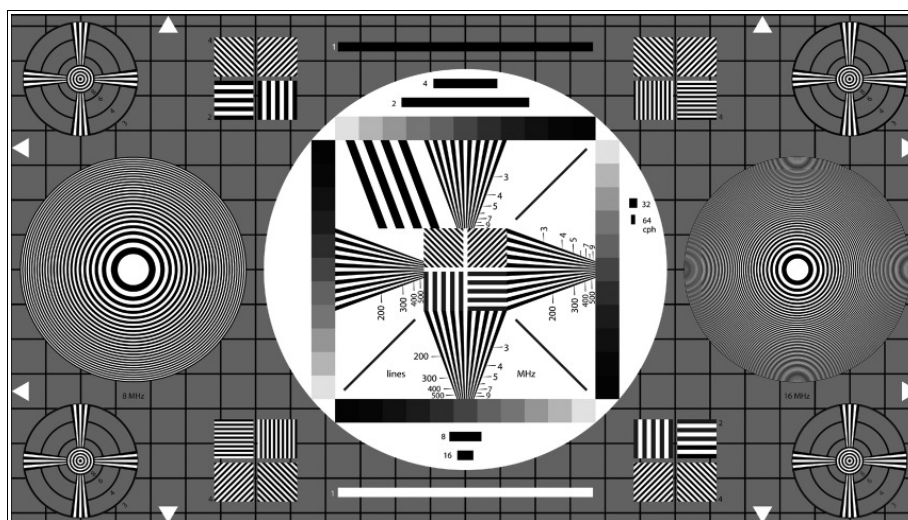




UNIVERSAL TEST CHART

REFLECTANCE



The TE105 test chart is designed for general (visual) appraisal of 16:9 TV cameras.

The density of the 4 gray scales increases from $D=0.15$ to $D=1.65$. The integrated 25/15 grid corresponds to that of an electronic grid generator.

The test chart is designed primarily for orientating assessment of transmission characteristics of an electronic camera. The circular figures and the grid allow a rough appraisal of the geometry. 2 MHz and 4 MHz line rasters are distributed over the image area, the 4 MHz rasters being inclined in angles of 45° and 135° to the horizontal line.

With the aid of an oscilloscope with line selection switch, the wedge-shaped vertical rasters enable the frequency response of the modulation depth to be determined. The signal of the oblique 1 MHz bars is used as reference value. The wedge-shaped line rasters further enable visual appraisal of the resolution limit to be made. In addition, cross-color interferences and the effects of notch filters and comb filters can be observed.

The horizontal bars located above and below the gray scales impart information on transmission characteristics in the medium frequency area (streaking). Rough appraisal of half-tone reproduction is possible with the aid of the gray scale; exact statements are, however, not possible due to the white surroundings.

The three diagonal lines inside the square of gray scales allow line interlacing to be checked. A ladder-shaped reception of the lines indicates paired lines. On the left and right sides two zone plates are located, the left one reaching a local frequency of 8, the right one of 16 MHz. The zone plates serve to determine the following characteristics of TV cameras and TV transmission systems:

- resolution in horizontal, vertical and diagonal direction
- resolution depending on the location of scanning
- effect of horizontal and vertical aperture corrections
- effects of interference between the zone plate and television raster resp. the shadow mask structure of color picture tubes
- reaction during horizontal and vertical movement of the camera (or the test chart): dynamic resolution, temporary disturbances