KENWOOD

UHF Trunked Compact Mobile Radio

TK-840

Up to 32 systems may be configured in either trunked or conventional modes (The maximum number of groups per system depends on the number of systems and channels programmed; ex. 32 systems with 5 ch. per system: 11 groups; 32 systems with 20 ch. per system: 5 groups).

A large, alphanumeric backlit LCD delivers clear legibility under any lighting conditions, and its 13-segment, 8-character format with integrated operational status indicators provides an informative and easy-to-read display, well-suited for multi-system/multi-group operations.

25 watts power output gives solid performance in any application.

Meets strict MIL-STD 810 C, D & E standards covering shock, vibration and dust resistance. From the glass-epoxy circuit board to the die-cast chassis, the TK-840 is ready for rough duty.

Wide band frequency coverage is available in three frequency ranges: 450 ~ 488 MHz, 488 ~ 512 MHz, and 406 ~ 430 MHz.

A data-ready connection port opens up a range of computer-based applications including MDT (Mobile Data Terminal), CAD (Computer-Aided Dispatch) and OAP (Over-the-Air Programming). Devices connected externally require the optional KCT-19 accessory connection cable.

The rotatable front panel allows the transceiver body to be mounted normally or upside down while keeping the display correctly oriented to the user—ideal for tight, difficult installations.

The E²PROM is programmed by a technician through a PC connected into the microphone jack for rapid and error-free set-up.

System scans provide powerful channel monitoring/management capability with Group Scan, Off-hook Scan, Off-hook Revert, and System Delete/Add (up to the maximum number of systems).

Auto-Tel will locate and connect with an RIC-compatible system, and initiate a telephone connection.

Take advantage of UHF trunking opportunities with Kenwood's new TK-840 trunked mobile radio — and get the highest functionality and smallest size of any trunked mobile on the market.

Trunked system features include fixed priority/block decode ID codes, free system ringback for telephone interconnect, transmit inhibit and transpond function.

QT (Quiet Talk) and DQT (Digital Quiet Talk) can be programmed for conventional channels, which can also be included in the scan map if required.

System Search (auto/manual) will search for an available system.

The Talk-Around function is useful when close-proximity simplex operation is desired, or if the user is outside of system range. It can he used in both trunked and conventional modes.

Call lights (solid/flashing) and the Horn Alert function signal the user of an incoming call with fixed receive or other ID codes.
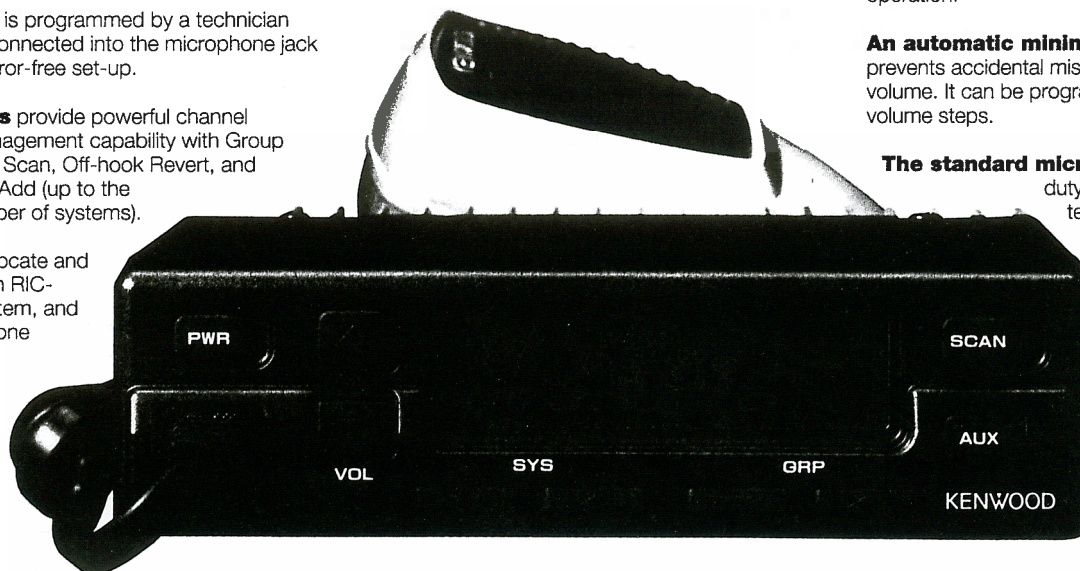
A programmable time-out-timer cuts off long transmissions for dispatch and telephone interconnect applications. It can be programmed in 15-second steps for between 15 and 600 seconds.
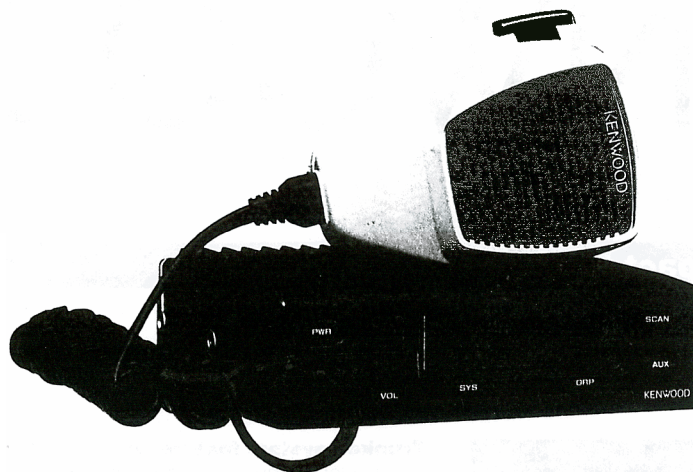
The programmable auxiliary switch can be set to control Horn Alert, Del/Add, Auto-Tel, Home System/Group (Fixed Call), Group Name (alphanumeric) ON/OFF, Option Signaling Reset, and Manual Relay.

High sensitivity and selectivity ensures reliable receiver performance in both longer-distance rural areas and high RFI (radio frequency interference) urban settings. In addition, the TCXO (Temperature Compensated Crystal Oscillator) ensures very stable and accurate frequency operation.

An automatic minimum volume feature prevents accidental missed calls due to low or no volume. It can be programmed in one of 32 volume steps.

The standard microphone utilizes a heavy-duty cable and modular telephone-type connector for exceptional ruggedness and resistance to failure. An optional DTMF microphone (KMC-18/18A) is also available for telephone interconnect.

Specifications

TK-840	
GENERAL	
Frequency range	K: 450 ~ 488 MHz
	K2: 488 ~ 512 MHz
	K3: 403 ~ 430 MHz
Systems	Max. 32
Groups	Max. 250
Conventional channels	Max. 308
Channel spacing	25 kHz (PLL step: 12.5 kHz)
Input voltage (negative ground)	13.6 V DC
Current drain	
Standby	Less than 0.4 A
Receive	Less than 1.0 A
Transmit	Less than 7.0 A
Duty cycle	RX: 100%; TX: 20%
Operating temperature range	-22° F ~ +140° F (-30° C ~ +60° C)
Dimensions (W x H x D)	5-33/64 x 1-37/64 x 5-5/16 in.
	(140 x 40 x 135 mm)
Weight (net)	2.09 lbs. (950 g)
FCC ID	ALHTK-840-1
	ALHTK-840-2
	ALHTK-840-3
FCC compliance	FCC part 90

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

TK-840	
RECEIVER (Measurements made per EIA standard EIA-204-D)	
RF input impedance	50 Ω
Sensitivity	0.3 μV (EIA 12 dB SINAD)
Modulation acceptance	±7 kHz
Selectivity	-73 dB
Intermodulation distortion	-70 dB
Spurious & image rejection	-75 dB (except 1/2 IF)
Channel frequency spread	K: 38 MHz
	K2: 24 MHz
	K3: 27 MHz
Audio output	4 W at less than 5% distortion
TRANSMITTER (Measurements made per EIA standard EIA-152-C)	
RF power output	25 W
RF output impedance	50 Ω
Spurious & harmonics	-65 dB
Modulation	F3E, F1D, F2D
FM noise	-48 dB
Microphone impedance	Low impedance
Audio distortion	Less than 5% at 1 kHz
Frequency stability	±0.0005% (-30° C ~ +60° C)
Channel frequency spread	K: 38 MHz
	K2: 24 MHz
	K3: 27 MHz

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 1	510.2/Procedure 1	510.3/Procedure 1
Vibration	514.2/Procedure 8, 10	514.3/Procedure 1	514.4/Procedure 1
Shock	516.2/Procedure 1, 2, 3, 5	516.3/Procedure 1, 3, 4, 5, 6	516.4/Procedure 1, 3, 4, 5, 6