



Resolving interference for Amateur Radio

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This QRM GURU Go-Kit is an excellent starting point for the equipment needed to find and resolve interference issues. It would be useful to supplement this kit with other items, such as a general coverage portable receiver, an audio recording device and a camera. Many operators already have these items at their disposal.

The kit includes the parts needed to create a simple DF loop antenna. These items have been placed inside a separate bag within the kit. It should only take 10-15 minutes to prepare. The instructions on how to assemble the loop antenna can be found on the qrm.guru website at: <https://qrm.guru/how-to-locate-the-noise-source-building-df-loop/> (Video R002)

Also on the site is a video showing how this antenna can be used. Follow the link <https://qrm.guru/step-two-narrowing-down-the-offending-noise-source/> (Video R004)

The contents of this kit are as follows:

Item	Qty	Application
Carry bag, with shoulder strap	1	Contains contents of the kit
Compass	1	Record direction of noise sources
Notepad & pen	1	General note taking
Pliers	1	Useful field tool
Wire cutters	1	Useful field tool
Additional QRM GURU stickers	10	For general distribution
Capacitors, 0.1 uf 275VAC	5	Mains spike & noise suppression
Capacitors, 0.1 uf 100VDC	5	Low voltage RF bypass filter cap
Capacitors, 4700uf 35V	2	DC power source filter
Clamp-on ferrite, Small	2	power line noise filter
Clamp-on ferrite, Medium	2	power line noise filter
Clamp-on ferrite, Large	2	power line noise filter
Ferrite ring, 30mm, Medium	2	power line noise filter
Ferrite ring, 50mm, Large	2	power line noise filter
Ferrite rod, 10mm dia, 45mm long	2	power line noise filter
Inductor, 470uh, 8 Amp	2	DC power source filter
1 metre of RG213 coax cable	1	DF Loop parts
1 metre BNC to PL259 patch cable	1	DF Loop parts
PL259 plug to suit RG213	2	DF Loop parts
PL259-SO239 Tee-adapter	1	DF Loop parts
60mm of heatshrink section, 15mm dia	1	DF Loop parts

There is no one universal solution to resolving interference issues. The way forward may require a combination of the kit items, or more specialised items not listed here. It is a starting point that will allow an investigation process to proceed.

Where an item is taken from the kit to resolve an issue, it is worthwhile organising a replacement when possible. Most items are available from Jaycar and Altronics component distributors. Where you are successful in resolving a noise problem with this kit. Please let us know by sending an email to feedback@qrm.guru. And share your experience with others.

Complete kit contents are shown below. Included with the kit are blank forms that are useful for recording the nature of an interference event.

- ◆ **Profiling the noise** – This sheet records information that helps to establish patterns and trends related to the interference source.
- ◆ **Power Line Noise** – If the noise source comes from a power line, this form will assist when it comes to launching a formal complaint. More effective than sending an email.
- ◆ **Observation Log sheet for an Amateur station** – This is used by the operator to record interference events. It will become essential evidence where utilities and the ACMA become involved in an interference incident.
- ◆ **Log sheet for recording interference by an Amateur** - Where a neighbour suspects you are interfering. Give them this sheet to record when they experience problems. It may not be you that is causing the problem. Compare it with your own log.

Replacement forms may be downloaded and printed from the QRM GURU website under the section 'Templates and Forms'.

