Power Macintosh: AV Video Card, Video Inputs (12/94)

Article Created: 3 March 1994
Article Reviewed/Updated: 14 December 1994

TOPIC ---

This article describes the Power Macintosh computer's AV Video Technologies
Card's video inputs.

DISCUSSION --

Video input signals, which may be analog composite or S-video in NTSC (National
Television Standards Committee – primarily used in North America and Japan), PAL
(Phase Alternating Line – primarily used outside of North America and Japan), or
SECAM (a French acronym for the television signal format used in France, Eastern
Europe, the former Soviet Union, and many former French colonies) format, enter
through one of the identical connectors for video input and output. An adapter
cable included with Power Macintosh AV models receives composite video from
external devices that have RCA connectors and feeds it into the luminance input
of the TDA8708 video ADC (Analog/Digital Converter) chip. The ADC chip can also
receive separate luminance and chroma signals from S-video sources. The ADC chip
digitizes the video waveform and the SAA7194 chip decodes the result into YUV
format. The YUV digital video format, also known as YCrCb, is a video signal
format with separate luminance and chrominance components.

The SAA7194 chip scales down the video image and converts its format to either
8-bit grayscale, 15-bit RGB, or 16-bit YUV, storing the result in the VRAM
buffer.

The data rate for full-screen NTSC video (640 by 480 pixels at 30 frames per
second) is 18.43 MB per second through the AV card. The data rate for
full-screen PAL video (768 by 576 pixels at 25 frames per second) is 22.12 MB
per second. This means that it is practical to record a video image up to
one-quarter screen in size on an output device such as an external hard disk
drive in real time, without data compression.

Users of the Power Macintosh 6100 AV, 7100 AV, or 8100 AV can capture live color
video with a standard video camera, using the composite video input cable
supplied with the computer.

Article Change History:
24 Aug 1994 - Made correction for technical accuracy.

14 Dec 1994 - Added keyword and technical detail; removed MHz references.

==

This information is from the Apple Technical Information Library.

19960215 11:05:19.00
Tech Info Library Article Number: 14801