

# 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.



**5-tone**



### 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 an optional headset like the KHS-21. 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 operator in distress.

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

### 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).

Actual size

### QT/DQT/DTMF/5-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 5-Tone encode and decode capability for legacy paging systems and selective call use. All selective calling formats (FleetSync™, DTMF & 5-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.

### 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 even in noisy environments.

### 8- TO 12-HOUR BATTERY PACKS

The KNB-25A Ni-Cd 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 Ni-MH 12-hour pack is the powerhouse of choice.

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

### TOUGH & WATER RESISTANT

Built tough to take rough treatment in its 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 for advanced security, etc.



K E N W O O D M E A N S B U S I N E S S

# 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		
Type 1	136-174MHz	440-470MHz
Type 3	—	400-430MHz
Number of Channels		Max. 16
Channel Spacing		
Type 1	25kHz/20kHz/12.5kHz	25kHz/20kHz/12.5kHz
Type 3	—	25kHz/12.5kHz
PLL Channel Stepping		5, 6.25kHz
Antenna Impedance		50Ω
Operating Voltage		7.5V DC±20%
Battery Life (5-5-90 duty cycle with battery saver off)		
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
Frequency Stability		±2.5ppm (-30°C ~ +60°C)
Channel Frequency Spread		
Type 1	38MHz	30MHz
Type 3	—	30MHz
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 (net)		
Radio Only		165g
with KNB-24L		290g (without antenna)
with KNB-25A		355g (without antenna)
with KNB-26N		400g (without antenna)
Applicable Standards	EN300 086, EN300 113, EN301 489, EN300 279	IP54, IP55

\*-10°C ~ +60°C when KNB-24L/26N in use

	TK-2160	TK-3160
<b>RECEIVER</b>		
Sensitivity		
EIA 12dB SINAD		0.25µV/0.25µV/0.32µV
EN 20dB SINAD		0.63µV/0.63µV/0.7µV
25kHz/20kHz/12.5kHz		
Adjacent Channel Selectivity		
25kHz/20kHz/12.5kHz		70dB/70dB/62dB
Intermodulation		65dB
Spurious Response Rejection		70dB
Audio Output		500mW with less than 10% distortion
Measurement		EN standard
<b>TRANSMITTER</b>		
RF Power Output		
Hi/Low	5W/1W	4W/1W
Modulation Limiting		
±5.0kHz at 25kHz		
±4.0kHz at 20kHz		
±2.5kHz at 12.5kHz		
Spurious Emission		
-36dBm (≤1GHz)		
-30dBm (>1GHz)		
FM Noise (EIA)		
25kHz/20kHz/12.5kHz		45dB/43dB/40dB
Microphone Impedance		2kΩ
Modulation Distortion		Less than 5%
Measurement		EN standard

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

## 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
<b>Low Pressure</b>	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
<b>High Temperature</b>	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
<b>Low Temperature</b>	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
<b>Temperature Shock</b>	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
<b>Solar Radiation</b>	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
<b>Rain</b>	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
<b>Humidity</b>	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4
<b>Salt Fog</b>	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
<b>Dust</b>	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
<b>Vibration</b>	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
<b>Shock</b>	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV	516.5/Procedure I, IV

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