

# KENWOOD

Listen to the Future

## TK-2180/3180

VHF/UHF FM Portable Radios

FleetSync®  
by KENWOOD

### GENERAL FEATURES

- 5 W (136-174 MHz) Models
- 5 W (450-520, 400-470 MHz) Models
- Conventional & LTR® Zones
- 12 Character Alphanumeric Aliases
- Backlit Dot Matrix LCD
- 3-Digit Sub-Display
- Function / Status LCD Icons
- RSSI Indicator
- Date & 12/24 Hour Time Clock
- Transmit / Busy / Call Alert / Warn LED
- 4 Front Panel PF keys
- 2 Side PF Keys
- Orange Emergency / AUX Key
- 12-Key DTMF / PF Keypad<sup>1</sup>
- 500 mW Audio Power
- Enhanced Kenwood Audio
- Companded Audio
- VOX Ready
- Voice Inversion Scrambler Built-in
- Encryption / ANI Board Control
- Easy Option Port
- VGS-1 Voice Guide / Storage Option
- Emergency Call Features
- Emergency Man-Down Option
- DTMF Encode / Decode<sup>2</sup>
- Special Alert Tone Patterns<sup>3</sup>
- Call Key<sup>4</sup>
- Time Out Timer
- Busy Channel Lockout
- LCD Battery Status Indicator
- Low Battery Alert
- Battery Saver

- Weather-sealed ACC Connector
- MIL-Spec Speaker Mic Option
- Windows® Programming & Tuning<sup>5</sup>
- Windows® Firmware Uploading<sup>5</sup>
- Front Panel Test/Tune
- Cloning
- MIL-STD-810 C/D/E/F
- MIL-STD "Driven-Rain"
- IP-54/55 Water & Dust Intrusion
- Intrinsically Safe Option

### CONVENTIONAL ZONES

- 512 Channels / 128 Zones<sup>6</sup>
- QT / DQT
- Two-Tone Decode<sup>7</sup>
- Single / Two-Tone Encode<sup>7</sup>
- Operator Selectable Tone<sup>7</sup>
- Dual Priority Scan
- Single & Multi-Zone Scan
- List Scan

### TRUNKED ZONES

- 512 GID / 128 Zones<sup>6</sup>
- Kenwood LTR® Features<sup>8</sup>

### FleetSync®

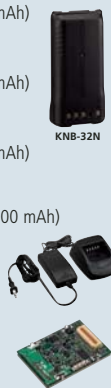
- FleetSync® or FleetSync® II<sup>9</sup>
- PTT ID Digital ANI
- Selective Call & Group Call
- Status Messaging
- Emergency Status
- Caller ID Display
- Short Text Messages<sup>10</sup>
- Power On/Off Status Messages
- PC Serial Interface

*Two models available:  
With or without keypad.  
(Not actual size proportion)*



# Options

- **KNB-31A**  
Ni-Cd Rechargeable Battery Pack (1700 mAh)
- **KNB-32N**  
Ni-MH Rechargeable Battery Pack (2500 mAh)
- **KNB-33L**  
Li-ion Rechargeable Battery Pack (1700 mAh)
- **KNB-41NC**  
Ni-MH Battery Pack Intrinsically Safe (2500 mAh)
- **KSC-32**  
Tri-chemistry Rapid Charger
- **VGS-1**  
Voice Guide & Storage Unit



- **KRA-22**  
VHF Helical Antenna
- **KRA-23**  
UHF Helical Antenna
- **KRA-26**  
VHF Helical Antenna
- **KRA-27**  
UHF Whip Antenna
- **KRA-16**  
VHF Stubby Antenna
- **KRA-17**  
UHF Stubby Antenna
- **KRA-25**  
VHF High Gain Antenna



- **KMC-25**  
Speaker Microphone
- **KEP-1**  
Heavy Duty Earphone
- **KHS-11**  
2-Wire Palm Mic with Earphone
- **KHS-12**  
3-Wire Mini Lapel Mic with Earphone



- **KHS-14**  
Lightweight Single Muff Headset
- **KHS-15-BH**  
Heavy Duty Behind-the-Head Headset
- **KHS-15-OH**  
Heavy Duty Over-the-Head Headset
- **KBH-10**  
Low Profile Belt Clip
- **KBH-11**  
Belt Clip (2.5")



# Specifications

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.

Model	TK-2180	TK-3180
<b>GENERAL</b>		
Frequency Range		
Type 1	136-174 MHz	450-520 MHz
Type 2		400-470 MHz
Number of Channels*		
Zone		Max. 128 per Radio
Ch/GID		Max. 250 per Zones
	(Max. 512 [Conv. Ch's + GID's] total per Radio)	
Channel Spacing		
Wide	25, 30 kHz	25 kHz
Narrow	12.5, 15 kHz	12.5 kHz
Battery Voltage	7.5 V DC ± 20 %	
Battery Life (5-5-90 duty cycle, during hi-power)		
with KNB-31A (1700 mAh)		Approx. 9 hours
with KNB-32N (2500 mAh)		Approx. 14 hours
with KNB-33L (1700 mAh)		Approx. 10 hours
Operating Temperature Range	-22 °F ~ +140 °F (-30 °C ~ +60 °C) [+14 °F ~ +140 °F (-10 °C ~ +60 °C) when KNB-32N/33L in use]	
Frequency Stability	±0.00025 % (-22 °F ~ +140 °F)	
Antenna Impedance	50 Ω	
Channel Frequency Spread		
Type 1	38 MHz	70 MHz
Type 2		70 MHz
Dimensions (W x H x D), Projections not included		
Radio Only	2-5/16" x 5-3/8" x 7/8" (58 x 136 x 21.5 mm)	
with KNB-31A	2-5/16" x 5-3/8" x 1-9/16" (58 x 136 x 39.5 mm)	
with KNB-32N	2-5/16" x 5-3/8" x 1-9/16" (58 x 136 x 39.5 mm)	
with KNB-33L	2-5/16" x 5-3/8" x 1-5/16" (58 x 136 x 33 mm)	
Weight (net)		
Radio Only	9.17 oz. (260 g)	
with KNB-31A	18.70 oz. (530 g)	
with KNB-32N	19.75 oz. (560 g)	
with KNB-33L	14.1 oz. (400 g)	

Model	TK-2180	TK-3180
<b>GENERAL</b>		
FCC ID		
Type 1	ALH37323110	ALH37333110
Type 2	-	ALH37333120
IC Certification		
Type 1	282D-37323110	-
Type 2	-	282D-37333120
<b>RECEIVER (Measurements made per TIA/EIA-603)</b>		
Sensitivity (12 dB SINAD)		
Wide		0.25 µV
Narrow		0.28 µV
Selectivity		
Wide	70 dB	70 dB
Narrow	65 dB	63 dB
Intermodulation Distortion		
Wide/Narrow	70 dB (±50, 100 kHz)	
Spurious Response	70 dB	
Audio Output (8 Ω impedance)	500 mW with less than 3 % distortion	
<b>TRANSMITTER (Measurements made per TIA/EIA-603)</b>		
RF Power Output		
High	5 W	5 W
Low	1 W	1 W
Spurious Response	70 dB	
Type of Emission		
Wide	16K0F3E	
Narrow	11K0F3E	
FM Hum & Noise		
Wide	45 dB	
Narrow	40 dB	
Audio Distortion		
Wide/Narrow	3 %	

Kenwood follows a policy of continuous advancement in development. For this reason specifications may be changed without notice.

\*Maximum capability depends on the number of programmed Zones and repeater channels.

FleetSync® is a registered trademark of Kenwood Corporation.

LTR® is a registered trademark of Transcript International.

# 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	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
<b>International Protection Standard</b>				
Dust & Water Protection	IP54/55			

footnotes from Front:

- <sup>1</sup> Keypad models only.
- <sup>2</sup> DTMF includes PTT ID, Emergency ANI, Manual Encode (keypad models), Auto-Dial List (32 numbers 16-Digits each) & Stun.
- <sup>3</sup> Special Alert Tone Patterns operate for 2-Tone, DTMF, FleetSync® selective call decode.
- <sup>4</sup> Call Key: 6 keys max.; operates for 2-Tone, DTMF and FleetSync® status encode.
- <sup>5</sup> KPG-89D required: Windows®98/ NT/ 2000/ Me/XP compatible; English/Spanish screen languages.
- <sup>6</sup> Conventional Zones: 512 Channels / 128 Zones max. per radio; 250 CH max. per Zone. Trunked Zones: 512 GID / 128 Zones max. per radio; 250 GID max. per Zone.
- <sup>7</sup> Two-Tone Decode (4 sets x 4 pairs each); Single / Two-Tone Encode (32 tones); Operator Selectable Tone (40 QT.DQT code pairs).
- <sup>8</sup> Kenwood LTR Features include: GID Delete/Add, LTR Talk Around / Scan Revert Group Display, System Scan, Group Scan, Auto Search.
- <sup>9</sup> FleetSync® & FleetSync® II are not compatible.
- <sup>10</sup> Short Text Messages are radio stored & LCD displayed.

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ISO9001 certification