

# KENWOOD

Listen to the Future



## Repeaters & Base Stations

CONVENTIONAL VHF & UHF

Kenwood VHF & UHF Repeaters and Base Stations are design for the demanding requirements of public safety, utility or heavy industrial applications where continuous duty operation is required.



- **Continuous Duty Cycle**
- **Forced Air Cooling**
- **QT/DQT Controller Built-in**
- **Options Include:**
  - Tone or DC remote control**
  - Battery backup**
- **Available in several mounting configurations including racks, 42" or 77" cabinets**
- **Full line of duplexers/combiners also available**

# Specifications

	TKR-7400S	TKR-7500S	TKR-8400S	TKR-8500S
<b>GENERAL</b>				
<b>VHF/UHF CONVENTIONAL REPEATERS &amp; BASE STATIONS</b>				
Frequency Range:				
K1	146 - 162 MHz	146 - 174 MHz	450 - 480 MHz	450 - 480 MHz
K2	158 - 174 MHz	136 - 150 MHz	480 - 512 MHz	480 - 512 MHz
K3	136 - 150 MHz	n/a	400 - 430 MHz	n/a
Base Station (Simplex):				
Number of Channels, Local*	32	16	32	16
Number of Channels, Tone Remote*	7	7	7	7
Number of Channels, DC Remote*	2	2	2	2
Repeater (Duplex):				
Number of Channels (typical)	1			
Channel Spacing:				
Wideband	30, 25 kHz	30, 25 kHz	25 kHz	25 kHz
Narrowband	15, 12.5 kHz	15, 12.5 kHz	12.5 kHz	12.5 kHz
PLL Channel Step	2.5, 5, 6.25 kHz	2.5, 5, 6.25, 7.5 kHz	5, 6.25 kHz	5, 6.25 kHz
Operating Voltage	115 / 230 VAC, 47-63 Hz			
Backup DC Voltage	13.4 VDC			
DC current requirement, standby	< 2.5 A*			
DC current requirement, transmit	<20 A at 110W	<25 A at 110W	<20 A at 100W	<25 A at 100W
Operating Temperature	-22 to +140F / -30 to +60C			
Frequency Stability	+/- 0.00015%	+/- 0.0002%	+/- 0.00015%	+/- 0.0002%
Antenna Impedance	50Ω			
FCC ID:				
K1	ALH30633110	ALH31103110	ALH30643110	ALH31113110
K2	ALH30633120	ALH31103120	ALH30643120	ALH31113120
K3	ALH30633130	n/a	ALH30643120	n/a
FCC Compliance:				
K1	FCC parts 22, 74, 90	FCC parts 22, 74, 90	FCC parts 22, 74, 90, 95	FCC parts 22, 74, 90, 95
K2	FCC parts 22, 74, 90	FCC parts 90, 90.210	FCC part 90	FCC parts 90, 90.210
K3	FCC parts 22, 74, 90	n/a	FCC part 90	n/a
IC Certification:				
K1	282195598A	282195726A	282195600A	282195725A
K2	282195598A	282195742A	n/a	n/a
K3	282195598A	n/a	282195600A	n/a
<b>RECEIVER</b>	<b>TKR-7400S</b>	<b>TKR-7500S</b>	<b>TKR-8400S</b>	<b>TKR-8500S</b>
Sensitivity:				
12 dB SINAD	0.30 μV	0.35 μV	0.30 μV	0.35 μV
20 dB Quieting	0.40 μV	0.45 μV	0.40 μV	0.45 μV
Selectivity				
Wideband (+/- 30 kHz)	95 dB	85 dB	n/a	n/a
Wideband (+/- 25 kHz)	n/a	n/a	90 dB	83 dB
Narrowband (+/- 15 kHz)	89 dB	80 dB	n/a	n/a
Narrowband (+/- 12.5 kHz)	87 dB	77 dB	80 dB	75 dB
Intermodulation Distortion				
Wideband (+/- 30, 60 kHz)	90 dB	80 dB	n/a	n/a
Wideband (+/- 25, 50 kHz)	n/a	n/a	85 dB	78 dB
Narrowband (+/- 15, 30 kHz)	85 dB	75 dB	n/a	n/a
Narrowband (+/- 12.5, 25 kHz)	n/a	n/a	80 dB	75 dB
Spurious & Image Rejection	100 dB	90 dB	100 dB	90 dB
FM Hum & Noise:				
Wideband	60 dB	50 dB	60 dB	50 dB
Narrowband	55 dB	45 dB	55 dB	45 dB
Audio Output, local speaker	4 W at < 2% distortion	4 W at < 5% distortion	4 W at < 2% distortion	4 W at < 5% distortion
Band Spread:				
K1	3 MHz	3 MHz	5 MHz	5 MHz
K2	3 MHz	3 MHz	5 MHz	5 MHz
K3	3 MHz	n/a	5 MHz	n/a
Measurement Compliance	EIA / TIA-204D	TIA / EIA-603	EIA / TIA-204D	TIA / EIA-603
<b>TRANSMITTER</b>	<b>TKR-7400S</b>	<b>TKR-7500S</b>	<b>TKR-8400S</b>	<b>TKR-8500S</b>
RF Power Output, no external amplifier	0.1 W to 5 W	15 W to 50 W	0.1 W to 5 W	15 W to 40 W
Duty Cycle, no external amplifier	100%	100% at 25 W	100%	100% at 25 W
RF Power Output with external amplifier*	40 W to 300 W*	40 W to 300 W*	40 W to 250 W*	40 W to 250 W*
Duty Cycle with external amplifier	100%			
Emission Designator:				
Wideband Voice	16K0F3E	16K0F3E	16K0F3E	16K0F3E
Wideband Data (POCSAG)	16K0F1D	n/a	16K0F1D	n/a
Narrowband Voice	11K0F3E	11K0F3E	11K0F3E	11K0F3E
Narrowband Data (POCSAG)	11K0F1D	n/a	11K0F1D	n/a
Spurious Response	70 dB	80 dB	70 dB	80 dB
FM Hum and Noise:				
Wideband	55 dB	50 dB	55 dB	50 dB
Narrowband	50 dB	45 dB	50 dB	45 dB
Local Microphone Impedance	600Ω			
Audio Distortion	< 0.5% at 1000 Hz	< 3% at 1000 Hz	< 0.5% at 1000 Hz	< 3% at 1000 Hz
Band Spread:				
K1	38 MHz	28 MHz	30 MHz	30 MHz
K2	38 MHz	14 MHz	32 MHz	32 MHz
K3	38 MHz	n/a	30 MHz	n/a
Measurement Compliance	EIA-152C	TIA / EIA-603	EIA-152C	TIA / EIA-603

\*Depends on configuration and equipment options.

Kenwood USA Corp. is committed to a policy of constant improvement in features, quality and performance. To accommodate these improvements, all technical information and specifications are subject to change without notice. Custom options and configurations are available, if needed. For more information, call 1-800-TRUNKING.

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