KENWOOD

UHF FM Repeater

TKR-830

Kenwood's new TKR-830 UHF repeater raises the performance and reliability bar again — combining low-profile design with rugged construction, computer-based configuration, and a 100% duty cycle.

DIE-CAST CHASSIS

The die-cast aluminum chassis with integrated heat sink is the key to the TKR-830's durability, service level and light weight. The entire unit is sealed to provide long-term protection even in the most abusive environmental conditions.

32 PRESET CHANNELS

There are no crystalling or complicated programming chores with the TKR-830. The 32 channels are built-in and preset, selectable from a remote control utilizing the D-SUB25 interface or internal DIP switch.

FLASH MEMORY ADVANTAGE

There is both a main and a reserve flash ROM memory cache to accommodate future upgrades and enhancements.

2-DIGIT NUMERIC LED DISPLAY

The 2-digit numeric LED on the front panel displays channel number and operational status information, such as an "unlocked" error.

LED INDICATORS

The LED indicator lights provide clear system status information at a glance, including transmit, receive, external standard input and power. If the transmitter or receiver becomes unlocked, the LEDs flash for quick problem assessment.

WIDE/NARROW CHANNEL BANDWIDTH

The TKR-830 can handle both existing wide band systems and emerging narrow band applications for flexibility and long-term viability. The bottom line is your investment is maximized over time.

PC PROGRAMMING AND TUNING

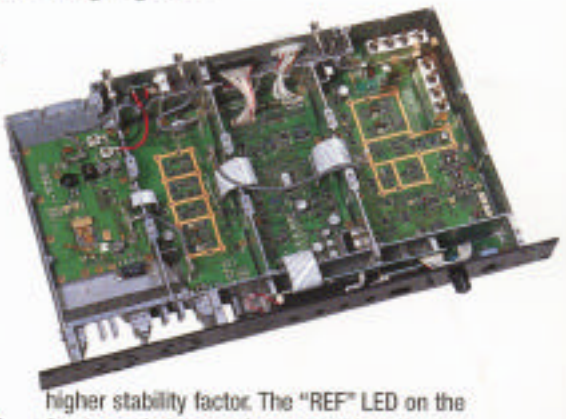
The repeater can be programmed quickly and efficiently, without ever opening the case, with the PC connector, KPG-47D software, the KPG-36 cable and any PC-compatible computer. Following are the radio parameters available for programming:

• Squelch (Analog/RSSI) • Signaling balance • Maximum deviation • Signaling deviation (TD) • RF output • RX audio signal output (RA) • RX detector signal output (RD) • TX audio input (TA)

Rear panel

EXTERNAL REFERENCE INPUT

The internal oscillator already provides an excellent ±1.5ppm stability figure, but for more demanding applications you can add the external oscillator standard to obtain a much higher stability factor. The "REF" LED on the front panel changes from green to red when the external signal is applied.



LOCAL SPEAKER & MICROPHONE/TEST SWITCH

The built-in front panel speaker provides excellent audio and can be volume-controlled or switched off for maintenance operations. The TEST switch allows you to activate the transmitter without a microphone, or you may use the supplied mic for transmitting audio.

LOGIC INTERFACE

The D-SUB25 connector provides a logic interface for external controllers to enable customization and integration with other features and capabilities. There is also an I/O connector for testing purposes.

Specifications

	TKR-830
GENERAL	
Frequency Range	Type 1: 450 – 480 MHz
Number of Channels	1 full-duplex channel (32 channels preset)
Channel Spacing Wide/narrow	 25 kHz/12.5 kHz (PLL step 5 kHz/6.25 kHz)
Operating Voltage	13.8 V DC ±15%
Current Drain Standby Receive Transmit & receive	 Less than 1 A Less than 1.5 A Less than 3 A
Duty Cycle	TX: 100%, RX: 100%
Frequency Stability	±0.00015% (-22° F – +140° F)
Operating Temperature Range	-22° F ~ +140° F (-30° C ~ +60° C)
Dimensions (W x H x D)	19 x 1-3/4 x 12 in. (483 x 44 x 305 mm)
Weight (net)	8.8 lbs. (4 kg)
FCC ID	Type 1: ALH24673110
FCC Compliance	FCC parts 22, 74, 90 and 95
IC Certification	282 195 427A

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

This device has not been approved by the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased until the approval of the FCC has been obtained.

	TKR-830
RECEIVER *(Measurements made per EIA/TIA-204-D)*	
Antenna Impedance	50 Ω
Sensitivity 12 dB SINAD 20 dB Quieting	 0.3 µV 0.4 µV
Selectivity Wide/narrow	 90/82 dB
Intermodulation Wide/narrow	 85/80 dB
FM Hum & Noise Wide/narrow	 60/55 dB
Audio Distortion (Ext. Speaker)	Less than 2% at 1000 Hz
Spurious & Image Rejection	100 dB
Audio Output (Ext. Speaker)	4 W at 4 Ω, less than 5% distortion
Band Spread	Type 1: 5 MHz
TRANSMITTER *(Measurements made per EIA-152-C)*	
RF Power Output	5 watts adjustable to 2 watts
Antenna Impedance	50 Ω
Type of Emission Wide/narrow	 16K0F3E/11K0F3E
Spurious & Response	70 dB
FM Hum & Noise Wide/narrow	 55/50 dB
Audio Distortion	Less than 2% at 1000 Hz
Microphone Impedance	600 Ω
Band Spread	Type 1: 30 MHz

ISO 9001
JQA-1205

Communications Equipment Division
Kenwood Corporation
ISO9001 certification

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