

R&S®CMA 180 radio test set: greater versatility with new add-ons

Just over a year on the market, the R&S®CMA 180 now comes with a range of new features and add-ons giving this radio test set even greater versatility.

Fig. 1: A large, user-friendly touchscreen combined with sophisticated test and measurement features make the R&S®CMA 180 radio test set a compact general-purpose instrument for maintenance and repair of professional radios.



Numerous professional users of classic analog and noncellular digital radio are using the R&S®CMA180 radio test set (Fig. 1), which was released one year* ago, for repair and maintenance of their radios. They appreciate this complete and versatile test set because it can perform all relevant measurements without additional tools.

As the number of users increased, there was a strong demand for additional features. Rohde&Schwarz developed numerous add-ons that are now available to ensure even greater versatility. Active or passive IF components can now be measured and the adjacent channel power (ACP) tested. For field use far away from any power supply, batteries are now available for interruption-free measurements, and a transit case protects the instrument against damage. The following provides an overview.

Tracking generator

Measuring a filter in the full frequency range of the R&S®CMA180 from 0.1 MHz to 3000 MHz? Nothing could be easier – with the tracking generator. Coupled with the sweeping spectrum analyzer and connected to the RFCOM – RFIN or RFOUT – RFIN / RFCOM female connectors (depending on the desired level range), the R&S®CMA180 can now passively or actively test RF / IF components.

ACP / harmonics measurement

Radios must not under any circumstances interfere with the radio traffic in adjacent bands. The ACP measurement determines the power a transmitter emits into adjacent channels and helps to minimize this interference. The channel and the measurement bandwidth settings can be set as needed (Fig. 2). Results are represented in graphical and tabular form. Even the occupied bandwidth can be measured selectively by allowing the test set to determine the bandwidth occupied by a specified percentage of the transmit power.

GPS, Glonass and Galileo receiver testing

With the R&S®CMA-KV140 option, users can test GPS receivers integrated into the radio. For this purpose, the ARB generator in the R&S®CMA180 simulates specific positions in large cities with a signal mix from ten satellites. A properly functioning GPS receiver in the radio will display the number of satellites, signal strength and GPS coordinates of the selected position in the city. The R&S®CMA-KW620, -KW21 and -KW22 options simulate the signals of individual GPS, Glonass and Galileo satellites specially for production testing.

NATO approval for the R&S®CMA180
For servicing all radios that are used in NATO, the R&S®CMA180 radio test set received the required NATO stock number (NSN: 6625-12-397-3866). This gives it approval for all NATO military forces.

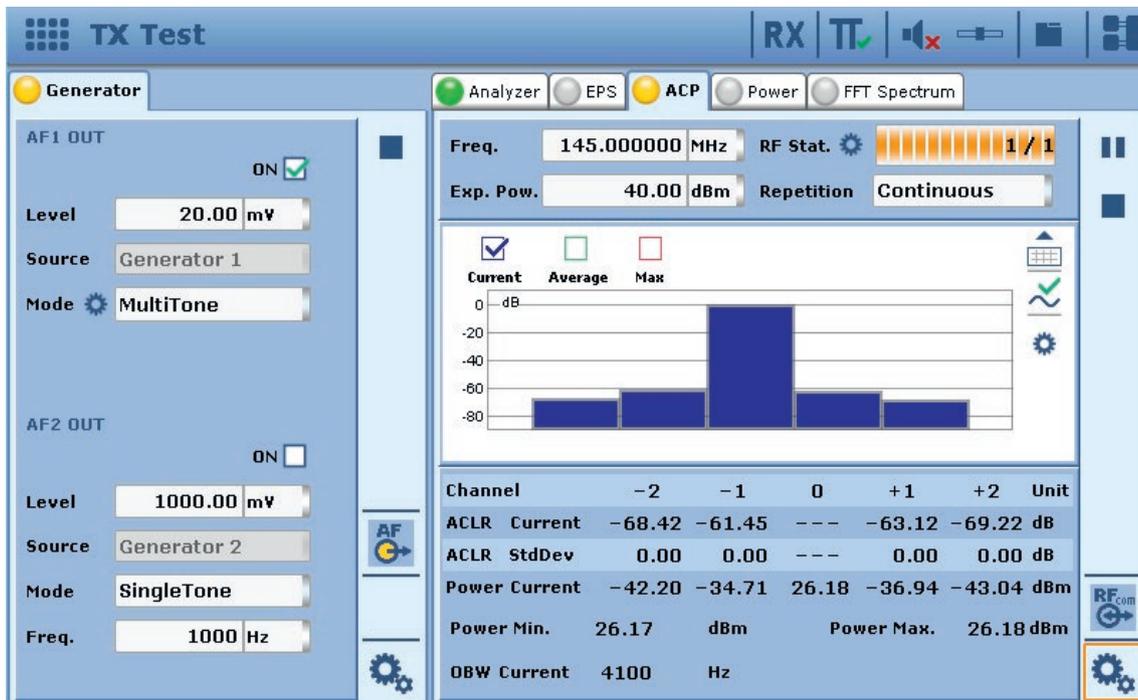


Fig. 2: Measuring the adjacent channel power. Channel and measurement bandwidth settings can be adjusted as needed.

Fig. 3: The R&S®CMA-Z600A AF impedance matching unit is a valuable add-on for audio functions.



AF impedance matching

The R&S®CMA-Z600A AF impedance matching unit enhances the versatile audio functions of the R&S®CMA180. It provides various input and output impedances between high/low impedance and 600 Ω, balanced/unbalanced as well as XLR connections (Fig. 3).

Fig. 4: Replaceable batteries enable interruption-free operation over long periods of time.



Well-protected while on the go

As a portable instrument, the R&S®CMA180 is ideal for field work. In conjunction with a solid state disk (SSD), its mechanical stability, operating temperature range from 0 °C to +50 °C and maximum permissible humidity of up to 95 % make it perfect for use in the field. This test set complies with the specifications of MIL-PRF-28800, class 3.

The battery set (Fig. 4) allows the R&S®CMA180 to operate for approx. 90 minutes independent of a current source. The batteries can be replaced during operation and recharged in an external charger. This ensures long, interruption-free operation.

Fig. 5: Well-protected while on the go with the R&S®CMA-Z030A display protection cover.



A display protection cover (Fig. 5) and connector protection caps protect the instrument during transport. The soft case (Fig. 6) or transit case also protect the instrument against damage.

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Fig. 6: The R&S®CMA-Z025A soft case has an opening on the back for connecting to a power supply so that the measuring instrument does not need to be removed.



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