

In order to provide the best accuracy for this measurement the video signal under tests should be at least 5 dBmV in level and the built in bandpass filters should be set to automatic mode. These automatic filters are used to prevent the analyzer from being overloaded when measuring low level distortion and noise. To turn on the automatic bandpass filters press the **FREQ** hard key from any of the measurement screens and press the bottom soft key to turn the filter to **AUTO**. If the video signal being tested is less than 5 dBmV the filters should be set to **OFF**.

A preamplifier is not normally needed because the AT2500 analyzer has its own internal pre-amp. A signal level of 5 dBmV will produce a 65 dB CNR dynamic range.

This type of CNR measurement makes the noise measurement in the bandwidth of the video of the channel. For that reason, this method requires the removal of the carrier or the modulation. This document will show the removal of the modulation.

From the Preset condition of the analyzer, take the following steps:

1. Press the **MENU** hard key and select the **CCN, CSO, CTB** measurement.
2. Press the **FREQ** hard key and using the video carrier soft key, select the desired channel. Press **ESC** to return to the measurement menu.
3. Make sure single measurement is selected on the top soft key.
4. On the second soft key, make sure that **CCN** is selected.
5. This is an in-channel measurement so be sure that in-channel is selected on the third soft key.
6. Make sure **Discrete Freq Interference** is set to **OFF**.
7. Press the **Set Measurement Parameters** soft key. Verify the **CCN** measurement settings. For **NTSC** measurements the recommended frequency offset is 2.00 MHz and **System Bandwidth Correction** is 4.00 MHz. Press **Save Setup** soft key. Note: These settings can be configured in the channel plan so that the analyzer will always use the correct measurement settings for a specific channel.
8. Press the **Measure** soft key and you will get an indication to remove the carrier. At this point you can either remove the carrier or the modulation.
9. Set the attenuator using the arrow keys so that the video carrier is near the top graticule or slightly beyond but not high enough to cause an **S** to appear above the Sunrise Telecom logo indicating that the analyzer input is saturated (see Figure 1). This has the effect of pulling the system noise out of the noise floor of the analyzer and minimizes the noise correction factor.
10. Press **enter** and the measurement will continue. The results are displayed on the bottom of the screen as shown in Figure 2. Notice also the noise correction factor. The lower this number, the better the accuracy of the measurement. A correction factor of 5 dB or more indicates inaccuracy. To reduce the correction factor set the video carrier higher in step 9.
11. To repeat the measurement press **ESC** and repeat step 8.
12. To save the measurement press the **STORE** key and then the **STORE RECORD** softkey. Enter a file name, **ID Code** (optional) and comments (optional).

Note: If these measurements are to be used to create an FCC proof of performance report using WinCom II, you must enter the correct **ID Code** (**HEAD** for headend or **TP01, TP02...**for field test points) to identify the location of the measurement.

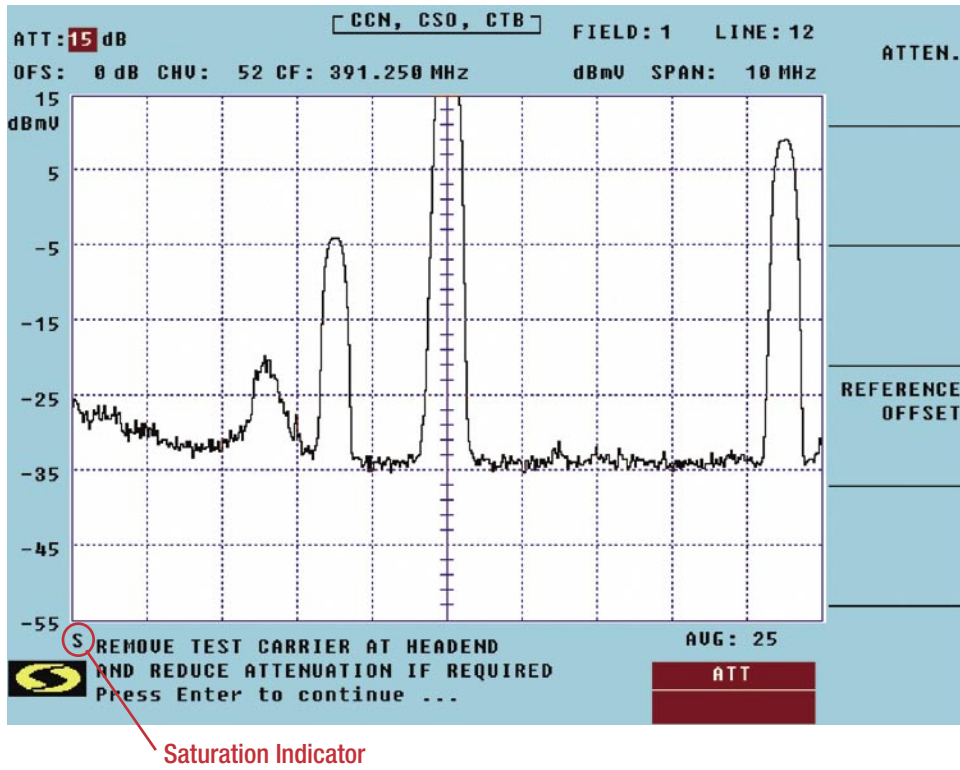


Figure 1

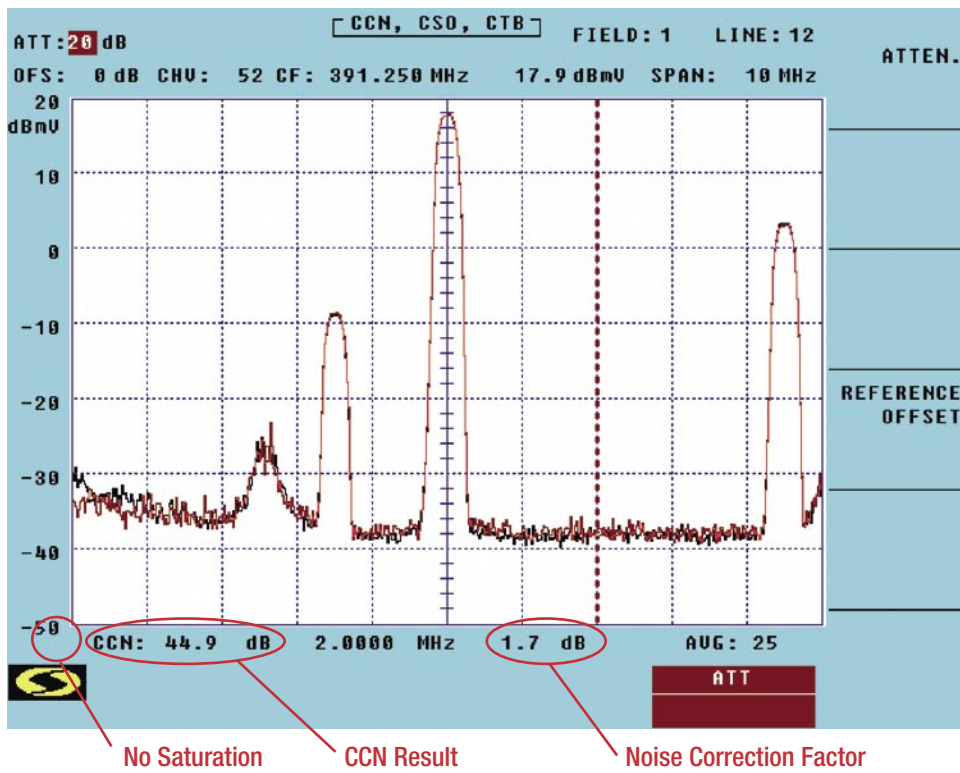


Figure 2



JUST ANOTHER WAY WE'RE UNCOMPLICATING CABLE