WITH AN AFFILIATE OR SUBSIDIARY WHICH MAINTAINS ITS HEADQUARTERS OR PRINCIPAL PLACE OF BUSINESS WITHIN WEST VIRGINIA EMPLOYING A MINIMUM OF ONE HUNDRED STATE RESIDENTS WHO CERTIFIES THAT, DURING THE LIFE OF THE CONTRACT, ON AVERAGE AT LEAST 75% OF THE EMPLOYEES OR BIDDERS' AFFILIATE'S OR SUBSIDIARY'S EMPLOYEES ARE RESIDENTS OF WEST VIRGINIA WHO HAVE RESIDED IN THE STATE CONTINUOUSLY FOR THE TWO YEARS IMMEDIATELY PRECEDING SUBMISSION OF THIS BID.</p> <p>BIDDER UNDERSTANDS IF THE SECRETARY OF TAX &amp; REVENUE DETERMINES THAT A BIDDER RECEIVING PREFERENCE HAS FAILED TO CONTINUE TO MEET THE REQUIREMENTS FOR SUCH PREFERENCE, THE SECRETARY MAY ORDER THE DIRECTOR OF PURCHASING TO: (A) RESCIND THE CONTRACT OR PURCHASE ORDER ISSUED; OR (B) ASSESS A PENALTY AGAINST SUCH BIDDER IN AN AMOUNT NOT TO EXCEED 5% OF THE BID AMOUNT AND THAT SUCH PENALTY WILL BE PAID TO THE CONTRACTING AGENCY OR DEDUCTED FROM ANY UNPAID BALANCE ON THE CONTRACT OR PURCHASE ORDER.</p> <p>BY SUBMISSION OF THIS CERTIFICATE, BIDDER AGREES TO DISCLOSE ANY REASONABLY REQUESTED INFORMATION TO THE PURCHASING DIVISION AND AUTHORIZES THE DEPARTMENT OF TAX AND REVENUE TO DISCLOSE TO THE DIRECTOR OF PURCHASING APPROPRIATE INFORMATION VERIFYING THAT BIDDER HAS PAID THE REQUIRED BUSINESS TAXES, PROVIDED THAT SUCH INFORMATION DOES NOT CONTAIN THE AMOUNTS OF TAXES PAID NOR ANY OTHER INFORMATION DEEMED BY THE TAX</p>					

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

NATURE	Barry Morris <i>Barry Morris</i>	TELEPHONE	(800)752-0986, X8280	DATE	01/03/08
TITLE	Public Safety Sales Manager	FAX	95-2948901	ADDRESS CHANGES TO BE NOTED ABOVE	

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



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# Request for Quotation

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ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

## RFQ COPY

TYPE NAME/ADDRESS HERE  
Kenwood USA Corporation  
P.O. Box 22745  
2201 E. Dominguez Street  
Long Beach CA 90801-5745

WEST VIRGINIA STATE POLICE

4124 KANAWHA TURNPIKE  
SOUTH CHARLESTON, WV  
25309 304-746-2141

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/17/2007	2% 20, Net 30 Days	Surface delivery	Destination	PrePaid
BID OPENING DATE: 01/09/2008		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
COMMISSIONER TO BE CONFIDENTIAL.						
UNDER PENALTY OF LAW FOR FALSE SWEARING (WEST VIRGINIA CODE 61-5-3), BIDDER HEREBY CERTIFIES THAT THIS CERTIFICATE IS TRUE AND ACCURATE IN ALL RESPECTS; AND THAT IF A CONTRACT IS ISSUED TO BIDDER AND IF ANYTHING CONTAINED WITHIN THIS CERTIFICATE CHANGES DURING THE TERM OF THE CONTRACT, BIDDER WILL NOTIFY THE PURCHASING DIVISION IN WRITING IMMEDIATELY.						
BIDDER: Kenwood USA Corporation						
DATE: 01/03/08						
SIGNED: Barry Morris <i>Barry Morris</i>						
TITLE: Public Safety Sales Manager						
* CHECK ANY COMBINATION OF PREFERENCE CONSIDERATION(S) IN EITHER "A" OR "B", OR BOTH "A" AND "B" WHICH YOU ARE ENTITLED TO RECEIVE. YOU MAY REQUEST UP TO THE MAXIMUM 5% PREFERENCE FOR BOTH "A" AND "B". (REV. 12/00)						
NOTICE						
A SIGNED BID MUST BE SUBMITTED TO:						
DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

NATURE Barry Morris <i>Barry Morris</i>	TELEPHONE (800)752-0986, X8280	DATE 01/03/08
TITLE Public Safety Sales Manager	95-2948901	ADDRESS CHANGES TO BE NOTED ABOVE

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





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

## Request for Quotation

RFQ NUMBER
DPS0816

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ADDRESS CORRESPONDENCE TO ATTENTION OF
JOHN ABBOTT 304-558-2544

### RFQ COPY

**VENDOR**  
TYPE NAME/ADDRESS HERE  
Kenwood USA Corporation  
P.O. Box 22745  
2201 E. Dominguez Street  
Long Beach CA 90801-5745

**SHIP TO**  
WEST VIRGINIA STATE POLICE  
  
4124 KANAWHA TURNPIKE  
SOUTH CHARLESTON, WV  
25309 304-746-2141

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
12/17/2007	2% 20, Net 30 Days	Surface delivery	Destination	PrePaid
BID OPENING DATE: 01/09/2008		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:						
SEALED BID						
BUYER:			JOHN ABBOTT-----			
RFQ. NO.:			DPS0814-----			
BID OPENING DATE:			01/09/2008-----			
BID OPENING TIME:			1:30 PM-----			
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:						
-----						
CONTACT PERSON (PLEASE PRINT CLEARLY):						
-----						
Barry Morris Kenwood USA Corporation Phone: (800) 752-0986, Ext. 8280 Fax: (310) 761-8246						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

NATURE	Barry Morris <i>Barry Morris</i>	TELEPHONE	(800) 752-0986, X8280	DATE	01/03/08
TITLE	Public Safety Sales Manager	FEIN	95-2948901	ADDRESS CHANGES TO BE NOTED ABOVE	

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



## Request for Quotation

RFQ NUMBER
DPS0816

PAGE
8

ADDRESS CORRESPONDENCE TO ATTENTION OF  
JOHN ABBOTT  
304-558-2544

RFQ COPY

**TYPE NAME/ADDRESS HERE**  
Kenwood USA Corporation  
P.O. Box 22745  
2201 E. Dominguez Street  
Long Beach CA 90801-5745

WEST VIRGINIA STATE POLICE

4124 KANAWHA TURNPIKE  
SOUTH CHARLESTON, WV  
25309 304-746-2141

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B	FREIGHT TERMS
12/17/2007	2% 20, Net 30 Days	Surface delivery	Destination	PrePaid
BID OPENING DATE:	01/09/2008	BID OPENING TIME	01:30PM	

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
***** THIS IS THE END OF RFQ DPS0816 ***** TOTAL:						See Price Quote Page 21

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
NATURE	Barry Morris <i>Barry Morris</i>	TELEPHONE	(800)752-0986, X8280
		DATE	01/03/08
TITLE	Public Safety Sales Manager	95-2948901	ADDRESS CHANGES TO BE NOTED ABOVE

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

## VHF and UHF DIGITAL MOBILE RADIO SPECIFICATIONS

The West Virginia State Police desire to establish an open-end contract for the purchase of digital mobile radio equipment and related accessories. The contract shall be available for use by the WV Division of Natural Resources Law Enforcement Section and all other entities of state government, as well as counties and municipalities as this will assist in the State's Interoperable Radio Project.

		Comply?	
		Yes	No
<b>1. <u>TIER 1 – High quality, high power APCO P-25 512 channel mobile radio with remote mount capability</u></b>			
<b>1.1 ITEM #1 – 100 Watt UHF Digital Mobile – P-25 Trunking ready (includes P-25 CAI)</b>			
1.1.1	A 100 watt mobile radio, with remote mounting capability for transmitter/receiver unit capable of operating in the 380 - 470 MHz band shall be provided.	<u>Bmm</u>	<u>X</u>
		See Clarification in Cover Letter	
1.1.2	Radio shall be capable via programming of wide band and narrow band operation (12.5 kHz/25 kHz respectively), and capable of storing 512 channels.	<u>X</u>	<u>      </u>
1.1.2.1	Each channel shall be individually programmable with regard to wideband/narrowband operation, digital/analog operation, and/or trunked/non-trunked operation.	<u>X</u>	<u>      </u>
1.1.3	There shall be no limitations in the radio with regard to what channels may be programmed into the radio in a given bank and in a particular mix of channels/talkgroups.	<u>X</u>	<u>      </u>
1.1.3.1	All currently licensable frequencies shall be considered acceptable to the unit.	<u>X</u>	<u>      </u>
1.1.4	Channel indication shall be by way of an alphanumeric display containing a minimum of 10 digits.	<u>X</u>	<u>      </u>

1.1.5	Radio shall have ID display capability Radio shall have programmable encode and decode capability for both CTCSS tones and digital coded squelch with a minimum of one pair of tones, not necessarily the same, for each programmed channel.	<u>X</u>	<u>      </u>
1.1.6	It shall transmit with a minimum of 100 watts RF output.	<u>X</u>	<u>      </u>
1.1.7	Receiver audio stage shall be capable of a minimum of 7.5 watts of audio.	<u>X</u>	<u>      </u>
1.1.8	The speaker shall be driven by this audio amplifier and must be capable of dissipating the entire audio capability.	<u>X</u>	<u>      </u>
1.1.8.1	An external speaker shall be provided with the unit.	<u>X</u>	<u>      </u>
1.1.9	A standard microphone shall be provided.	<u>X</u>	<u>      </u>
1.1.10	Radio shall include software for P-25 CAI and P-25 Trunked operation.	<u>X</u>	<u>      </u>
1.1.11	This shall include any other software necessary to enable seamless roaming operation on the WVIRP radio system presently being installed in West Virginia, and operational in Harrison, Marion, and Monongalia, Berkeley, and other counties	<u>X</u>	<u>      </u>
1.1.12	Radio shall be capable of interfacing for data input/output.	<u>X</u>	<u>      </u>
1.1.12.1	If internal hardware is necessary in the radio, a price will be given for installation of that hardware at the time of purchase if option (Mobile Data Hardware Interface) is exercised.	<u>X</u>	<u>      </u>
1.1.12.2	Associated software or hardware, which shall include programming cable(s) external to the radio necessary for utilization of the radio in a data mode will be priced as a separate option (Mobile Data Software Interface) and shall be available either at time of purchase or at a later time as an independent purchase item.	<u>X</u>	<u>      </u>

- |  |              |               |
|--|--------------|---------------|
| 1.1.13 Any necessary hardware to mount radio to vehicle, normally in the trunk area, shall be provided as part of each package.  | <u>  X  </u> | <u>      </u> |
| 1.1.14 A remote mounted head shall be provided have a cable to facilitate connection to the remote mounted trunk unit at least 20 feet.  | <u>  X  </u> | <u>      </u> |
| 1.1.15 If a separate power cable is necessary, it shall be at least 25 feet in length.   | <u>  X  </u> | <u>      </u> |
| 1.1.16 A mike hangup shall be provided.  | <u>  X  </u> | <u>      </u> |
| <b>1.2 ITEM #2 – 100 Watt VHF Digital Mobile – P-25 CAI ready</b>  |              |               |
| 1.2.1 A 100 watt mobile radio, with remote mounting capability for transmitter/receiver unit capable of operating in the 136-174 MHz band shall be provided.   | <u>  X  </u> | <u>      </u> |
| 1.2.2 Radio shall be capable via programming, of wide band and narrow band (12.5 kHz/30 kHz respectively) operation, and capable of storing 512 channels.  | <u>  X  </u> | <u>      </u> |
| 1.2.2.1 Each channel shall be individually programmable with regard to wideband/narrowband operation, digital/analog operation, and/or trunked/non-trunked operation.  | <u>  X  </u> | <u>      </u> |
| 1.2.3 There shall be no limitations in the radio with regard to what channels may be programmed into the radio in a given bank and in a particular mix of channels/talkgroups.   | <u>  X  </u> | <u>      </u> |
| 1.2.3.1 All currently licensable frequencies shall be considered acceptable to the unit.   | <u>  X  </u> | <u>      </u> |
| 1.2.4 Channel indication shall be by way of an alphanumeric display containing a minimum of 10 digits.   | <u>  X  </u> | <u>      </u> |
| 1.2.5 Radio shall have ID display capability Radio shall have programmable encode and decode capability for CTCSS tones, digital coded squelch, and NAC codes, with a minimum of one pair of tones, not necessarily the same, for each programmed channel. | <u>  X  </u> | <u>      </u> |
| 1.2.6 It shall transmit with a minimum of 100 watts RF output.   | <u>  X  </u> | <u>      </u> |

- |  |          |               |
|--|----------|---------------|
| 1.2.7 Receiver audio stage shall be capable of a minimum of 7.5 watts of audio.  | <u>X</u> | <u>      </u> |
| 1.2.8 The speaker shall be driven by this audio amplifier and must be capable of dissipating the entire audio capability.                              | <u>X</u> | <u>      </u> |
| 1.2.9 An external speaker shall be provided with the unit.   | <u>X</u> | <u>      </u> |
| 1.2.10 A standard microphone shall be provided.  | <u>X</u> | <u>      </u> |
| 1.2.11 Radio shall include all software to operate at least to P-25 CAI standards compatible with the WV DNR Law Enforcement Section VHF radio system. | <u>X</u> | <u>      </u> |
| 1.2.12 Any necessary hardware to mount radio to vehicle, normally in the trunk area, shall be provided as part of each package.                        | <u>X</u> | <u>      </u> |
| 1.2.13 A remote mounted head shall be provided have a cable to facilitate connection to the remote mounted trunk unit at least 20 feet.                | <u>X</u> | <u>      </u> |
| 1.2.14 If a separate power cable is necessary, it shall be at least 25 feet in length.   | <u>X</u> | <u>      </u> |
| 1.2.15 A mike hangup shall be provided.  | <u>X</u> | <u>      </u> |

**2. TEIR 2 – Medium Power, Underdash APCO P-25 512 channel mobile radio**

**2.1 ITEM #3 - UHF Digital Mobile – P-25 Trunking ready (includes P-25 CAI)**

- |   |               |               |                                      |
|---|---------------|---------------|--------------------------------------|
| 2.1.1 A mobile under dash type radio (one piece) capable of operating in the 380 - 470 MHz band shall be provided.                  | <u>      </u> | <u>X</u>      | See Clarification in<br>Cover Letter |
| 2.1.2 Radio shall be capable via programming of wide band and narrow band operation.  | <u>X</u>      | <u>      </u> |                                      |
| 2.1.2.1 Each channel shall be individually programmable with regard to wideband/narrowband operation, and digital/analog operation. | <u>X</u>      | <u>      </u> |                                      |

2.1.3	There shall be no limitations in the radio with regard to what channels may be programmed into the radio.	<u>X</u>	<u>      </u>
2.1.3.1	All currently licensable frequencies shall be considered acceptable to the unit. It shall have maximum dimensions of 7.5" W x 3.5" H x 11" D.	<u>X</u>	<u>      </u>
2.1.3.2	It shall be capable of storing a minimum of 512 channels.	<u>X</u>	<u>      </u>
2.1.4	Channel indication shall be by way of an alphanumeric display containing a minimum of 10 digits.	<u>X</u>	<u>      </u>
2.1.5	Radio shall have ID display capability.	<u>X</u>	<u>      </u>
2.1.6	If the front panel is sloped, the amount of slope shall not be greater than 20 degrees.	<u>X</u>	<u>      </u>
2.1.7	Radio shall have programmable encode and decode capability for both CTCSS tones and digital coded squelch with a minimum of one pair of tones, not necessarily the same, for each programmed channel.	<u>X</u>	<u>      </u>
2.1.8	It shall transmit with a minimum of 40 watts RF.	<u>X</u>	<u>      </u>
2.1.9	Receiver audio stage shall be capable of a minimum of 5 watts of audio from the internal speaker.	<u>      </u>	<u>X</u> See Clarification in Cover Letter
2.1.10	The speaker shall be driven by this audio amplifier and must be capable of dissipating the entire audio capability.	<u>X</u>	<u>      </u>
2.1.10.1	An external speaker will be provided with the unit.	<u>X</u>	<u>      </u>
2.1.10.2	When the external speaker is in use, any internal speaker shall be capable of being disabled.	<u>X</u>	<u>      </u>
2.1.10.3	If the internal speaker is mounted on the radio front panel, then the external speaker may be deleted, but must still be capable of using same.	<u>X</u>	<u>      </u>
2.1.11	A standard microphone shall be provided.	<u>X</u>	<u>      </u>
2.1.12	Radio shall include software for P-25 CAI and P-25 Trunked operation.	<u>X</u>	<u>      </u>

2.1.13 This shall include any other software necessary to enable seamless roaming operation on the WVIRP radio system presently being installed in West Virginia, and operational in Harrison, Marion, and Monongalia counties. X \_\_\_\_\_

2.1.14 Radio shall be capable of interfacing for data input/output. X \_\_\_\_\_

2.1.14.1 If internal hardware is necessary in the radio, a price will be given for installation of that hardware at the time of purchase if option (Mobile Data Hardware Interface) is exercised. X \_\_\_\_\_

2.1.14.2 Associated software or hardware, which shall include programming cable(s) external to the radio necessary for utilization of the radio in a data mode will be priced as a separate option (Mobile Data Software Interface) and shall be available either at time of purchase or at a later time as an independent purchase item. X \_\_\_\_\_

**2.2 ITEM #4 - VHF Digital Mobile with P-25 Digital CAI (Trunking capable)**

2.2.1 A mobile under dash type radio (one piece) capable of operating in the 150-174 MHz band shall be provided. X \_\_\_\_\_

2.2.2 Radio shall be capable via programming of wide band and narrow band operation. X \_\_\_\_\_

2.2.2.1 Each channel shall be individually programmable with regard to wideband/narrowband operation, and digital/analog operation. X \_\_\_\_\_

2.2.3 There shall be no limitations in the radio with regard to what channels may be programmed into the radio. X \_\_\_\_\_

2.2.3.1 All currently licensable frequencies shall be considered acceptable to the unit. X \_\_\_\_\_

2.2.3.2 It shall be capable of storing a minimum of 512 channels. X \_\_\_\_\_

2.2.4 It shall have maximum dimensions of 7.5" W x 3.5" H x 11" D. X \_\_\_\_\_



- |          |   |          |                                      |
|----------|---|----------|--------------------------------------|
| 2.2.5    | Channel indication shall be by way of an alphanumeric display containing a minimum of 10 digits.  | <u>X</u> | _____                                |
| 2.2.5.1  | Radio shall have ID display capability.   | <u>X</u> | _____                                |
| 2.2.6    | If the front panel is sloped, the amount of slope shall not be greater than 20 degrees.   | <u>X</u> | _____                                |
| 2.2.7    | Radio shall have programmable encode and decode capability for both CTCSS tones and digital coded squelch with a minimum of one pair of tones, not necessarily the same, for each programmed channel. | <u>X</u> | _____                                |
| 2.2.8    | It shall transmit with a minimum of 40 watts RF.  | <u>X</u> | _____                                |
| 2.2.9    | Receiver audio stage shall be capable of a minimum of 5 watts of audio from the internal speaker.   | <u>X</u> | See Clarification in<br>Cover Letter |
| 2.2.10   | The speaker shall be driven by this audio amplifier and must be capable of dissipating the entire audio capability.   | <u>X</u> | _____                                |
| 2.2.10.1 | An external speaker will be provided with the unit.   | <u>X</u> | _____                                |
| 2.2.10.2 | When the external speaker is in use, any internal speaker shall be capable of being disabled.   | <u>X</u> | _____                                |
| 2.2.10.3 | If the internal speaker is mounted on the radio front panel, then the external speaker may be deleted, but must still be capable of using same.   | <u>X</u> | _____                                |
| 2.2.11   | A standard microphone shall be provided.  | <u>X</u> | _____                                |
| 2.2.12   | Radio shall include all software to operate at least to P-25 CAI standards compatible with the WV DNR Law Enforcement Section VHF radio system.   | <u>X</u> | _____                                |

### 3. GENERAL SPECIFICATIONS AND WARRANTY

- |     |  |          |       |
|-----|--|----------|-------|
| 3.1 | All UHF radios being offered for purchase shall have previously been approved for use on the West Virginia Interoperable Radio Project system. | <u>X</u> | _____ |
|-----|--|----------|-------|

- |       |   |              |               |
|-------|---|--------------|---------------|
| 3.2   | All VHF radios being offered shall have been previously approved for use on the West Virginia Department of Natural Resources P-25 CAI repeater system.                           | <u>  X  </u> | <u>      </u> |
| 3.3   | In the case of a radio not previously approved, a working example of the equipment to be provided will be available for evaluation prior to award.                                | <u>  X  </u> | <u>      </u> |
| 3.3.1 | Operating and repair manuals will be provided on each component delivered for evaluation.   | <u>  X  </u> | <u>      </u> |
| 3.3.2 | The documentation supplied by the accepted vendor will not be returned, and shall not be construed as being part of the manuals required in other parts of this specification.    | <u>  X  </u> | <u>      </u> |
| 3.3.3 | The working sample will include explicit instructions and diagrams to facilitate connection of all components as intended by the vendor.  | <u>  X  </u> | <u>      </u> |
| 3.3.4 | If the vendor desires, it is acceptable for a representative to assemble the package in working order.  | <u>  X  </u> | <u>      </u> |
| 3.3.5 | Any necessary programming to facilitate testing will be provided to the purchasers specifications by the vendor.  | <u>  X  </u> | <u>      </u> |
| 3.3.6 | Any failure of the example to not contain all items specified and to not perform as required will be grounds for disqualification of the bid.                                     | <u>  X  </u> | <u>      </u> |
| 3.4   | Upon request and/or prior to bid award Vendors shall provide manufacturer's certification indicating they are an authorized reseller of the product(s) they are offering/bidding. | <u>  X  </u> | <u>      </u> |
| 3.5   | All equipment shall be warranted for a period of 1 year, including parts and labor, and beginning when the equipment is first placed in service.                                  | <u>  X  </u> | <u>      </u> |
| 3.6   | All features that are placed in the radio by way of programming or feature encoding will remain for the life of the radio.  | <u>  X  </u> | <u>      </u> |
| 3.6.1 | Any lost feature information (ie. # of channels, type of radio, etc) will be replaced (provided) at no charge for the life of the radio.  | <u>  X  </u> | <u>      </u> |

- |  |          |       |
|--|----------|-------|
| 3.7 The successful vendor shall provide pre-paid shipping labels to cover all shipping charges for any item needing to be returned for repair work during the warranty period. | <u>X</u> | _____ |
| 3.8 All firmware upgrades will be free of charge for the life of the radio.  | <u>X</u> | _____ |
| 3.9 All programming software updates shall be free of charge for the life of the radio.  | <u>X</u> | _____ |
| 3.10 All items are to be available for purchase separately and each item is to be individually priced.   | <u>X</u> | _____ |
| 3.11 Each item bid is to include make and model on Price Quotation sheet provided, and shall include literature sufficient for analysis of product being proposed.             | <u>X</u> | _____ |
| 3.12 Radios must be compatible with AES encryption.  | <u>X</u> | _____ |
| 3.12.1 This encryption method will be an option available both at the time of purchase and as a later upgrade.   | <u>X</u> | _____ |
| 3.12.2 Radio shall be capable of holding multiple encryption keys.   | <u>X</u> | _____ |
| 3.12.3 Any necessary hardware to allow AES encryption (ie. hardware encryption board) shall be included in the radio at time of purchase.                                      | <u>X</u> | _____ |
| 3.12.4 The only option shown shall be the software required to enable the AES encryption regardless if encryption is purchased initially with the radio or at a later date.    | <u>X</u> | _____ |
| 3.13 An AES encryption key loader will also be listed as an option and shall include all applicable cables.  | <u>X</u> | _____ |
| 3.13.1 The optional keyloader shall come preloaded with AES encryption capability.   | <u>X</u> | _____ |
| 3.14 All encryption keyloading shall be capable via a Motorola KVL3000 Plus.   | <u>X</u> | _____ |
| 3.15 A remote head option shall be provided.   | <u>X</u> | _____ |

- 3.15.1 All interfacing cables will be provided when this option is purchased, including a cable at least 20 feet in length between the remote head and the t/r unit, and a power cable at least 25 feet in length.

  X   \_\_\_\_\_

#### 4. COMPATIBILITY

- 4.1 Any modifications necessary to make this equipment operate properly with other provided equipment are to be the responsibility of the vendor.

  X   \_\_\_\_\_

- 4.2 All programming and jumper settings must be performed prior to delivery for operation with any other equipment in this specification.

  X   \_\_\_\_\_

- 4.3 All equipment shall function without unintended interaction and interference to other components.

  X   \_\_\_\_\_

- 4.4 Any software or hardware deemed necessary for these products to operate in the WVIRP system (UHF), or WVDNR system (VHF), yet excluded by the vendor will be provided after purchase at no charge to the purchaser.

  X   \_\_\_\_\_

- 4.5 All upgrades to facilitate installation of this hardware or software will be the responsibility of the vendor and shall be undertaken at no charge to the purchaser.

  X   \_\_\_\_\_

#### 5. SERVICE MANUALS

- 5.1 Schematics will be available and provided as specified.

  X   \_\_\_\_\_

- 5.2 A minimum of 6 complete depot level service/repair manuals will be provided.

  X   \_\_\_\_\_

- 5.3 If greater than 30 radios are provided, service/repair manuals shall be provided in a ratio of 1 manual per 5 radios.

  X   \_\_\_\_\_

- 5.4 If greater than 50 radios are provided, service/repair manuals shall be provided in a ratio of 1 manual per 10 radios after fulfilling minimum requirements.

  X   \_\_\_\_\_

- 5.5 Any failure to comply will be grounds for disqualification of the bid, or cancellation of the contract.

  X   \_\_\_\_\_

## 6. EQUIPMENT OPTIONS

6.1 The following items shall be available for items #1-4:

6.1.1 Desktop Microphone to substitute for mobile microphone.	<u>X</u>	_____
6.1.2 Desktop Power Supply to convert mobile radio into table top base type radio.	<u>X</u>	_____
6.1.3 Upgrade to P-25 trunked operation for the VHF radio.	<u>X</u>	_____
6.1.4 AES Encryption.	<u>X</u>	_____
6.1.5 AES Encryption Key Loader (Motorola KVL 3000+ or approved equal).	<u>X</u>	_____
6.1.6 Encryption key loader cable for 6.1.5.	<u>X</u>	_____
6.1.7 Option C after purchase.	<u>X</u>	_____
6.1.8 Remote control head and associated hardware (split TR unit control head) (To be standard on items 1 & 2).	<u>X</u>	_____
6.1.9 Mobile Data Hardware Interface.	<u>X</u>	_____
6.1.10 Mobile Data Software Interface.	<u>X</u>	_____

6.2 Programming Software for items 1 & 2:

6.2.1 All radio programming must be able to be performed on a Microsoft Windows 2000/XP based computer.	<u>X</u>	_____
6.2.2 The vendor shall make available for purchase all programming software and cabling necessary to program all radios.	<u>X</u>	_____

6.3 Programming Software for items 3 & 4:

6.3.1 All radio programming must be able to be performed on a Microsoft Windows 2000/XP based computer.	<u>X</u>	_____
6.3.2 The vendor shall make available for purchase all programming software and cabling necessary to program all radios.	<u>X</u>	_____

## 7. EVALUATION FOR BID AWARD

- |       |  |   |  |
|-------|--|---|--|
| 7.1   | Evaluation will include the review of all items listed in these specifications.  | X |  |
| 7.2   | The recommendation for bid award shall be made to the bid meeting the intent of the specifications set forth in this RFQ and containing the lowest Total Cost of all items listed.   | X |  |
| 7.3   | All pricing must be line itemed as indicated on the attached Price Quotation form.   | X |  |
| 7.4   | Vendors may provide pricing on a separate price sheet for additional items they offer relating to the items listed in this RFQ. This pricing will only be for informational purposes and will not be considered for bid award. Should any of the additional items listed be needed in the future, a change order to the contract will be made and at that time exact pricing will be obtained. | X |  |
| 7.5   | Special / Promotional pricing offered by vendors for limited periods of time and any item pricing provided for items not requested in this RFQ shall not be considered for bid award and/or price comparison.  | X |  |
| 7.6   | Vendors must include make and model on the Price Quotation sheet for items 1, 2, 3 & 4.  | X |  |
| 7.6.1 | Upon request vendors shall provide a manufacturer product sheet (if not included with bid) which shows the product's specification information.  | X |  |
| 7.7   | Vendors must include make, model and product part number for Options A, B, E, and F listed in this RFQ.  | X |  |

# VHF and UHF DIGITAL MOBILE RADIO

## PRICE QUOTATION

### UHF

Item #1 VHF Digital Mobile \$ 2789.50  
with remote mount head

Make: KENWOOD Model: TK-5810HBK2, KCH-14, KRK-5, KCT-22M3, KCT-23M4,  
KMC-27, KES-5, KWD-TR20, L-1056

### VHF

Item #2 UHF Digital Mobile \$ 2205.70  
with remote mount head

Make: KENWOOD Model: TK-5710HBK, KCH-14, KRK-5, KCT-22M3, KCT-23M4,  
KMC-27, KES-5

### Options for Items #1-2

- A) Desktop Microphone (substitute for mobile) \$ 0.00 (Specify Desktop Mic option with order)  
- KMC-27 and + KMC-9B
- B) Desktop Power Supply \$ 116.90  
KPS-15
- C) Upgrade VHF radio to P-25 trunked operation \$ 583.80  
KWD-TR20, L-1056
- D) AES Encryption \$ 665.00  
KWD-AE21K
- E) AES Encryption Key Loader (KVL3000+ or Equal) \$ 350.00  
KPG-113AE
- F) Encryption Key Loader cable option E \$ 175.00  
KPG-94
- G) Upgrade to option C after purchase \$ 583.80  
KWD-TR20
- H) Mobile Data Hardware Interface \$ N/A
- I) Mobile Data Software Interface \$ N/A

### UHF

Item #3 VHF Digital Mobile \$ 2247.00

Make: KENWOOD Model: TK-5810BK2, 10BMD, KWD-TR20, L-1056

### VHF

Item #4 UHF Digital Mobile \$ 1663.20

Make: KENWOOD Model: TK-5710BK, 10BMD

### Options for Items #3-4

- A) Desktop Microphone (substitute for mobile) \$ 0.00 (Specify Desktop Mic option with order)  
- KMC-27 and + KMC-9B
- B) Desktop Power Supply \$ 116.90  
KPS-15
- C) Upgrade VHF radio to P-25 trunked operation \$ 583.80  
KWD-TR20, L-1056

D) AES Encryption <i>KWD-AE21K</i>	\$ 665.00
E) AES Encryption Key Loader (KVL3000+ Or equal) <i>KPG-113AE</i>	\$ 350.00
F) Encryption Key Loader cable E <i>KPG-94</i>	\$ 175.00
G) Upgrade to option C after purchase <i>KWD-TR20</i>	\$ 583.80
H) Remote control radio head <i>KRK-5, KCT-22M3</i>	\$ 161.00
I) Mobile Data Hardware Interface	\$ N/A
J) Mobile Data Software Interface	\$ N/A

**Item #5, Programming Software and cables for Items #1 & 2**

5.1) Programming software <i>KPG-95DK</i>	\$ 418.60
5.2) Programming cable <i>KPG-43AM</i>	\$ 76.30
5.3) Programming interface (if required)	\$ N/A

**Item #6, Programming Software and cables for Items #3 & 4**

6.1) Programming software <i>KPG-95DK</i>	\$ 418.60
6.2) Programming cable <i>KPG-43AM</i>	\$ 76.30
6.3) Programming interface (if required)	\$ N/A



# KENWOOD

## Land Mobile Radio Division Price Guide West Virginia RFQ#DPS0816 Unique Price Page

### TK-5710 / 5810

VHF / UHF FM & P25 Digital Mobile Radios

- 50W & 110W (136-174 MHz)
- 45W & 100W (450-520, 400-470 MHz)
- 50 Zones / 512 Channels
- Personality Lists
- Enhanced Kenwood Audio
- Zone/CH Voice Announce
- Emergency Feature Set
- Tactical Group
- Easy Option Ports (26-Pin)
- MIL-STD C/D/E/F, IP-54
- MIL-STD 810 512.X Driven Rain
- FleetSync I/II
- DES Encryption Option
- AES Encryption Option

MODEL	DESCRIPTION	RETAIL	WV PRICE
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**RF DECK ONLY: ORDER CONFIGURATION SET & ASSEMBLY LABOR CODE FOR A COMPLETE MOBILE**

TK-5710BK	136-174MHz 10-50W 50 Zones/512 Channels (R.F. DECK ONLY)	\$1,753.00	\$1,227.10
TK-5710HBK	136-174MHz 50-110W 50 Zones/512 Channels (R.F. DECK ONLY)	\$2,240.00	\$1,568.00
TK-5810BK	450-520 MHz 5-45W 50 Zones/512 Channels (R.F. DECK ONLY)	\$1,753.00	\$1,227.10
TK-5810BK2	400-470 MHz 5-45W 50 Zones/512 Channels (R.F. DECK ONLY)	\$1,753.00	\$1,227.10
TK-5810HBK	450-520 MHz 50-100W 50 Zones/512 Channels (R.F. DECK ONLY)	\$2,240.00	\$1,568.00
TK-5810HBK2	400-470 MHz 50-100W 50 Zones/512 Channels (R.F. DECK ONLY)	\$2,240.00	\$1,568.00

#### DASH MOUNT CONFIGURATION SETS

10BHD	KCH-14M, KCT-23M2, KMB-9, KMC-27	\$651.00	\$455.70
10BMD	KCH-14M, KCT-23M, KMB-5, KMC-27	\$623.00	\$436.10
10FHD	KCH-15M, KCT-23M2, KMB-9, KMC-27, KES-5	\$710.00	\$497.00
10FMD	KCH-15M, KCT-23M, KMB-5, KMC-27, KES-5	\$682.00	\$477.40

#### SINGLE HEAD REMOTE MOUNT CONFIGURATON SETS

10BHS	KCH-14M, KRK-5, KCT-22M2, KCT-23M4, KMB-9, KMC-27	\$877.00	\$613.90
10BMS	KCH-14M, KRK-5, KCT-22M2, KCT-23M3, KMB-5, KMC-27	\$846.00	\$592.20
10FHS	KCH-15M, KRK-5, KCT-22M2, KCT-23M4, KMB-9, KMC-27, KES-5	\$936.00	\$655.20
10FMS	KCH-15M, KRK-5, KCT-22M2, KCT-23M3, KMB-5, KMC-27, KES-5	\$905.00	\$633.50

#### DUAL HEAD REMOTE MOUNT CONFIGURATION SETS

10BHDH	KCH-14M(x2), KRK-6DH, KCT-22M2(x2), KCT-23M4, KMB-9, KMC-27(x2)	\$1,636.00	\$1,145.20
10BMDH	KCH-14M(x2), KRK-6DH, KCT-22M2(x2), KCT-23M3, KMB-5, KMC-27(x2)	\$1,605.00	\$1,123.50
10FHDH	KCH-15M(x2), KRK-6DH, KCT-22M2(x2), KCT-23M4, KMB-9, KMC-27(x2), KES-5(x2)	\$1,754.00	\$1,227.80
10FMDH	KCH-15M(x2), KRK-6DH, KCT-22M2(x2), KCT-23M3, KMB-5, KMC-27(x2), KES-5(x2)	\$1,723.00	\$1,206.10

#### CABLES

KCT-18	Ignition sense cable	\$13.00	\$9.10
KCT-22M	Control cable - 8 Feet	\$70.00	\$49.00
KCT-22M2	Control cable - 17 Feet (Standard accessory config. set cable)	\$80.00	\$56.00
KCT-22M3	Control cable - 25 Feet	\$90.00	\$63.00
KCT-23M	DC Cable (10-50W Dash mount)	\$30.00	\$21.00
KCT-23M2	DC Cable (50-110W Dash mount)	\$37.00	\$25.90
KCT-23M3	DC Cable (10-50W Remote mount)	\$33.00	\$23.10
KCT-23M4	DC Cable (50-110W Remote mount)	\$43.00	\$30.10

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<b>INSTALLATION ACCESSORIES</b>			
KLF-2	Line Filter (suppresses alternator whine, 25dB, 25A max)	\$39.50	\$27.65
KMB-10	Key Lock Adapter for use with KMB-5	\$25.00	\$17.50
KMB-5	Medium Power Mounting Bracket (10-50W models)	\$14.00	\$9.80
KMB-9	High Power Mounting Bracket with built-in key lock (50-110W models)	\$35.00	\$24.50
<b>MICROPHONES AND SPEAKERS</b>			
KES-5	External Speaker (40W max input)	\$59.00	\$41.30
KMC-27	MIL-SPEC noise-canceling mobile hand microphone (included with configuration sets)	\$99.00	\$69.30
KMC-28	MIL-SPEC DTMF noise-canceling mobile hand microphone	\$155.00	\$108.50
KMC-9B	Desk top microphone	\$92.00	\$64.40
<b>FRONT PANELS &amp; REMOTE KITS ONLY (Order Configuration Sets for full install accessories)</b>			
KCH-14M	Basic Remote Control Head w/ 12 Alphanumeric Display (4W Front Speaker)	\$480.00	\$336.00
KCH-15M	Full-Featured Remote Control Head w/ 14 Alphanumeric Display (external speaker required)	\$480.00	\$336.00
KRK-5	Single Control Head Remote Mount Kit	\$140.00	\$98.00
KRK-6DH	Dual Control Head Remote Mount Kit	\$240.00	\$168.00
<b>SERVICE RELATED ACCESSORIES</b>			
KPG-43AM	Programming interface Cable (DB9F PC connector)	\$109.00	\$76.30
KCT-53UM	USB Adapter for KPG-xxAM DB9F Programming Interface Cables (DB9M - to - USB Type A connector);	\$81.67	\$57.17
KPG-95DK	Windows® Programming Software for TK-5210/5310/5710/5810 (98, ME, 2000 & XP compatible)	\$598.00	\$418.60
	Includes "Dealer Level License ID" for FM & P25 Conventional modes only. See L-989 KPG-95DK Network Level ID (Trunking System Priviledges_ - Restricted Purchase Requirements.		
	Note: A Dealer Level License ID can load network data files provided by a Network Level Licensed KPG-95DK, but cannot change trunked network parameters.		
L-989	KPG-95DK Network Level ID (encrypted data file)	\$132.00	\$92.40
	Enables trunking system programming privileges; See KPG-95DK Network Level ID (Trunking System Priviledges) - Restricted Purchase Requirements		
	L-989- KPG-95DK Network Level ID (Trunking System Priviledges) - Restricted Purchase Requirements. The KPG-95D only ships with a "Dealer Level License ID" which permits Conventional FM and P25 Conventional radio programming privileges only. For radios with the P25 trunking option installed, trunked/network programming privileges require a "Network Level License ID" generally reserved ONLY for the system owner or the system owners authorized operators/service centers. Purchasing the KPG-95DK Network Level License ID will require 1) Written verifiable authorization from the systems owner/operator. 2) The 3-digit hexadecimal P25 System ID from the system owner/operator. 3) Purchase of a L-989 : KPG-95D Network Level ID option. This option will include an encrypted KPG-95D "System Key Data File" containing the 16-digit Network Level License ID & 3-digit hexadecimal System ID code.		
KPG-94	Key Loader Interface Cable for Motorola KVL-3000/3000 Plus	\$250.00	\$175.00

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<b>Call Kenwood Parts at 800-367-7514 to order the following:</b>			
K29-5276-03	Key Inserts for 90-series mobile (AN, D/A, DIM, HA, HC, IC, MON, OPT, OST, PA)	\$14.00	\$9.80
K29-5277-03	Key Inserts for 90-series mobile (RCL, RPT, SCN, SP, SPM, SQ, TA, <up arrow>, <down arrow>)	\$14.00	\$9.80
K29-5305-03	Key Inserts for 90-series mobile (CH1, CH2, CH3, CH4, CH5, AUXA, AUXB, AUXC, EMG, ORG)	\$14.00	\$9.80
K29-5276-03	Key Inserts for 90-Series/TK-5710/5810 (AN, D/A, DIM, HA, HC, IC, MON, OPT, OST, PA)	\$14.00	\$9.80
K29-5277-03	Key Inserts for 90-Series/TK-5710/5810 (RCL, RPT, SCN, SP, SPM, SQ, TA, <up arrow>, <down arrow>, 1x Clear key insert)	\$14.00	\$9.80
K29-5305-03	Key Inserts for 90-Series/TK-5710/5810 (CH1, CH2, CH3, CH4, CH5, AUXA, AUXB, AUXC, EMG, ORG)	\$14.00	\$9.80
K29-9353-13	Key Inserts for TK-5710/5810 (2TN, AD, AR, CLK, FNC, PBK, SCP, SEC, SEL, SES)	\$14.00	\$9.80
K29-9354-03	Key Inserts for TK-5710/5810 (GPS, STS, TAC, TON, RES, IDV, KDL, TGR, 2x Clear key inserts)	\$14.00	\$9.80
K29-9356-03	Key Inserts for TK-5710/5810 (PAG, SIT, SRC, 7 X Clear key inserts)	\$14.00	\$9.80

<b>FIRMWARE OPTIONS</b>			
KWD-TR20	Trunking Option for TK-5210/5710/5310/5810	\$834.00	\$583.80
	Must order L-1056 Install KWD-TR20 VHF trunking Option KPG-95DK Requires Network Level License ID to program trunked network radio parameters (see KPG-95D for purchase restrictions & requirements) Compatible with TK-5210 Version 2 (SN 80600001 or later); TK-5310 (SN 809xxxxx or later); TK-5710 Version 2 (SN 806xxxxx); TK-5810 (SN 809xxxxx or later)		
L-1056	Install KWD-TR20 Trunking Option in TK-5710/5810 (Must purchase KWD-TR20 separately)	N/C	

<b>OPTION MODULES</b>			
KWD-DE21K	DES Plug-in Cryptographic Module for TK-5210/5710/5310/5810* (Intrinsically Safe Approved Accessory)	\$550.00	\$385.00
L-1602	Install KWD-DE21K in TK-5710/5810 Mobile (Must purchase module separately)	\$75.00	\$52.50
KWD-AE21K	AES (non-Fips) & DES Plug-in Cryptographic Module for TK-5210/5710/5310/5810 (Intrinsically Safe Approved Accessory)	\$950.00	\$665.00
L-1346	Install KWD-AE21K in TK-5710/5810 Mobile (Must purchase module separately)	\$75.00	\$52.50
KPG-113AE	AES & DES Software KeyLoader (includes USB Secure Key) KWD-DE21K/AE21K	\$500.00	\$350.00
KPG-114DE	(DES only) DES Software KeyLoader KWD-DE21K/AE21K	\$350.00	\$245.00

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<b>OPTION MODULES</b>			
VGS-1	Voice Storage Unit	\$72.00	\$50.40
	VGS-1 provides Auto-Record, Voice Memo & Playback; The Voice Guide (a.k.a. annunciation) function is built-in to the TK-5710/5810 and does not require the VGS-1		
CIM-1000K-26	GE-Star or MDC-1200 ANI Encode 26-Pin Plug-In Board Order labor code for radio install and programming.	\$125.00	\$87.50
CIM-CABLE	Serial Program Cable	\$59.00	\$41.30
	CIM-1000K-26 programs via Windows Hyper terminal (Windows Ver 3.1 or later) or any ProComm version; board must be installed in a powered radio for programming. The radio programmer does NOT program the CIM-1000K-26. CIMM-CABLE is a DB-9 PC connector with 3 short lead with clips and may require a PC serial extension cable		

<b>INSTALLATION / TUNING CHARGES</b>			
L-1028	Package Dash/Single Head Remote for 5710/5810 mobiles	\$17.00	\$11.90
L-1029	Package Dual Head Remote for 5710/5810 mobiles	\$34.00	\$23.80
L-1006	Modify TK-5710/5810 for Horn Alert relay output (1 amp max.; relay factory installed already)	\$25.00	\$17.50
L-862	Install Front Panel PF Key Label Inserts in TK-5710/5810/90-series Mobile (key names and positions must be specified)	\$15.00	\$10.50
L-864	KCT-22A Extended Control Head Cable (Specify length in 1 ft increments up to 50 ft. max.)	\$190.00	\$133.00
L-865	KCT-22A Extended Control Head Cable (Specify length in 1 ft. increments up to 100 ft. max.)	\$245.00	\$171.50
	<b>Extended control head cables:</b> Extended cables result in a loss of control head audio power. On KCH-14 use 13W audio output modifications per service manual. Use a standard KCT-22 25 ft. or less cable for firmware installation. Normal KPG-95D radio programming is possible at extended lengths.		
L-866	Modify KCT-23M2/M4 110W High Power DC Cables from 4 to 2 Conductors (1x23 ft. positive, 1x23 ft. negative; AWG #10)	\$75.00	\$52.50
	<b>Two Conductor Modification:</b>		
	KCT-23M2 75/110W Dash Mount DC Cable ( 4 Conductor: 2x10 ft. positive, 2x10 ft. negative)		
	KCT-23M4 75/110W Remote Mount DC Cable (4 Conductor: 2x23 ft. positive, 2x23 ft. negative)		
L-962	Install VGS-1 Voice Guide & Storage Unit	\$25.00	\$17.50
L-989	KPG-95DK Network Level ID Privilege (encrypted data file)	\$132.00	\$92.40
L-1024	Install & Program CIM-1000K-26 for MDC-1200 in TK-5710/5810	\$75.00	\$52.50
L-1025	Install & Program CIM-1000K-26 for GE-Star in TK-5710/5810	\$75.00	\$52.50

STATE OF WEST VIRGINIA  
Purchasing Division**PURCHASING AFFIDAVIT**

**West Virginia Code §5A-3-10a states:** No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate

**DEFINITIONS:**

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

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

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

**LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

**CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit [www.state.wv.us/admin/purchase/privacy](http://www.state.wv.us/admin/purchase/privacy) for the Notice of Agency Confidentiality Policies.

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

Vendor's Name: Kenwood USA Corporation

Authorized Signature: Barry Morris *Barry Morris* Date: 01/03/08

# KENWOOD

Listen to the Future



## TK-5710(H)/5810(H)

VHF/UHF FM & Project 25 Digital Mobile Radio



**FleetSync®**  
by KENWOOD

### GENERAL FEATURES

- 50W & 110W (136-174 MHz)
- 45W & 100 W (450-520, 400-470 MHz)
- 50 Zones / 512 Channels
- Personality Lists
- Enhanced Kenwood Audio
- Zone/CH Voice Announce
- Emergency Features
- Tactical Group
- Intercom<sup>1</sup>
- Public Address
- Time Out Timer
- Busy Channel Lockout
- Ignition Sense<sup>2</sup>
- Timed Power Off
- DB-25 & 9-Pin Accessory Connectors<sup>3</sup>
- Transceiver Password
- Date & 12/24 Hour Time Clock
- Windows® Programming & Tuning<sup>4</sup>
- Windows® Firmware Uploading<sup>4</sup>
- Field-Programming & Tuning
- Cloning
- Easy Option Ports (26-pin)<sup>5</sup>
- DB-25 & 9-Pin Accessory Connectors
- MIL-STD 810 C/D/E/F, IP-54
- MIL-STD Noise-Cancel Mic (included)
- MIL-STD 12-Key DTMF Mic Option

### MOUNTING CONFIGURATIONS

- Dash Mount
- Single Control Head Remote Mount
- Dual Control Head Remote Mount

### FRONT PANELS/CONTROL HEADS

- Backlit Dot Matrix LCD
  - 3-Digit Sub-Display
  - Function / Status LCD Icons
  - Transmit LED
  - Busy/Call Alert/Warn LED
  - LCD Brightness Control
  - Power On/Off Switch
  - Rotary Volume Knob
  - Rotary Selector Knob
  - Backlit Keys
  - PF Key Label Inserts
  - Microphone Jack
  - MIL-STD 810 512.X Driven Rain
- KCH-14 Front Panel
- 12-Character Alphanumeric Aliases
  - 5 PF Keys
  - UP/DOWN Keys
  - Built-in Front Speaker
- KCH-15 Front Panel
- 14-Character Alphanumeric Aliases
  - 11 PF Keys
  - UP/DOWN Keys
  - External Speaker Required

### SCAN TYPES (FM & P25)

- Single Zone/Multi-Zone Scan<sup>11</sup>
- Scan Lists
- Conventional Scan
- Limited Talk Group Scan<sup>6</sup>
- Priority Monitor Scan<sup>6</sup>
- Dual Priority Scan

### FM

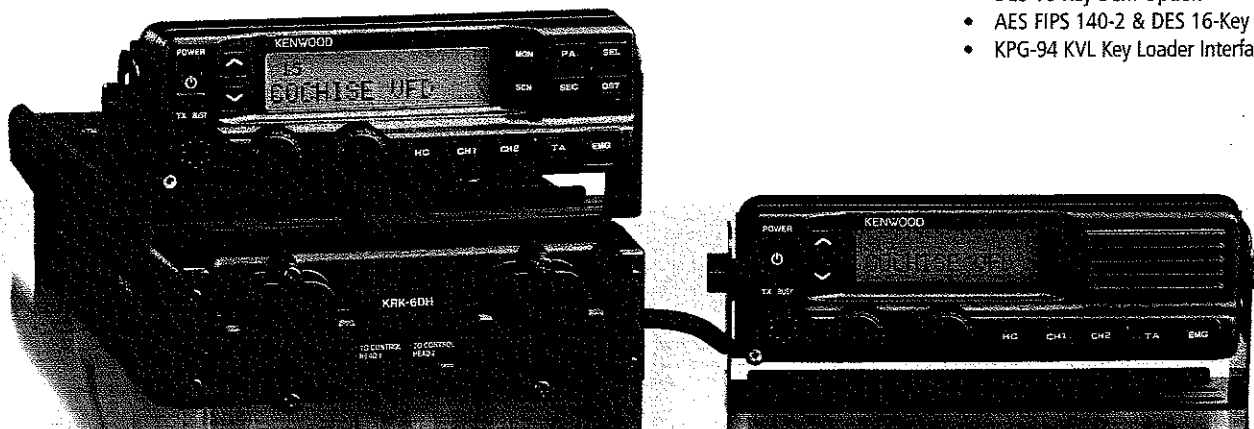
- QT / DQT
- Operator Selectable Tone
- Two-Tone Decode / Encode<sup>7</sup>
- DTMF Encode / Decode / Stun<sup>8</sup>
- Special Alert Tone Patterns<sup>9</sup>
- Horn Alert Output
- Encryption / ANI Board Control
- Companded Audio

### FleetSync® (FM)

- FleetSync® or FleetSync® II<sup>10</sup>
- PTT ID Digital ANI
- Caller ID Display
- Status Messaging
- Emergency & Stun Statuses
- Selective & Group Call
- Text Messaging

### P25 DIGITAL

- P25 Digital Conventional
- P25 Digital Trunking Option
- IMBE™ VOCODER
- Talk Group ID Lists
- Individual ID Lists
- Caller ID Display
- RSSI Indicator
- Remote Monitor
- Remote Check
- Radio Inhibit
- Encryption Key Delete
- Encryption Key Zeroize (SCM required)<sup>11</sup>
- Encryption Key Retention (SCM required)<sup>11</sup>
- DES 16-Key SCM Option<sup>11</sup>
- AES FIPS 140-2 & DES 16-Key SCM Option<sup>11</sup>
- KPG-94 KVL Key Loader Interface Cable<sup>12</sup>



## Options

### KMC-9B

Desktop Microphone



### KMC-27

Microphone  
(MIL-SPEC noise-canceling)



### KMC-28

Keypad Microphone  
(MIL-SPEC noise-canceling)



### KCT-18

Ignition Sense Cable



### KCT-22

Remote Control Cable



### KCT-23

DC Power Cable



### KES-5

External Speaker (20W)



### KCH-14

Basic Remote  
Control Head



### KCH-15

Full-Featured Remote  
Control Head



### KRK-5

Single Control Head Remote Kit

### KRK-6DH

Dual Control Head Remote Kit



### KPG-94

Keyloader Interface Cable



### VGS-1

Voice Guide & Storage Unit



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

## Specifications

Model	TK-5710	TK-5710H	TK-5810	TK-5810H
<b>GENERAL</b>				
Frequency Range	136-174 MHz		450-520 MHz	
Type 1			400-470 MHz	
Type 2				
Number of Channels			512	
Zones			50	
Max. Channels per Zone			250	
Channel Spacing	12.5 / 15 / 20 / 25 / 30 kHz		12.5 kHz	
Analog			12.5 / 25 kHz	
Digital				
Operating Voltage	13.6V DC $\pm$ 15%	13.4V DC $\pm$ 15%	13.6V DC $\pm$ 15%	13.4V DC $\pm$ 15%
Current Drain			Less than 0.6A	
Standby			Less than 2.3A	
Receive				
Transmit	Less than 12A	Less than 25A	Less than 14A	Less than 28A
Duty Cycle			Transmit: 20%	
Operating Temperature Range			-22 °F to +140 °F (-30 °C to +60 °C)	
Frequency Stability			$\pm$ 2.0 ppm (-22 °F to +140 °F)	
Antenna Impedance			50 $\Omega$	
Dimensions (W x H x D)				
RF Deck only	7.01 x 2.36 x 7.68 in. (178 x 60 x 195 mm)	7.01 x 2.36 x 12.87 in. (178 x 60 x 327 mm)	7.01 x 2.36 x 7.68 in. (178 x 60 x 195 mm)	7.01 x 2.36 x 12.87 in. (178 x 60 x 327 mm)
with KCH-14 or 15	7.05 x 2.36 x 9.09 in. (179 x 60 x 231 mm)	7.05 x 2.36 x 14.29 in. (179 x 60 x 363 mm)	7.05 x 2.36 x 9.09 in. (179 x 60 x 231 mm)	7.05 x 2.36 x 14.29 in. (179 x 60 x 363 mm)
Weight RF Deck only	5.3 lbs. (2.4 kg)	8.6 lbs. (3.9 kg)	5.5 lbs. (2.5 kg)	9.2 lbs. (4.2 kg)
with KCH-14	5.9 lbs. (2.7 kg)	9.2 lbs. (4.2 kg)	6.2 lbs. (2.8 kg)	9.9 lbs. (4.5 kg)
with KCH-15	5.9 lbs. (2.7 kg)	9.2 lbs. (4.2 kg)	6.2 lbs. (2.8 kg)	9.9 lbs. (4.5 kg)
FCC ID				
Type 1	K4435753110	K4435753210	K4439923110	K4439923210
Type 2			K4439923120	K4439923220
IC Certification				
Type 1	282F-35753110			
Type 2			282F-39923120	
<b>RECEIVER (Measurements made per EIA/TIA-204-D)</b>				
Sensitivity				
Digital (5% BER)			0.25 $\mu$ V	
Digital (1% BER)			0.40 $\mu$ V	
Analog 12 dB SINAD			0.25 $\mu$ V	
Selectivity				
Digital			-63 dB	
Analog @ 25/30 kHz	-83 dB / -85 dB		-83 dB / -	
Analog @12.5/15 kHz	-76 dB / -80 dB		-76 dB / -	
Intermodulation Distortion (Digital & Analog)			-80 dB	
Spurious Response (Digital & Analog)			-90 dB	
Audio Distortion				
Digital			Less than 1.0%	
Analog			Less than 2.0%	
Audio Output				
Internal (KCH-14)	@3%		1.5 W at 8 $\Omega$	
	@5%		1.625 W at 8 $\Omega$	
External	@3%		12 W at 4 $\Omega$	
	@5%		13 W at 4 $\Omega$	
<b>TRANSMITTER (Measurements made per EIA/TIA-152-C)</b>				
RF Output Power	50 W to 5 W	110 W to 50 W	45 W to 5 W	100 W to 50 W <sup>1,2</sup>
Spurious & Harmonics			80 dB	
FM Hum & Noise				
Analog @ 25 kHz	50 (53) °1 dB		50 dB	
Analog @12.5 kHz	45 (47) °1 dB		45 dB	
Microphone Impedance			600 $\Omega$	
Audio Distortion			Less than 2%	
Modulation			16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D 20K0F7D, 11K2F7D, 14K4F1D, 7K20F1D	

Analog measurements made per TIA/EIA 603  
Digital measurements made per TIA/EIA 102CAAA

(\*1) 148MHz - 168MHz

(\*2) Type 1: 100W to 50W for 450-500MHz. More than 60W to 50W

for 500-520MHz.  
Type 2: 100W to 50W for 400-470MHz.

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Kenwood follows a policy of continuous advancement in development.

For this reason specifications may be changed without notice.

## Applicable MIL-STD & IP

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II Cat.A1	501.3/Procedure I, II Cat.A1	501.4/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II Cat.C1	502.3/Procedure I, II Cat.C1	502.4/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I Cat.A1, C1	503.3/Procedure I Cat.A1, C1	503.4/Procedure I, II
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
Humidity	507.1/Procedure II	507.2/Procedure II	507.3/Procedure II	507.4
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
Dust	510.1/Procedure I	510.2/Procedure I, II	510.3/Procedure I	510.4/Procedure I, III
Vibration	514.2/Procedure VIII, X	514.3/Procedure I Cat.8, II Cat.3	514.4/Procedure I Cat.8, II Cat.3	514.5/Procedure I Cat.20, II Cat.5
Shock	516.2/Procedure I, II, III, V	516.3/Procedure I, IV, V, VI	516.4/Procedure I, IV, V, VI	516.5/Procedure I, IV, V, VI
<b>International Protection Standard</b>				
Dust & Water Protection	IP54			

footnotes from Front:

\* Intercom: Dual Head capable remote mounts only.

\* KCT-18 ignition sense cable option required.

\* DB-25 ACC. I/O's for dispatch consoles, desktop remotes, vehicle intercom/PA units, motorcycle PTT/headset kits, PC Laptop /Data Modems, GPS/AVL Modems; DB-25 (9 Prog. AUX I/O's & 2 Prog. AUX Outputs); 1 Prog Input (on Control Head).

\* KPG-95D Software required (Windows 98/ NT/ 2000/ Me/XP compatible).

\* Easy Option Ports: VGS-1, ANI & Scrambler board ports; only 2 ports can be used simultaneously.

\* P25 Trunking option required.

\* Two-Tone: Decode (4 sets x 4 pairs each); Encode: 32 pairs;

Operator Selectable Tone (40 OTDOT code pairs).

\* DTMF Encode: PTT ID, Emergency ANI, Manual Encode (KMC-28), Auto-Dial (9 numbers); DTMF Decode: Primary/Secondary ID, Stun (a.k.a. dead beat disable).

\* Operates for 2-Tone, DTMF, FleetSync selective calling.

\* FleetSync & FleetSync II are not compatible.

\* Feature Option added to the TK-5710 Version 2 radios (SN 80600001 or later).

\* KPG-94 adapts the Motorola, KVL3000/3000 Plus Key Loader to the TK-5710/5810.

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