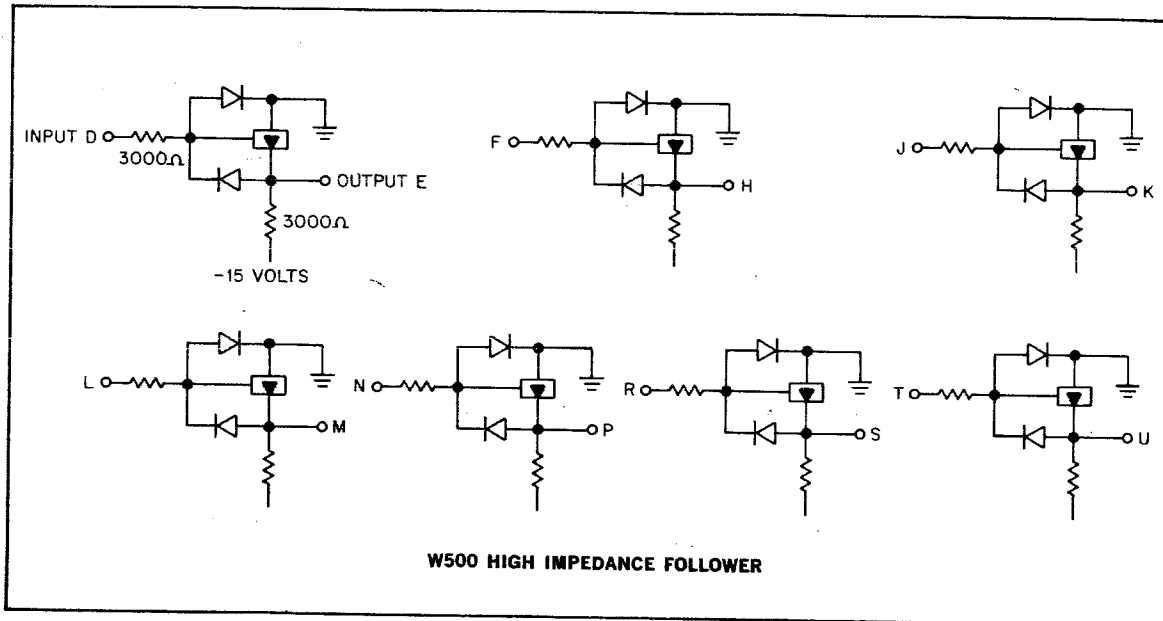


HIGH IMPEDANCE FOLLOWER

TYPE W500

W
SERIES



High impedance signal sources such as photo-cells and low-current instrumentation amplifiers can drive Schmitt Trigger W501 or logic gates through a W500 circuit. The module contains 7 fault-protected circuits, each comprising two cascaded emitter-follower amplifiers. Input voltage excursions up to $\pm 30\text{v}$ or short-circuits from output to ground are harmless. Outputs can go as negative as -15v with very light loading, but will not exceed -10v when driving a W501 input.

INPUTS: Excursions Between -0 and -3v : Input currents of $100\ \mu\text{a}$ or less (typically 50) flow toward the driving source, tending to bring it more positive. Low frequency equivalent input resistance exceeds $10\text{K}\Omega$ even while the output voltage is passing through the input threshold region of a Schmitt circuit or diode gate. Voltage offset between input and output: less than $\pm 1/3\text{v}$.

Larger Excursions: A diode shorts the active components of the follower circuit if the input voltage goes more positive than ground or more negative

than -15v , and the input equivalent circuit changes to 3000Ω returned to the limiting voltage. If the output is connected to a clamped load for driving grounded loads such as B-series inverters, the limiting negative voltage changes from -15 to -3v .

OUTPUTS: Excursions Between 0 and -3v : Each circuit can drive up to $15\ \text{ma}$ at ground. Driving capability at -3v is $3\ \text{ma}$ more than that of any clamped load attached. If the output is brought to ground by a paralleled transistor collector, not only the internal $5\ \text{ma}$ load and the external load must be driven, but also the current demanded by the input 3000Ω resistance returned to the negative input voltage present. $10\ \text{mc}$ emitters may not be driven. **Larger Excursions:** If no clamped load is attached, each output will follow its input as far negative as its internal 3000Ω resistor to $-15\ \text{v}$ will drive the load. Output voltage cannot go more positive than ground.

POWER: $+10\text{v(A)}/18\ \text{ma}$; $-15\text{v}/35\ \text{ma}$.