

KENWOOD

TK-5210

VHF FM & Project 25 Digital Portable Radio



FleetSync[®]
by KENWOOD



- FM CONVENTIONAL
- P25 DIGITAL CONVENTIONAL
- P25 DIGITAL TRUNKING (OPTION)
- 5 WATTS, 136-174 MHZ
- 512 CHANNELS & 50 ZONES
- BACKLIT HIGH-RESOLUTION DOT MATRIX LCD*
- 16-CHARACTER ALPHANUMERIC ALIASES*
- ON/OFF VOLUME KNOB
- 16-POSITION SELECTOR KNOB
- 2-POSITION PF LEVER SWITCH
- 3-POSITION CONCENTRIC PF SWITCH
- 4 FRONT PANEL PF KEYS*
- 3 SIDE PF KEYS
- ORANGE EMERGENCY / AUX PF KEY
- 12-KEY DTMF/PF KEYPAD**
- 2 PF KEY SPEAKER MICROPHONE
- EMERGENCY & EMERGENCY MAN-DOWN
- TACTICAL GROUP
- FLEETSYNC[®] / II
- MILSTD 810 C,D,E & F
- MILSTD 810-512.X, IP66/67 IMMERSION OPTION

*K2 & K3 models only
**K3 model only





The TK-5210 portables are the epitome of simple functionality in a rugged public safety platform. These units operate in both FM and Project 25 digital modes to meet interoperating requirements now and well into the future. Kenwood offers three models for all levels of users in all divisions and departments. The TK-5210 is uncompromising in traditional FM features and adds Project 25 digital capability in a practical easy-to-use symphony.

**K2 & K3 models only*

GENERAL

PREMIUM INDUSTRIAL DESIGN

The TK-5210 is the latest in Kenwood portable industrial design and engineering. The rugged housing, contours and controls are designed for maximum comfort, functionality and environmental toughness.

50 ZONES / 512 CHANNELS

All models include an extra large 50 Zone/512 Channel capacity for current and future radio system and network requirements.

ADVANCED DISPLAY*

The backlit high-resolution dot matrix LCD is clearly visible day or night with a 16-character alphanumeric alias for easy-to-read channel/group names.

ADVANCED CONTROLS

The mechanical rotary on/off volume and selector knobs are designed for sure grip and sight-unseen tactile feedback. The selector knob is programmable for channel or zone select and the TK-5210 has 10 other programmable function controls available to customize the radio for simple or sophisticated operation. The full keypad K3-model keys are programmable for direct access or shift-function features.

VOICE ANNUNCIATION

Announces zone and channel numbers in a clear synthesized voice. A great tool for radio communications training or as an aid for the sight or physically impaired.

EMERGENCY CALL FEATURES

Emergency (manual) or Emergency Man-down (tilt-switch option) notifies dispatch or incident command of personnel in trouble. The radio can be set for audible/visible or silent alerting even if the radio power has been turned off.

FORESTRY SERVICE FEATURE SET (FSFS)

Designed specifically for forestry, conservation, wildlife management and cooperative firefighting agencies the FSFS consists of the Tactical Group (FM & P25), Operator Selectable Tone (OST) List and Direct OST Select capability (FM only).

TACTICAL GROUP*

Users can create a custom group of up to 250 channels for temporary mutual aid and incident communications (FM & P25 modes).

WINDOWS® PROGRAMMING SOFTWARE AND FIELD PROGRAMMING

Radio data file creation, storing, firmware updating and radio tuning can all be performed in a convenient Windows® 98, NT, 2000, Me or XP environment. Self programming, tuning and cloning can be enabled for field programming without a computer.

MILSTD & IP ENVIRONMENTAL SPECIFICATIONS

Meets or exceeds all the major MILSTD 810 C, D, E & F environmental categories including the 40-mile per hour "driven-rain" specification. The MILSTD 810, 512.X, IP66/67 immersion option adds extra protection for intense water environments and mishaps.





SCAN LISTS & DUAL PRIORITY

Dual priority monitors activity on two primary channels during channel scanning and while receiving a call. The TK-5210 includes all traditional Kenwood scan parameters such as revert channel/display, priority channel alert, delete/add, nuisance delete and priority temporary delete.

SCAN TYPES

Scan Types provides transparent scanning of both conventional (FM & P25) and trunked personalities (P25). "Conventional" permits dual priority scan of conventional channels. "Limited Talk Group" scans both conventional and trunking personalities (no priority checking). Priority Monitor permits dual priority scanning of trunking personalities within the same trunked system.

FM CONVENTIONAL

OPERATOR SELECTABLE TONE*

OST permits users to select up to 40 QT/DQT pairs for accessing repeaters and talk-groups in the field. Each pair has an alphanumeric name and can be recalled by the radio panel controls (FM only).

FleetSync® / II (FM ONLY)

The TK-5210 includes Kenwood's advanced digital signaling protocol for new and existing FM systems. FleetSync® offers PTT ID, Caller ID, Emergency Status, Emergency Man-Down status, custom dispatch statuses, power on/off statuses, radio stun, selective calling and text messaging features. The 3-line LCD* displays FleetSync® short text messages for easy reading.

ENCRYPTION & ANI BOARD CONTROL

For FM mode, the encryption/ANI connection port and programmable controls permit installation of virtually any type and brand of board offering a choice of security levels for cost-conscious law enforcement, corrections, industrial and military installations. The TK-5210 port can also accommodate ANI option boards for G-Star and Motorola MDC 1200 formats.

P25 DIGITAL



ANSI TIA/EIA-102 COMPLIANT

The TK-5210 is fully compliant with the Project 25 TIA/EIA 102 Series for land mobile digital radio standards adopted by the public safety community for advanced features and interoperability.

ADVANCED DSP DIGITAL AUDIO

Kenwood designed the TK-5210 with optimized DSP coding and the DVSI IMBE™ VOCODER technology to offer superior error-corrected Project 25 Common Air Interface audio.

65,000+ TALK GROUPS

Project 25 supports 65,535 Talk Group ID's capable of handling the largest and most diverse of dispatch operations. The TK-5210 Talk Group ID List stores up to 250 TGID's.

TALK GROUP DISPLAY*

Each Talk Group ID can be associated with a 16-character alphanumeric name tag and automatically displayed upon mode change, PTT and/or receive.

16 MILLION INDIVIDUAL IDS

Project 25 supports 16,777,215 Individual ID's. The TK-5210 Individual ID List stores up to 99 ID's, each with an associated 16-character alphanumeric name tag for user transmit selection and receive caller ID display. Individual IDs can be tagged to automatically transmit in clear or encrypted mode.

REMOTE FEATURES

The Project 25 features permit dispatchers to monitor incident transmit audio, check if a radio is on and in range or over-the-air stun a compromised radio into a non-functional state.

DES-OFB & AES ENCRYPTION OPTIONS

Kenwood offers the Project 25 DES 128-bit key or the higher security level AES 256-bit encryption key options available in single or 16 encryption key capacity.

PROJECT 25 TRUNKING OPTION

This option adds Project 25 VHF trunking capabilities to the TK-5210. The TK-5210 has FM conventional and Project 25 digital conventional as standard.

OTHER GENERAL FEATURES

- Auto Backlight On* ■ Key Lock ■ 3-Digit Sub-Display*
- Function/Status LCD Icons* ■ VOX Ready ■ Microphone Sensitivity
- Noise-Canceling Internal Microphone ■ External Speaker Control
- Speaker Mic Attenuation ■ Companded Audio Per Channel
- Enhanced Kenwood Audio ■ Easy Option Port ■ Home Zone/CH
- Direct Channel Access (5) ■ Embedded Message (64-Character)
- Embedded Message with Password ■ Min/Max. Speaker Volume
- Talk Around ■ Busy Channel Lockout ■ Time Out Timer ■ Trunking
- RSSI Indicator* ■ Battery Level Indicator* ■ Low Battery Warning
- Battery Saver ■ Power On LCD Text Message* ■ Transceiver Password*
- Data Password (Read/Write) ■ Date & Time Clock* ■ Flash Memory
- Weather-Sealed Accessory Connector ■ 2 Year Warranty

OTHER FM FEATURES

- QT / DQT ■ Two-Tone Decode (4x4) ■ DTMF Decode & Encode
- Special Alert Tone Patterns (8) ■ Encryption Board Control (16 Keys)
- ANI Board Control

OTHER P25 FEATURES

- Call Response Key ■ Zeroize Key & Common Key Reference (CKR)
- Motorola KVL3000 Key Loader Compatible (KPG-93 required)

*K2 & K3 models only



Options

KNB-32N
Ni-MH Rechargeable
Battery Pack
(2500 mAh)



KRA-22
VHF Helical Antenna



KRA-26
VHF Helical Antenna



KRA-16
VHF Stubby Antenna



KRA-25
VHF High Gain Antenna



KRA-28
VHF Broad Band
High Gain Antenna



KSC-32
Tri-chemistry
Rapid Charger



KPG-93
Keyloader Interface
Cable



KMC-25
Speaker Microphone



KMC-26
Speaker Microphone
with Antenna Connector



KEP-1
Heavy Duty Earphone



KHS-11
2-Wire Palm Mic
with Earphone



KHS-14
Lightweight Single
Muff Headset



KHS-15-BH
Heavy Duty
Behind-the-Head Headset



KHS-15-OH
Heavy Duty
Over-the-Head Headset



KBH-11
Belt Clip (2.5")



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

Specifications

Model	TK-5210
GENERAL	
Models	
TK-5210K	Basic Model
TK-5210K2	4-key w/LCD Model
TK-5210K3	Full key w/LCD Model
Frequency Range	136-174 MHz
Number of Channels	512
Zones	50
Max. Channels per Zone	250
Channel Spacing	
Analog	12.5 / 15 / 20 / 25 / 30 kHz
Digital	12.5 kHz
Operating Voltage	7.5 VDC ± 20 %
Battery Life (@ 5-5-90 duty cycle)	
KNB-32N, 7.5 VDC, 2500 mAh	12 hours
Operating Temperature Range	
	-22° F to +140° F (-30° C to +60° C)
Frequency Stability (-22° F to +140° F)	± 2.0 ppm
Antenna Impedance	50 Ω
Dimensions (W x H x D)(projections not included)	
with KNB-32N	2-5/16 x 6-3/32 x 1-13/16 in. (58 x 155 x 45.7 mm)
Weight (Radio only)	
TK-5210K	11.11 oz. (315 g)
TK-5210K2	11.64 oz. (330 g)
TK-5210K3	11.64 oz. (330 g)
Weight (TK-5210K2 with KRA-22 & Belt Clip) with KNB-32N	
	23.28 oz. (660 g)
FCC ID	ALH35733110
IC Certification	282D-35733110
FCC Compliance	FCC Parts 22, 74 & 90

Model	TK-5210
RECEIVER	
Sensitivity	
Digital (5 % BER)	0.25 μV
Digital (1 % BER)	0.40 μV
Analog 12 dB SINAD	0.25 μV
Selectivity	
Digital	-60 dB
Analog @ 25/30 kHz	-78 dB
Analog @ 12.5 kHz	-67 dB
Intermodulation Distortion	
Digital	-75 dB
Analog @ 25/30 kHz	-75 dB
Analog @ 12.5 kHz	-68 dB
Spurious & Image	
Digital	-80 dB
Analog	-80 dB
Audio Distortion	
Digital	Less than 1.5 %
Analog	Less than 2 %
Audio Output	500 mW / 8 Ω
TRANSMITTER	
RF Power Output	5 W / 1 W
Spurious & Harmonics	70 dB
FM Hum & Noise	
Analog @ 25 kHz	50 dB
Analog @ 12.5 kHz	45 dB
Audio Distortion	
	Less than 2 %
Modulation	16K0F3E, 11K0F3E, 8K10F1E, 8K10F1D

Analog measurements made per TIA/EIA 603

Digital measurements made per TIA/EIA 102CAAA

Kenwood reserves the right to change specifications without prior notice or obligation.

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Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

IMBE™ is a trademark of Digital Voice Systems Inc.

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, V	516.3/Procedure I, IV	516.4/Procedure I, IV	516.5/Procedure I, IV
Immersion(option)	512.1/Procedure I	512.2/Procedure I	512.3/Procedure I	512.4/Procedure I

International Protection Standard

Dust & Water Protection	IP54/55
Dust & Water Jet Intrusion	IP66*
Immersion	IP67*

*IP66/67 Optional Package

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