

KENWOOD

VHF/UHF FM Mobile Radios

TK-690H/790(H)/890(H)



When the mission is critical, your communications equipment has to be always at the ready, 110% reliable, but not demanding your attention. And operation has to be second nature. Emergency services in particular demand the best in two-way radio communications — best in terms of performance, operating ease, and durability. There's absolutely no room for compromise. That's why the choice has to be Kenwood's TK-690H/790(H)/890(H), FM mobile radios that are designed and built for the uncompromising.

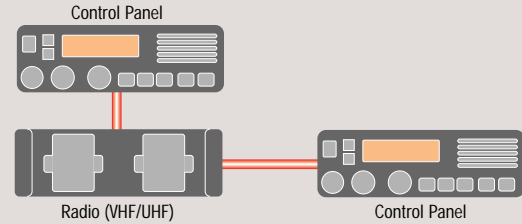


Versatility:

Single/Dual-head Remote Control

With the optional KRK-5 kit, you can put the radio unit in the trunk and the control head up front. This means the radio takes up less space in the cab, and the controls can be mounted in the most convenient location. Alternatively, the optional KRK-6DH kit provides two complete radio

control points — ideal for public safety applications: fire trucks, EMS units, sport utility command posts, disaster/emergency response units, and SWAT vans. Each control head features intercom, public address, transmit, monitor, and independent volume control capabilities.

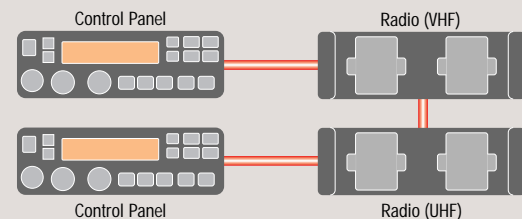
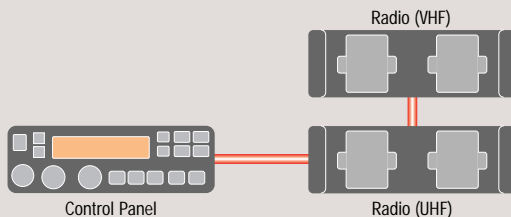


Choose from Four Configurations

Dual-band Remote & Dual-band/Dual-head Remote

If you need to operate both VHF and UHF bands from a single control panel, choose Kenwood's optional KRK-7DB kit. With this, you can scan selected channels on both bands automatically, and program channels on either band in any order. It's so simple — because you're basically controlling two radios as if they were one. And now you can combine

this dual-band capability with the convenience of a dual control head: the optional KRK-8DBH kit lets two operators control the same two radios, monitor each other's transmissions, and communicate via intercom. It can make all the difference for fire, emergency response, EMS, search & rescue, and other mission-critical agencies.



Leading Edge: A Wealth of Advanced

INTUITIVE USER INTERFACE

Depending on your needs, you can order TK-690H/790(H)/890(H) land mobile radios with one of two control panels: Basic or Full-featured.

■ BASIC CONTROL PANEL

Alphanumeric LCD

The basic control panel can be fitted to any model. It has an 8-digit, 13-segment alphanumeric readout for group/channel number & name and operational status; 3-digit, 7-segment numerics for group/channel number; and icons for operational and status indications. For nighttime operation, the display is backlit.

High-quality Audio Output

The basic control panel delivers clear audio quality via a front-mounted speaker as well as 13W via the external speaker terminal for extra clarity in noisy vehicles and situations.

Transmit & Busy LED Indicators

The green and red LEDs clearly distinguish between transmit and receive.

7 Programmable Function (PF) keys

GRP UP, GRP DOWN, and PF 1~5 are programmable.

■ FULL-FEATURED CONTROL PANEL

Dot Matrix LCD

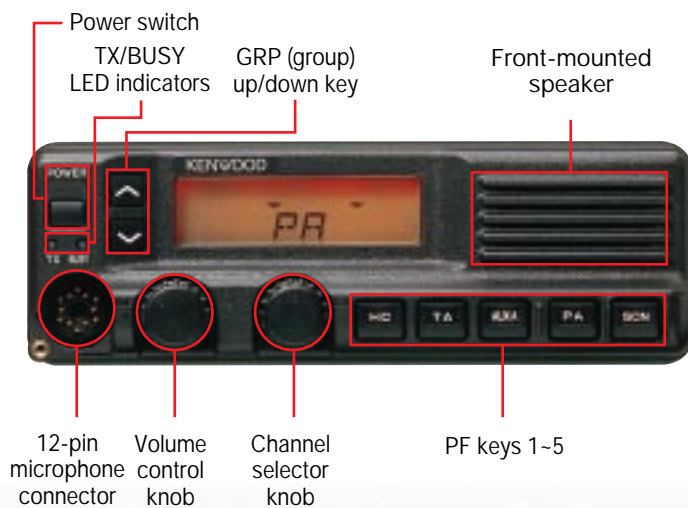
The panel has a large, easy-to-read dot matrix LCD with 14-digit alphanumeric display for group/channel number & name and operational status, 3-digit alphanumeric for group/channel number, and icons for operational and status indications. It's also backlit for nighttime operation.

13 Programmable Function (PF) keys

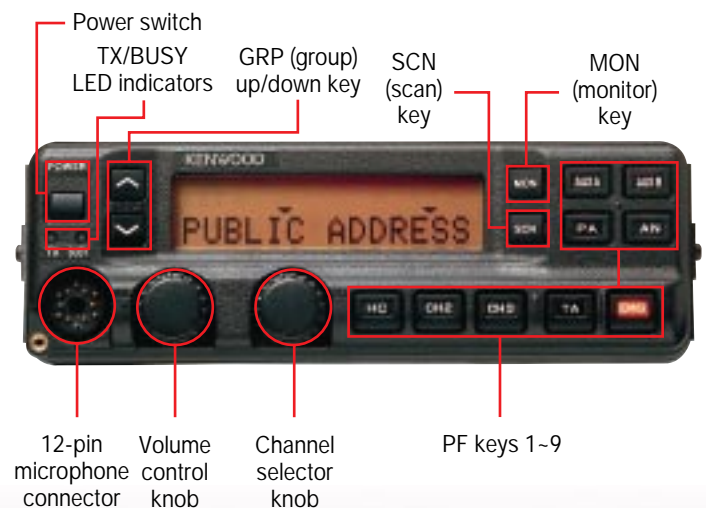
GRP UP, GRP DOWN, MON, SCN, and PF 1~9 are programmable for virtually any mobile radio feature. This allows each unit to be customized to fit the user's needs.



Basic Control Panel



Full-featured Control Panel



Features

VERSATILITY

Large 160-channel Capacity & Dynamic Grouping

The 160-channel capacity combined with “dynamic” channel grouping means that groups can be as small as one channel or as large as 160 channels. This provides versatile channel organization suited for any company-wide, departmental or divisional requirements — plus room for auxiliary or special-use groups.

Wide-band Coverage

The TK-690H/790(H)/890(H) radios utilize advanced power modules capable of wide coverage for local, regional and state-wide frequency needs.

Channel Scan Features & Dual Priority

These radios can accommodate virtually any channel scanning need. Multiple or single group scanning, channel & group add/delete, revert channel, and two priority channels are just some of the parameters that can be selected. Talk-back scan allows users to respond immediately to calls regardless of the pre-programmed or selected scan revert channel. Also, undesired channels can be deleted temporarily with the nuisance delete feature.

Flash Memory

Main and reserve Flash memory caches allow for future updates.

SECURITY

Encryption Control

Secure voice capabilities are available for law enforcement with optional scrambler modules. An internal port permits the addition of these modules to provide voice scrambling from low-level inversion to high-level encryption.

Digital ANI and Emergency Control

Unit ID and emergency ANI for computer-aided dispatch operations can also be added with optional modules.

Emergency Key & Call

The orange emergency key — recessed to avoid unintentional activation — can be programmed to trigger an ANI option device. The emergency call feature switches the radio automatically to a pre-programmed channel for dispatcher alert.



DTMF Signaling & Dialing Features

DTMF PTT ID provides a built-in ANI for business and industrial applications. With the optional KMC-28 keypad mic, manual DTMF is available for system access, remote control and selective calling. Also included are memory auto-dial features for telephone interconnect.

Operator Selectable Tone/Code (OST)

Designed specifically for forestry, cooperative fire and wildlife management departments, the OST feature provides a programmable bank of 16 user-selectable tones (QT & DQT) for accessing different repeaters. Each tone can have an assigned alpha-tag and be directly recalled by the KMC-28 DTMF keypad mic or other radio controls.

Built-in Selective Calling (Two-tone & DTMF)

Two-tone decode allows for three code pairs, each with individual and group paging settings. The DTMF selective calling provides individual call, group call, and over-the-air disable/enable. Both signaling types are assignable on a per-channel basis and have audible and visual call alerting.

Embedded Message

Stored inside the Flash memory of the radio, an electronic message (max. 64 alphanumeric characters) can hold owner identification, property ID numbers, user and department names, service records, etc. A radio can thus be electronically identified even if external labels, markings or factory serial numbers have been removed.



Dual-band/Dual-head Remote

STRENGTH & DURABILITY

MIL-810 C/D/E

The TK-690H/790(H)/890(H) radios meet or exceed stringent U.S. Department of Defense environmental standards in addition to Kenwood's own technical and industrial standards. The KCH-10 Basic Remote Control Head and KCH-11 Full-featured Remote Control Head



satisfy the demanding **driven rain** standard, which means that you can count on these water-resistant radios to keep on performing even if your motorcycle fleet is caught in the rain or takes a charge from a line.



Weather-sealed Universal Connector

The universal accessory connector featured on both basic and full-featured control heads uses spring-action gold-alloy elements for excellent contact, conductivity and anti-corrosive properties, making them resistant to water, dust, and other MIL-STD 810 C/D/E conditions. The universal connector is designed to mate with Kenwood audio accessories such as the KMC-27 and KMC-28 microphones.



Die-cast Chassis

The aluminum die-cast chassis heat-sink is lightweight yet provides exceptional strength and heat dissipation.

PERFORMANCE

Medium and High Power Models

Both medium and high power versions of the TK-690H/790(H)/890(H) radios are available for up to 110W of RF output.

Other Convenient Features





- Time-out Timer (TOT)
- Busy Channel Lockout
- Operator Selectable Priority Channel
- Multiple Bandwidth Mode
- DTMF Decode
- Dead Beat Disable (DBD) & Reset

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, II | 500.3/Procedure I, II |
| High Temperature | 501.1/Procedure I, II | 501.2/Procedure I, II Cat. A1 | 501.3/Procedure I, II Cat. A1 |
| Low Temperature | 502.1/Procedure I | 502.2/Procedure I, II Cat. C1 | 502.3/Procedure I, II Cat. C1 |
| Temperature Shock | 503.1/Procedure I | 503.2/Procedure I Cat. A1, C1 | 503.3/Procedure I Cat. A1, C1 |
| Solar Radiation | 505.1/Procedure I | 505.2/Procedure I | 505.3/Procedure I |
| Rain | 506.1/Procedure I*, II (*Control head only) | 506.2/Procedure I*, II (*Control head only) | 506.3/Procedure I*, II (*Control head only) |
| 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 Cat. 8 | 514.4/Procedure I Cat. 8 |
| Shock | 516.2/Procedure I, II, V | 516.3/Procedure I, IV | 516.4/Procedure I, IV |

Wide Selection of Options





TK-690H/790(H)/890(H) OPTIONAL ACCESSORIES

| | | | |
|---|---|--|---|
|  |  |  |  |
| KCH-10 | KCH-11 | KRK-5 | KRK-6DH |
| Basic Remote Control Head | Full-featured Remote Control Head | Single Control Head Remote Kit | Dual Control Head Remote Kit |

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| KRK-7DB* | KRK-8DBH* | KCT-22 | | |
| Dual Band Remote Kit | Dual Band & Dual Control Head Remote Kit | Remote Control Cable | | |

| | | | | |
|---|---|---|--|---|
|  |  |  |  |  |
| Medium Power Dash (10 feet) | High Power Dash (10 feet) | Medium Power Remote (Pos: 23 feet, Neg: 3.3 feet) | High Power Remote (Pos: 23 feet, Neg: 3.3 feet) | |
| KCT-23 | | | | KCT-18 |
| DC Power Cable | | | | Ignition Sense Cable |

| | | | | |
|---|---|---|--|---|
|  |  |  |  |  |
| KMB-5 | KMB-9 | KMB-10 | KES-4 | KMC-27 |
| Mounting Bracket (Medium) | Mounting Bracket (High) | Key Lock Adapter (Medium Dash Mount) | External Speaker (20W) | Microphone (MIL-SPEC, Noise Canceling) |

| | | | |
|---|---|---|---|
|  |  |  |  |
| KMC-28 | KMC-9B | KLF-2 | KPS-10A |
| Keypad Microphone (MIL-SPEC, Noise Canceling) | Desktop Microphone | Line Filter (except TK-890H) | DC Power Supply (Medium Power Model) |

*KRK-7DB and KRK-8DBH will be available soon.

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

SPECIFICATIONS

| | TK-690H | TK-790(H) | TK-790 | TK-890(H) | TK-890 |
|---|--|--|--|--|--|
| GENERAL | | | | | |
| Frequency range Type 1 Type 2 Type 3 | 29.7 ~ 37.0 MHz 35.0 ~ 43.0 MHz 40.0 ~ 50.0 MHz | 148 ~ 174 MHz | 148 ~ 174 MHz 136 ~ 156 MHz | 450 ~ 480 MHz | 450 ~ 490 MHz 480 ~ 512 MHz 403 ~ 430 MHz |
| Number of channels | 160 | 160 | 160 | 160 | 160 |
| Channel spacing Wide Narrow | 20 kHz (PLL step: 5kHz) | 25 kHz, 30 kHz 12.5 kHz, 15 kHz (PLL step: 5 kHz/6.25kHz/ 7.5kHz) | 25 kHz, 30 kHz 12.5 kHz, 15 kHz (PLL step: 5 kHz/6.25 kHz/ 7.5 kHz) | 25 kHz 12.5 kHz (PLL step: 5 kHz/6.25 kHz) | 25 kHz 12.5 kHz (PLL step: 5 kHz/6.25 kHz) |
| Operating voltage | 13.4 V DC ± 15 % | 13.4 V DC ± 15 % | 13.6 V DC ± 15 % | 13.4 V DC ± 15 % | 13.6 V DC ± 15 % |
| Current drain Standby Receive Transmit | Less than 0.6 A Less than 2.2 A Less than 25 A | Less than 0.6 A Less than 2.2 A Less than 25 A | Less than 0.6 A Less than 2.2 A Less than 12 A | Less than 0.6 A Less than 2.2 A Less than 28 A | Less than 0.6 A Less than 2.2 A Less than 12 A |
| Duty Cycle | Transmit: 20 % | Transmit: 20 % | Transmit: 20 % | Transmit: 20 % | Transmit: 20 % |
| Operating temperature range | -22° F ~ +140° F (-30° C ~ +60° C) | -22° F ~ +140° F (-30° C ~ +60° C) | -22° F ~ +140° F (-30° C ~ +60° C) | -22° F ~ +140° F (-30° C ~ +60° C) | -22° F ~ +140° F (-30° C ~ +60° C) |
| Frequency stability (-22° F ~ +140° F) | ±0.0005 % | ±0.0002 % | ±0.0002 % | ±0.0002 % | ±0.0002 % |
| Antenna impedance | 50 Ω | 50 Ω | 50 Ω | 50 Ω | 50 Ω |
| Dimensions (W x H x D) | 7 x 2-1/4 x 12-3/4 in. (178 x 60 x 327 mm) | 7 x 2-1/4 x 12-3/4 in. (178 x 60 x 327 mm) | 7 x 2-1/4 x 7-3/4 in. (178 x 60 x 195 mm), 7 x 2-1/4 x 9 in. (178 x 60 x 228 mm) with KCH-10 | 7 x 2-1/4 x 12-3/4 in. (178 x 60 x 327 mm) | 7 x 2-1/4 x 7-3/4 in. (178 x 60 x 195 mm), 7 x 2-1/4 x 9 in. (178 x 60 x 228 mm) with KCH-10 |
| Weight (net) | 7.9 lbs. (3.6 kg) | 7.9 lbs. (3.6 kg) | 5 lbs. (2.3 kg), 5.7 lbs. (2.6 kg) with KCH-10 | 7.9 lbs. (3.6 kg) | 5 lbs. (2.3 kg), 5.7 lbs. (2.6 kg) with KCH-10 |
| FCC ID Type 1 Type 2 Type 3 | ALH22923110 ALH22923120 ALH22923130 | ALH22933210 | ALH22933110 ALH22933120 | ALH22943210 | ALH22943110 ALH22943120 ALH22943130 |
| FCC compliance Type 1 Type 2 Type 3 | FCC parts 22, 90 FCC parts 22, 90 FCC parts 15, 22, 90 | FCC parts 22, 74, 90, 90.210 | FCC parts 22, 74, 90, 90.210 | FCC parts 22, 74, 90, 90.210 | FCC parts 22, 74, 90, 90.210 FCC parts 22, 74, 90, 90.210 FCC parts 90, 90.210 |
| IC certification Type 1 Type 2 Type 3 | 282195519A 282195532A 282195520A | 282195450A | 282195451A 282195510A | 282195446A | 282195447A |
| RECEIVER (Measurements made per EIA/TIA-204-D) | | | | | |
| Sensitivity 12 dB SINAD 20 dB Quieting | 0.25 μV 0.35 μV | 0.25 μV 0.35 μV | 0.25 μV 0.35 μV | 0.25 μV 0.35 μV | 0.25 μV 0.35 μV |
| Selectivity Wide Narrow | 85 dB | 85 dB 80 dB | 85 dB 80 dB | 85 dB 77 dB | 85 dB 77 dB |
| Intermodulation distortion Wide Narrow | 80 dB | 80 dB 75 dB | 80 dB 75 dB | 80 dB 75 dB | 80 dB 75 dB |
| Spurious response | 90 dB | 90 dB | 90 dB | 90 dB | 90 dB |
| Audio output | 13 W at 4 Ω with less than 5 % distortion (12 W 4 Ω with less than 3 % distortion) | 13 W at 4 Ω with less than 5 % distortion (12 W 4 Ω with less than 3 % distortion) | 13 W at 4 Ω with less than 5 % distortion (12 W 4 Ω with less than 3 % distortion) | 13 W at 4 Ω with less than 5 % distortion (12 W 4 Ω with less than 3 % distortion) | 13 W at 4 Ω with less than 5 % distortion (12 W 4 Ω with less than 3 % distortion) |
| Band spread Type 1 Type 2 Type 3 | 7.3 MHz 8.0 MHz 10.0 MHz | 26 MHz | 26 MHz 20 MHz | 20 MHz | 20 MHz 20 MHz 20 MHz |
| TRANSMITTER (Measurements made per EIA-152-C) | | | | | |
| RF power output | 110 W adjustable to 45 W | 110 W adjustable to 45 W | 45 W adjustable to 5 W | 100 W (75 W in 470 ~ 480 MHz) adjustable to 40 W | 40 W adjustable to 5 W |
| Type of emission Wide Narrow | 16KØF3E | 16KØF3E 11KØF3E | 16KØF3E 11KØF3E | 16KØF3E 11KØF3E | 16KØF3E 11KØF3E |
| Spurious response | 80 dB | 80 dB | 80 dB | 80 dB | 80 dB |
| FM hum and noise Wide Narrow | 55 dB | 53 dB 47 dB | 53 dB 47 dB | 50 dB 44 dB | 50 dB 44 dB |
| Microphone impedance | 600 Ω | 600 Ω | 600 Ω | 600 Ω | 600 Ω |
| Audio distortion | Less than 2 % at 1000 Hz | Less than 2 % at 1000 Hz | Less than 2 % at 1000 Hz | Less than 2 % at 1000 Hz | Less than 2 % at 1000 Hz |
| Band spread Type 1 Type 2 Type 3 | 7.3 MHz 8.0 MHz 10.0 MHz | 26 MHz | 26 MHz 20 MHz | 30 MHz | 40 MHz 32 MHz 27 MHz |

Kenwood reserves the right to change specifications and features without prior notice.

KENWOOD CORPORATION

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**ISO 9001
JQA-1205**

Communications Equipment Division
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ISO9001 certification