ANC-4

Antenna Noise Canceller & Diversity Combiner

The Perfect Complement to Timewave’s DSP-599zx!

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 powerlines, electric motors, TVs and home electronics up to 40 dB
- Works for voice, data & CW
- 250 Watt rating

The ANC-4 is an rf device that eliminates or reduces power line noise, computer noise, TV-generated interference, and other types of electrical noise. The ANC-4 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 ANC-4 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 line 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 ANC-4 operates as an active antenna by using the noise antenna and the NOISE 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.

Specifications for the ANC-4

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Operating Frequency Range</td>
<td>500 kHz to 80 MHz</td>
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<tr>
<td></td>
<td>(usable down to 100 kHz)</td>
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<tr>
<td>Signal Loss, Main Ant. to Radio</td>
<td>6 dB</td>
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<tr>
<td>RF Input Level, Main Antenna</td>
<td>3 Vrms maximum</td>
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<tr>
<td>Maximum Transmit RF Power Through Unit</td>
<td>250 W PEP or Average</td>
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<tr>
<td>Time to Switch to Bypass When Transmit RF is Detected</td>
<td>7 msec, typical</td>
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<tr>
<td>Time to Return to Receive Mode When RF is Not Present</td>
<td>Approx. 500 msec or 7 msec, typical</td>
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<tr>
<td>Typical Local Noise Types</td>
<td>Power Line Noise, Computer Noise, TV Noise, etc.</td>
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<tr>
<td>Noise Cancellation</td>
<td>Typically 40 dB or greater</td>
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Front Panel
- POWER switch, POWER LED, PHASE RANGE switch, NOISE PHASE control, FREQ RANGE switch, NOISE GAIN Control.

Rear Panel
- Power Input, Noise Antenna Input, Main Antenna Input, Radio Output

Input Power
- +11 VDC to +16 VDC @ 150 mA, reverse polarity protected

Size
- 1.7"H x 6"W x 4.3"D (4.3cm x 15.2cm x 10.9cm)

Weight
- 2 pounds (.91 kg)

Temperature Ranges
- Operating: -20°C to +55°C
- Storage: -40°C to +85°C

Humidity
- Up to 95% @ +55°C