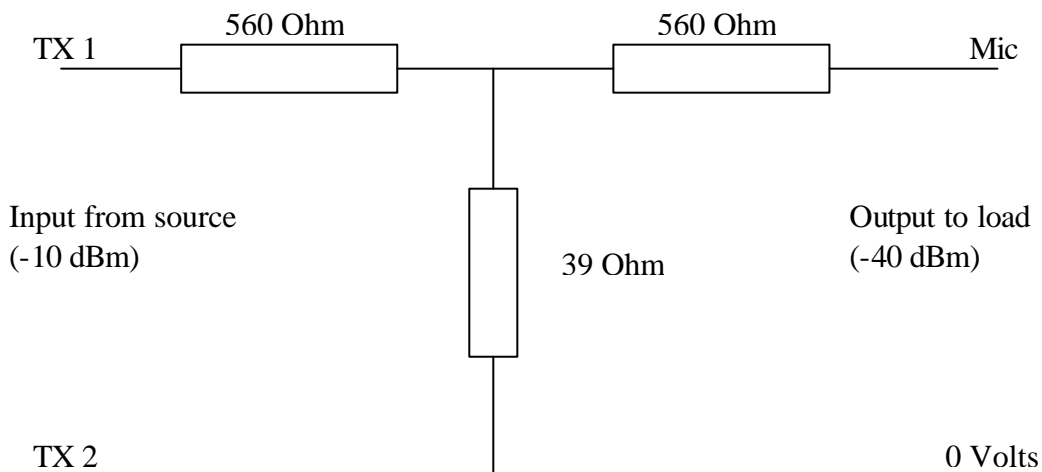


Interfacing to Fixed Mobile Radio Sets

Working with systems requires knowledge of commonly used system levels and setting up procedures. Base station radio sets are normally designed to interface to their drive circuitry at a line level of -10dBm. Where base station radio sets are equipped with both line interface and a microphone interface, the interface levels would be different, and the systems engineer should interface to the line interface and not the microphone interface.

Where a system is to use fixed mobile radio sets which are equipped with only a microphone interface, it can generally be assumed that the sensitivity of this interface would be in the region of -40dBm for full system deviation. From a service and system configuration point of view it is much better to leave the driving equipment set for the industry standard -10dBm output and to insert the -30dB attenuator outlined below between the driving equipment and the fixed mobile radio set.

30 dB - 600 Ohm Attenuator



In the above circuit where the microphone pin has a standing DC voltage for use with electret microphones, a series connected 100 nF capacitor should be added between the microphone and the 560 Ohm resistor to act as a DC block.

By keeping a standard driving level or -10dBm, any visiting engineer would know what to look for and set if equipment is being replaced. The attenuator reduces the drive level as seen by the fixed mobile radio set to "Microphone" levels and thus avoids over deviation and distortion.