

KENWOOD

TK-280/380

VHF/UHF FM Portable Radios

5-tone

Kenwood's TK-280/380 Multi-Mode portables answer demanding communications needs, as these units are fully compatible with conventional, selcall and alphanumeric two-way paging systems. The software driven modes, features sets and other technologies are built into a tough, compact package that meets both water and dust resistance environmental specifications.



LARGE CHANNEL CAPACITY (MAX. 250)

Synthesized channel frequency generation provides a maximum of 250 channels. Furthermore, frequencies and various configuration settings can be programmed independently in each channel.

WIDE/NARROW CHANNEL

The TK-280/380 can be programmed for 25 kHz, 20 kHz or 12.5 kHz spacing operation per channel.

LARGE DOT MATRIX LCD DISPLAY

The large, 12 + 3 digit dot matrix LCD display provides clear legibility under all lighting conditions from bright sunshine to total darkness (with back light on). The LCD also offers multi-language capability.



ALPHANUMERIC TWO-WAY PAGING

This function provides a built-in capability to send and receive both pre-stored status messages and custom alphanumeric text messages. The received pages are stored in memory so they can be reviewed.

DMS: DIGITAL MESSAGE SYSTEM

DMS (Digital Message System): prepares various functions such as PTT ID, CAD (computer-aided dispatch), selective call, status messages, short messages, long messages and emergency

5-TONE SIGNALING

Built-in 5tone encoder/decoder provides no fewer than 12 formats including the Kenwood format. It is also possible to set not only 5-tone but also 6-tone, 7-tone, 2-by-5 tone, 3-by-5 tone signaling.

DIGITAL ANI/EMERGENCY ANI

Digital ANI modules can be added for PTT Unit ID and Emergency ANI operations on computer-aided dispatch and/or voice-recorder logged communications systems. A separate Emergency ANI flags dispatchers of units in distress and is triggered by a programmable key (recessed orange top panel key).



COMPANDED AUDIO

The compander noise-reduction feature enhances audio clarity on narrow bandwidth systems and is programmable per channel.

WEATHER-RESISTANT

The TK-280/380 meets the demanding IP54 and IP55 standards, which guarantees weather-resistant performance.

FLASH MEMORY ADVANTAGE

Flash memory permits updates, advanced feature sets and system architectural changes to be made electronically without ever opening the unit. This means fast changes for the system operator and less down-time for users.

ENCRYPTION CONTROL

Encryption control provides secure voice communications for law enforcement or private security. An internal port permits addition of optional modules to provide voice scrambling high-level encryption types.

ULTRA-HIGH CAPACITY NIMH BATTERY (OPTION)

A wide range of optional battery line-up can satisfy each demands of customers. KNB-21N, the ultra-high capacity NiMH batteries (option) offer more than 10 hours of operation without charging.

OTHER FEATURES

- MIL-STD 810 C/D/E
- BUILT-IN QT/DQT
- DTMF SIGNALING & DIALING
- MULTIPLE SCANNING
- PROGRAMMABLE FUNCTION KEYS
- KEY LOCK
- TALK AROUND
- LOW BATTERY ALERT
- MINIMUM VOLUME
- EMBEDDED MESSAGE
- PC PROGRAMMING AND TUNING
- PASSWORD-PROTECTED PROGRAMMING AND CLONING
- RADIO LOCK PASSWORD
- ANNUNCIATION TONE CONTROL
- PROGRAMMABLE ALERT TONE
- QT/DQT OPERATOR SELECTABLE TONE
- REMOTE STUN, REVIVE AND KILL
- HIGH OUTPUT AUDIO (500 mW)



Options



Not all accessories may be available. Please contact your dealer for details.

Specifications

	TK-280	TK-380
GENERAL		
Frequency Range Type 1: Type 3:	146 – 174 MHz	440 – 470 MHz 406 – 450 MHz
Number of channels	Max. 250	Max. 250
Channel spacing Type 1: Type 3:	25 kHz / 20 kHz / 12.5 kHz	25 kHz / 20 kHz / 12.5 kHz 25 kHz / 12.5 kHz
PLL channel stepping	5,6,25 KHz	5,6,25 KHz
Antenna Impedance	50 Ω	50 Ω
Operating voltage	7.5 V DC ±20 %	7.5 V DC ±20 %
Battery Life (5-5-90 duty cycle with battery saver off) with KNB-16A (1100 mAh) with KNB-17A (1500 mAh) with KNB-21N (1600mAh) with KNB-22N (2100mAh)	More than 8 hours at 5 W More than 10 hours at 5 W More than 10.5 hours at 5 W More than 13 hours at 5 W	More than 8 hours at 4 W More than 10 hours at 4 W More than 10.5 hours at 4 W More than 13 hours at 4 W
Operating temperature range	-30° C ~ +60° C	-30° C ~ +60° C
Frequency stability	±2.5 ppm (-30° C ~ +60° C)	±2.5 ppm (-30° C ~ +60° C)
Frequency spread Type 1: Type 3:	28 MHz	30 MHz 44 MHz
Dimensions (W x H x D)	58 x 135 x 34 mm with KNB-16A battery 58 x 135 x 37 mm with KNB-17A battery	58 x 135 x 34 mm with KNB-16A battery 58 x 135 x 37 mm with KNB-17A battery
Weight (net)	460 g with KNB-16A battery & antenna	460 g with KNB-16A battery & antenna
Applicable standards	ETS300 086, ETS300 113, ETS300 219, ETS300 279 IP54, IP55	ETS300 086, ETS300 113, ETS300 219, ETS300 279 IP54, IP55

	TK-280	TK-380
RECEIVER		
Sensitivity (EIA 12 dB SINAD)	0.25 μV/0.25 μV/0.32 μV	0.25 μV/0.25 μV/0.32 μV
Sensitivity (ETS 20 dB SINAD)	-4 dBμV/-4 dBμV/-2 dBμV	-4 dBμV/-4 dBμV/-2 dBμV
25 kHz/20 kHz/12.5 kHz		
Adjacent Channel Selectivity	73 dB / 73 dB / 63 dB	72 dB / 72 dB / 62 dB
25 kHz / 20 kHz / 12.5 kHz		
Intermodulation	65 dB	65 dB
Spurious & Image Rejection	70 dB	70 dB
Audio Output	500 mW at 16 Ω with less than 5% distortion	500 mW at 16 Ω with less than 5% distortion
Measurement	ETS standard	ETS standard
TRANSMITTER		
RF Power Output (Hi/Low)	5 W / 1 W	4 W / 1 W
Modulation Limiting	±5.0 kHz at 25 kHz ±4.0 kHz at 20 kHz ±2.5 kHz at 12.5 kHz	±5.0 kHz at 25 kHz ±4.0 kHz at 20 kHz ±2.5 kHz at 12.5 kHz
Spurious Emission	-36 dBm ≤ 1 GHz -30 dBm > 1 GHz	-36 dBm ≤ 1 GHz -30 dBm > 1 GHz
FM Noise (EIA) 25 kHz / 20 kHz / 12.5 kHz	45 dB / 45 dB / 40 dB	45 dB / 45 dB / 40 dB
Microphone impedance	600 Ω	600 Ω
Modulation Distortion	Less than 3% at 1 kHz	Less than 3% at 1 kHz
Measurement	ETS standard	ETS standard

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

Applicable MIL-STD

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I	500.3/Procedure I
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II
Humidity	507.1/Procedure II	507.2/Procedure II	507.3/Procedure II
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I
Shock	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV

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