KENWOOD

Trunked Compact Mobile Radio

TK-930HD/931HD

- Programmable up to 10 systems with 10 groups each on the 800 MHz (TK-930HD) or 900 MHz (TK-931HD) bands
- Powerful scanning functions provide maximum user convenience
- LCD display is clear and legible in almost any light
- Rugged design and construction (MIL-STD 810 C/D/E) for years of reliable service
- Computerized programming by dealer with PC-based software enables fast and accurate set-up
- Detachable front panel and remoteable chassis option (KCT-10A/B) for flexible installation capability
- 35W (TK-930HD) and 30W (TK-931HD) RF power output

Seize a Wise Investment Opp

Welcome to a proven standard in performance and user satisfaction: Kenwood's TK-930HD/931HD mobile for the 800/900 MHz bands. Engineered to deliver years of dependable service under the toughest conditions, it gives you the right combination of features, options and pricing to make the most out of every dollar you invest.

User Features

Programmable up to 10 systems with 10 groups per system, the TK-930HD/931HD can handle even the most complex network requirements. Configure it with your system parameters, and even include conventional channels on the scan map as well to get the most out of your mobiles.

The large backlit LCD display is readable under any lighting conditions from bright sunshine to total darkness (with backlight on). The 8-character alphanumeric display allows you to set up a user-friendly system/group naming convention.

35W (TK-930HD)/30W (TK-931HD) power output provides more than enough punch to deliver the best quality signal anywhere in the coverage area.

Powerful **System Scan functions** allow you to give users a number of options to monitor and manage their traffic. These include **Interval Scan**, which will automatically resume system scan within a certain time while the mic is off hook; **Off Hook Revert**, which reverts to either "last used" or "last called" system/group when the mic goes off hook; and **User Selectable Delete/Add**. There is also a **Group Scan** function, plus a **Pre-Programmed Delete** function so each radio can have its own unique system allocations.

The **System Search** function (if activated) will automatically look for other systems if the mobile leaves its main system coverage area.

Conventional channels may be programmed as well, and can be included in the scan map along with the trunked channels. You may also program **Quiet Talk (QT), Digital Quiet Talk (DQT), Busy Channel Lockout** and **Talk Around** functions to these conventional channels for maximum utilization.

Free system ringback in trunked mode will automatically notify the user when the telephone interconnect is available again after a busy-system condition, adding another dimension of user convenience when making telephone calls.

A dual-action call indicator allows you to signal a mobile with a priority call, triggering the **horn alert** if the user is not in the vehicle. The call indicator will light up steady or flash, depending on the call type.

Other User Features

- In trunking systems, up to **2 fixed priority receive ID codes** and up to 250 block receive ID codes may be programmed for each system.
- **Transmit inhibit** prevents inadvertent interruption of other traffic on the channel.
- **Transpond** allows a quick check to see if the radio is operating within system range. (Programmable for each system and group.)
- An **automatic minimum volume** can be programmed in one of 32 steps to prevent missed calls.
- **Busy channel lockout** can be programmed for crowded repeater operations.
- **Talk Around** lets the user work simplex on conventional channels with other mobiles when close in or out of system range.

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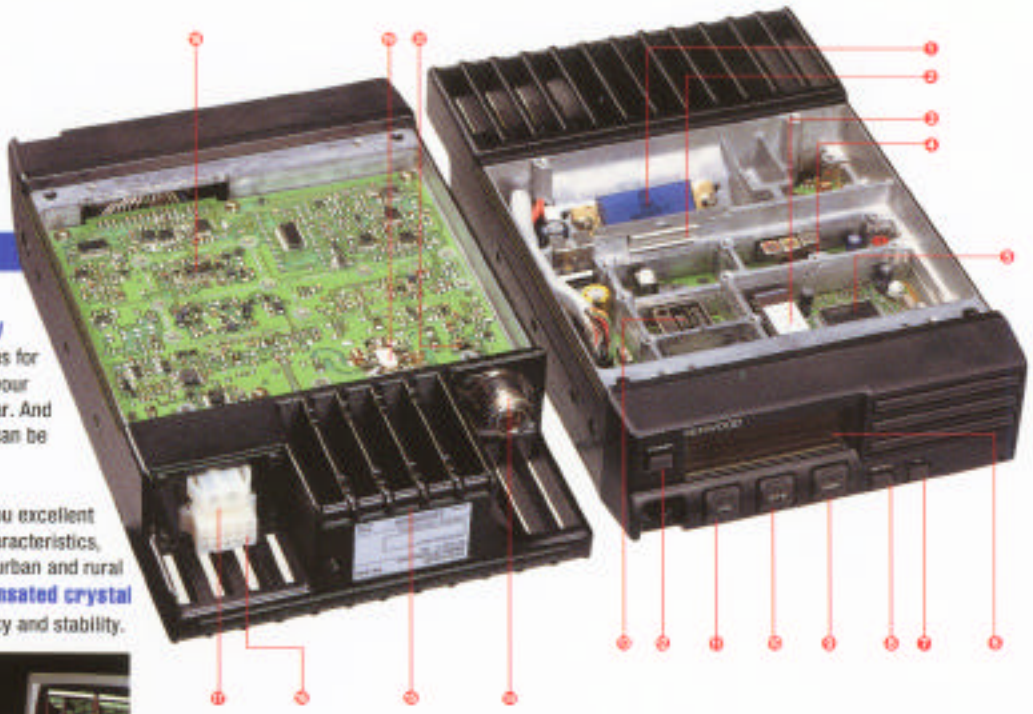
Technical Features

Rugged, diecast construction with the **glass-epoxy circuit board** meets MIL-STD 810 C/D/E specifications for shock, vibration, rain and dust so you can depend on your radios to perform reliably, day after day, year after year. And the remote mount conversion kit means these radios can be mounted almost anywhere in any vehicle.

The **high-performance transceiver design** gives you excellent sensitivity, spurious response and intermodulation characteristics, making the TK-930HD/931HD a top performer in both urban and rural settings. In addition, the **TCXO (temperature-compensated crystal oscillator)** ensures extremely high frequency accuracy and stability.



PC programmability allows your technician to configure the radio systems/groups rapidly and precisely with a personal computer. The interface connects through the microphone jack on the front panel.

Dual time-out timers can be programmed both for dispatch systems (0.5 to 5 minutes in 0.5 minute steps) and telephone-interconnect systems (1 to 10 minutes in 1 minute steps) to prevent lengthy transmissions.

1. Drive module
2. Pre-drive module
3. EPROM
4. MCF (Monolithic Crystal Filter)
5. CPU
6. LCD
7. Aux switch
8. Scan
9. Up/down group switch
10. Up/down system switch
11. Up/down volume control
12. Power switch
13. TCXO (Temperature Compensated Crystal Oscillator)
14. Antenna receptacle
15. One piece die-cast chassis/ heatsink
16. Accessory connector
17. DC connector
18. PLL IC
19. Power amplifier
20. Antenna switch (diode)

Other Technical Features

- A **NPSPAC-compatible** model is also available
- Optional **DTMF microphones (KMC-18/18A)** are available for telephone-interconnect operation.
- The supplied **heavy-duty microphone** is equipped with a telephone-type connector and heavy-duty cable for extra reliability.
- The **heavy-duty, front-mounted speaker** delivers loud, crisp sound with up to four watts output.
- The **control head conversion kit** (KCT-10A: 20 ft., or KCT-10B: 13 ft.) lets you mount the front panel close to the operator and locate the transceiver chassis away from the dash.

Kenwood Radios Mean Business.

Options

KMC-2A
Noise-Canceling Hand Microphone

KMC-18
DTMF Hand Microphone

KMC-18A
DTMF Microphone with ANI/ Memory Function

KMC-9
Control Station Desktop Microphone

KSP-1A
External Speaker

KSP-2A
10-Watt Amplifier/ External Speaker

KPS-10A
DC Power Supply

KRK-1
Remote Kit (requires KCT-10A/B cable)

KMB-2C
Control Station Mounting Case

KLF-2
Line Noise Filter

KCT-10A
Control Cable (20'/6 m)

KCT-10B
Control Cable (13'/4 m)

KMB-10
Key Lock Adapter

** Not all accessories may be available, please contact dealers for details.*

Specifications

	TK-930HD	TK-930HDK2 (NPSPAC)	TK-931HD
GENERAL			
Frequency range	RX: 851 – 870 MHz TX: 806 – 825 MHz, 851 – 870 MHz (Talk Around)	RX: 866 – 869 MHz TX: 821 – 824 MHz, 866 – 869 MHz (Talk Around)	RX: 935 – 941 MHz TX: 896 – 902 MHz, 935 – 941 MHz (Talk Around)
Systems/channels	10 systems/200 channels	10 systems/200 channels	10 systems/200 channels
Groups	10 groups per system	10 groups per system	10 groups per system
Conventional channels	10 channels per system	10 channels per system	10 channels per system
Channel spacing	25 kHz (PLL step: 12.5 kHz)	25 kHz (PLL step: 12.5 kHz)	12.5 kHz
Input voltage (negative ground)	13.6 V DC	13.6 V DC	13.6 V DC
Current drain Standby Receive Transmit	 0.4 A 1.0 A 10.0 A	 0.4 A 1.0 A 10.0 A	 0.4 A 1.0 A 9.0 A
Duty cycle	RX: 100%, TX: 20%	RX: 100%, TX: 20%	RX: 100%, TX: 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)
Dimensions (W x H x D)	5-7/8 x 2 x 8-5/8 in. (150 x 50 x 220 mm)	5-7/8 x 2 x 8-5/8 in. (150 x 50 x 220 mm)	5-7/8 x 2 x 8-5/8 in. (150 x 50 x 220 mm)
Weight (net)	3.53 lbs. (1.6 kg)	3.53 lbs. (1.6 kg)	3.53 lbs. (1.6 kg)
FCC ID	ALHTK-930H-1	ALHTK-930H-2	ALHTK-931H-1
FCC compliance	FCC parts 22 & 90	FCC part 90	FCC part 90
RECEIVER (Measurements made per EIA standard EIA-204-C)			
RF input impedance	50 Ω	50 Ω	50 Ω
Sensitivity (EIA 12 dB SINAD)	0.3 µV	0.3 µV	0.35 µV
Modulation acceptance	±7 kHz	±7 kHz	±3.5 kHz
Selectivity	-75 dB	-75 dB	-70 dB
Intermodulation distortion	-70 dB	-70 dB	-65 dB
Spurious & image rejection	-75 dB	-75 dB	-75 dB
Frequency stability (-30° C – +60° C)	±0.00025%	±0.00015%	±0.00015%
Channel frequency spread	19 MHz	19 MHz	6 MHz
Audio output	4 W at less than 5% distortion	4 W at less than 5% distortion	4 W at less than 5% distortion
TRANSMITTER (Measurements made per EIA standard EIA-152-B)			
RF power output	35 W/15 W (More than 25 W for Talk Around)	35 W/15 W (More than 25 W for Talk Around)	30 W/15 W (More than 20 W for Talk Around)
RF output impedance	50 Ω	50 Ω	50 Ω
Spurious & harmonics	-65 dB	-65 dB	-65 dB
Modulation	F3E, F1D, F2D	14K0F3E	F3E, F1D, F2D
FM noise	-45 dB	-45 dB	-40 dB
Microphone impedance	Low impedance	Low impedance	Low impedance
Audio distortion	Less than 3% at 1000 Hz	Less than 3% at 1000 Hz	Less than 3% at 1000 Hz
Frequency stability (-30° C – +60° C)	±0.00025%	±0.00015%	±0.00015%
Channel frequency spread	64 MHz	64 MHz	45 MHz

Applicable EIA environmental standards: EIA 152C, 204C for shock, vibration, humidity

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

Applicable MIL-STD

Standard	MIL 810C	MIL 810D	MIL 810E
Rain	506.1/Procedure 2	506.2/Procedure 2	506.3/Procedure 2
Dust	510.1/Procedure 1	510.2/Procedure 1	510.3/Procedure 1
Vibration	514.2/Procedure 8	514.3/Procedure 1	514.4/Procedure 1
Shock	516.2/Procedure 1, 2, 3, 5	516.3/Procedure 1, 4, 5, 6	516.4/Procedure 1, 4, 5, 6

ISO 9001
JQA-1205

Communications Equipment Division
Kenwood Corporation
ISO9001 certification

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