

## Chapter 6.0 Hamtronics

### Section 6.9 Avoiding Interference

G4A15 (D) p.249

Which of the following can be a symptom of transmitted RF being picked up by an audio cable carrying AFSK data signals between a computer and a transceiver?

- A. The VOX circuit does not un-key the transmitter
- B. The transmitter signal is distorted
- C. Frequent connection timeouts
- D. All of these choices are correct

G4C01 (B) p.249

Which of the following might be useful in reducing RF interference to audio frequency devices?

- A. Bypass inductor
- B. Bypass capacitor
- C. Forward-biased diode
- D. Reverse-biased diode

G4C02 (C) p.250

Which of the following could be a cause of interference covering a wide range of frequencies?

- A. Not using a balun or line isolator to feed balanced antennas
- B. Lack of rectification of the transmitter's signal in power conductors
- C. Arcing at a poor electrical connection
- D. Using a balun to feed an unbalanced antenna

G4C03 (C) p.248

What sound is heard from an audio device or telephone if there is interference from a nearby single sideband phone transmitter?

- A. A steady hum whenever the transmitter is on the air
- B. On-and-off humming or clicking
- C. Distorted speech
- D. Clearly audible speech

G4C04 (A) p.249

What is the effect on an audio device or telephone system if there is interference from a nearby CW transmitter?

- A. On-and-off humming or clicking
- B. A CW signal at a nearly pure audio frequency
- C. A chirpy CW signal
- D. Severely distorted audio

G4C05 (D) p.253

What might be the problem if you receive an RF burn when touching your equipment while transmitting on an HF band, assuming the equipment is connected to a ground rod?

- A. Flat braid rather than round wire has been used for the ground wire
- B. Insulated wire has been used for the ground wire
- C. The ground rod is resonant
- D. The ground wire has high impedance on that frequency

G4C06 (C) p.253

What effect can be caused by a resonant ground connection?

- A. Overheating of ground straps
- B. Corrosion of the ground rod
- C. High RF voltages on the enclosures of station equipment
- D. A ground loop

G4C07 (A) p.252

What is one good way to avoid unwanted effects of stray RF energy in an amateur station?

- A. Connect all equipment grounds together
- B. Install an RF filter in series with the ground wire
- C. Use a ground loop for best conductivity
- D. Install a few ferrite beads on the ground wire where it connects to your station

G4C08 (A) p.249

Which of the following would reduce RF interference caused by common-mode current on an audio cable?

- A. Placing a ferrite choke around the cable
- B. Adding series capacitors to the conductors
- C. Adding shunt inductors to the conductors
- D. Adding an additional insulating jacket to the cable

G4C09 (D) p.251

How can a ground loop be avoided?

- A. Connect all ground conductors in series
- B. Connect the AC neutral conductor to the ground wire
- C. Avoid using lock washers and star washers when making ground connections
- D. Connect all ground conductors to a single point

G4C10 (A) p.251

What could be a symptom of a ground loop somewhere in your station?

- A. You receive reports of "hum" on your station's transmitted signal
- B. The SWR reading for one or more antennas is suddenly very high
- C. An item of station equipment starts to draw excessive amounts of current
- D. You receive reports of harmonic interference from your station

G4E07 (D) p.251

Which of the following may cause interference to be heard in the receiver of an HF radio installed in a recent model vehicle?

- A. The battery charging system
- B. The fuel delivery system
- C. The vehicle control computer
- D. All of these choices are correct