

Testing VoIP for Air Traffic Controllers

Fast maintenance testing of VoIP (ED-137B) radios

Test challenge

Besides the classic analog audio interfaces, new air traffic radios now support VoIP interfaces to transmit and receive audio. These digital VoIP interfaces also have to be tested. This requires connecting the radio to an IP connection that supports the ED-137B protocol.

Test solution

The R&S®CMA180 and the R&S®CMA-K610 VoIP option make the VoIP interface available to both the analyzer and generator. It is seamlessly integrated into the user interface and allows fast switching between the analog and digital audio interface.

For transmitter testing, the VOIP generator delivers the required test audio signal input to the radio. For receiver testing, the demodulated audio from the radio is provided to the R&S®CMA analyzer via IP.

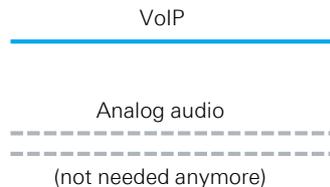


R&S®CMA180 radio test set

Your benefit	Features
Receiver and transmitter testing	Both tests can be conducted with a finger tap
Seamless integration	Fast and easy switching between analog and digital audio

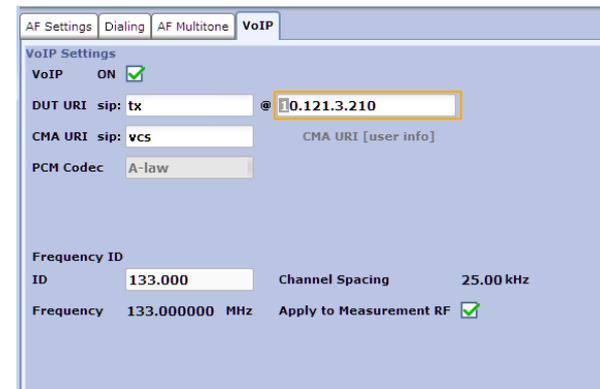
► For more information, visit www.rohde-schwarz.com/catalog/CMA180

Setup for VoIP



With VoIP, the analog audio connection can be removed. All audio is transmitted over the IP interface via a LAN cable. The cable is connected to the rear of the R&S CMA180 and the radio's IP connector.

Setting up the VoIP Connection



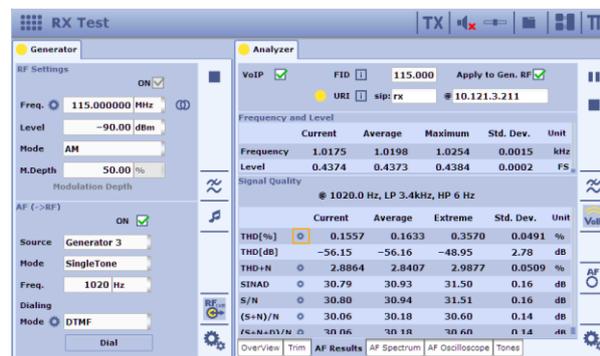
R&S CMA180: Setting up the URI of the radio and the R&S CMA180

VoIP transmitter test



R&S CMA180: The VoIP audio generator provides the IP connection and the audio input to the radio. The radio will modulate the digital audio signal and transmit it to the R&S CMA180 over the air interface. The R&S CMA180 then measures the RF parameters and the signal quality.

VOIP receiver test



R&S CMA180: An AM signal with a 1020 Hz audio tone is provided to the DUT and the demodulated audio is measured on the VoIP interface.

Ordering information

Typical configuration

Description	Type
Radio test set	R&S CMA180
VOIP support in accordance with ED137	R&S CMA-K610
CMA VOIP kit	R&S CMA-Z610A