

Game: fox hunting

Secret radio transmitters are hidden all over the place: will you be able to find them?

Learning targets: Improve topography and orienteering skills - Learn how to exploit the directionality of antennas to locate a radio emitting object

Description: Fox hunting is a well known structured sport activity among radio amateurs, developed from orienteering. The sport is also known as Amateur Radio Direction Finding (ARDF). While widespread among radio amateurs, this activity does not necessarily require a radio amateur license, since participants only need radio receivers.

In ARDF competitions, several transmitters are hidden in a natural area. Basic or no information is given about the rough position of them. Similarly to an orienteering competition, the participants must find the transmitters and mark their personal badge with a tool available in the same place of the transmitters. The winner is established on the basis of the number of located transmitters and or on the elapsed time. To locate the transmitters, the participants have portable receivers equipped with a directional antenna, that is an antenna that can collect radio signals much better in some directions than in others. The strength of the collected signal is also used to understand the proximity to the transmitter.

Here below are some links about this sport activity. The devices required to participate can be expensive, so an interested Scout/Guide group should ask for support from the nearest radio amateur association.

- <https://www.iaru-r1.org/about-us/committees-and-working-groups/ardf/>
- https://en.wikipedia.org/wiki/Amateur_radio_direction_finding
- <https://www.youtube.com/watch?v=tl4HztSY8Mo>

It's also possible to recreate this game in a smaller area, using cheap programmable devices as transmitters or receivers. The instructions are reported here below:

<https://microbit.org/projects/make-it-code-it/treasure-hunt/>