

The resulting video signal is an NTSC-compatible composite-video signal that can be displayed on a standard video monitor. The signal is similar to the EIA (Electronic Industries Association) standard positive composite video (see Table 7-15). This signal is available in two places in the Apple IIe:

- At the phono jack on the back of the Apple IIe. The sleeve of this jack is connected to ground and the tip is connected to the video output through a resistor network that attenuates it to about 1 volt and matches its impedance to 75 ohms.
- At the internal video connector on the Apple IIe circuit board near the RCA jack, J13 in Figure 7-15c. It is made up of four Molex-type pins, 0.25 inches tall, on 0.10-inch centers. This connector carries the video signal, ground, and two power supplies, as shown in Table 7-15.

Table 7-15
Internal video connector signals

Pin	Signal	Description
1	GROUND	System common ground.
2	VIDEO	NTSC-compatible positive composite video. White level is about 2.0 volts, black level is about 0.75 volts, and sync level is 0.0 volts. This output is not protected against short-circuits.
3	-5V	-5 volt power supply.
4	+12V	+12 volt power supply.

Built-in I/O circuits

The use of the Apple IIe's built-in I/O features is described in Chapter 2. This section describes the hardware implementation of all of those features except the video display described in the previous sections.

The IOU (Input/Output Unit) directly generates the output signals for the speaker, the cassette interface, and the annunciators. The other I/O features are handled by smaller ICs, as described later in this section.