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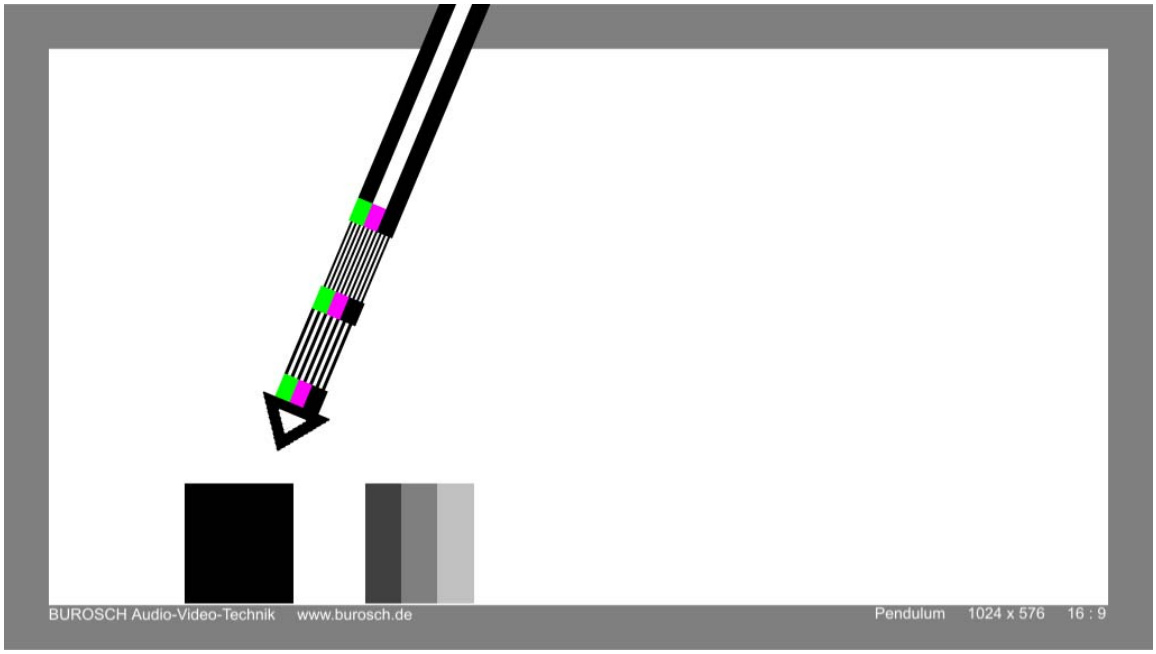
Test Pattern: Pendulum

Pendulum



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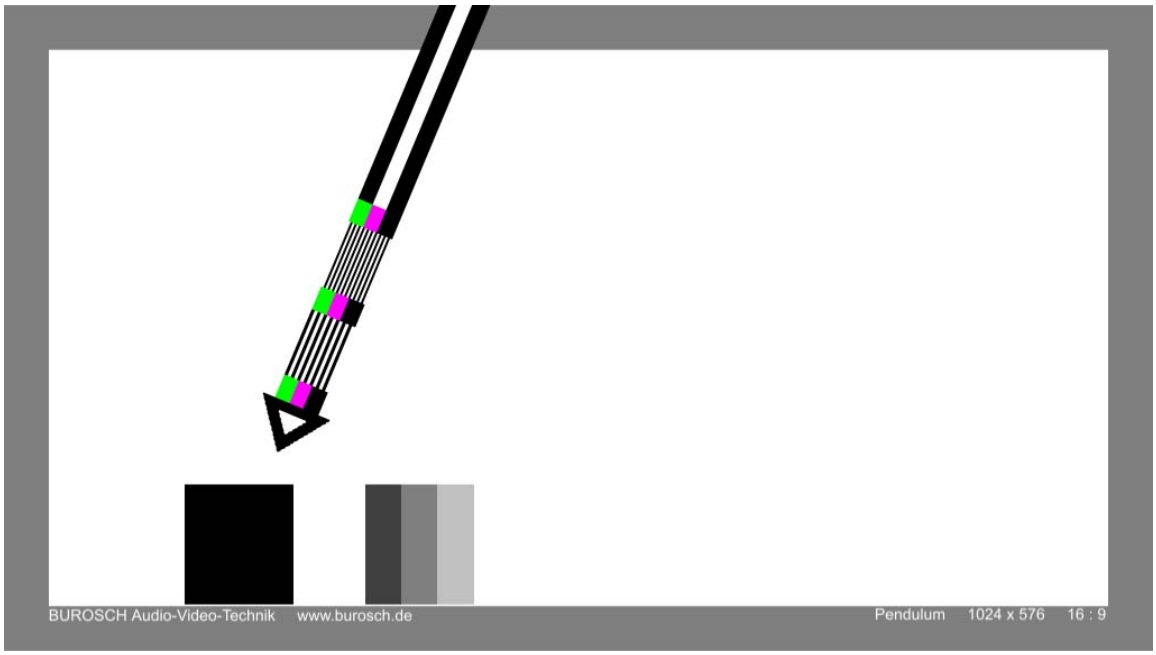
The pendulum on the neutral background is posing a challenge to the processing of the playback string especially to the display and the de-interlacer, cause it's recorded interlaced. At error-free display you see a judder free swinging pendulum with clearly separated color areas. The pendulum itself mustn't become blurred in the moving or force in comb-shaped contoures.

- De-Interlacing
- Moving interpolation

This test pattern is served as sight check for evaluation and adjustment of a video signal string with image sender what can be achieved without measuring devices.
Before using the test patterns please check that all conditions come up with the later appliance, especially check the signal path and the light conditions and note that direct reflections affect the image quality clearly.

Subsequent you find the descriptions of the individual image-elements.



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Correct exposition:

- judder free swinging pendulum without blurring (maximun at high speed exiguously)
- Clearly separated color areas in the pendulum
- color at the pendulum mustn't get lost.

Typical faults:

- pendulum is juddering – image source and display are asynchronous or there is a conversion to another image frequency.
- pendulum becomes blurring when it moves – bad interpolation of the de-interlacer or active noise reduction.
- pendulum forcing when it moves in comb-shaped structures – de-interlacer uses misleadingly weave / film mode instead of interpolating
- The color areas in the pendulum become highly blurred or become lateral skewed displayed – lacking color processing
- Especially on the pedulum top color seaming will be generated in moving – one color of the display has another response times than the others.

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Standards are helpful and important

For a correct playback of a film or a video or even of an image there have to be a neutral transfer. You often hear the argumentation that these isn't necessary because the vision of every human is different and so a objective playback isn't possible. As a matter of principle is this argumentation right. Admittedly there will be ignored that it's only possible if the signal transfer acts neutral and straight. Only when the expressed image is similar to the recorded image by the camera, the human is able to perceive what he would saw at location by his individual sensation.
The transfer itself have to behave neutrally. Big worldwide institues look after the standards so that the neutrality is warranted.
In german speaking countries is the institute for broadcast engineering of the public broadcasting corporation of ARD, ZDF, DLR, ORF and SRG/SSR mainly responsiblefor the standards:

www.irt.de

For the whole european area the European Broadcast Union, EBU in Switzerland handles superordinate to the local development institutes:

www.ebu.ch

On international floor established in 1865 in Paris the International Telecommunication Union, ITU is included:

www.itu.int

For best image evaluation and calibration you use the test pictures from this document. It works also with real, filmed motives but with reservations. The big advantage of test patterns from Burosch Audio-Video-Technik is the knowledge how the test patterns have to look and the knowledge how to reproduce them. Only this way the neutrality of the transmission and the playback can be measured extactly and if necessary to correct it:

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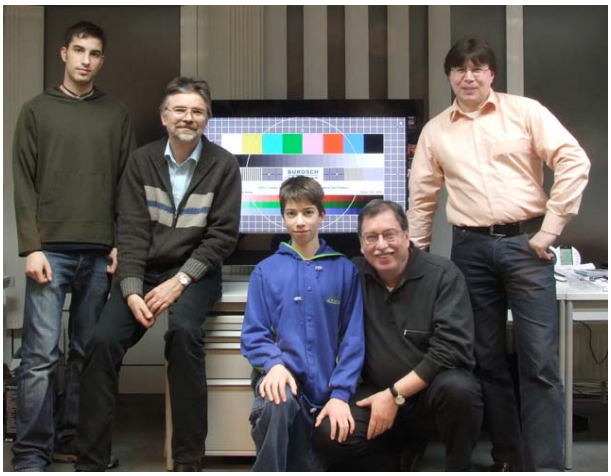

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