

CONDUCTED SPURS AND HARMONICS

CONDUCTED SPURIOUS OUTPUT

The following photograph indicates the spurious performance (± 3 MHz) from the designated TV channel. As can be seen from the photos taken at a power level of 2.0kW, the spurious levels are >60 dB below the peak of sync of the visual carrier. The diamond in the top center of the screen indicates the true peak of sync of the visual carrier and the waveform indicates that the -4.5 MHz intermodulation (IM) product is 61.75 dB down from peak of sync. The $+9$ MHz IM product visible in the photo is at -72 dB below the visual carrier. This photo indicates the desired 13dB aural to visual power level. The SPAN is 20MHz and the vertical scale is 10dB/div.



POWER OUTPUT 2.0KW

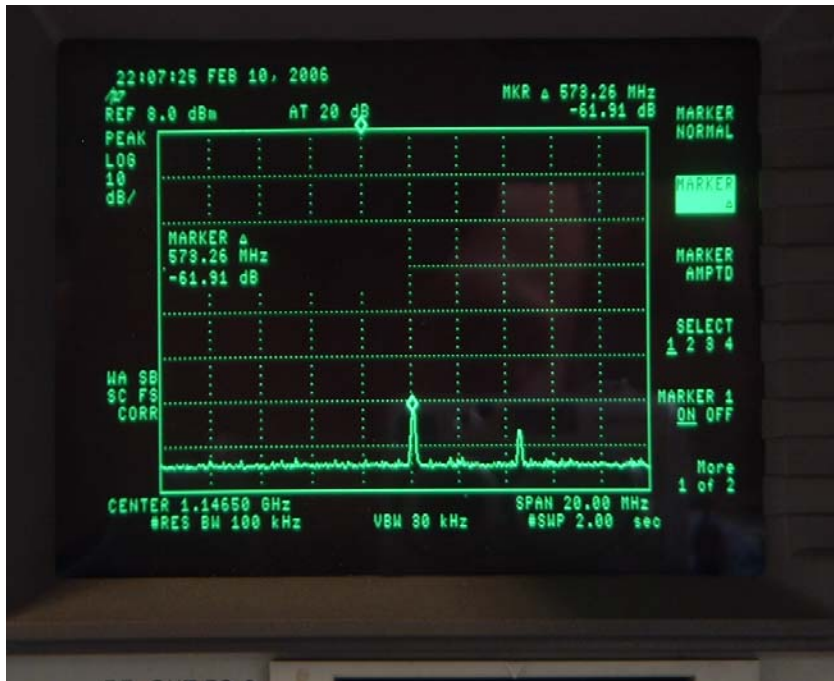
CONDUCTED HARMONIC OUTPUTS

The following data indicates the harmonic performance of the UTX2KW ULTRA. The setup of Figure 1 was used to measure the harmonics. In this case the spectrum analyzer replaced the HP435 Power meter. Only the second and third harmonics were visible above the -75 dB noise floor of the spectrum analyzer. The following table displays the actual value of the harmonic that takes into account of the high power attenuators and cable used for the measurements. The value of <-75dB in the table indicates that the harmonic level was below the noise floor of the spectrum analyzer. Photographs of the spectrum containing the second and third harmonics are shown below. The pictures indicate that the harmonic levels are below 60 dB compared to the diamond at the top of the screen.

HARMONIC LEVELS VS. FREQUENCY AT 2.0KW POWER OUTPUT

Frequency of Harmonic (MHz)	Harmonic Number	Corrected amplitude (dB) (Relative to peak sync power at the fundamental visual carrier frequency.)
1146.5	2	-62
1719.75	3	-72
2293	4	<-75
2866.25	5	<-75
3439.5	6	<-75
4012.75	7	<-75
4586	8	<-75
5159.25	9	<-75
5732.5	10	<-75

Photographs of 2nd and 3rd harmonics are on the following page.



Second Harmonic Spectrum



Third harmonic spectrum