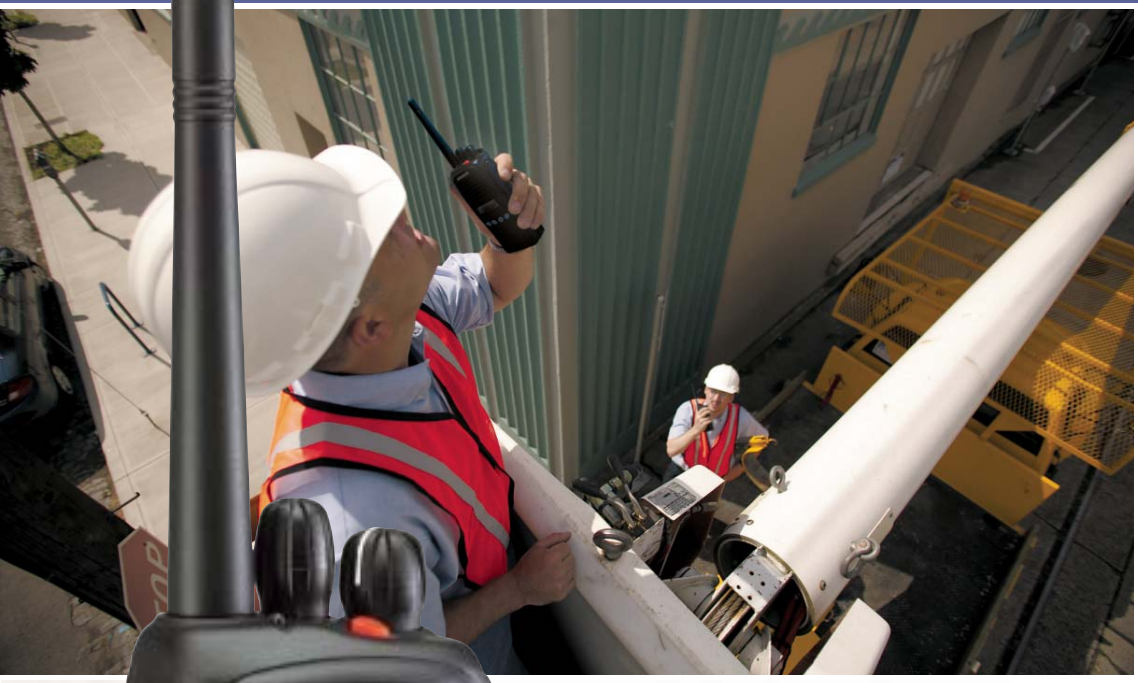
KENWOOD

TK-2180/3180

FleetSync® by KENWOOD

VHF/UHF FM Portable Radios



- WIDE BAND OPERATION
- 5 WATT UHF & VHF MODELS
- CONVENTIONAL & LTR® TRUNKING ZONES
- EXTRA LARGE CHANNEL CAPACITY
- DUAL PRIORITY SCAN
- 12-CHARACTER ALPHANUMERIC ALIASES
- DOT MATRIX DISPLAY
- ENHANCED KENWOOD AUDIO
- VOX READY
- VOICE INVERSION SCRAMBLER
- FleetSync® / FleetSync® II
- QT / DQT / DTMF / 2-TONE
- VGS-1 VOICE GUIDE & STORAGE UNIT (OPTION)
- EASY OPTION PORT
- MIL-STD 810 C/D/E/F & IP54/55

Meet the Next Generation in Professional Handheld Communications

Kenwood's TK-2180/3180 defines a bold new standard for portable radio performance, scoring high marks for operating ease, versatility and reliability.

WIDE BAND OPERATION

The TK-2180/3180 models feature wide band UHF (70 MHz) and VHF (38 MHz) coverage in one radio model.

512 CHANNELS/128 ZONES

The large 512 channel/128 zone capability* accommodates virtually any current or future capacity requirement for single or multiple site radio systems.

Maximum capacity notes*

128 Conventional & LTR Zones cumulative maximum per radio

512 Conventional Channels & Group ID's (GID's) cumulative maximum per radio

250 Channels maximum per any Conventional Zone

250 GID's maximum per any LTR Zone

12-CHARACTER DOT-MATRIX DISPLAY

The backlighting and high-resolution dot matrix 12-character alphanumeric display provides easy-to-read channel aliases day or night. Also a 3-digit sub-display for zone/channel/group ID numbers and icons for function/status indicators make for intuitive operation.

HANDHELD ELEGANCE

Kenwood employed premium industrial design concepts to make the TK-2180/3180 portables functionally practical, rugged and an attractive piece of equipment to carry.

ENHANCED KENWOOD AUDIO

Kenwood utilizes its longstanding audio heritage to optimize voice frequency components so that the audio output cuts through typical ambient noise. This enhancement and the companded noise reduction provide clarity and low distortion especially on narrow bandwidth systems.

VOICE INVERSION SCRAMBLER

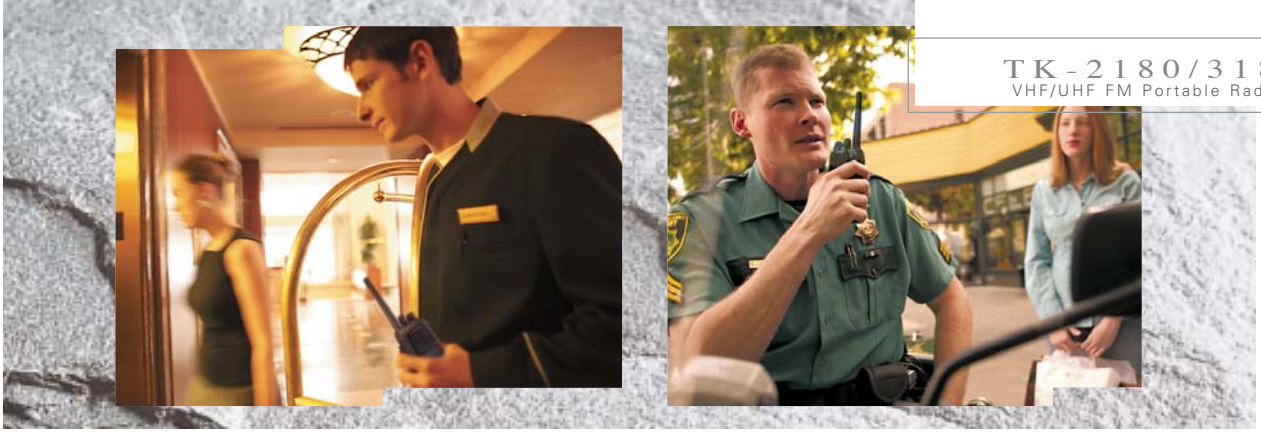
The built-in voice inversion scrambler provides entry level security against casual eavesdropping.

VOX READY

The TK-2180/3180 offers convenient hands-free operation with a compatible headset. The TK-2180/3180 internal VOX (voice-operated transmission) circuitry provides automatic PTT and a 10-level sensitivity adjustment for different ambient noise levels.

ROBUST & RELIABLE

The TK-2180/3180 is built to survive the hard knocks, drops and all weather environments of its users. It meets or exceeds the stringent IP54/55 dust and water intrusion standards and the MIL-STD 810 C, D, E & F environmental standards including the demanding "driven rain" test.



OUTSTANDING FEATURES

CONVENTIONAL & LTR® TRUNKING ZONES

The TK-2180/3180 operates on LTR® trunking systems, conventional channels or any combination of both, facilitating mixed operation today or migration tomorrow.

FleetSync® & FleetSync® II

FleetSync® by KENWOOD

Kenwood's FleetSync® digital signaling system includes PTT ID digital ANI for instant radio call identification and Emergency status for personnel safety. FleetSync also includes status messaging, selective calling and short/long text dispatch messaging features. The TK-2180/3180 supports either original FleetSync® or FleetSync® II*.

**FleetSync and FleetSync II are incompatible.*

DUAL PRIORITY & SCAN FEATURES

Dual-Priority Scan automatically checks two important channels for activity while channel scanning (conventional zones only). Also, each radio can be programmed to scan through any table of individual channels, systems and talk groups using the many programmable scan features and parameters. Channel/GID Delete/Add, Nuisance Delete and Priority Temporary Delete provide relief from non-essential voice traffic when scanning multiple channels or trunked talk groups.

SIGNALING

The TK-2180/3180 includes industry standard signaling formats for the most common type radio systems.

- **QT/DQT:** Sub-audible QT tones and DQT digital codes provide industry standard talk group muting and segregation for conventional radio systems.
- **DTMF:** DTMF permits DTMF PTT ID, telephone interconnect operation, individual/group selective calling and remote radio disable/enable (remote stun).
- **2-Tone Selective Calling:** Four code pairs each with individual and group page settings and audio visual alerts can be assigned per channel.

OPTIONAL VGS-1 VOICE GUIDE & STORAGE UNIT

This innovative Kenwood option makes several functions possible. "Voice Guide" announces zone, channel, groups and feature activation/deactivation in a clear synthesized voice. A great tool for radio communications training or as an aid for the sight or physically impaired. "Voice Storage" records up to 300 seconds of receive audio for missed calls or your own voice for memo recording. It also can store an "Auto-Reply" greeting and record voice messages for unattended radios while away from the radio or while in a meeting (the calling unit must send a FleetSync® selective call for activation).

EASY OPTION PORT

Kenwood's plug-in option port makes the VGS-1 option and compatible after-market board installation quick and simple.

OTHER FEATURES

- UNIVERSAL ACCESSORY CONNECTOR (80/90 SERIES COMPATIBLE)
- PROGRAMMABLE FUNCTION KEYS
- EMERGENCY KEY
- EMERGENCY & MAN-DOWN FEATURES
- OPERATOR-SELECTABLE TONE (CONVENTIONAL)
- ENCRYPTION & ANI MODULE CONTROL
- REAL-TIME CLOCK FOR TIME STAMPING
- EMBEDDED MESSAGES
- RADIO LOCK PASSWORD
- FLASH MEMORY
- CLONING
- WINDOWS PC PROGRAMMING & TUNING

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)

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

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 a complete list of all accessories and options.

Model	TK-2180	TK-3180
GENERAL		
Frequency Range		
Type 1	136-174 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, using 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	
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)	

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

Model	TK-2180	TK-3180
GENERAL		
FCC ID		
Type 1	ALH37323110	
Type 2		ALH37333120
FCC Compliance		
Type 1	FCC parts 22, 74, 90, 90.210	
Type 2		FCC parts 22, 74, 90
IC Certification		
Type 1	282D-37323110	
Type 2		282D-37333120
RECEIVER (Measurements made per TIA/EIA-603)		
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	
TRANSMITTER (Measurements made per TIA/EIA-603)		
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.

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
International Protection Standard				
Dust & Water Protection	IP54/55			