KENWOOD

TK-7180/8180

FleetSync® by KENWOOD

VHF/UHF FM Mobile Radios

- WIDE BAND OPERATION
- CONVENTIONAL & LTR® TRUNKING ZONES
- EXTRA LARGE CHANNEL CAPACITY
- DUAL PRIORITY SCAN
- DOT MATRIX DISPLAY
- 6 PROGRAMMABLE FUNCTION KEYS
- ENHANCED KENWOOD AUDIO
- VOICE INVERSION SCRAMBLER
- FleetSync® / FleetSync® II
- QT/DQT/DTMF/2-TONE
- VGS-1 VOICE GUIDE & STORAGE UNIT (OPTION)
- EASY OPTION PORT
- REMOTE CONTROL HEAD OPTION
- DB-25 ACCESSORY TERMINAL
- MIL-STD 810 C/D/E/F

OUTSTANDING FEATURES

CONVENTIONAL & LTR® TRUNKING ZONES

The TK-7180/8180 operates on LTR® trunking systems, conventional channels or any combination of both, facilitating mixed operation today or migration tomorrow.

FleetSync®/FleetSync® II

Kenwood's FleetSync® digital signaling system includes PTT ID digital ANI for instant radio call identification and Emergency status for personnel safety. FleetSync also includes status messaging, selective calling and short/long text dispatch messaging features. The TK-7180/8180 supports either original FleetSync® or FleetSync®II*.

**FleetSync and FleetSync II are incompatible.*

DUAL PRIORITY & SCAN FEATURES

Dual-Priority Scan automatically checks two important channels for activity while channel scanning (conventional zones only). Also, each radio can be programmed to scan any table of individual channels, systems and talk groups using the many programmable scan features and parameters. Channel/GID Delete/Add, Nuisance Delete and Priority Temporary Delete provide relief from non-essential voice traffic when scanning multiple channels or trunked talk groups.

SIGNALING

The TK-7180/8180 includes industry standard signaling formats for the most common type radio systems.

- **QT/DQT:** Sub-audible QT tones and DQT digital codes provide industry standard talk group muting and segregation for conventional radio systems.
- **DTMF:** DTMF permits DTMF PTT ID, telephone interconnect operation, individual/group selective calling and remote radio disable/enable (remote stun).
- **2-Tone Selective Calling:** Four code pairs each with individual and group page settings and audio visual alerts can be assigned per channel.

VGS-1 VOICE GUIDE & STORAGE UNIT

This innovative Kenwood option makes several functions possible. "Voice Guide" announces zone, channel, groups and feature activation/deactivation in a clear synthesized voice. A great tool for radio communications training or as an aid for the sight or physically impaired. "Voice Storage" records up to 300 seconds of receive audio for missed calls or your own voice for memo recording. It also can transmit an "Auto-Reply" greeting and record voice messages for unattended radios while away from the radio or while in a meeting (the calling unit must send a FleetSync® selective call for activation). The VGS-1 can be used to store FleetSync® GPS AVL data*.

** Voice functions are not available when the VGS-1 is used for FleetSync GPS data storage.*

EASY OPTION PORT

Kenwood's plug-in option port makes the VGS-1 option and compatible after-market board installation quick and simple.

OTHER FEATURES

▮ 6 PROGRAMMABLE FUNCTION KEYS ▮ EMERGENCY FEATURES ▮ OPERATOR-SELECTABLE TONE (CONVENTIONAL) ▮ ENCRYPTION & ANI MODULE CONTROL ▮ DB-25 ACCESSORY CONNECTOR (FEMALE) ▮ REMOTE CONTROL I/O'S ▮ MOBILE DATA I/O PORTS ▮ PROGRAMMABLE AUX I/O'S ▮ REAL-TIME CLOCK FOR TIME STAMPING ▮ EMBEDDED MESSAGES ▮ RADIO LOCK PASSWORD ▮ TIMED POWER OFF (8-HOUR) ▮ IGNITION SENSE INPUT & CABLE OPTION ▮ HORN ALERT & PUBLIC ADDRESS OPTION ▮ FLASH MEMORY ▮ WINDOWS PC PROGRAMMING & TUNING ▮ CLONING

Catch the New Wave in Professional Mobile Communications

Kenwood's TK-7180/8180 offers a superb range of advanced features that play a key role in the latest dispatch and fleet control applications.

WIDE BAND OPERATION

The TK-7180/8180 models feature wide band UHF (70 MHz) and VHF (38 MHz) coverage in one radio model.

MOBILE ELEGANCE

Kenwood employed premium industrial design concepts to make the TK-7180/8180 mobiles functionally practical, rugged and attractive whether vehicle or base station installed.

512 CHANNELS /128 ZONES

The large 512 channel / 128 zone capability* accommodates virtually any current or future capacity requirement for single or multiple site radio systems.

Maximum capacity notes*

128 Conventional & LTR Zones cumulative maximum per radio

512 Conventional Channels & Group ID's (GID's) cumulative maximum per radio

250 Channels maximum per any Conventional Zone

250 GID's maximum per any LTR Zone

12-CHARACTER DOT-MATRIX DISPLAY WITH ICONS

The backlighting and high-resolution dot matrix 12-character alphanumeric display provides easy-to-read channel aliases day or night. Also a 3-digit sub-display for zone/channel/group ID numbers and icons for function/status indicators make for intuitive operation.

VOICE INVERSION SCRAMBLER

The built-in voice inversion scrambler provides basic protection against casual eavesdropping.

ENHANCED KENWOOD AUDIO

Kenwood utilizes its long standing audio heritage to optimize voice frequency components so that the audio output cuts through typical ambient noise. This enhancement and the companded noise reduction provide clarity and low distortion especially on narrow bandwidth systems.

FleetSync® GPS READY

The TK-7180/8180 has connection ports (internal or external) for GPS receiver units with a standard NMEA-0183 data output. This enables a FleetSync-compatible AVL system to track a fleet of TK-7180/8180 mobiles.

REMOTE CONTROL HEAD OPTION

The KRK-10 remote kit converts the front panel into a space saving remote control head for today's smaller vehicles and console mounting.

ROBUST & RELIABLE

The TK-7180/8180 is built to survive the hard knocks and harsh all weather environments of many type mobile installations. These mobiles meet or exceed the stringent MIL-STD 810 C, D, E & F environmental standards including the demanding "driven rain" test.

Options

KMC-35
Microphone
(supplied microphone)

KMC-36
Keypad Microphone

KMC-30
Microphone

KMC-32
Keypad Microphone

KMC-9C
Control Station
Desktop Microphone

KRK-10
Control Head
Remote Kit (23ft/7m)

KCT-46
Ignition Sense Cable

KCT-40
Radio Interface Cable
(for KDS-100, KGP-2A/2B)

KCT-23M
DC Cable (Dash mount / 10 feet)

KCT-23M3
DC Cable (Remote mount / 23 feet)

KAP-2
Horn Alert/Public Address Relay Unit

VGS-1
Voice Guide & Storage Unit

KES-3
External Speaker

KES-5
External Speaker
(requires KAP-2)

KMB-10
Key Lock Adapter

KLF-2
Line Noise Filter

KPS-15
DC Power Supply

KDS-100
Mobile Data Terminal

All accessories and options may not be available in all markets. Contact an authorized Kenwood dealer for details and a complete list of all accessories and options.

Specifications

	TK-7180	TK-8180
GENERAL		
Frequency Range		
Type 1	136~174 MHz	
Type 2		400~470 MHz
Number of Channels*		
Zone	Max.128 per Radio	
Ch/GID	Max.250 per Zones	
	(Max.512 [Conv.Ch 's +GID 's] total per Radio)	
Channel Spacing		
Wide	25 kHz, 30 kHz	25 kHz
Narrow	12.5 kHz, 15 kHz	12.5 kHz
Operating Voltage	13.6 V DC±15 %	
Current Drain		
Standby	0.4 A	
Receive	1.0 A	
Transmit	9.0 A	
Duty Cycle	Transmit: 20 %	
Operating Temperature Range	-22 °F ~ +140 °F (-30 °C ~ +60 °C)	
Frequency Stability	±0.00025 % (-22 °F ~ +140 °F)	
Antenna Impedance	50 Ω	
Channel Frequency Spread		
Type 1	38 MHz	70 MHz
Type 2		70 MHz
Dimensions (W x H x D), Projections not included	6-5/16" x 1-3/4" x 6-3/16" (160 mm x 45 mm x 157 mm)	
Weight (net)	3.3 lbs. (1.5 kg)	
FCC ID		
Type 1	K4437303110	
Type 2		K4437313120
FCC Compliance		
Type 1	FCC parts 22,74,90,90.210	FCC parts 22,74,90,95
Type 2		FCC parts 22,74,90,90.210
IC Certification		
Type 1	282F-37303110	
Type 2		282F-37313120

*Maximum capability depends on the number of programmed Zone and repeater channels.

	TK-7180	TK-8180
RECEIVER (Measurements made per EIA/TIA-603)		
Sensitivity (12dB SINAD)		
Wide	0.25 µV	
Narrow	0.28 µV	
Selectivity*		
Wide	80 dB	80 dB
Narrow	70 dB	67 dB
Intermodulation Distortion		
Wide/Narrow	75 dB (±50, 100 kHz)	
Spurious Response*	90 dB	85 dB
Audio Output (4 Ω impetance)	4 W with less than 5 % distortion	
TRANSMITTER (Measurements made per EIA/TIA-603)		
RF Output Power		
Type 1	30 to 1 W	30 to 1 W
Type 2		30 to 1 W
Spurious Response	70 dB	
Type of Emission		
Wide	16K0F3E	
Narrow	11K0F3E	
FM Hum & Noise		
Wide	50 dB	
Narrow	45 dB	
Microphone Impedance	600 Ω	
Audio Distortion		
Wide/Narrow	3 %	

* Typical specifications

Kenwood follows a policy of continuous advancement in development.
For this reason specifications may be changed without notice.
FleetSync ® is a registered trademark of Kenwood Corporation.
LTR ® is a registered trademark of Transcrypt International.

Applicable MIL-STD & IP

Standard	MIL 810C Methods/Procedures	MIL 810D Methods/Procedures	MIL 810E Methods/Procedures	MIL 810F Methods/Procedures
Low Pressure	500.1/Procedure I	500.2/Procedure I, II	500.3/Procedure I, II	500.4/Procedure I, II
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II	501.4/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I, II	502.3/Procedure I, II	502.4/Procedure I, II
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I	503.4/Procedure I, II
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I	505.4/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II	506.4/Procedure I, III
Humidity	507.1/Procedure I, II	507.2/Procedure II, III	507.3/Procedure II, III	507.4
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I	509.4
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I	510.4/Procedure I, III
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I	514.5/Procedure I
Shock	516.2/Procedure I, II, III, V	516.3/Procedure I, IV, V	516.4/Procedure I, IV, V	516.5/Procedure I, IV, V
International Protection Standard				
Dust & Water Protection	IP54: Radio itself			
	IP54/55: Remote Head with KRK-10			

*To meet above Mil810 and IP grade, weather proof microphone KMC-35 or KMC-36 has to be connected.

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