



FIG 1 The Control Unit R&S NetCCU® 800 can be used both in the TV and FM transmitters of the R&S®Nx8000 family.

The Control Unit R&S NetCCU® 800
is the distributing center and user
interface for the new successful
R&S®Nx8000 transmitter platform.

Control Unit R&S NetCCU® 800

Common control unit for FM and TV transmitters

Switching center for two transmitter families

The Control Unit R&S NetCCU® 800 (FIG 1) is included as a common distributing center both in the new generation of R&S®NH/NV8200 TV transmitters [1] and in the new family of VHF FM Transmitters R&S®NR8200 [2]. For network operators, this has the advantage of low operation and training costs as well as simplified logistics with regard to stock-keeping of spare parts. For the first time, the control concept and user interfaces in TV and FM transmitters are uniform. This also simplifies their integration into network management systems and facilitates the setup and putting them into operation, plus reduces maintenance and service costs.

Innovative control concept

A transmitter system mainly consists of an exciter, amplifier, cooling system and transmitter control unit. Depending on the output power or redundancy concept, these components are present in multiples. The central control unit's (CCU) task is to display the system parameters, to monitor them and to perform redundancy switching in the event of an error. To maximize the performance, the R&S NetCCU® 800 is connected with the exciters via Ethernet and with the amplifiers via a CAN bus (FIG 2).

Remote control and local operation

The color display (1/4 VGA) and the keys on the front panel are used for local operation of the transmitters. The

More information at
www.rohde-schwarz.com
 (search term: NetCCU800)

REFERENCES

- [1] UHF TV Transmitters R&S®NH/NV8200: Air-cooled transmitters for the medium-power segment. News from Rohde & Schwarz (2005) No. 185, pp 40–42
- [2] Family of VHF FM Transmitters R&S®NR8200: Compact, air-cooled transmitters for 2.5 kW to 30 kW. News from Rohde & Schwarz (2005) No. 186, pp 44–45
- [3] Transmitter Control Unit R&S NetCCU® 700: All-purpose instrument with integrated DVB-T receiver module. News from Rohde & Schwarz (2005) No. 185, pp 34–37

straightforward menus provide access to all parameters of the transmitter system. You can call up setting ranges and a brief description for each parameter; this especially facilitates the system's occasional on-site use (FIG 3).

Since the R&S NetCCU® 800 uses Java software and the XML description language, the menus can easily be adapted to customer-specific requirements (e.g. other languages).

In addition to the increasingly important remote control of unattended stations, network management systems of the network operator can be directly connected with the control unit and communicate with its integrated SNMP agent. The agent automatically informs the control center about errors on the transmitter station via SNMP trap. The CCU is also equipped with a web server, providing the maintenance personnel, which is often at different sites, access to all parameters of the transmitter system when and where needed (FIG 4). Structure and content of the menus are identical to the local operation of the transmitter via display.

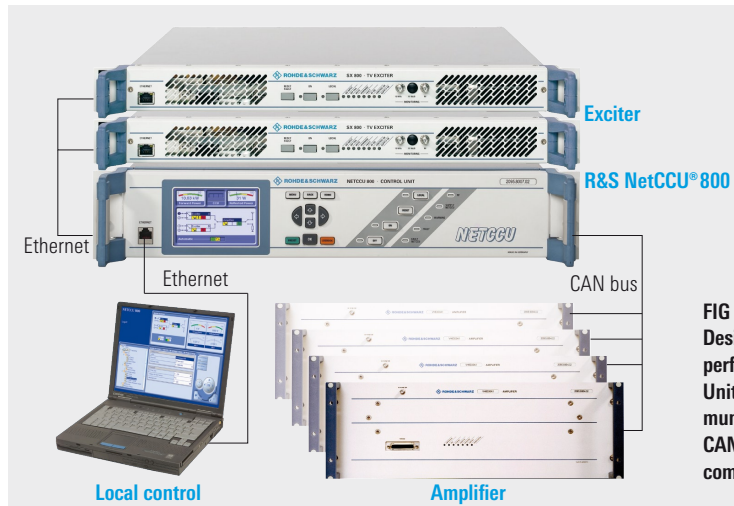


FIG 2
Designed to achieve high performance: The Control Unit R&S NetCCU® 800 communicates via Ethernet or a CAN bus with the transmitter components.

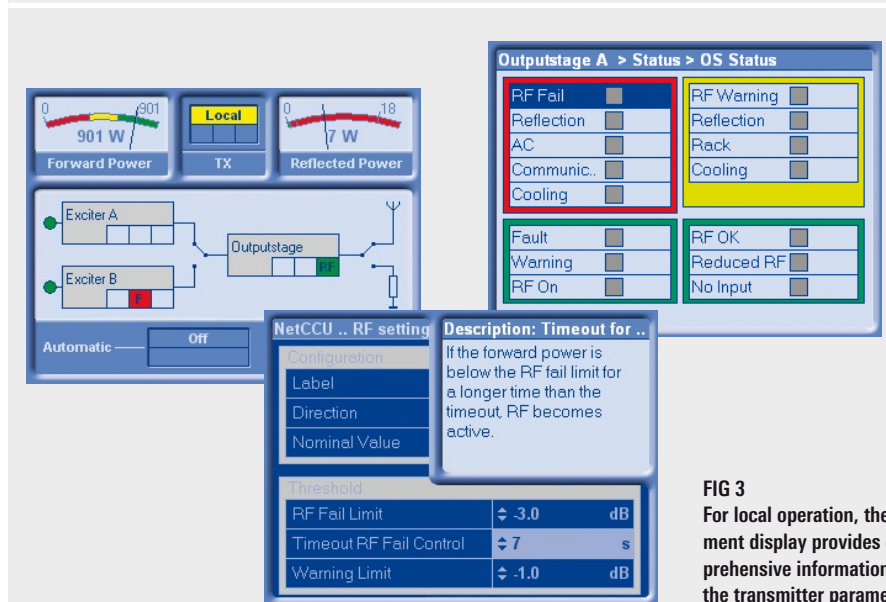


FIG 3
For local operation, the instrument display provides comprehensive information about the transmitter parameters.

DVB-T receiver module option

As with the predecessor model of the control unit, the DVB-T receiver module option [3] is available for monitoring the output signal of a DVB-T transmitter. This allows monitoring of important parameters such as MER, BER, S/N, input level and modulation mode and call them up via the user interfaces (local, SNMP and web). In the retransmitter application, this option is used to cost-efficiently feed the modulation signal when receiving the RF of a master transmitter.

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FIG 4 Convenient remote control via a web browser.

