

6 Reasons why the Specifications of your CW Transmitter really matter

1- Accuracy

CW transmitters are mainly used for channel model calibration/tuning. So few dB variation in the aggregate accuracy of the transmitter and receiver either leads to over-designed infrastructure which means more capital expenses, on the other side it might lead to under-designed poor performing network.

2- Spurious and harmonics

Test transmitter is a kind of RF signal generator that by nature experiences out of band emissions together with the intended signal. Such out-of-band radiations might interfere with other working channels particularly if the transmitter is to be used with amplifier which in turns boost such spurious and generates new frequency products/harmonics.

3- Frequency band

Multi-band CW transmitters reduce user's investment and decrease field setup if several bands are to be examined. Besides, a multi-port transmitter magnificently reduces test time since more frequency bands can be measured simultaneously within one test round.

4- Modulation purity

Using a modulated CW transmitter in WCDMA or LTE mode implies using a 3G or 4G scanners in the reception side. So the profile and EVM (Error vector magnitude) of the modulated signal should comply with 3GPP standard in order that the scanner detects and reads the signal smoothly.

Additionally if the transmitter is to be used with external power amplifier, this imposes more distortion to the signal which could deteriorate its profile and EVM out of the scanners limits.

5- Frequency accuracy

CW receivers or scanners have certain channel width within which it's able to lock to the transmitted signal. Deviation from the central frequency of the channel under test either makes it harder to lock or worsen test accuracy due to signal profile leakage out of the receiver bandwidth.

6- Size

In addition to field convenience, a hand-held light-weight transmitter simplifies the test mission to a great extent and allows for more test scenarios and different forms of setup.