



# 11-STEP GRAY SCALE TEST CHART 16:9 / BT.709

TRANSPARENT



Two 11-graduated counter current gray scales are arranged on a gray background ( $D \approx 0.56$ ), the gray scale corresponds to the ITU recommendation BT.709.

The output signal of an optimally gamma-corrected camera according to BT.709 generates two counter current, linear step signals.

The contrast range of the gray scale is 40 : 1.

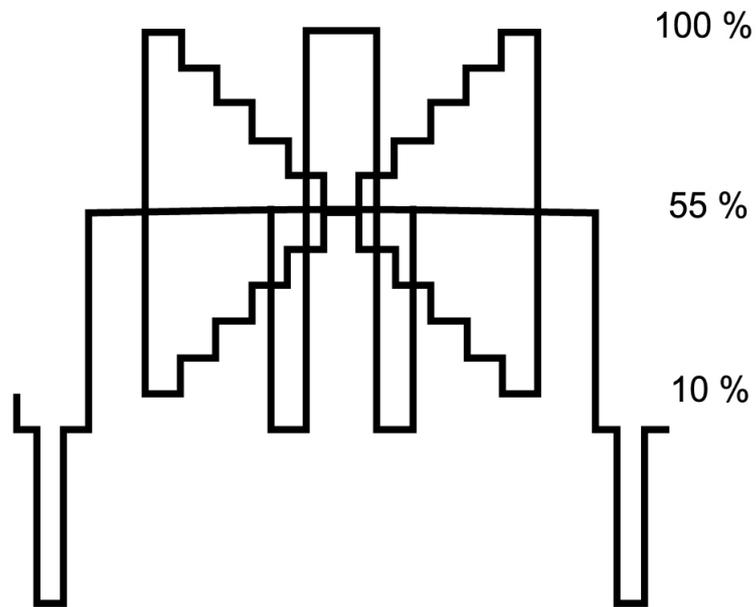
The values of the 11-graduated gray scale are as follows:

Step	Density	Transmission in %	Video signal for BT.709 in %	Video signal for gamma 0.45 in %
1	0.05	89	100	100
2	0.13	74	91	92
3	0.22	60	82	84
4	0.32	48	73	75
5	0.43	37	64	67
6	0.56	28	55	59
7	0.70	20	46	51
8	0.88	13	37	43
9	1.08	8	28	35
10	1.34	5	19	26
11	1.70	2	10	18

Two black fields and a white field are located between the gray scales. The density of the black fields in the middle is  $D > 3$  (transmission  $< 0.1\%$ ), the white field between has a density of 0.05 (transmission 89.9%).

**Recommended usage:**

Adjust the aperture until the lightest patch reaches 100% video signal at the waveform monitor. With an optimally corrected camera according to ITU recommendation BT.709 the darkest patch will reach 10% signal level.



When using this chart with a gamma correction of 0.45 the video signal level for each step will change as listed in the table above.