HF QRM NOISE CANCELLER 1-30

Technical Data Sheet

Antenna Noise Canceller & Diversity Combiner

The QNC (QRM Noise Canceller) is an RF device that eliminates or reduces power line noise, computer noise, TV – generated interference, and other types of electrical noise. The QNC unit connects right to the antenna connector of the receiver or transceiver to cancel locally generated noise before it gets into the receiver and affects the receiver AGC circuits. Reception of signals well below the noise level of the local interference is possible.

To cancel locally generated interference, the QNC detects the interfering signal and adjusts its phase and magnitude so that it matches the offending interference at the receiver input, but is 180 degrees out of phase, effectively cancelling the interference.

This scheme is particularly effective at reducing local power noise or other locally generated noise types.

Front panel controls allow adjustment of both the phase and magnitude of the local interference, providing extremely deep cancellation of the offending interference.

The QNC connects between the main station antenna and the receiver antenna connector. A second antenna connects to the QNC to act as a pickup antenna. A short wire antenna or a short collapsible whip is generally satisfactory for eliminating noises generated around the operating position or in the house, but an external antenna usually works better to eliminate noises generated outside the home. Any noise antenna that works, including combination of horizontal and vertical polarized antennas, is satisfactory.

The QNC operates as an active antenna by using the noise antenna and the GAIN control to amplify the antenna output. The unit can also be used as a diversity combiner to peak weak signals or null interfering signals.

Features

- Cancels S-9 line noise
- Nulls strong interfering signals
- Works with any transceiver/receiver
- Makes 2 antennas into phased array
- Wipes out noise before it hits your receiver
- Reduces interference generated by power lines, electric motors, TVs and home electronics
- Works for voice, data & CW
- 150 Watt rating

Specifications for the QNC 1-30

Operating Frequency Range		1 Mhz – 30 Mhz
Signal Loss, Main Ant. To Radio		5 dBm
RF Input Level, Main Antenna		3 Vrms
Maximum Transmit RF Power Through Unit		150 W PEP or Ave
Time to Switch to Bypass When Transmit RF is Detected		7 msec, typical
Time to Return to Receive Mode When RF is not Present		Approx. 500 msec
Noise Cancellation		Up to -100 dBm
Front Panel		POWER Switch, Power LED TX LED, NOISE GAIN Control PHASE 1 & PHASE 2 Control
Rear Panel		Power Input, GND Terminal Noise Antenna Input (SO-239) Main Antenna Input (SO-239) Radio Output (SO-239)
Input Power		13.8VDC to 15VDC Reverse polarity protection
Power consumption	RX Mode TX Mode	52 mA 20 mA
Size		H x W x D (mm) 60 x 150 x 120
Weight		750 grams
Accessories Supplied		1 x 2.5mm DC Power Lead 1.5M 1 x RCA Plug & Cable 1 x User Guide

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