

KENWOOD

MPT Trunked Portable Radios

TK-285/385



- MAX. 32 CHANNELS
- FULL MPT1327/1343 COMPATIBILITY
- MULTI-NETWORK CAPABILITY
- COMPANDOR
- QT/DT ENCODE & DECODE
- DTMF ENCODE
- TX POWER SELECT
- PROGRAMMABLE FUNCTION KEYS
- LARGE DOT MATRIX LCD WITH LIGHT CONTROL
- DATA ACCESS INTERFACE
- FLASH MEMORY
- MIL-STD 810 C/D/E
- HEAVY-DUTY ANTENNA MOUNT
- DIE-CAST CHASSIS & POLY-CARBONATE CASE
- WEATHER-SEALED UNIVERSAL CONNECTOR
- MIL-SPEC SPEAKER MIC WITH PROGRAMMABLE CONTROLS
- ENCRYPTION CONTROL
- PASSWORD-PROTECTED PROGRAMMING

TK-285/385 — Pride

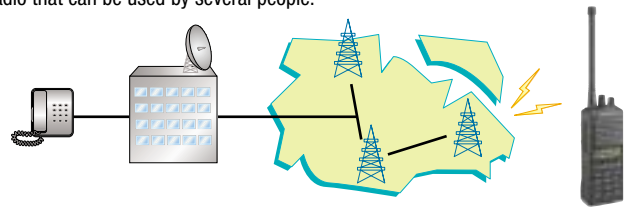


Open architecture is the key to cost-effective true competitive MPT1327/1343 performance, look to the weather-resistant construction, this trunked portable

Serious Radio for Serious Business

FULL MPT1327/1343 COMPATIBILITY The TK-285/385 offers full MPT1327/1343 compatibility, ensuring accurate operation on the trunked network. The dialing plan is supported by industry-standard MPT1343.

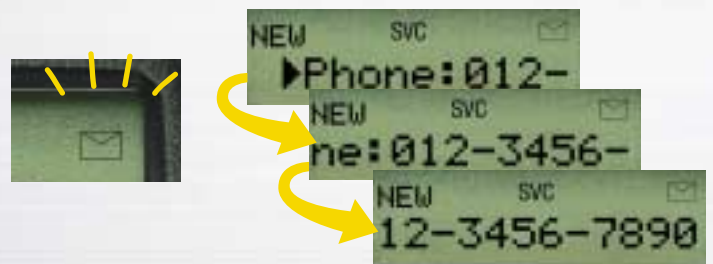
MULTI-NETWORK CAPABILITY One radio can be used on up to 8 networks. The independent network profile is able to include either an independent user or radio data. Different channel plans are also available, making this a multi-personality radio that can be used by several people.



VARIOUS HUNT OPTIONS For acquiring control channels, various hunt options — defined by MPT1343 — are supported: Comprehensive Hunt, Preferential NDD Hunt, Background Hunt, and Vote Now Advice. These options ensure clear voice operation everywhere.

DATA ACCESS INTERFACE For more power and versatility, Kenwood data interface protocol is supported to make it simple to create dispatch control software.

CALLED-IN-ABSENCE STACK Calls that are received while you are absent or busy can be recorded in stack memory for later recall. The radio allocates this memory dynamically, meaning that voice calls, status calls, short data message calls and long message calls can all be stacked together as long as there is memory available. The maximum size of the stack is 1024 characters — enough for, say, 10 short data messages of 100 characters each.



CALL FACILITIES

- ◆ Individual Call
- ◆ Conference (Group) Call
- ◆ Broadcast Call
- ◆ Inter-fleet/Inter-prefix Call
- ◆ PABX Call
- ◆ PSTN Call
- ◆ Priority Call
- ◆ Emergency Call
- ◆ Status Message Call
- ◆ Short Data Message Call (SST/MST)*
- ◆ Non-prescribed Data Transfer*
- ◆ Call Diversion
- ◆ Don't Disturb Facility
- ◆ Queue Incoming Call

CONVENTIONAL FACILITIES

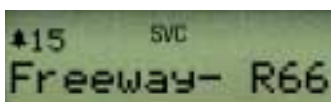
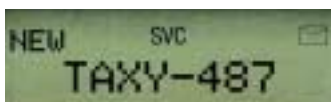
- ◆ Maximum of 32 channels
- ◆ QT/DQT encode and decode
- ◆ DTMF encode
- ◆ Time-Out Timer
- ◆ Name Tag
- ◆ Busy Channel Lockout
- ◆ Compandor
- ◆ TX Power Select

* PC or other external equipment required

in Performance

working — with all the benefits that brings over conventional radios and repeaters. And for truly Kenwood's TK-285/385. With its multi-network capability, fully customisable features, and tough portable radio means serious business.

LARGE DOT MATRIX LCD A "12 + 3" character LCD display provides clear legibility under all lighting conditions, from bright sunshine to total darkness (with the backlight on). The main display line has room for 12 alphanumeric characters to indicate the call address tag or call process status. A 3-character sub-line shows RSSI (5-level signal strength bar), which facilitates comfortable conversation. The LCD can also display European characters.



PROGRAMMABLE FUNCTION KEYS These can be programmed for virtually any radio function, allowing the unit to be customised to fit user needs. Of course programming for just the simpler functions results in an extremely user-friendly radio that answers all the basic requirements of a transceiver.

FLASH MEMORY Flash memory permits updates, advanced feature sets and system architectural changes to be made electronically without ever opening the unit. This results in simplicity for the system operator and reduced downtime for users.

IMPRESSIVE SPECIFICATIONS, WORLD-CLASS PERFORMANCE High-stability 2.5PPM oscillators, an efficient MOS-FET power module and advanced filtering are just some of the features that give this radio the performance and power to serve as a key component in any well-designed radio system.

HIGH-QUALITY AUDIO OUTPUT The TK-285/385 is equipped with an extra-large 40mm speaker element and produces 500mW of audio power for robust clarity in noisy crowds and industrial environments.

COMPANDED AUDIO The built-in compandor uses compression technology to enhance audio clarity by reducing noise. It can be switched on for voice communications on the trunk channel, or set for individual channels when communicating in conventional mode.

EXTRA-LONG BATTERY LIFE The KNB-16A (1100mAh) and KNB-17A (1500mAh) batteries deliver long operation times — 8 hours and 10 hours, respectively — on a single charge (5-5-90 duty).

MIL-STD 810 C/D/E ENVIRONMENTAL TESTS The TK-285/385 meets or exceeds the tough U.S. Department of Defense MIL-STD 810 C, D & E environmental standards in eleven categories such as vibration, shock, humidity, rain, salt fog, dust, temperature, solar radiation, and atmospheric pressure.

WEATHER-RESISTANT (IP-54 APPROVED)



Integrated elements such as the keypad membrane, gasket seals and the polyvinyl speaker cone prevent moisture penetration for confident wet-weather use. In fact, the TK-285/385 meets the demanding IP-54 standard, which guarantees water-resistant performance.

DIE-CAST CHASSIS AND POLYCARBONATE CASE The monocoque aluminium die-cast chassis, which doubles as a heat sink, borrows a principal from aircraft construction for rigid strength. It is encased in super-tough polycarbonate to provide years of durability.

WEATHER-SEALED UNIVERSAL CONNECTOR

The KMC-25 speaker microphone, which offers excellent resistance to water and dust, connects to the radio via a weather-sealed universal connector. This means that various optional microphones can also be used with confidence, even in heavy rain.



LIGHT CONTROL Automatic on/off control of backlighting for the keys and LCD enables safe night-time operation while avoiding excessive battery drain.

TWO-COLOUR LED In conventional mode, the two-colour LED provides traditional transmit/warning (red) and receive (green) visual indications. It is recessed to limit visibility to just the radio operator.

KEY LOCK A programmable key can be assigned to lock other radio key/control functions, thus preventing accidental operation. Vital functions such as PTT, CALL, CLEAR and Emergency are still available even when key lock is active.

MIL-SPEC SPEAKER MIC WITH PROGRAMMABLE CONTROLS The KMC-25 MIL-SPEC speaker microphone meets the same tough MIL-STD 810C, D & E specifications as the radio unit, while the weather-sealed quick-disconnect plug keeps out moisture, dirt and grime. There are 2 unique top PF keys on the KMC-25 for repetitive operations such as home select, and further functions can be programmed using the PF keys on the radio. There is also an orange emergency key.

HEAVY-DUTY ANTENNA MOUNT The antenna's industry-standard SMA connector provides improved mechanical and electrical performance.

PC PROGRAMMING AND TUNING Radio parameter programming and tuning can be accomplished via the universal accessory connector using a PC without ever having to open the radio. This saves both time and expense. (Software and cable option required.)

ENCRYPTION CONTROL Encryption control provides secure voice communications on the traffic channel for law enforcement or private security. An internal port permits the addition of optional modules to provide high-level encryption voice scrambling.

PASSWORD-PROTECTED PROGRAMMING All radios can have the programming password(s) protected to prevent unauthorised program information extraction and duplication.

RADIO LOCK PASSWORD As a means of preventing unauthorised use of lost or stolen portables, this feature requires an access code to be entered every time the radio is powered up. This password — with a maximum of 6 digits — can be easily field-programmed or modified by an authorised user.

EMBEDDED MESSAGE The radio's flash memory can store an electronic message (of up to 64 characters) containing owner identification, property ID numbers, user and department names, service records, etc. A radio can thus be electronically identified even if external labels, markings and factory serial numbers have been removed.

OTHERS

- Maximum of 32 Group Addresses
- 99 Call Address Table supports MPT1343 dialling format
- Full Off-Air Call Setup
- Selectable Display Language: English, Spanish or Portuguese
- Minimum Volume
- Power-On Status
- Battery Warning
- Redial (last 3 called)
- Power-On Text

Options



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

Specifications

	TK-285	TK-385
GENERAL		
Frequency range Type 1: RX TX Type 2: RX TX	217 – 250 MHz 218 – 250 MHz 240 – 270 MHz 240 – 270 MHz	450 – 470 MHz 450 – 470 MHz
Channels	Max. 32 (conventional)	Max. 32 (conventional)
Channel spacing	12.5 kHz	12.5 kHz
PLL channel stepping	6.25/12.5 kHz	6.25/12.5 kHz
Operating voltage	7.5 VDC ±20 %	7.5 VDC ±20 %
Battery life (5-5-90 duty cycle) KNB-16A (1100mAh) KNB-17A (1500mAh)	More than 8 hours More than 10 hours	More than 8 hours More than 10 hours
Operating temperature range	-30° C ~ +60° C	-30° C ~ +60° C
Frequency stability (-30° C ~ +60° C)	±2.5 ppm	±2.5 ppm
Dimensions (W x H x D)	58 x 135 x 34 mm with KNB-16A battery	58 x 135 x 34 mm with KNB-16A battery
Weight (net)	460 g with KNB-16A battery, Antenna and belt hook	460 g with KNB-16A battery, Antenna and belt hook

	TK-285	TK-385
RECEIVER (Measurements made per ETS standard)		
Antenna impedance	50 Ω	50 Ω
Sensitivity (EIA) / 12 dB SINAD	0.28 μV	0.28 μV
Selectivity	63 dB	62 dB
Intermodulation	65 dB	62 dB
Spurious & image rejection	70 dB	70 dB
Audio output (at 16Ω)	500 mW with less than 5% distortion	500 mW with less than 5% distortion
Channel frequency spread Type 1 Type 2	33 MHz 30 MHz	20 MHz
TRANSMITTER (Measurements made per ETS standard)		
Antenna impedance	50 Ω	50 Ω
RF power output: HI / LO	5 W / 1 W	4 W / 1 W
Modulation limiting	±2.5 kHz at 12.5 kHz	±2.5 kHz at 12.5 kHz
Spurious & harmonics	-36 dBm ≤ 1GHz -30 dBm >1GHz	-36 dBm ≤ 1GHz -30 dBm >1GHz
FM hum & noise (EIA)	40 dB	40 dB
Modulation distortion	Less than 3 % at 1 kHz	Less than 3 % at 1 kHz
Microphone impedance	600 Ω	600 Ω
Channel frequency spread Type 1 Type 2	32 MHz 30 MHz	20 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
Low Pressure	500.1/Procedure I	500.2/Procedure I	500.3/Procedure I
High Temperature	501.1/Procedure I, II	501.2/Procedure I, II	501.3/Procedure I, II
Low Temperature	502.1/Procedure I	502.2/Procedure I	502.3/Procedure I
Temperature Shock	503.1/Procedure I	503.2/Procedure I	503.3/Procedure I
Solar Radiation	505.1/Procedure I	505.2/Procedure I	505.3/Procedure I
Rain	506.1/Procedure I, II	506.2/Procedure I, II	506.3/Procedure I, II
Humidity	507.1/Procedure II	507.2/Procedure II	507.3/Procedure II
Salt Fog	509.1/Procedure I	509.2/Procedure I	509.3/Procedure I
Dust	510.1/Procedure I	510.2/Procedure I	510.3/Procedure I
Vibration	514.2/Procedure VIII, X	514.3/Procedure I	514.4/Procedure I
Shock	516.2/Procedure I, II, V	516.3/Procedure I, IV	516.4/Procedure I, IV



JQA-1205 ISO 9001
Communications Equipment Division
Kenwood Corporation
ISO9001 certification

KENWOOD CORPORATION

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