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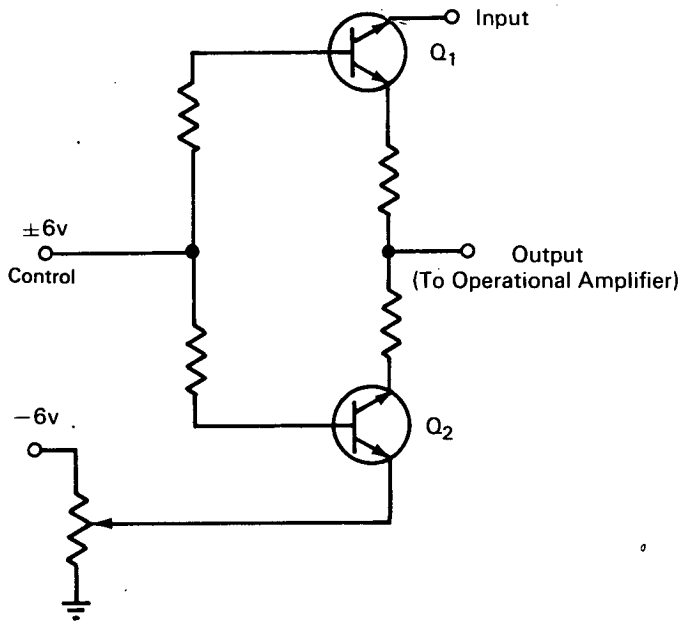
Brief 67-10559

NASA TECH BRIEF

Solid State Zero-Bias Bilateral Switch



This circuit was designed to switch a ±2.5 volt peak, dc to 300 kHz input to an operational amplifier as controlled by a +6 (*on*) or −6v (*off*) signal.

The novel feature of this circuit is the use of the bilateral transistor Q_2 which draws a saturation current of equal amplitude and opposite polarity to the saturation current of the bilateral transistor Q_1. As a result, the dc bias effect is canceled at the output (input summing point of the operational amplifier). Since Q_2 is switched *on* whenever Q_1 is *on*, and *off* when Q_1 is *off*, the operational amplifier has a true zero dc bias in both signal *off* and signal *on* conditions.

Notes:

1. This switch should be useful in a wide variety of signal switching and control circuits.
2. Inquiries concerning this switch may be directed to:

   Technology Utilization Officer
   Goddard Space Flight Center
   Greenbelt, Maryland 20771
   Reference: B67-10559

Patent status:

No patent action is contemplated by NASA.

Source: J. M. Husted
of Radio Corporation of America
under contract to
Goddard Space Flight Center
(GSFC-532)

Category 01

IS-SAF
RM. 1427 KSC HQS.
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