PALOMAR ENGINEERS®
RFI Solutions from KHz to GHz
HF Wire Antennas 160-6M

Coax Common-Mode Noise Filters (CMNF)
What it fixes • Where to place • Which model • 60-second test

Why you need it

Common-mode current rides on the **outside** of the coax braid and drags noise into your radio—especially with antenna switches that leave braids tied together. A CMNF adds high choking impedance on the braid, typically cutting noise by **~25–36 dB (≈4–6 S-units)** while passing desired signals normally. *One filter per feed line* is recommended for multi-antenna stations.

Where to place it

- **At the radio/entry**, before any switch/splitter/amp. One per feed line.
- High-power: station entry or amp output. Tough low bands: consider **two in series** (entry + radio).
- Balanced/ladder-line: use **MB-1-500-50** at the transition; optionally add a CMNF at the radio.

60-second "Do I have it?" test

1. Unplug coax; note baseline noise.
2. Touch **center pin only** to the radio jack; note noise.
3. Touch **shell only**. If noise jumps, your braid is noisy → install a CMNF.

Transmit note: A good feed-point choke (e.g., MC-1-3000 or MC-1-500) keeps the coax from becoming part of the antenna on TX; the CMNF handles the station end.

Pick your model

Use	Model	Range (MHz)	Impedance	PEP
HF station (general)	CMNF-500-50	1.8–65	50 Ω	500 W
HF with amplifier	CMNF-1500HF / 5000HF	1.8–65	50 Ω	1.5 kW / 5 kW
Low-band focus (160/80	CMNF-1500LF /	0.2–7	50 Ω	1.5 kW / 5

m)	5000LF			kW
TV/CATV/modem	CMNF-500-75	~1.8–65	75 Ω	—
VHF / UHF	CMNF-500-50VHF / -50UHF	70–170 / 225–500	50 Ω	500 W
Balanced feed	MB-1-500-50 (1:1)	1–61	50 Ω → balanced	500 W

Duty cycle

Ratings are SSB PEP. For continuous digital/CW (FT8/RTTY) reduce average power or select the next higher model. If any enclosure becomes hot, reduce duty or power.