R&S®SCx8000 compact transmitter family: now also for VHF and L band

New transmitters for VHF and the L band have been added to the R&S®SCx8000 family of transmitters [1] to cover all broadcast frequency ranges plus the world’s most important TV and digital audio broadcasting standards. Compact dimensions and high efficiency are also the outstanding characteristics of these transmitters, making them the market benchmark.

R&S®SCW8000 / R&S®SCA8000 VHF transmitters
The R&S®SCW8000 and R&S®SCA8000 VHF transmitters for TV and digital audio broadcasting (DAB, DAB+), respectively, are available with output powers of up to 600 W for digital standards and up to 1100 W for analog TV. The transmitters are of ultracompact design. Together with the R&S®SX801 multistandard exciter [2], which also provides transmitter control functionality, they take up no more than four 19” height units. This makes it very easy to install multiple transmitters in a single rack, or accommodate transmitters in unused spaces in crowded racks. The transmitters can also be installed in outdoor racks. Their efficiency of up to 24 % translates into significant cost savings.

R&S®SCQ8000 / R&S®SCL8000 L-band transmitters
For the L band (1452 MHz to 1492 MHz), the R&S®SCQ8000 TV transmitters and the R&S®SCL8000 DAB, DAB+ and T-DMB transmitters are available. They offer an efficiency of up to 22 %, which is unparalleled in this frequency range. Powers of up to 300 W for TV and up to 400 W for digital audio broadcasting can be implemented, as in the case of the VHF and UHF transmitters, together with the R&S®SX801 multistandard exciter and one amplifier in just four 19” height units.

Four amplifiers (photo) are required to implement output powers of up to 1200 W for TV and 1500 W for DAB. The amplifiers are coupled together by means of a unit integrated into the rack. In addition to the power coupler, this unit also contains an input signal splitter, a harmonics filter, power absorbers and lightning protection. The transmitter is controlled by the R&S®NetCCU800, which can also be used to control a dual-drive transmitter. Taking up only 20 height units, the four-amplifier transmitter configuration is also the most compact in this class.

Christian Wachter


The R&S®SCx8000 L-band transmitter, configured as an R&S®SCL8304V dual-drive transmitter, installed in a 19” rack with 20 height units. This configuration provides maximum output power of 1200 W for DTV and 1500 W for DAB, DAB+ and T-DMB. The transmitter includes two R&S®SX801 multistandard exciters, an R&S®NetCCU800 transmitter control unit, four R&S®VL8301C1 amplifiers and an R&S®ZR8002Z10 mains distribution.