

In his "In Practice" articles, Ian White (GM3SEK) strongly recommends using **Fair-Rite 31-mix ferrite material** (specifically the large snap-on part number **0431177081**) as a "Problem Solver" for RFI (Radio Frequency Interference) and common-mode chokes, particularly on the lower HF bands (1.8–30 MHz).

Key Details About GM3SEK's Type 31 Usage:

- **The "Problem Solver" Snap-On:** The core often featured in his articles is the large **Fair-Rite 31-mix snap-on ferrite (Part No. 0431177081)**. It is frequently used for mains power filtering.
- **Application:** It is used to create a high-impedance choke, preventing mains cabling from acting as an antenna for noise (QRM).
- **Method:** For maximum effectiveness, the outer insulation of the mains cable is removed, and the three wires are wound 5-7 turns around this large clamp-on core.
- **Performance:** Type 31 is preferred for its high resistive (lossy) impedance, which is better suited for lower frequency RFI (below 10 MHz) compared to Type 43.
- **Alternative Structure:** Besides the clamp-on, 31-mix is also used in toroid form (e.g., **FT240-31**) for coax-based baluns and chokes.

Alternatives Mentioned in GM3SEK's Designs:

- **Type 43 Oval Cores (Part 2643167851):** Often used in conjunction with the Type 31 core in a staged mains filter, with Type 31 handling the lower bands and Type 43 handling the higher bands.

Where to Purchase:

Commonly available through electronic components distributors

like [Mouser](#) or **Farnell/CPC**, often listed under the specific Fair-Rite part numbers.

To help you with your RFI issues, **would you like to know the best way to wind the cables on these ferrites to maximize their effectiveness?**