

DVP5000/DVP5000U

Digital Video Processor/Scaler for HDTV



HDTV is finally here. Unfortunately, it usually arrives as an interlaced signal. This causes visible line structure and stairstepping artifacts. The new DVP5000 will input the 1080i interlaced HDTV signal and recombine the information to yield artifact free 1080p progressive HDTV. While removing interlacing artifacts it also increases light output on CRT projectors. Large venue Electronic Cinema applications with fixed panel display projectors such as DLP and D-ILA projectors require a progressive signal for optimum performance which the DVP5000 can provide.

The new DVP5000 combines patented technology with an extensive list of features to optimize any multi-scan projector, providing the excellent video quality only Faroudja can deliver for theater, commercial, and staging applications. CRT, DLP, LCD and Plasma displays all benefit from the DVP5000 performance.

Other key features include:

- HDTV 1080i to 1080p Conversion
- Scan Rate scaling of DTV 480i to computer rates VGA, SVGA, XGA and SXGA.
- Scan Rate scaling of DTV 480i to DTV/HDTV rates 480p, 1080i, 720p, 960p (Quadrupling) and even 1080p.
- New Scan-Lock™ Bandwidth Expansion optimizes detail settings for each scan rate.
- New Directional Correlation Deinterlacing (DCDi™) for artifact free deinterlacing of original video material.
- Accepts progressive DVD signals for upconverting to higher scan rates.
- Internal Aspect Ratio control for Letterbox, Anamorphic and 4:3 sources.
- Patented Picture Plus™ technology for superior color decoding, deinterlacing and detail processing.
- 10-bit Adaptive color decoding with Time Base Correction.



Award Winning Technology



FAROUDJA
PICTURE PLUS™

DVP5000/DVP5000U Digital Video Processor/Scaler

THE ULTIMATE IMAGE!

The DVP5000 produces the Ultimate Image combined with all the features required to meet the demands of the ever expanding projector market for Electronic Cinema, and Home Theater applications. The DVP5000 adds significant image performance to any multi-scan projector from any DTV or HDTV source.

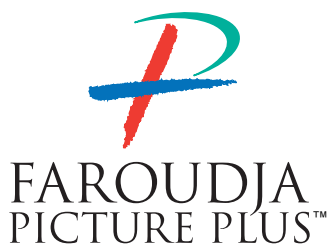
Image Quality

The DVP5000 applies three new critical signal processing circuits that take image quality to an even higher level than previous Faroudja models.

- **HDTV 1080i to 1080p Conversion** removes the interlaced artifacts from HDTV 1080i sources using new patented technology optimized for the high bandwidth and signal timing demands of the 1080p scan rate (67KHz) including new interpolations of 3/2-pulldown detection and Bandwidth Expansion. A separate HDTV input stage accepts the 480p, 1080i or 720p signals.
- **Diagonal Correlation Deinterlacing (DCDi™)** applies new motion adaptive deinterlacing that prevents the introduction of motion artifacts and jagged edges from video signals that originated from 480i video cameras. A second patented 3/2 pull-down detection circuit is used for video signals that originate from film.
- **Scan-Lock™ Bandwidth Expansion** detail circuitry. Most "scalers" create a soft image as the scan rate is increased due to line interpolation and no detail processing after the scaling stage. The DVP5000's unique "Scan-Lock" circuitry applies the advanced Bandwidth Expansion circuitry after the scaling stage and is fine-tuned and locked to optimize each scan rate. This approach greatly improves edge detail at any scan rate. The Patented Bandwidth Expansion circuitry is a complex multi-step process to improve edge detail for both chroma and luminance information.

Additional Patented Picture Plus™ circuitry:

- Adaptive Comb Filter
- 10-Bit processing
- Two-Line Time Base Correction



Outputs

The output frequencies can be perfectly aligned to match the native resolution of most high resolution Fixed Panel Display projectors. CRT projector performance can be fine-tuned to provide maximum line count resulting in higher light output and resolution without image softening.

- HDTV 1080i signals are converted to 1080p. HDTV 480p signals can be viewed as either 480p or converted to 960p. HDTV 720p signals are passed-through. All HDTV signals are processed with Bandwidth Expansion for improved edge detail.*
- 480i signals are upconverted to computer frequencies of 640X480, 800X600, 1024X768 and 1280X1024. Also to DTV/HDTV frequencies of 720p, 1080i, 960p (Quadrupling) and 1080p.
- Internal Aspect Ratio control allows for optimizing the projector with the different 480i sources available. Letterbox, Anamorphic and 4:3 sources are adjusted inside the DVP5000 so only one memory is required in the projector. *Aspect Ratio control not available with HDTV input signals.
- The Progressive output from DVDs (480p) can be connected to the DVP5000 and upconverted to any of the higher scan rates available.

Features

- Selectable RGB, RGsB and YPrPb output.
- 40 custom presets that include Aspect Ratio and scan rate.
- Noise reduction.
- Inputs for Composite, S-Video, Interlaced Component, Progressive Component, HDTV and Computer.
- RS232 and Infrared Control with Smart multi-component remote.

DVP5000U

The DVP5000U is compatible with both PAL and NTSC signals.

- NTSC/PAL B, M and N Processing.
- Frame doubling to 100Hz (576p output only).
- Frame Doubling for Progressive DVD outputs.
- 16 additional custom presets.
- HDTV input for 60Hz ATSC standards only.



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*Specifications subject to change without notice.