PQA Picture Quality Analyzer
Release Notes

This document supports software versions 4.1.10.

077-1626-00

Contacting Tektronix

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Release Notes

This document supports software version 4.1.10 of the PQA software, which can be
installed on the following products:

- MTSA-HW MPEG Test System
- MTSA-PC MPEG Test System (software-only)

New video format support

- Software version 4.1.10 of the PQA software adds support for YCbCr 4:2:0 10-bit
planar video formats. The YCbCr 4:2:0 10-bit format is supported only for .yuv files
created by MTS4EA which are encoded with one of the "two byte LSB/MSB first"
options.

Known issues and behaviors

- The PQA software V4.1.X installer may ask you to accept the installation of the

DESkey driver. You should always accept the installation even if the driver is already installed on the PC.

- The Contrast and Brightness settings in the Display Settings dialog box (Configure > Display Settings) might not operate correctly in the Overlay View.

- When reviewing the results of display measures calculated using different frame rates, original images are displayed rather than up-sampled interpolations. This can cause the results map to appear temporally advanced, or delayed by up to half a frame when compared to the lower frame rate sequence.

- In the Overlay View, video sequences with different resolutions are not spatially aligned.

- The Standalone Attention Model uses the Reference sequence for dual-ended measurements and the Test sequence for single-ended measurements.

- If the reference and test sequences have different resolutions and the measurement contains the Artifact Detection node but does not contain the View Model node, the system might become unstable. To avoid this situation, Tektronix suggests that when a measurement includes the Artifact Detection node, you ensure that the measurement also includes the View Model node whenever the reference and test sequences have different resolutions.

- The vertical and horizontal resolution for .rgb and .yuv files must be multiples of 4.

- If the reference or test file has a "," (comma) character in its file name, the system might become unstable when the measurement result is recalled in review mode. To avoid this, do not use commas in file names.

Reviewing PQA V3.X measurement result (.csv) files using PQA V4.X

- If you want to use PQA software V4.X to view a measurement result (.csv) file created by PQA software V3.X, you need to first manually edit the Output Temporal ROI start and end frame values in the V3.X results file as follows:

- If the "Start Frame" in "Output Temporal ROI" is greater than zero, increase the value of the "Start Frame" by 1.

- If you adjust the "Start Frame" by 1, then also increase the value of the "End Frame" in "Output Temporal ROI" by 1.

If you do not manually adjust the start and end frame values when viewing measurement results using software 4.X that were created by software V3.X, the Output ROI will be wrong by 1 frame.

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SWAP action restriction
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- When you press the SWAP button in the SGAC window with one generate channel using
RGB file format and the other generate channel using YUV file format, a couple of
black frames may be seen each time you press the SWAP button.


Decoding .3gp streams
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- Decoding .3gp stream files may result in the created YUV file having the wrong
frame rate. If you know the frame rate of the .3gp file, you can work around this
problem by selecting the correct frame rate using the Format button.


About full reference measurements with interlaced video content
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- Interlaced video content can be measured accurately only when the Reference and
Test video both have interlaced video content and spatial alignment is not needed to
be set differently from the default scale and shift.


About spatial and temporal alignment
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- Automatic spatial and temporal alignment work by calculating the correlation
between the reference video sequence and the test video sequence. Video that is
still, contains little movement, or consists of simple contents (such as a color bar
test pattern signal), can be difficult to align automatically.

If you receive a warning when you attempt an automatic temporal or spatial
alignment, try the automatic alignment again starting with another frame that
contains more complex contents and movement. You can change the starting frame by
changing the From frame setting on the Temporal Sync tab.

Auto temporal alignment only finds one offset for a pair of sequences. If the test
sequence contains frozen or skipped frames, the automatic temporal alignment
algorithm will not be able to realign the sequences.

Auto alignment cannot be selected for Luma Gain and Offset Brightness on the Spatial
Alignment tab. However, you can manually set the Luma Gain and Offset Brightness on
the Spatial Alignment tab and those settings will be used by the selected
measurement. If you want the PQA to align the video sequences for luma
automatically, you must select Auto for Luma Gain and Offset Brightness in the View
Model configuration node.
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