

# KENWOOD

VHF/UHF FM Mobile Radios

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



**W**hen 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.

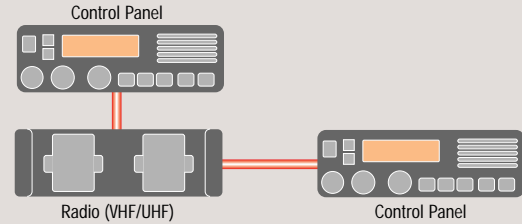


**Versatility:**

## 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.

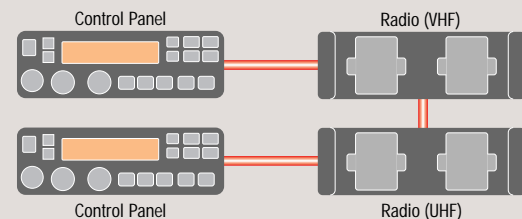
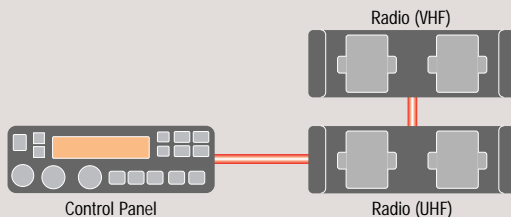


# Choose from Four Configurations

## 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.

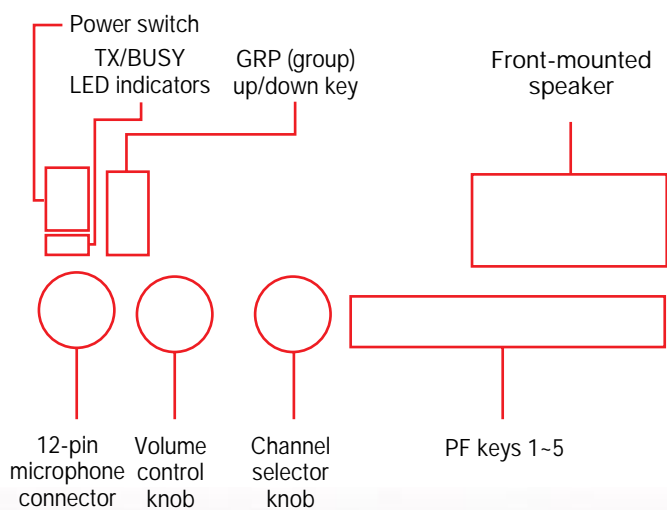
#### Transmit & Busy LED Indicators

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.

#### Basic Control Panel



### ■ FULL-FEATURED CONTROL PANEL

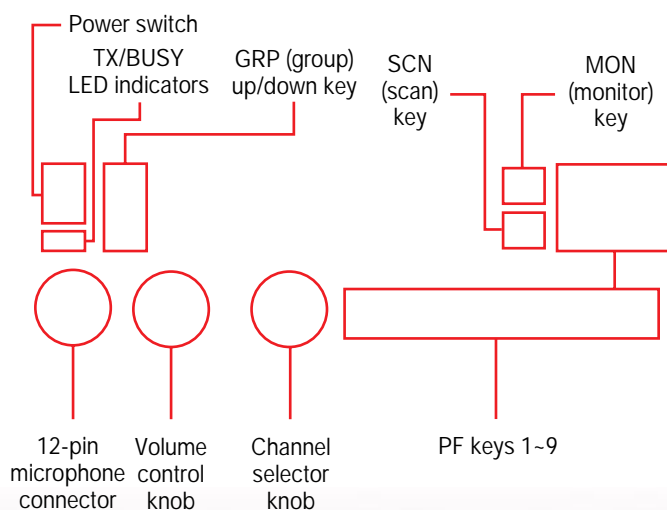
#### Dot Matrix LCD

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.

#### 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.

### 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.

## 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.

### 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.





# SPECIFICATIONS

	TK-690H	TK-790(H)	TK-790	TK-890(H)	TK-890
<b>GENERAL</b>					
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 $\pm$ 15 %	13.4 V DC $\pm$ 15 %	13.6 V DC $\pm$ 15 %	13.4 V DC $\pm$ 15 %	13.6 V DC $\pm$ 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)	$\pm$ 0.0005 %	$\pm$ 0.0002 %	$\pm$ 0.0002 %	$\pm$ 0.0002 %	$\pm$ 0.0002 %
Antenna impedance	50 $\Omega$	50 $\Omega$	50 $\Omega$	50 $\Omega$	50 $\Omega$
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
<b>RECEIVER</b> (Measurements made per EIA/TIA-204-D)					
Sensitivity 12 dB SINAD 20 dB Quieting	0.25 $\mu$ V 0.35 $\mu$ V	0.25 $\mu$ V 0.35 $\mu$ V	0.25 $\mu$ V 0.35 $\mu$ V	0.25 $\mu$ V 0.35 $\mu$ V	0.25 $\mu$ V 0.35 $\mu$ V
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 $\Omega$ with less than 5 % distortion (12 W 4 $\Omega$ with less than 3 % distortion)	13 W at 4 $\Omega$ with less than 5 % distortion (12 W 4 $\Omega$ with less than 3 % distortion)	13 W at 4 $\Omega$ with less than 5 % distortion (12 W 4 $\Omega$ with less than 3 % distortion)	13 W at 4 $\Omega$ with less than 5 % distortion (12 W 4 $\Omega$ with less than 3 % distortion)	13 W at 4 $\Omega$ with less than 5 % distortion (12 W 4 $\Omega$ 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
<b>TRANSMITTER</b> (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	16K $\Phi$ F3E	16K $\Phi$ F3E 11K $\Phi$ F3E	16K $\Phi$ F3E 11K $\Phi$ F3E	16K $\Phi$ F3E 11K $\Phi$ F3E	16K $\Phi$ F3E 11K $\Phi$ F3E
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 $\Omega$	600 $\Omega$	600 $\Omega$	600 $\Omega$	600 $\Omega$
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

14-6, 1-chome, Dogenzaka, Shibuya-ku, Tokyo 150-8501, Japan

## KENWOOD COMMUNICATIONS CORPORATION

P.O. BOX 22745, 2201 East Dominguez St., Long Beach, CA 90801-5745, U.S.A.

## KENWOOD ELECTRONICS CANADA INC.

6070 Kestrel Road, Mississauga, Ontario, Canada L5T 1S8



**ISO 9001  
JQA-1205**

Communications Equipment Division  
Kenwood Corporation  
ISO9001 certification