

## Tech Info Library

## **Apple III: Game Paddles**

Revised: 6/22/94 Security: Everyone

Apple III: Game Paddles

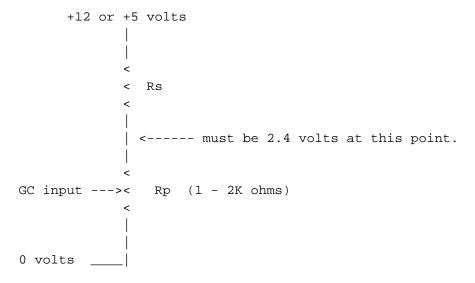
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Standard Apple II 150K game paddles cannot be used with the Apple III. A high impedance potentiometer like the Apple II paddle will not work properly connected to an Apple III port.

The analog inputs on Port A and Port B of the Apple III are designed to read a voltage between 0 and 2.4 volts and convert it to a number between 0 and 255. The schematic on page 82 of the Apple III Owner's Guide is drawn for a joystick with 5,000 ohm potentiometers. Only the bottom 20% of the potentiometer's range is used. Using the +12 volt power supply will result in the most stable readings.

The following circuit can be used if the entire range of the potentiometer is desired.



The voltage range at the GC inputs should go from 0v to 2.4v. The value of Rs can be calculated for +5 volt systems with this formula:

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$$Rs = Rp * 2.6 / 2.4$$

For +12 volt systems use

$$Rs = Rp * 9.6 / 2.4$$

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