

# KENWOOD

## TK-2160/3160

Compact VHF/UHF FM Portable Radios

Setting the pace with a compact, simple and reliable design, Kenwood's TK-2160/3160 portables are the new benchmark of performance. With such features as priority scan, VOX, and MIL-STD 810 & IP54/55 weatherproofing, these units are all set to work rain or shine.

### COMPACT DESIGN

Compact enough to carry anywhere with ease, this smart new radio has a distinctively ergonomic form that's handy to hold and operate.

### OPERATING EASE

The rotary and key controls on the TK-2160/3160 have been designed to provide the user with positive detent feedback even if carried and operated under-cover or in a pocket.

### INTERNAL VOX/HANDS FREE READY

Enjoy the convenience of hands-free operation using any audio accessory. By simply talking, the internal VOX (voice-operated transmission) with 10-level sensitivity adjustment provides PTT action. VOX is also ideal for specialized job tasks and events where hands-free, constant and/or repetitive communications is necessary.

### PRIORITY SCAN & TALK BACK

Scanning is a simple way to monitor multiple channels (16-channel capacity) and the TK-2160/3160 model offers both standard and priority scan modes. Talk Back allows immediate response to a received call without having to manually search or change channels.

### BUILT-IN VOICE SCRAMBLER

The TK-2160/3160 includes a voice inversion-scrambling feature that provides basic communications security against casual eavesdropping.

### FleetSync™ PTT ID, SELCALL & EMERGENCY

Utilizing Kenwood's FleetSync™ digital signalling protocol, the TK-2160/3160 has PTT ID (ANI: automatic number identification) and Selective Calling capabilities for managed dispatch operations. For hazardous/hostile duty environments, the orange key can also be programmed for Emergency status to alert the dispatcher and/or fleet of a unit in distress.

DMS (Digital Message System) function has been renamed to FleetSync.

### QT/DQT/DTMF/2-TONE

The industry standard tone/code squelching formats QT (CTCSS) and DQT (digital) provide system access and group segregation on shared frequencies. DTMF PTT ID is included for dispatch operations or for a simple remote control application. The DTMF decode capabilities include a selective call ID, transpond with ID, "wild card" group calling and radio stun.

The TK-2160/3160 is also equipped with 2-Tone encode and decode capability for legacy paging systems and selective call use (three tone pairs, A, B, C & D tones; 288.5–3000 Hz). All selective calling formats (FleetSync®, DTMF & 2-Tone) have call alert tones and LED indications.

### PROGRAMMABLE CALL ALERT TONES

The programmable call alert pattern, duration, tone and volume provide personalized and distinctive selective calling alerts.

### PROGRAMMABLE FUNCTION KEYS

The three side PF Keys are programmable to any of the many functions available on the TK-2160/3160, permitting a customized fit for specific users (including the orange key).

### HIGH-QUALITY AUDIO

Clear audio means confident communications. The TK-2160/3160 large speaker, full half-watt of audio output and tailored response characteristics provide optimum audio in even noisy environments.

### 8- TO 12-HOUR BATTERY PACKS

The KNB-25A NiCd 8-hour\* pack is the economical standard for the TK-2160/3160 portables. The optional KNB-24L Lithium Ion 9-hour\* pack offers the ultimate in compact, lightweight carrying comfort. For super high-capacity talk and standby time, the KNB-26N NiMH 12-hour pack is the powerhouse of choice.

\*Battery life is based on 5% transmit-5% receive-90% standby duty cycles.

### TOUGH & WATERPROOF

Built tough to take rough treatment in stride, these portables have passed the advanced IP54/55 and MIL-STD 810 "blowing rain" waterproof tests and meet/exceed eleven other stringent MIL-STD 810 C/D/E/F environmental standards. This proves that whatever conditions may be, the TK-2160/3160 is ready to answer the call.

### OPTION BOARD

Despite its compact design, the TK-2160/3160 can be fitted with option boards such as the SmarTrunk II™ OMNI<sup>1</sup>, and Transcript Encryption<sup>2</sup>, for advanced operating of trunking service or security.

<sup>1</sup> SmarTrunk II OMNI board is available from SmarTrunk System, Inc.

<sup>2</sup> Transcript Encryption board is available from Transcript Secure Technologies.



## Options

### ■ **KNB-24L**

Li-ion Battery Pack  
(1,400mAh)



### ■ **KNB-25A**

Ni-Cd Battery Pack  
(1,200mAh)



### ■ **KNB-26N**

Ni-MH Battery Pack  
(2,000mAh)



### ■ **KBP-5**

Battery Case



### ■ **KSC-25**

Rapid Charger



### ■ **KSC-30**

Charger for KNB-25A  
and KNB-26N



### ■ **KRA-22**

VHF Low Profile  
Helical Antenna



### ■ **KRA-23**

UHF Low Profile  
Helical Antenna



### ■ **KRA-26**

VHF Helical Antenna



### ■ **KRA-27**

UHF Whip Antenna



### ■ **KMC-17**

Speaker Microphone



### ■ **KMC-21**

Speaker Microphone



### ■ **KHS-1**

Head Set with VOX/PTT



### ■ **KHS-21**

Head Set



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

	TK-2160	TK-3160
<b>GENERAL</b>		
Frequency range		
Type1	136-174 MHz	450-490 MHz
Number of Channels	Max. 16	
Channel Spacing		
Wide/Narrow	25, 30kHz/12.5, 15kHz	25kHz/12.5kHz
Channel Step	5, 6.25kHz	
Operating Voltage	7.5V DC±20%	
Battery Life (5-5-90 duty cycle)		
with KNB-24L (1400mAh)	Approx. 9 hours	
with KNB-25A (1200mAh)	Approx. 8 hours	
with KNB-26N (2000mAh)	Approx. 12 hours	
Operating Temperature Range	-30°C ~ +60°C	
	-10°C ~ +60°C when KNB-24L/26N in use	
Frequency Stability	±2.5ppm (-30°C ~ +60°C)	
Antenna impedance	50Ω	
Channel Frequency spread		
Type1	38MHz	40MHz
Dimensions (W x H x D), Projections not included		
Radio Only	56 x 109.3 x 18.4mm	
with KNB-24L	56 x 109.3 x 34.5mm	
with KNB-25A	56 x 109.3 x 40.7mm	
with KNB-26N	56 x 109.3 x 40.7mm	
Weight		
Radio Only	165g	
with KNB-24L	290g (without antenna)	
with KNB-25A	355g (without antenna)	
with KNB-26N	400g (without antenna)	

	TK-2160	TK-3160
<b>RECEIVER</b> (Measurements made per TIA/EIA-603)		
Sensitivity (12dB SINAD)		
wide/Narrow	0.25µV/0.28µV	
Selectivity		
wide/Narrow	70dB/62dB	
Intermodulation Distortion		
wide/Narrow	65dB/60dB	
Spurious Response	65dB	
Audio output	500mW with less than 10% distortion	
<b>TRANSMITTER</b> (Measurements made per TIA/EIA-603)		
RF Power output		
Hi/Lo	5W/1W	4W/1W
Spurious Response	70dB	
Modulation		
wide/Narrow	16K0F3E/11K0F3E	
FM Noise		
wide/Narrow	45/43dB	45/40dB
Audio Distortion	Less than 5%	

Kenwood reserves the right to change specifications and features without prior notice.  
FleetSync™ is a trademark of Kenwood Corporation.  
SmarTrunk II™ is a trademark of SmarTrunk Systems, Inc.

## Applicable MIL-STD

Military Standards	Methods/Procedures MIL-STD 810C	Methods/Procedures MIL-STD 810D	Methods/Procedures MIL-STD 810E	Methods/Procedures MIL-STD 810F
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	501.3/Procedure I, II	501.4/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	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 I, II	507.2/Procedure II, III	507.3/Procedure II, III	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	510.3/Procedure I	510.4/Procedure I, III
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
Shock	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV	516.5/Procedure I, IV



JQA-1205 091-A  
ISO9001 Registered  
Communications Equipment Division  
Kenwood Corporation  
ISO9001 certification

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