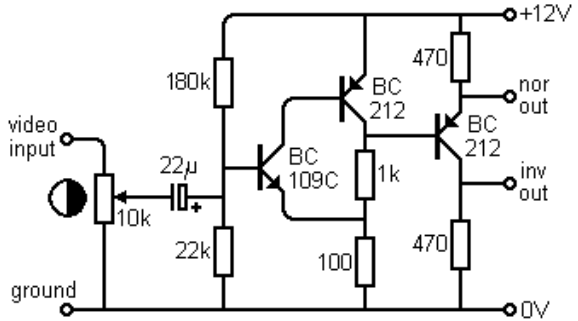


Simple inverting/non inverting preamplifier

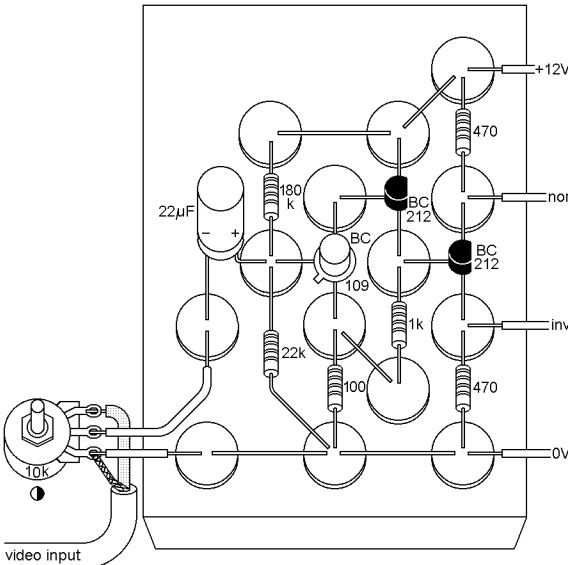
This simple three-transistor circuit has an amplification of 10x and provides both an inverting and non-inverting output. It can be used to obtain sufficient video signal to drive the single FET LED driver circuit from a low level earphone output of a CD player, or as a general-purpose NBTV amplifier.

The circuit

For use with the LED driver the potentiometer is moved from the input of the LED driver to the input of the preamplifier, as only one contrast control is needed. The input capacitor of the LED driver can then be connected directly to the normal or inverting output of this amplifier.



Building



The circuit could be built on MDF with self-tapping screws and washers, just like the LED driver. However, if you prefer to use a soldering iron rather than fixing with screws, try using drawing pins as connection points and solder the components between them. Locate the small tab on the BC109. The centre wire (base) has to be bent underneath the can in the opposite direction.

In operation

After switching on it takes some seconds for the voltages to stabilise. This will temporarily overload the LED

driver. This will also happen when you switch from "inv" to "nor". So be sure to install the overload protection for the LED driver when using this preamplifier. After stabilisation the DC voltage across both 470 ohm resistors should be 2.5 to 3.5 V. This indicates that the amplifier is working properly.