

Bad Buffer - JR 22

Bad Buffer is an interface, a go-between, making raw current and voltages usable in different contexts. Its raison d'être is compatibility, yet often with a perverted twist. It is not only a buffer but shaper of signals. Control voltages or audio signals can be amplified, clamped, clipped, offset and inverted. And with extreme overdrive and DC offset, it can be 'bad'.

Notes

VR1 inverter - cross-fade between IC1A (inverting) and IC1B (non-inverting)

VR2 gain - the distortion level is set by the ratio between the input resistor (R5) and the feedback resistor (VR2): e.g., $100/1 = 100\times$ gain; $100/10 = 10\times$ gain (see Bad Buffer Distortion for simplified distortion only version)

VR3 offset - voltage/waveform

R5 and R6 values should be matched to keep the input at unity gain (lowest possible ratio between input and feedback resistor 1/1)

Virtual Ground (VG) - R9 and R10 create a voltage divider for the creation of a VG

The 'spare' op-amp is used as a buffer to provide greater stability for the VG

R11 (1k) is optional and is only needed with heavy capacitive loads

