

New Product Release Information

TK-2360E
TK-3360E

VHF FM Transceiver
UHF FM Transceiver

April 2010

We are pleased to send you product information on our new VHF and UHF FM Portable Transceivers, the TK-2360E and TK-3360E.



1. SCHEDULE

Launch

: May.

2. MAIN FEATURES

Slim, Compact, Light Weight

Compact enough to carry anywhere with ease, this smart new radio has a distinctively ergonomic form that's handy to hold and operate. The ergonomic design of the TK-x360 Series fit nearly in your hand, yet weights only 260 g with the Li-Ion battery.

16 Channels with 4/8/12 Channel Stopper

The TK-x360 Series provide plenty of capacity for multiple channels or radio systems. The new "Channel stopper" function will be helpful for radio users who only need a few channels. It is easy to use and can be set up without any mechanical tools.

Wide Band Coverage (70MHz in UHF)

The TK-x360 Series offer wide frequency coverage, 38MHz band-spread for VHF (136-174 MHz) and 70MHz band-spread for UHF (400-470 MHz). Great for a wide range of customers, and very useful for rental business.

Clear and Crisp, Enhanced Kenwood Audio

The TK-x360 Series provide loud clear audio even in noisy environments. Kenwood has utilized its longstanding 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.

Variety of Signalling

➤ **QT/DQT/DTMF**

Encoder/Decoder function uses QT/DQT to segregates talk groups, so users only hear calls from their own group.

DTMF PTT ID is included for dispatch operations or for a simple remote control application. The DTMF decode capabilities include a selective call ID, transpond with ID, "wild card" group calling and radio stun.

➤ **5-Tone Signaling**

Built-in 5-tone encoder/decoder provides 6-different formats, ZVEI, ZVEI2, CCIR, EIA, EEA and the Kenwood format. It is also possible to set not only 5-Tone but also 6-Tone, 7-Tone, 2-frames 5-Tone and the 3-frames 5-tone signalling.

➤ **FleetSync® PTT ID, SelCall & Emergency**

Utilizing Kenwood's FleetSync® digital signalling protocol, the TK-x360 Series have PTT ID (ANI: automatic number identification) and Selective Calling capabilities for managed dispatch operations. For hazardous/hostile duty environments, PF key can also be programmed for Emergency status to alert the dispatcher and/or operator in distress.

5-tone

FleetSync®
by KENWOOD

“Staff Safe” functions for Various Emergency Scene

These functions provide security and safety for users who work remotely as well as for those who work in hazardous areas. If the operator is in an emergency situation, the transceiver automatically sends a help signal to a pre-determined person or system.

➤ **Standard Man-down**

Standard Man-down function is available as a factory setting.

If the operator (and the radio) are horizontal (or slanted)* for a pre-set period, an alert signal is transmitted.

Can be activated as the default option

* The angle value can be pre-set

➤ **Advanced Motion Detection**

(Software License Option*) * Need activation file

Stationary mode

When the operator (and the radio) do not move for a pre-set period, an alert signal is transmitted.

Motion mode (Panic)

When the operator (and the radio) moves a lot for certain period, an alert signal is transmitted.

➤ **Lone Worker Function**

This ingenious feature provides an extra layer of security and safety for individuals. As long as the buttons are pressed regularly, the radio operates normally; however, if there is a long lapse (programmable), it will sound an alert.

In the absence of further response from the user, the TK-x360 Series will place an emergency call to a pre-determined person or group of people..

Lone Worker function can be used in combination with other Emergency functions.

➤ **Emergency Key (Orange Key)**

A clearly identified Orange key can be used exclusively for emergency signalling to send a help signal to a pre-determined person or group of people.

Programmable Built-In Voice Inversion Scrambler

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

It is possible to have a unique scrambler setting for each channel by picking the voice inversion frequency from one of 16 tables.

Independent Setting Per Channel (VOX, Compander, Scrambler)

The TK-x360 Series can be dealer-programmed with VOX, Scrambler and Compander functions “per channel”. If you program the same frequency on different channel, you can easily switch the function on/off by selecting the appropriate channel.

New Optional Batteries, Choice of 3-Batteries

The TK-x360 Series offer a slim & lightweight KNB-55L (Li-Ion) battery for up to 9 hours of operation*. The KNB-56N (Ni-MH) is a good choice for lower-temperature (-30°C) environments, while the high-capacity KNB-57L (Li-Ion) will power the TK-x360 Series for longer life operation.

* Save OFF mode



KNB-55L
1480mAh



KNB-56N
1400mAh



KNB-57L
2000mAh

4-colours LED (Blue, Red, Orange and Green)

On top of existing colours (Red, Orange and Green), the TK-x360 Series have a Blue LED. With this variety of colour LEDs, radio users can recognize the caller when the radio receives a selective call transmission.



Voice Announcement

The rotary and key controls on the TK-x360 Series have been designed to provide the user with voice-announcement even if carried and operated undercover or in a pocket. The initial language of the voice annunciation function is set to English. The radio announces the radio status or mode when you operate the radio. (The language is selectable from English, French, German, Dutch, Italian, Spanish, Russian and Chinese)

Programmable Function Keys

2 PF Keys are programmable for any features allowing the transceiver to be customized to fit users' specific requirements. The functions can be assigned both Press and Hold operation.

Robust & Water Resistant

The TK-x360 Series are built to survive the hard knocks, drops and all-weather environments of its users. It meets or exceeds the stringent IP54/55 dust and water intrusion standards and the MIL-STD 810 C, D, E & F environmental standards. It still meets IP54/55 when used with the KMC-45 external speaker microphone.



3. OTHER FEATURES

■ Priority Scan ■ Voting ■ UHF 5W output power ■ Radio Stun ■ VOX Ready ■ Wide/ Semi Wide/ Narrow per channel ■ Companded Audio per Channel ■ Talk Around ■ B.C.L. (Busy Channel Lockout) ■ Key Lock ■ Scan Del/ Add function ■ KENWOOD ESN (Electronic Serial Number) ■ Adjustable Microphone Gain by FPU only: High/ Normal/ Low ■ Microsoft Windows® PC Programming & Tuning
Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

4. QUALITY CONTROL

ISO 9001 Quality Management for Manufacturing

The TK-x360 Series are manufactured in Kenwood's Singapore factory which has been assessed and registered as ISO9001 compliant. ISO9001 is the international standard for Quality Management Systems.

Kenwood Original Quality Test Standards for Products

Each transceiver has passed Kenwood's original quality tests, which simulate years of sustained, demanding use in harsh operating conditions. These tests are more extreme than any of the accepted Industry Standards.

5. OPTIONAL ACCESSORIES

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|-------------------|---|
| ■ KBH-12 | Belt-Clip |
| ■ KBP-5 | Battery Case (AA x 6) |
| ■ KNB-55L (NEW) | Li-Ion Battery (1,480 mAh) |
| ■ KNB-56N (NEW) | NiMH Battery (1,400 mAh) |
| ■ KNB-57L (NEW) | Li-Ion Battery (2,000 mAh) |
| ■ KRA-22 | VHF short Antenna |
| ■ KRA-23 | UHF short Antenna |
| ■ KRA-26 | VHF Antenna |
| ■ KRA-27 | UHF Antenna |
| ■ KSC-25 | Rapid rate Charger
for the KNB-55L/56N/57L/35L/26N |
| ■ KSC-30 | Regular rate Charger for the KNB-56N/26N |
| ■ KMC-45 | Heavy-duty Speaker-Microphone |
| ■ KMC-21 | Lightweight Speaker-Microphone |
| ■ KHS-1 | Headset with a boom-Mic. and PTT/VOX |
| ■ KHS-21 | Headset with a boom-Mic. |
| ■ KHS-22 | Behind-the-head Headset |
| ■ KHS-7 | Single Headset with a boom-Mic. |
| ■ KHS-7A | Single Headset with a boom-Mic. and Inline-PTT |
| ■ KHS-8BL | 2-wires Microphone Kit |
| ■ KHS-9BL | 3-wires Microphone Kit |
| ■ KHS-10-OH | Heavy-duty Noise Reduction Headset with inline-PTT |
| ■ EMC-7 | Clip Microphone with "D" Earpiece and PTT |
| ■ KHS-29F | Boom Microphone with "D" Earpiece and PTT |
| ■ KLH-169NC (NEW) | Nylon Case |
| ■ KLH-170PG (NEW) | Heavy duty leather case with swivel belt loop |
| ■ KWR-1 | Water Resistant Bag |
| ■ KSC-256 | 6 Pocket Multiple Charger |
| ■ KSL-3SF (NEW) | Advanced Motion Detection License Option |

Programming Accessories for Dealers;

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|-------------|----------------------|
| ■ KPG-22A | Programming Cable |
| ■ KPG-128DM | Programming Software |

6. SUPPLIED ACCESSORIES

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| ■ Users Manual | En, Sp, Ger, Fr, Du, It, Turkish, Greek |
| ■ Belt-Clip | (KBH-12) |

7. SPECIFICATIONS : TK-2360E/ TK-3360E

General		TK-2360E	TK-3360E
Frequency Range		136-174 MHz	400-470 MHz
Number of Channel		Max. 16ch	
Channel Spacing		25 / 20 / 12.5 kHz	
Antenna Impedance		50 ohm	
Operating Voltage		7.5V DC±20%	
Battery Life (5-5-90) w/ KNB-55L/56N		9 hours	
Bat. Save OFF w/ KNB-57L		13 hours	
Operating Temperature Range		-30°C to +60°C	
Frequency Stability		± 2.5 ppm (-30°C to +60°C)	
Dimensions (W x H x D) with KNB-55L		56 x 103.7 x 29.1 mm	
Weight		Main body: 163g (with KNB-55L : 260 g)	
Applicable Standards		EN 300 086, EN 300 113, EN 300 219, EN 301 489, EN 60065, EN60950-1, EN 60215	
		IP54, IP55, MIL 810 C/D/E/F	
Receiver		TK-2360E	TK-3360E
Sensitivity	EIA 12dB SINAD 25 / 20 / 12.5 kHz	0.25 µV / 0.25 µV / 0.28 µV	
	EN 20 dB SINAD: 25 / 20 / 12.5 kHz	-3 dB µV (0.35 µV) / -3 dB µ V (0.35 µV) / -2 dB µV (0.40 µV)	
Adjacent Channel Selectivity 25 / 20 / 12.5 kHz		70 dB / 70 dB / 63 dB	
Intermodulation		68dB	
Spurious Response Rejection		70 dB	
Audio Distortion		Less than 5%	
Audio Output (8 ohm impedance)		500 mW at 8 ohm	

Transmitter	TK-2360E	TK-3360E
RF Power output	5W / 1W	
Modulation Limiting (Analogue)	±5.0 kHz at 25 kHz ±4.0 kHz at 20kHz ±2.5 kHz at 12.5 kHz	
Spurious Emission	-36 dBm ≤ 1 GHz , -30 dBm > 1 GHz	
FM Noise (EIA) 25 / 20 / 12.5 kHz	45 dB / 45 dB / 43 dB	
Modulation Distortion	Less Than 5%	
Modulation	16K0F3E, 14K0F3E, 14K0F2D, 12K0F2D, 8K50F3E, 7K50F2D	

Measurements made per EN Standards.

Specifications shown are typical. Radios meet applicable regulatory requirements.

Kenwood follows a policy of continuous advancement in development.

For this reasons, specifications may be changed without notice.