

# KG 510 series

## VHF/UHF Base and Repeater Station



### Traditional Excellence

KYODO has been building Land Mobile Radios for 60 years. During that time, our products have earned a worldwide reputation for reliability and performance. Our traditional commitment to advancing technology, innovative design and the latest Surface Mount Techniques provides the highest level of quality and ultimate versatility. The KG510 has evolved from these traditions and offers features that customers can use well into the future. The KG510 will work for you, day-in-day-out for years and years.

### TRADITIONAL KYODO EXCELLENCE FEATURES

1. Simple or two frequency duplex operation
2. EEPROM programmable with a PC computer
3. Single channel and 99 channel versions available
4. Full dot matrix liquid crystal display
5. All FM frequency bands from 30 to 520 MHz
6. Front facing speaker
7. Transmit time limiter to prevent channel jamming
8. TX and RX encryption
9. Two channel scanning models
10. 5 tone encoder & decoder plus DTMF encoder & decoder
11. 22, 26, or 35 MHz switching bandwidth (model dependant)
12. Up to 99 channels with channel labels
13. Two-stage front end allows mixed simple and duplex operation
14. Channel selectable wide or narrow channel spacing
15. CTCSS/DCS on a per channel basis
16. 5 X 4 Keypad for channel change etc
17. 2RU equipment cabinet
18. Step-up VCO voltage for superior selectivity
19. Low stand-by current is ideal for solar installations
20. Watch dog timer

## SPECIFICATIONS KG510 BASE STATION / REPEATER

GENERAL					
Frequency Range	30 MHz Band	80 MHz Band	VHF Band	200 MHz Band	UHF Band
KG510-xxx 50K	Designated 03	Designated 08	Designated 15	Designated 20	Designated 40
Band Splits	A: 29.5 - 35 MHz B: 35 - 42 MHz C: 42 - 50 MHz* * Special Order	A: 66 - 78 MHz B: 74 - 88 MHz	A: 136-156 MHz B: 150-174 MHz	A: 176-204MHz B: 200-230 MHz C: 225-255 MHz D: 250-280 MHz	SA:300-335 MHz A: 335-370 MHz B: 365-400 MHz C: 400-435 MHz DS:420-455 MHz D:440-475 MHz E:465-500 MHz F:485-520 MHz
Number of Channels	99 channels with channel name				
Channel Spacing	12.5, 20, 25, 30 kHz programmable by channel				
Mode of Operation	Simplex, Semi duplex, Full Duplex, Repeater				
Antenna Impedance	50 Ohms unbalanced				
Power Supply	13.6 V DC negative ground, regulated, 10A				
Environmental Conditions	TX: 4 A @ 10 W, 6 A @ 25 W, 9 @ 50 W, RX: 340 mA standby, 370mA receive-mid volume, 525 mA receive-max volume				
Dimensions	462 mm (18.2") wide, 88 mm (3.47") high, 360 mm 14.2") deep				
Weight	11 kg (24.2 lb)				
Construction	Die cast aluminum chassis and control panel, stamped aluminum bottom cover				
Color	Panel, light gray, Chassis dark gray				
Front Panel	Volume, squelch, keypad, ext. spkr./headphone jack, On/Off switch, speaker high and low power adjust, channel select, scan, monitor, shift.				
Display, full dot matrix	Operation mode, alarm, busy, channel number, channel frequencies and tones.				
Diagnostics	Receive signal strength, transmit power output, alarms for SWR, low PA power, PLL unlock EROM data error				
TRANSMITTER					
RF Power Output	High power 50 W, low power 25 W High/Low Power is programmable by channel and selectable at front panel Low power level is adjustable down to 1W.				
Max. Frequency Deviation	Wide band: +/- 5 kHz, Narrow band, +/- 2.5 kHz				
Frequency Stability	+0.0002%				
Frequency Response	Within +1, -3dB of 6 dB/octave pre-emphasis from 300 to 3000 Hz, 1 kHz ref.				
Signal to Noise Ratio	Wide band: more than 50dB at 1 kHz 70% modulation Narrow band: more than 45 dB at 1 kHz 70% modulation				
Modulation Distortion	Less than 3% at 1kHz 70% modulation				
Spurious and Harmonics	.25 μW or less				
RECEIVER					
Intermediate Frequency	1 <sup>st</sup> IF: 21.6, 30 MHz band, 48.5 MHz other bands 2 <sup>nd</sup> IF: 455 kHz				
Frequency Stability	+0.0002%				
Sensitivity	Less than 0.4 μV for 20 dB quieting, Less than 0.3μV for 12 dB SINAD				
Squelch Sensitivity	Less than 0.25 μV				
Selectivity	More than 70 dB at 25 kHz point				
Blocking	More than 90 dB				
Intermodulation	More than 70 dB				
Spurious Response	More than 70 dB				
AF Response	Within +1, -3 dB of 6 dB/octave de-emphasis from .3 to 3 kHz, 1 kHz Ref.				
AF Output	Internal speaker: 3 W @ < 5% distortion into 8 Ohms, 1 kHz External Speaker: 5 W @ <5% distortion into 4 Ohms, 1 kHz				
Signal to Noise Ratio	Wide band, 25 kHz: more than 50 dB at 1 kHz 70% modulation Narrow band, 12.5 kHz: more than 45 dB at 1kHz 70% modulation				

NOTICE: Due to constant technological developments and changes, specifications may vary without notice. Options and specifications may vary slightly in different countries to suit local requirements. Some bands may not be available in the U.S. pending FCC approvals.

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