



The perfect combination for the test of SMATV systems

The **IF TEST** or also called **ATTENUATION TEST** function allows to evaluate a building's IRS/SMATV cabling system before the antennas and head-end equipment are operative. For this application PROMAX has specially designed **RP-050** and **RP-080** signal generators.



RP-080 Signal generator

The **RP-080** is handy, versatile and easy to use. With its compact dimensions (77 x 85 x 28 mm) and insignificant weight of only 150 g, this signal generator easily fits in our toolbox or even in our pocket.

The **RP-080** needs to be used together with PROMAX TV level meters with satellite and terrestrial band coverage such as **PRODIG-5 Universal TV Explorer**, **PROLINK-4/4C Premium**, **PROLINK-3/3C Premium** or **MC- 577**.

From the technical point of view this small device includes many useful features. It generates **four pilot carriers**, two in the **terrestrial** band (85 MHz and 750 MHz) and two in the **satellite IF** band (1000 MHz and 2150 MHz). The frequency accuracy of the pilot signals is as high as ± 50 kHz at levels ranging from 75 to 100 dB μ V (selectable in 1 dB steps).

The signal generator is equipped with **4 signal level indicators** based on red coloured LED columns showing the output level of each carrier. Output level of each carrier can be adjusted individually via 4 selection buttons. Three LEDs give information about the supply voltage (13 or 18V) and the presence of 22 kHz switching signal.

■ Preparing the process



TV Explorer connected to RP-080

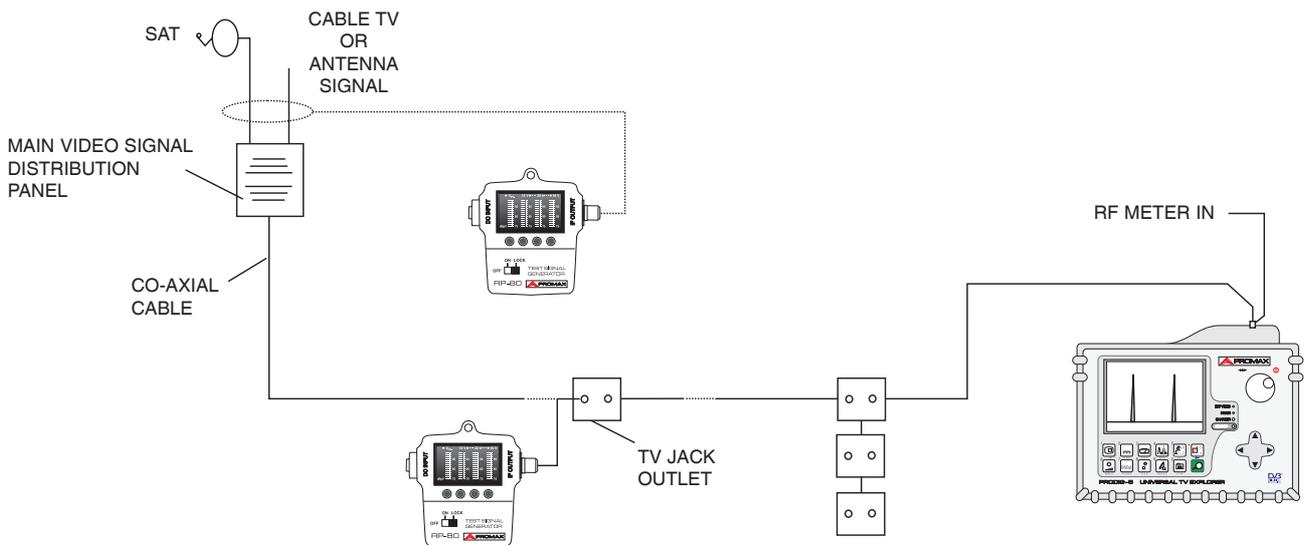
As indicated earlier, a TV level meter such as **TV Explorer** is also required to make the tests.

Using these two devices is **very easy** to **check the frequency response** of the satellite and terrestrial TV installation within hotels, apartments, houses, etc... A schematic diagram of the different possible connections is shown below.

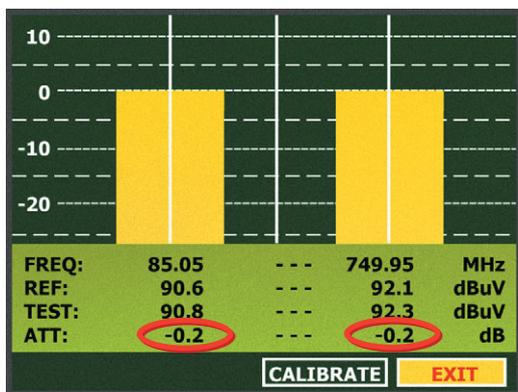
At the beginning a calibration with the **TV Explorer** must be performed. For this purpose the **RP-080** must be connected directly to the **TV Explorer**. The **RP-080** will be powered through the **TV Explorer's RF input** using the mast head amplifier or LNB supply voltage from the analyser.

Users will find the **ATTENUATION TEST** (if we are in terrestrial band) or **IF TEST** (if we are in satellite) under the **UTILITY** menu.

Once we access this function the **TV Explorer** will offer us the option to **CALIBRATE**. The system will then compensate all the cable and connector losses and will set the corresponding attenuation values for the available frequencies to zero.



Checking a TV SAT - UHF installation



Calibration screen

■ Calibrating the TV Explorer

The picture shows the calibration screen in terrestrial mode. **RP-080** generates two frequencies in this band, 85 MHz and 750 MHz and the **TV Explorer** will automatically detect them and show the values on the side bars. If we work with **RP-050**, which generates one single frequency in the terrestrial band, then the centre bar will be used.

Due to measurement resolution limitation users can always expect the calibration to indicate some minute numerical loss.

Ready to start!



RP-080 at a test outlet

We are now ready to start with the tests. **RP-080** must be disconnected from the meter and connected to the system headend instead of the antennas. We will leave it there and go with the **TV Explorer** to the desired test outlet somewhere else in the building.

Once the meter is connected to the TV outlet and the LNB voltage is powering the **RP-080** through the IRS/SMATV system, we can read the attenuation at the two reference frequencies at once.

