

Cave Radio & Electronics Group

One of the Special Interest Groups of the
British Cave Research Association



Online Seminars for Summer 2026

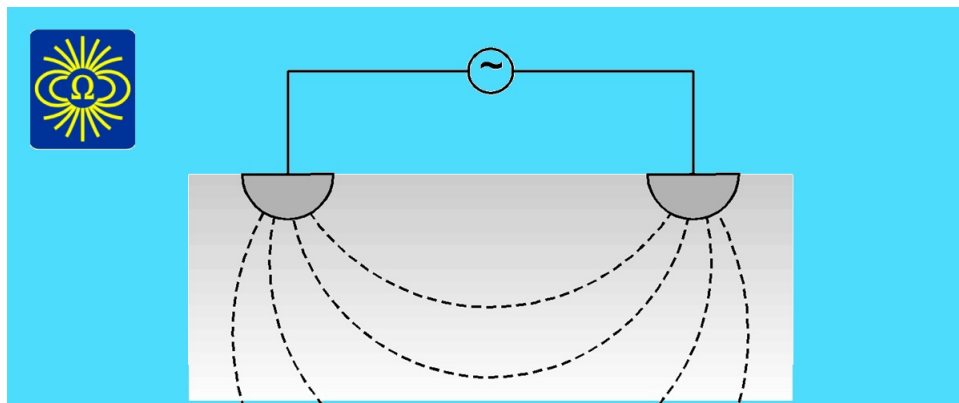
Visit bcra.org.uk/seminars for further information

All talks via the Zoom platform – 2nd Monday of June, July, August at 19:30 BST

Enquiries to d.gibson@bcra.org.uk

How Earth-Current Antennas Really Work

With cave radio equipment, there has been a trend away from the use of induction loop antennas to so-called earth-current antennas, i.e. long wires grounded at both ends. However, the popular explanation for how this antenna works is fallacious. The antenna does not operate by allowing the current to flow in a 'big loop' in the ground and in fact, it does not depend, fundamentally, on current flow in the ground at all. **Monday 18 June @ 19:30 UTC+1**



Current Problems in Cave Radio

Through-rock radio is now well-established, but there are puzzles still to answer. The first part of this talk will discuss the merit of loop v. line antennas, tuned v. untuned antennas, and ferrite v. ceramic antennas. Geophysical surveying, and the anisotropic properties of limestone could benefit from further work, and perhaps make useful student projects. The second part of the talk will describe practical problems of building equipment. For example, why do supposedly waterproof boxes tend to end up with water inside them when left in a cave for a long period?

Monday 13 July @ 19:30 UTC+1

Developments in Cave Radio

Over the last 20 years in amateur ('ham') radio there have been some significant developments that have, so far, had little impact on the design of cave radios. The developments are: WSJT-X digital software; the ability to generate digital signals directly at radio frequencies; and the commercial availability of cheap, efficient radios. This talk will look at barriers to the use of this technology; why we might want to use it; and the results of some experiments.

Monday 10 August @ 19:30 UTC+1

Historical Uses of Through-Rock Radio

Through-rock communication using electrical methods has been around, in one form or another, for 150 years. The earth-return telephone is the obvious example, but several wireless techniques have also been tried over the ages. This talk will give a quick run-down of the work of various pioneers, as reported from time to time in the CREG journal, and will lead into a discussion of future developments.

Change of date. Postponed from 10 August to Monday 14 September @ 19:30 UTC+1

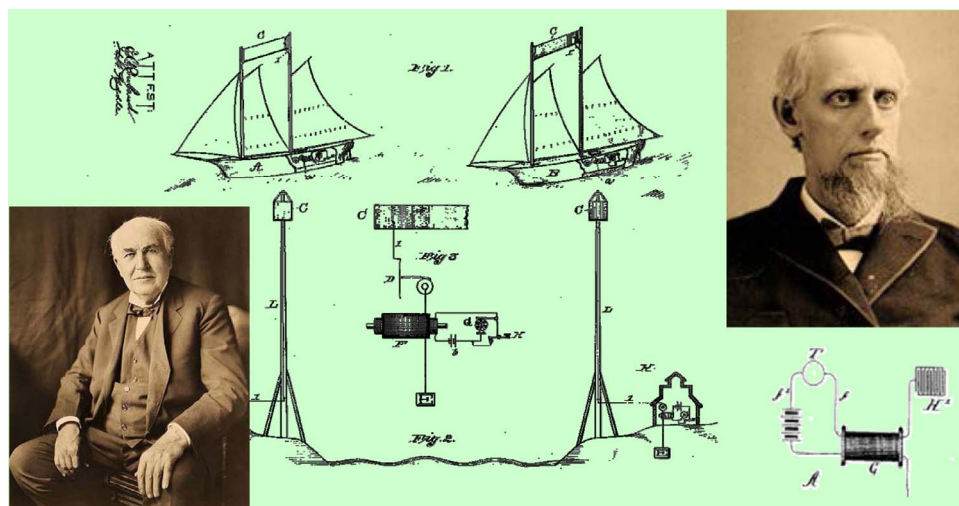


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