

# KENWOOD

Listen to the Future



## TK-2302/3302

Compact VHF/UHF FM Portable Radios

For clear, reliable communications indoors or out, rain or shine, there's no beating Kenwood's compact TK-2302/3302 transceiver. Based on a proven design, but refined and updated with enhanced features, it has the power and performance to satisfy even the toughest job requirements, due in part to the MIL-STD 810 & IP54/55 weather-proofing. A model of ergonomic excellence on the outside, inside it's packed with such features as priority scan, built-in VOX and a voice scrambler. No wonder the smart new TK-2302/3302 is attracting such attention.

### COMPACT DESIGN

The rounded ergonomic contours of the TK-2302/3302 naturally provide a superbly comfortable hold, while the non-slip elastomer channel knob with improved torque characteristics and enlarged PTT button ensure a positive tactile response during operation.

### TOUGH & WATERPROOF

Built tough to take rough treatment in its stride, the TK-2302/3302 has passed the demanding IP54/55 dust and water intrusion tests, both with and without the KMC-45 optional speaker microphone. It also meets or exceeds 11 stringent MIL-STD 810 C/D/E/F environmental standards, including "driven rain". So whatever the weather, the TK-2302/3302 is ever ready for action.

### ENHANCED AUDIO QUALITY

Clear audio means confident communications, but power output is not the only factor that determines how easy it is to use a radio in varying noisy environments. As an experienced audio specialist, Kenwood can draw on decades of expertise at every step: component selection, construction, optimization, evaluation and analysis. The resulting audio performance, specially engineered for transceivers, is undeniably clearer and crisper. Just listen to the difference.

### QT/DQT SIGNALLING

The radio's encoder/decoder function uses QT/DQT to segregate talk groups so you only hear calls from your own group.

### 5-TONE SIGNALLING (Encode only)

The 5-tone encoder function can send 5-tone ID to another radio with 5-tone decode.

### PROGRAMMABLE FUNCTION KEYS

The two PF Keys can be programmed for any of the many functions available on the TK-2302/3302, permitting a customized fit for your requirements.

### VOICE ANNUNCIATION

The rotary and key controls on the radio can provide voice confirmation of radio status or operating mode, which is convenient when you are not able to look at the TK-2302/3302 – for example, if it's in your pocket. English is the default language, but you can switch to French, German, Dutch, Italian, Spanish, Russian or Chinese.

### INDEPENDENT SETTINGS PER CHANNEL (VOX, COMPANDER, SCRAMBLER)

Radio channels can be programmed\* independently for VOX, scrambler and compander functions. This means you can switch a function on or off simply by changing channels (on the same frequency).

\*By the dealer

### 16 CHANNELS

The TK-2302/3302 provides ample capacity for operating with multiple channels or radio systems.

### BUILT-IN VOICE-INVERSION SCRAMBLER

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

### VOX READY

Enjoy the convenience of hands-free operation using any optional headset. Offering a 10-level sensitivity adjustment, the internal VOX (voice-operated transmission) function automatically activates PTT when you start talking. This is great for specialized tasks or events that require hands-free, constant or repetitive communications.

### OTHER FEATURES

- Read/Write Password Protection
- Wide/Narrow per Channel
- Companded Audio per Channel
- Talk Around
- B.C.L. (Busy Channel Lockout)
- Key Lock
- 3-colour LEDs (red, orange, green)
- Scan Del/Add
- KENWOOD ESN (Electronic Serial Number)
- Adjustable Microphone Gain (by FPU): High or Normal
- Microsoft Windows® PC Programming & Tuning



## Options

### ■ KNB-45L

Li-Ion Battery Pack  
(2,000 mAh)



### ■ KNB-29N

Ni-MH Battery Pack  
(1,500mAh)



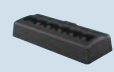
### ■ KSC-31

Rapid Charger  
for KNB-29N



### ■ KSC-316

6 Pocket Multiple Charger  
for KNB-29N



### ■ KSC-35

Rapid Charger  
for KNB-45L



### ■ KSC-356

6 Pocket Multiple Charger  
for KNB-45L



### ■ KRA-22/23

VHF/UHF Low Profile  
Helical Antenna



### ■ KRA-26/27

VHF/UHF Whip Antenna



### ■ KMC-45

Speaker Microphone



### ■ KMC-21

Compact Speaker  
Microphone



### ■ EMC-7

Clip Microphone  
with Earphone



### ■ KEP-2

Earphone Kit



### ■ KHS-1

Headset with VOX/PTT



### ■ KHS-7

Single Muff Headset



### ■ KHS-8BL

2-wire Palm Microphone



### ■ KHS-9BL

3-wire Lapel Microphone  
with Earphone



### ■ KHS-10-OH

Heavy-duty Noise Reduction  
Headset



### ■ KHS-21

Headset



### ■ KHS-22

Headset



### ■ KHS-29F

Headset



### ■ KWR-1

Water Resistant Bag



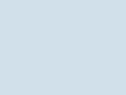
### ■ KBH-10

Belt Clip



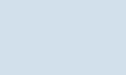
### ■ KLH-120

Soft Leather Case



### ■ KLH-131

Nylon Case



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

	TK-2302	TK-3302
<b>GENERAL</b>		
Frequency Range		
Type 1	136 - 174 MHz	440 - 470 MHz
Type 3	—	400 - 430 MHz
Number of Channels	Max.16	
Channel Spacing		
Wide / Wide 4K* / Narrow	25 kHz / 20 kHz / 12.5 kHz	
Battery Voltage	7.5 V DC $\pm 20\%$	
Battery Life (5-5-90 duty cycle, during hi-power battery saver: OFF/ON)		
with KNB-45L (2,000 mAh)	Approx. 12 hours / 18 hours	
with KNB-29N (1,500 mAh)	Approx. 10 hours / 14 hours	
Operating Temperature Range	-30°C ~ +60°C	
Frequency Stability	$\pm 2.5$ ppm (-30°C ~ +60°C)	
Antenna Impedance	50 $\Omega$	
Dimensions (W x H x D), Projections not Included		
with KNB-45L / 29N	54 x 122 x 33.8 mm	
Weight (net)		
Radio only	160 g	
with KNB-45L	280 g	
with KNB-29N	360 g	

\* Wide 4K: Type 1 only

	TK-2302	TK-3302
<b>RECEIVER</b>		
Sensitivity		
EIA 12 dB SINAD	0.28 $\mu$ V / 0.28 $\mu$ V / 0.35 $\mu$ V	
EN 20 dB SINAD	-3 dB $\mu$ V (0.35 $\mu$ V) / -3 dB $\mu$ V (0.35 $\mu$ V) / -2 dB $\mu$ V (0.40 $\mu$ V)	
Wide / Wide 4K* / Narrow		
Adjacent Channel Selectivity		
Wide / Wide 4K* / Narrow	70 dB / 70 dB / 62 dB	
Intermodulation	65 dB	65 dB
Spurious Response Rejection	70 dB	70 dB
Audio Output	500 mW / 8 $\Omega$	
Measurement	EN Standards	
<b>TRANSMITTER</b>		
RF Power Output (High/Low)	5 W / 1 W	4 W / 1 W
Modulation Limiting*		
	$\pm 5.0$ kHz at 25 kHz	$\pm 5.0$ kHz at 25 kHz
	$\pm 4.0$ kHz at 20 kHz (Type 1 only)	$\pm 4.0$ kHz at 20 kHz (Type 1 only)
	$\pm 2.5$ kHz at 12.5 kHz	$\pm 2.5$ kHz at 12.5 kHz
Spurious Emission	-36 dBm $\leq$ 1GHz, -30 dBm $>$ 1GHz	-36 dBm $\leq$ 1GHz, -30 dBm $>$ 1GHz
Modulation		
Wide / Wide 4K* / Narrow	16K0F3E / 14K0F3E / 11K0F3E	
FM Noise (EIA)		
Wide / Wide 4K* / Narrow	45 dB / 43 dB / 40 dB	
Modulation Distortion	Less than 5 %	
Microphone Impedance	2 k $\Omega$	
Measurement	EN Standards	

Kenwood follows a policy of continuous advancement in development.  
For this reason specifications may be changed without notice.

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## 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
<b>International Protection Standard</b>				
Dust & Water Protection*	IP54/55			

\*To meet IP54/55, the 2-pin connector cover has to be connected on the radio; the locking bracket has to be attached to the KMC-45 external speaker microphone.

## Listen to the Future

Kenwood has always connected with people through sound. Now we want to expand the world of sound in ways that only Kenwood can, listening to our customers and to the pulse of the coming age as we head toward a future of shared discovery, inspiration and enjoyment.

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