

Name of research institute or organization:

Relaisgemeinschaft HB9F Bern

Title of project:

Operation of a 70 cm amateur beacon transmitter,
operation of a 23 cm voice repeater station,
study of high frequency propagation conditions.

Project leader and team:

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Project description:

The “Relaisgemeinschaft HB9F Bern” has been operating two amateur radio stations at the Sphinx observatory for more than twenty years.

Our 70 cm beacon at 432.984 MHz has been working incessantly since 1980. No maintenance was necessary since.

The 23 cm repeater is operating at Tx 1258.900 MHz and Rx 1293.900 MHz since 1992. During summer we exchanged the hybrid-quad by the collinear omnidirectional antenna which was used before 2001. As part of the total renewal of the HB9F amateur radio station network we also replaced the old repeater by a newly designed type. It consists of a *Motorola MC-Micro 70 cm* transmitter connected to an up-converter to 23 cm. The self-made 23 cm amplifier reaches 20 W prior to the interdigital filter. The latter was built by HB9MHS, using a 4 GHz wave guide with silver-plated brass cavities and two notch filters. Behind the down-converter a *Motorola MC-Micro 2 m* with 25 kHz ZF bandwidth is used as receiver. The power supply consists of a toroid transformer, a cooled rectifier, and two DC/DC converters with 12 V output voltage. A final repeater output of 10 W ERP is reached. To key the repeater a carrier during minimum 2 s is necessary.

Our group homepage <http://www.relais-hb9f.ch>, providing complementary information on technical equipment and activities, was added by a WAP portal <http://wap.relais-hb9f.ch>. The most important information on our amateur radio stations can be retrieved on WAP capable mobile devices.

For the hospitality for over twenty years the “Relaisgemeinschaft HB9F Bern” expresses its thanks to the “Foundation High Altitude Research Stations Jungfrauoch and Gornergrat”.

Key words:

Amateur radio beacon, repeater

Internet data bases:

URL: <http://www.relais-hb9f.ch>

WAP: <http://wap.relais-hb9f.ch>

Collaborating partners/networks:

USKA – Union of Swiss Short Wave Amateurs, Section Bern

Scientific publications and public outreach 2002:

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