

GY-HD110U: Can the GY-HD110U provide a downconverted DV signal via the 1394 connector?

The IEEE-1394 connector provides output in the native file format recorded on the tape: DV if recorded in the DV mode, and HDV if recorded in the HDV mode. The GY-HD110U provides down-converted 480i via analog outputs to facilitate HD picture content monitoring using conventional SD displays. When HD originals are intended for release on SD media, especially DVD, JVC recommends finishing in original native high definition, thereby preserving maximum image quality. Once completed, an HD project is easily output in SD for final release. The final DVDs will be of significantly better quality than if the project is posted in DV from an in-camera conversion.

Here's why: The HDV format records significantly higher resolution and the chroma is subsampled at 4:2:0. If a DV dub is made from an HDV recording, the extra resolution is lost, and the chroma subsampling effectively becomes 4:1:0. This is less than optimal for DV which records at 4:1:1 (in the U.S.), and less than optimal for DVD which utilizes MPEG2 at 4:2:0. Modern non-linear editing systems can edit the HDV recording in HD, and do any processing (extra enhancement, effects, etc.) in the higher resolution HD domain, and with the full HDV chroma resolution. The final DVD can be made from the NLE's downconverted output, but with the full chroma resolution and 24p cadence of the original MPEG2 recording.

To fully appreciate the difference between standard definition DVD's made from downconverted ProHD footage, and footage originally captured in the DV format, please watch the following video clip. (caution: 44MB!)

[SD video clip showing downconverted footage vs. original DV](#)



In this clip, the footage on the left was captured with a GY-HD100U in the HD mode, then downconverted to standard definition DVD format. The footage on the right was captured with the same camera as a DV file, then converted to DVD format.

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If you need a player for MPG or M2T files, check out the open source **VLC Player** at www.videolan.org.

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