# KENWOOD

## TK-762G(H)/862G(H)

### Compact Synthesized FM Mobile Radios



- ■ WIDE/NARROW CHANNEL BANDWIDTH PER CHANNEL (MULTI-MODE)
- ■ MAX. 8-CHANNEL CAPACITY
- ■ PC PROGRAMMABLE AND CLONING CAPABILITY
- ■ DATA READY CONNECTION PORT FOR MDT/MODEM APPLICATIONS
- ■ COMPACT, LIGHTWEIGHT AND RUGGED (MIL-STD 810 C/D/E)
- ■ INSTALLATION-READY DESIGN

- ■ 1-CHARACTER/7-SEGMENT LCD
- ■ BUILT-IN QT, DQT AND TWO-TONE SIGNALING
- ■ DTMF ENCODE AND DECODE
- ■ FLASH MEMORY ADVANTAGE
- ■ COMPANDED AUDIO
- ■ PTT ID PER CHANNEL
- ■ RADIO PASSWORD

# Move Your Operations into High

Built-in quality + a full range of advanced features = streamlined efficiency. This is the formula for success that the TK-762G(H)/862G(H) mobile has to offer. Compact yet extremely rugged, the TK-762G(H)/862G(H) is fully equipped with 8-channel capacity, wide-band switching (multi-mode) and an optional public address function (PA/HA) for more operating convenience. For the best in mobile communications, get the TK-762G(H)/862G(H) mobile — its performance will move you.

## 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-762G(H)/862G(H) mobile radios — make Kenwood the premier choice.*

### MIL-STD 810 C/D/E
The TK-762G(H) and TK-862G(H) are manufactured along Kenwood's demanding technical and industrial standards. These units meet or exceed the tough environmental MIL-STD 810 C/D/E standards used by the U.S. Department of Defense, covering shock, vibration, and dust for excellent long-term durability in the roughest of vehicle environments. With their heavy-duty construction, the TK-762G(H)/862G(H) will provide long-lasting field life.

## EASY USER INTERFACE

*A premium radio product must be easy to setup, use and maintain. The TK-762G(H)/862G(H) is a perfect example of this philosophy as it combines user-friendly ergonomics in a lightweight and well-balanced package.*

### NUMERIC LCD DISPLAY
Radio operating status and settings are displayed in the 1-digit, 7-segment LCD panel. The LCD lamp feature enhances nighttime viewing.

### BUILT-IN QT AND DQT SIGNALING
Encoder/decoder function segregates talk groups so users only hear calls from their own group.

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

### BUILT-IN 2-TONE DECODER
The decoder offers a 2-tone paging pair that can be assigned to any channel (Individual Call: A, B or C tones paired in any combination; Group Call: Long A, Long B or Long C). Incoming messages are signaled via both audible and visible alerts while call alert provides two distinct short beep tone sequences to differentiate between individual and group calls. Transpond can be enabled to transmit an acknowledgement tone (long beep) that a page was received.

### BUILT-IN 2-TONE ENCODER
The TK-762G(H)/862G(H) mobile units are equipped with 2-tone encoding/decoding capability. When encoding or decoding transceiver communications, a specific code is available for each function.

### DTMF TRANSPOND
Upon a valid DTMF paging decode, DTMF Transpond can transmit an acknowledgement code (auto dial memory No. 1) as a receipt of page. Transpond can be enabled to transmit a long beep tone as recognition that a page has been received.

### SIGNALING AND/OR LOGIC
Depending on the application, DTMF or 2-tone paging decode can be set to one of two squelch types. "OR" is set for receiving all voice traffic with audio muted only by the programmed QT/DQT tone/codes (radio will alert when a valid decode of a page is received). "AND" is set for muting the radio until both the programmed QT/DQT and a valid DTMF page is decoded.

### HIGH-VISIBILITY FRONT PANEL KEYS
The back lighting and laser-etched embossed front panel keys provide excellent nighttime visibility and peripheral vision operation.

# Gear!

## PERFORMANCE

*A premium radio design like the TK-762G(H)/862G(H) mobile radios 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.*

### MOBILE DATA READY
A data connection port allows voice and/or data communications using modems, MDTs and digital messaging equipment (KCT-19 cable required).

### RUGGED, EASY-TO-USE MICROPHONE
The microphone unit incorporates an easy to use telephone style plug and heavy-duty cable to protect against failure.

### COMPANDED AUDIO
The compandor 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.

### COMPACT VERSATILE MOUNTING
Lightweight and compact in size, these units facilitate easy mounting even in the tight or awkward positions of today's vehicles. The front panel can be inverted for correct viewing while leaving the built-in speaker positioned facing away from the mounting surface. An optional external mounted speaker is also available.
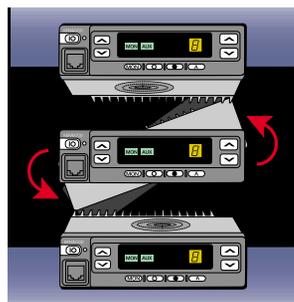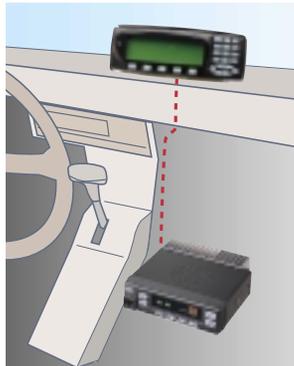
## VERSATILITY

*A premium radio like the TK-762G(H)/862G(H) must be flexible enough to answer diverse applications 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 CHANNEL BANDWIDTH
The TK-762G(H) and TK-862G(H) mobiles are programmable wide/narrow channel spacing* on a per channel basis (TK-762G(H): 25 (30) kHz wide/12.5 (15) kHz narrow; TK-862G(H): 25 kHz wide/12.5 kHz narrow). The enhanced synthesizer channel step programmability accommodates channel allocations now and in the future.

*Both models operate with a minimum 25 kHz wide and 12.5 kHz narrow channel bandwidth.*

### WIDEBAND DESIGN
Coverage is provided across the most common VHF & UHF bands (see specifications). VHF: 148 ~ 174 MHz and 136 ~ 162 MHz; UHF: 450 ~ 490 MHz.

### HIGH-CHANNEL CAPACITY
8-channel capacity ensures plenty of room for applications today and tomorrow. Once programmed, users simply select the appropriate channel. Flexible channel group size permits organizing channels into required regional or special-use groupings.

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

### RADIO PASSWORD
As with a mobile phone, you can prevent unauthorized use with an unlock code known only to you: this code has to be input when the transceiver is switched on.

### BUILT-IN DTMF DECODER
The TK-762G(H)/862G(H) DTMF decode feature adds another dimension to paging with either one of two operational modes. Code Squelch mode provides a 3- to 10-digit ID for basic DTMF paging operations. The Selective Call mode adds selective calling plus status capability by utilizing a 3-digit ID plus 1-digit intermediate (group) code plus a 5-digit status code. The ID and status codes are displayed in the radio's LCD. DTMF decode can be used to call individual mobiles or groups of mobiles within a fleet and also provides an alert output to trigger a vehicle horn, headlights, or strobe bar to allow a dispatcher a way to hail drivers away from the vehicle.

### DTMF ANI FUNCTION
A DTMF code can be encoded by two methods: "PTT ID" or "DIAL ID" operation. "PTT ID" — the traditional DTMF ANI unit ID — is programmable per channel and sends ANI automatically on every PTT (begin of transmit leading edge code and EOT trailing edge code are both independently programmable). Additionally, each channel can have its own unique DTMF ANI number to suit a variety of custom applications. Dial ID permits sending the DTMF ANI codes (BOT or EOT codes) manually via the front keypad for remote control or system-access applications.

### PC PROGRAMMING AND TUNING
Radio parameter programming and tuning can be accomplished via the microphone connector from a PC-compatible computer without ever having to open the radio to save both time and expense (programming software and cable options required). Function settings and frequencies can be rapidly and accurately programmed thanks to easy-to-use drop-down menus and help screens.

### PUBLIC ADDRESS CAPABILITY
Available with the plug-in KAP-1 PA switching option, this furnishes a simple PA audio output for internal vehicular use (school buses, airport shuttles, tour buses, etc.) or external horn speakers.

### SmarTrunk™ OMNI BOARD COMPATIBLE
Expand to conventional and conventional system capacity with the OMNI Board, available from the SmarTrunk™ Corporation.

## SECURITY

*In today's world, flexible mobile communications is as important as any other trade tool. Compromised communications can put life, property and business at risk.*

### SECURITY DEAD BEAT DISABLE (DBD)
DTMF Dead Beat Disable permits over-the-air immobilization of both transmit and transmit/receive audio to prevent the unauthorized use of lost, stolen or compromised mobile units. Both DBD types can be independently programmed with a separate code and does not require the use of the other DTMF paging features.

### 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. Making a unit electronically identifiable even if external labels, markings or factory serial numbers have been removed.

### OTHER FEATURES:
▌ TIME-OUT TIMER ▌ HORN ALERT ▌ IGNITION SENSE FUNCTION (option)
▌ OFF-HOOK DECODE

# Options

| | | | | |
|---|---|---|---|---|
| **KAP-1**<br>PA/HA Switching Unit | **KES-3**<br>External Compact Speaker<br>(fits 3.5 mm ext. speaker jack ) | **KMB-10**<br>Key Lock Adapter<br>(for mobile mounting bracket) | **KMC-9C**<br>Control Station<br>Desktop Microphone | |
| **KCT-18**<br>Ignition Sense Cable | **KES-5**<br>External Speaker | **KMC-27A**<br>Microphone<br>(MIL-SPEC, Noise canceling) | **KPS-10A**<br>DC Power Supply | |
| **KCT-19**<br>Accessories<br>Connection Cable | **KLF-2**<br>Line Noise Filter<br>(in-line install with DC<br>power cable) | **KMC-27B**<br>Microphone<br>(same as supplied) | **KDS-100**<br>Mobile Data Terminal | |
| **KCT-35**<br>Interface Cable<br>(for KDS-100, KGP-2A/2B) | **KMB-2B**<br>Mounting Case<br>(for KPS-10A<br>power supply mounting) | **KMC-28A**<br>Keypad Microphone<br>(12 keys, MIL-SPEC,<br>Noise canceling) | **KGP-2A/2B**<br>GPS Receiver<br>Modem Unit | GPS-2A<br>GPS-2B |

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

# Specifications

| | TK-762G | TK-762GH | TK-862G | TK-862GH |
|---|---|---|---|---|
| **GENERAL** | | | | |
| Frequency range | Type 1:<br>148 ~ 174 MHz<br>Type 2:<br>136 ~ 162 MHz | Type 1: 1<br>48 ~ 174 MHz<br>Type 2:<br>136 ~ 162 MHz | Type 1:<br>450 ~ 490 MHz<br>Type 2:<br>485 ~ 512 MHz | Type 1:<br>450 ~ 490 MHz |
| Number of channels | Max. 8 | | Max. 8 | |
| Number of groups | Max. 8 | | Max. 8 | |
| Channel spacing Wide/Narrow | 25, 30kHz/12.5, 15kHz | | 25kHz/12.5kHz | |
| PLL step | 2.5, 5, 6.25, 7.5 kHz | | 5, 6.25 kHz | |
| Channel frequency spread | Type 1: 26 MHz<br>Type 2: 26 MHz | | Type 1: 40 MHz<br>Type 2: 27 MHz | Type 1: 40 MHz |
| Antenna impedance | 50Ω | | 50Ω | |
| Input voltage | 13.6 V DC ± 15% | | 13.6 V DC ± 15% | |
| Current Drain<br>Standby<br>Receive<br>Transmit | 0.4 A<br>1.0 A<br>8.0 A | 0.4 A<br>1.0 A<br>12.0 A | 0.4 A<br>1.0 A<br>8.0 A | 0.4 A<br>1.0 A<br>12.0 A |
| Operating temperature range | -22° F ~ +140° F<br>(-30° C ~ +60° C) | | -22° F ~ +140° F<br>(-30° C ~ +60° C) | |
| Frequency stability | ±2.5 ppm (-22° F ~ +140° F)<br>(-30° C ~ +60° C) | | ±2.5 ppm (-22° F ~ +140° F)<br>(-30° C ~ +60° C) | |
| Dimensions (W x H x D) | 140 x 40 x 145 mm<br>(5-33/64 x 1-37/64 x<br>5-45/64 in.) | 140 x 40 x 173 mm<br>(5-33/64 x 1-37/64 x<br>6-13/16 in.) | 140 x 40 x 145 mm<br>(5-33/64 x 1-37/64 x<br>5-45/64 in.) | 140 x 40 x 173 mm<br>(5-33/64 x 1-37/64 x<br>6-13/16 in.) |
| Weight (net) | 940 g (2.07 lbs.) | 1.05 kg (2.31 lbs.) | 940 g (2.07 lbs.) | 1.05 kg (2.31 lbs.) |
| FCC ID | Type 1: ALH29373110<br>Type 2: ALH29373120 | Type 1: ALH29373210<br>Type 2: ALH29373220 | Type 1: ALH29383110<br>Type 2: ALH29383120 | Type 1: ALH29383210 |
| FCC compliance | Type 1: FCC parts 22, 74,<br>80, 90<br>Type 2: FCC parts 22, 90 | Type 1: FCC parts 22, 74,<br>90, 90.210<br>Type 2: FCC parts 22, 74,<br>90, 90.210 | Type 1: FCC parts 22, 74,<br>90, 95A<br>Type 2: FCC parts 90,<br>90.210 | Type 1: FCC parts 22, 74,<br>90, 90.210, 95 |
| IC | Type 1: 282195591A<br>Type 2: 282195624A | Type 1: 282195682A<br>Type 2: 282195708A | Type 1: 282195590A | Type 1: 282195681A |

| | TK-762G | TK-762GH | TK-862G | TK-862GH |
|---|---|---|---|---|
| **RECEIVER** (Measurements made per EIT/TIA-204D) | | | | |
| Sensitivity (12 dB SINAD)<br>Wide/Narrow | 0.25 μV / 0.33 μV | | 0.28 μV / 0.35 μV | |
| Selectivity<br>Wide/Narrow | 85 dB / 75 dB | | 80 dB / 65 dB | |
| Intermodulation distortion<br>Wide/Narrow | 75 dB / 65 dB | | 75 dB / 63 dB | |
| Spurious response | 90 dB | | 80 dB | |
| Audio output | 4 W at 4 Ω, with less than<br>5% distortion | | 4 W at 4 Ω, with less than<br>5% distortion | |
| **TRANSMITTER** (Measurements made per EIA-152C) | | | | |
| RF power output | 25 W | 50 W | 25 W | 40 W |
| Modulation<br>Wide/Narrow | 16K0F3E / 11K0F3E | | 16K0F3E / 11K0F3E | |
| Spurious & harmonics | 70 dB | | 65 dB | |
| FM noise<br>Wide/Narrow | 50 dB / 45 dB | | 50 dB / 45 dB | |
| Microphone impedance | 1.2 KΩ | | 1.2 KΩ | |
| Audio distortion | Less than 3% | | Less than 3% | |

*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 |
|---|---|---|---|
| **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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