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## Video Technologies: Composite vs. S-video (6/96)

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TOPIC -----

What is the difference between composite video and S-video? Also, which Macintosh computers support these video technologies?

DISCUSSION -----

The following Macintosh computers support both composite video and S-video input and output:

- Macintosh Quadra 660AV
- Macintosh Quadra 840AV
- Power Macintosh 6100AV series
- Power Macintosh 7100AV series
- Power Macintosh 8100AV series
- Power Macintosh 7500 series
- Power Macintosh 7600 series
- Power Macintosh 8500 series

The Macintosh Quadra 660AV and 840AV and the Power Macintosh 7500, 7600, and 8500 series computers have separate connectors for composite and S-video. The Power Macintosh 6100AV, 7100AV, and 8100AV series computers have S-video input and output connectors but require an adapter for composite video input and output.

Following are descriptions of composite video and S-video.

### Composite Video

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A composite video signal is one in which the luminance, chrominance, and sync information have been combined into a single signal using one of the coding standards: NTSC, PAL, SECAM, and others. This is the form the signal must take before it can be broadcast or recorded by standard means. Composite video is more common than S-video, as televisions, most video-cassette recorders (VCRs), and laser disc players (LDPs) use the composite format.

### Chrominance

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The color part of a signal, relating to the hue and saturation but not to the

luminance (brightness) of the signal. Any colored signal has both chrominance and luminance.

#### Luminance

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The aspect of the video signal carrying information about the brightness of an image.

#### Sync

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Short for synchronous. Refers to signals used to synchronize the horizontal and vertical scans of a video signal. This signal is derived from a composite or combination of horizontal and vertical drives, with some slightly narrowed and delayed pulses as well as the addition of equalizing pulses. When used, is usually accompanied by subcarrier.

#### S-video

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An S-video signal is a consumer form of component video. It is used primarily with Super8 (Hi8 video or 8 mm tape) camcorders and S-VHS recorders (S-video on VHS tape). S-video is a less common -- but higher quality -- video format than composite video.

#### Component video

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Component video is a recording system that does not require NTSC encoding of RGB signals, but uses a means of recording and routing the luminance and color signals separately. This method does not reduce bandwidth nor compromise the RGB components and results in images of higher resolution and better color quality than composite video. Though designed for high-end television production, similar recording methods have recently become available to the consumer market.

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12 Dec 1995 - Updated information. Added additional computers.

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