



## Phase Shifter

This circuit demonstrates one of the most popular sounds of the late 70's and 80's for both guitarists and keyboardists, which in the 90's has been making a comeback in recordings.

In the time domain, this circuit produces at the output a 0 to 180-degree phase shift in the input signal. Each of the four phase-shift stages are brought up and down by an adjustable LFO, which provides the sweep drive to a network of JFETs, acting as variable resistors at the input to each stage.

The output is derived from a mixture (mixed at the PNP transistor) of the dry buffered signal, the 180-degree phase-shifted signal, and a tap at the 90-degree point in the network.

When viewed in the frequency domain, this whole scheme appears to produce a pseudo comb filter, the notches and peaks (hence the pseudo moniker) of which are set at octave intervals, producing the characteristic, "phasing" sound

This design is "very" similar to the commercial, "MXR Phase 90" effect, circa 1978.

