

# KENWOOD

Compact Synthesized FM Portable Radios

## TK-270G/370G



- MAX. 128 CHANNEL CAPACITY
- MIL-STD 810 C/D/E
- WEATHER-RESISTANT SEALS
- DIE-CAST CHASSIS
- 8-CHARACTER/13-SEGMENT LCD
- QT/DQT BUILT-IN SIGNALING
- 2-TONE DECODER/ENCODER
- FLASH MEMORY ADVANTAGE
- MULTI-MODE WIDE/NARROW BANDWIDTH PER CHANNEL
- COMPANDED AUDIO
- PTT ID PER CHANNEL
- SCAN WITH PRIORITY

# The Fully Featured Radio for



Here are some the reasons why the TK-270G/370G portables have the memory capacity, integrated QT & DQT signaling, extended battery life (500 mW speaker), and built-in speaker mic jack. Pack portables are perfect for any and all requirements.

## Elements of a Premium Radio Product

### STRENGTH & DURABILITY

Kenwood's facilities are proud to be internationally recognized as ISO-9001 certified and this means that our radio products follow a strict adherence to high standards in design, manufacturing and quality assurance. Whatever the requirement, the excellent performance and reliability of our communications equipment — exemplified by the TK-270G/370G portables — make Kenwood the premier choice.

#### VERTICAL LAYERED DESIGN

The battery pack forming the entire back of the unit and the transceiver components forming the front, is a fresh departure from the conventional stacked design. This approach results in a stronger chassis and a single PCB, and improves the overall styling and appearance of the radio.

#### MIL-STD 810 C/D/E

The TK-270G/370G are manufactured along Kenwood's demanding technical and industrial standards, meeting or exceeding the tough environmental standards used by the U.S. Department of Defense. These radios pass U.S. MIL-STD 810 C/D/E standards covering shock, vibration, humidity, dust, and rain, for reliable performance in even the toughest conditions.

#### DIE-CAST CHASSIS AND POLYCARBONATE CASE

The monocoque aluminum die-cast chassis-heat sink borrows a principal from aircraft construction for rigid strength. Surrounding this and forming an integral part of the chassis, is the super-tough polycarbonate case to provide years of durability. The heavy-duty belt clip and antenna mount are also integrated into the chassis for strengthened unit construction.

#### WEATHER-RESISTANT

Integrated elements like gasket seals and the polyvinyl speaker cone prevent moisture penetration for confident wet weather use.

### PERFORMANCE

A premium radio design like the TK-270G/370G portables use state-of-the-art surface mount technology, multiple layer epoxy PC boards, high-level integrated circuits and hybrid components to create a symphony of compact, rugged and power-efficient performance.

#### COMPANDED AUDIO

The compander noise-reduction feature enhances audio clarity on narrow bandwidth systems and is programmable per channel. Voice intelligence components are amplified and compressed at the transmit end then re-expanded on the receive end to reproduce the original audio signal.

#### HEAVY-DUTY ANTENNA MOUNT

The antenna's industry-standard SMA connector provides improved mechanical and electrical performance.

#### HIGH OUTPUT AUDIO

A large 1-3/8 inch speaker provides 500 mW audio output. This enables the user to hear transmissions clearly even in the noisiest environments.



# Any Requirement

radios deliver top performance: 128-channel  
dedicated dialing functions, priority scan, high output  
packed with innovative features, these handy

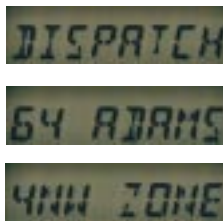


## EASY USER INTERFACE

*A premium radio product must be easy to setup, use and maintain. The TK-270G/370G is a perfect example of this philosophy as it combines user-friendly ergonomics in a lightweight and well-balanced package.*

### ALPHANUMERIC LCD DISPLAY

The 8-character display panel provides quick recognition of operating status and present settings with alphanumeric and icon characters. For enhanced nighttime viewing, pressing the backlight key illuminates the LCD display and keypad, and if no other keys are operated, backlighting shut offs after 5 seconds.



### BUSY CHANNEL LOCKOUT

Lockout further improves channel management by preventing transmission if another talk group is already on the air.

### BUILT-IN QT AND DQT SIGNALING

QT and DQT functions segregate talk groups so users only hear calls from their own group for clearer, improved communications.

### BUILT-IN 2-TONE DECODER AND ENCODER

The decoder and encoder functions offer a 2-tone paging code assignable to any channel. An incoming message is signaled with audible and visible alerts.

### CALL ALERT

Notifies you as to whether the call received had DTMF or 2-tone signaling.

### DTMF TRANSPOND

Transmits a code telling the caller that your radio received their DTMF paging signal.

### SIGNALING AND/OR LOGIC

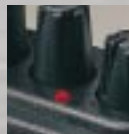
For improved response when using combinations of signaling systems, squelch is opened when either one, or all, signal requirements are met.

### DIALING FEATURES

Convenient dialing functions include **Manual Dial**, **Auto-Dial**, **Redial** and **Store & Send** (display shows the input DTMF code before it is sent).

### TWO-COLOR LED

The two-color LED provides traditional transmit/warning (red), receive (green), and alert (orange) visual indications. This LED is recessed to limit omnidirectional visibility to everyone except the radio operator.



## VERSATILITY

*A premium radio like the TK-270G/370G must be flexible enough to answer any application and offer the room to expand as system or user needs grow.*

### 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.

### WIDE/NARROW CHANNELBANDWIDTH

The TK-270G/370G can be programmed for wide or narrow bandwidth operation per channel to accommodate all channel allocations now and in the future.

### HIGH-CHANNEL CAPACITY

128-channel capacity (semi-duplex) ensures plenty of room for applications today and tomorrow. And once programmed, users can select specific channels within the set range.

### DTMF SIGNALING

This feature adds another dimension to paging with convenient 3- to 10-digit DTMF code combinations available. 3-digit ID plus 1-digit intermediate code Sel Call, and a 1- to 5-digit status code are also supported, as is DTMF group calling.

### UNIT CLONING

Cloning enables duplication of radios in the field via a simple interface cable without the use of a PC or special equipment.

### PC PROGRAMMING AND TUNING

Radio parameter programming and tuning can be accomplished via the accessory connector from a PC-compatible computer without ever having to open the radio to save both time and expense (requires optional programming cable and software).

### POWER OUTPUT SETTINGS

Programmable power levels provide one of two settings (High/ Low) for each of the channels so the radio can be tailored for mixed transmit range requirements. Output levels can be programmed at 5W/1W on VHF and 4W/1W on UHF.

### ANI FUNCTION

Two types of ANI — PTT ID (per channel) and DIAL ID — send connect and disconnect ID information. Repeater/RIC access is enabled through key operation or ID transmit with PTT set to On.

### SCAN WITH PRIORITY

Channel scanning provides users with an easy way to monitor multiple channels for activity. Priority Scan enables the radio to automatically check for activity on an important main channel during the channel scan sequence and while receiving a call on another non-priority channel. Multi-group and single group scan are available to limit scanning to the currently selected group or to scan all channel groups.

### DEAD BEAT DISABLE (D.B.D)

Useful when functions of the radio need to be rendered unusable, reception of a pre-determined DTMF signal can either disable the units' signal transmission, or prohibit signal transmission, while muting signal reception volume.

### EMBEDDED MESSAGE

The radio's flash memory can store an electronic message containing owner identification, property I.D. numbers, user and department names, service records, etc. A radio can be electronically identified even if external labels, markings or factory serial numbers have been removed.

### OTHER FEATURES:

- TIME-OUT TIMER ■ BATTERY POWER SAVE ■ LOW BATTERY ALERT
- MONITOR ■ TALK AROUND ■ BUSY LED CONTROL ■ MULTI-FUNCTION DIAL
- KEY LOCK

# Options

<p><b>KNB-14</b> Ni-Cd Battery (7.2 V, 600 mAh)</p> 	<p><b>KMB-14</b> Multi-Charger Adapter (for KSC-15/16)</p> 	<p><b>KHS-7</b> Lightweight Single Speaker Headset</p> 	<p><b>KRA-14</b> VHF Helical Antenna</p> 
<p><b>KNB-15A</b> Ni-Cd Battery (7.2 V, 1100 mAh)</p> 	<p><b>KVC-3</b> Regular Rate Vehicular Charger Adapter (for KSC-15)</p> 	<p><b>KHS-7A</b> Light Weight Single Muff Headset</p> 	<p><b>KRA-15</b> UHF Whip Antenna</p> 
<p><b>KBP-1</b> Battery Case</p> 	<p><b>KVC-4</b> Rapid Rate Vehicular Charger Adapter (for KSC-16)</p> 	<p><b>KHS-8BL</b> 2 Wire-Palm Mic with Earphone (Black)</p> 	<p><b>KRA-16</b> VHF Stubby Antenna</p> 
<p><b>KSC-15</b> Regular Rate Charger</p> 	<p><b>KMC-17</b> Speaker Microphone</p> 	<p><b>KHS-8BE</b> 2 Wire-Palm Mic with Earphone (Beige)</p> 	<p><b>KRA-17</b> UHF Stubby Antenna</p> 
<p><b>KSC-16</b> Rapid Charger</p> 	<p><b>KMC-21</b> Compact Low-Profile Speaker Microphone</p> 	<p><b>KHS-9BL</b> 3 Wire-Lapel Mic with Earphone (Black)</p> 	<p><b>KBH-8</b> Spring-Action Belt Hook</p> 
<p><b>KSC-21R</b> Conditioning Rapid Battery Charger (Charges only)</p> 	<p><b>KEP-2</b> Earphone Coil Cord Kit (for KMC-17/21)</p> 	<p><b>KHS-9BL</b> 3 Wire-Lapel Mic with Earphone (Black)</p> 	<p><b>KLH-71B</b> Leather Case</p> 
	<p><b>KHS-1</b> Headset with VOX/PTT</p> 	<p><b>KHS-9BE</b> 3 Wire-Lapel Mic with Earphone (Beige)</p> 	<p><b>KLH-6SW</b> Swivel Case Adapter</p> 
			<p><b>KBH-8DS</b> Swivel Belt Loop with D-stub Backplate</p> 
			<p><b>KWR-1</b> Water-Resistant Bag</p> 

# Specifications

	TK-270G	TK-370G
<b>GENERAL</b>		
Frequency range	150 – 174 MHz	450 – 470 MHz
Number of channels	Max. 128	Max. 128
Number of groups	Max. 128	Max. 128
Channel spacing Wide / Narrow	25, 30 kHz / 12.5, 15 kHz	25 kHz / 12.5 kHz
PLL step	2.5, 5, 6.25, 7.5 kHz	5, 6.25 kHz
Channel frequency spread	24 MHz	20 MHz
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-14 (600mAh) with KNB-15A (1100mAh)	More than 4 hours More than 8 hours	More than 4 hours More than 8 hours
Operating temperature range	-22° F – +140° (-30° C – +60° C)	-22° F – +140° F (-30° C – +60° C)
Frequency stability	±3 ppm (-22° F – +140° F)	±2.5 ppm (-22° F – +140° F)
Dimensions (W x H x D)	2-5/16 x 5-5/16 x 1-1/4 in. (58 x 135 x 32 mm) with KNB-14 battery 2-5/16 x 5-5/16 x 1-3/8 in. (58 x 135 x 35 mm) with KNB-15A battery	2-5/16 x 5-5/16 x 1-1/4 in. (58 x 135 x 32 mm) with KNB-14 battery 2-5/16 x 5-5/16 x 1-3/8 in. (58 x 135 x 35 mm) with KNB-15A battery
Weight (net)	0.49 lbs. (220 g), main body only without antenna 0.88 lbs. (400 g) with KNB-14 battery & antenna	0.49 lbs. (220 g), main body only without antenna 0.88 lbs. (400 g) with KNB-14 battery & antenna
FCC ID	ALH29463110	ALH29473110
FCC compliance	FCC parts 22, 74, 80, 90, 95	FCC parts 22, 74, 80, 90, 95
IC certification	282195581A	282195580A

	TK-270G	TK-370G
<b>RECEIVER</b> (Measurements made per EIA-RS 316B)		
Sensitivity (12 dB SINAD) Wide / Narrow	0.25 μV / 0.28 / μV	0.25 μV / 0.28 / μV
Selectivity Wide / Narrow	70 dB / 65 dB	70 dB / 65 dB
Intermodulation distortion Wide / Narrow	65 dB / 60 dB	65dB / 60 dB
Spurious response	65 dB	60 dB
Audio output	500 mW at less than 10% distortion	500 mW at less than 10% distortion
<b>TRANSMITTER</b> (Measurements made per EIA-RS 316B)		
RF power output (Hi/Low)	5W/1W	4W/1W
Spurious & harmonics	Less than 70 dB	Less than 70 dB
Modulation Wide / Narrow	16KøF3E / 11KøF3E	16KøF3E / 11KøF3E
FM noise Wide / Narrow	45 dB / 43 dB	45 dB / 40 dB
Modulation distortion	Less than 5%	Less than 5%

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
<b>Rain</b>	506.1/Procedure II	506.2/Procedure II	506.3/Procedure II
<b>Humidity</b>	507.1/Procedure II	507.2/Procedure II	507.3/Procedure II
<b>Dust</b>	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I
<b>Vibration</b>	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I
<b>Shock</b>	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV

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