

The maintenance of DMR and TETRA radio cells, Hytera & Motorola radios as well as the corresponding antenna systems (Procon, Kathrein) and, if necessary, the existing fleet management or dispatcher software is a central part of our offer.



We are very happy to work within the framework of regular maintenance contracts or on call for individual orders.

Maintenance of radio technology (radio cells & radios):

➤ Free of charge rental equipment

Spreenauten GmbH has one of the most extensive rental parks (radios, repeaters, accessories). We normally maintain critical or productive systems. Should this not be possible for technical or operational reasons, we are happy to provide free replacement equipment for the period of maintenance.

➤ Safety

By means of penetration tests we check the access from outside to your radio communication system. Of course, our IT department will also be happy to advise you on network security and encrypted communication via radio.

➤ Spectrum analysis

Here we ensure that the radio cell (repeater, antenna system) operates within the desired parameters and the assigned frequencies. If interferences or radio interruptions are known, we determine in the affected areas whether other transmitters cause interference.

➤ Visual inspection

Our communication technicians carry out a detailed visual inspection as part of the maintenance. During this inspection, the antenna cables are also inspected for wear and damage. The visual inspection is usually carried out by means of a lifting platform, with which the cable routes are driven. Here we also check whether any current-carrying cables have been laid parallel to the data lines of the radio cell.

➤ Measurement

Here we concentrate on the signal transmission between radios and radio cells. The measurement is carried out by our own designed and developed hardware which is based on real scenarios. It is important for us that the values with which the radio cell and the radios operate are consistent. Of course, we also carry out laboratory measurements on request.

➤ DGUV V3 testing of radios & radio cells

The regular DGUV V3 test (formerly BGV A3 test) of your radio technology ensures the electrotechnical reliability of the radio devices and repeaters used. Depending on the application, this is required by law at regular intervals.

➤ **Firmware Updates (Motorola & Hytera)**

As part of repeater maintenance, we also carry out all safety and function-relevant firmware updates for radios and repeaters - and check them for complete functionality on site

➤ **Cleaning**

During the visual inspection we clean the antenna system from possible corrosion and dust or dirt deposits.

Optionally, we also offer regular basic cleaning of your equipment (radios incl. charging contacts, batteries, charging technology, loudspeaker microphones etc.), impregnation and disinfection. This can be done on site or at our Berlin headquarters. During this time we will be happy to provide you with rental equipment (from radios to repeaters) free of charge.

➤ **Codeplug optimization**

With more than 10 years of experience in the field of optimizing code plugs on radios and repeaters (and our own in-house software development), we know exactly what the code plugs need and are happy to optimize standard code plugs for the desired application. The testing of existing codeplugs is a central part of our maintenance service.

➤ **Optimization**

On the basis of the knowledge gained from maintenance, we propose optimization measures and, if desired, implement them directly on site.

The focus here is on the uninterrupted functioning of radio cells and radio equipment and the avoidance of "electromagnetic pollution" and thus the safety and health of your employees*. Radio cells are often operated with too high an output power. From a technical and health point of view, the optimum is always: as much as necessary as little as possible.

➤ **Documentation & heat map**

The professional documentation of your system including an informative heat map for the progress control of the coverage completes the maintenance of radio cells and radios by us.

Put the maintenance of your radio cell in our hands. In addition to many years of experience (not only with the customer but also through our own rental park), we offer an IT-based approach and thus fast support, short SLAs and a 24/7 technical service.

We are happy to advise you free of charge on the subject of "maintenance of radio cells and radio equipment".

You can reach our technology in emergencies around the clock and every day.
For inquiries and advice we are at your disposal Monday to Friday from 09:00 -
18:00.

Contact maintenance:
E-mail: support@spreenauten.de
Telefonisch: +49.(0)30.293.81.97-0