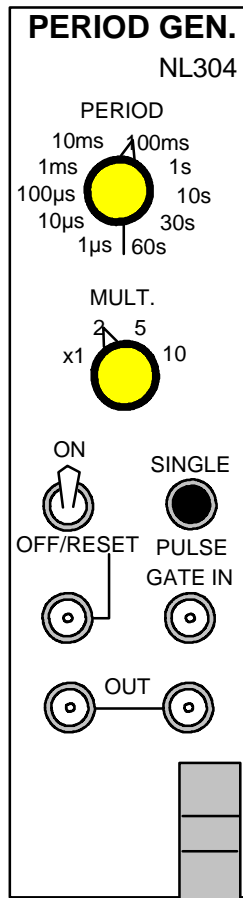


NL304 - PERIOD GENERATOR

Introduction

The **NL304 PERIOD GENERATOR** contains a crystal oscillator and frequency dividers for producing a precise, stable frequency standard. It can be externally gated (GATE IN) and synchronised with an external source (RESET input). The pulse train can be switched off and a single output pulse can be produced manually by a front panel push switch.

The NL304 is the basic "clock" of the **NeuroLog™ System** as it provides the "fine grain" (1 microsecond increments) necessary for digital control of pulse width, cycle duration, delay, etc. using the NL603 Counters.

The pulse repetition rate is controlled by two rotary switches. A ten position switch gives 8 decades of control between 1 microsecond and 10 seconds plus 30 and 60 seconds. The other switch is a multiplier with settings of x1, x2, x5, x10.

The operation of the NL304 is self-explanatory except for the GATE IN and RESET inputs. No output pulses are produced when the GATE IN input is held at a low logic level; when the input goes high, the gated output pulses are synchronously generated (the GATE IN input is high when no external connection is made to it). A brief high logic pulse at the RESET input also synchronises the output pulse train; the first pulse generated following the reset pulse is delayed one period from the negative edge of the input pulse. A sustained high logic level at the RESET input inhibits output pulse generation.

Specification

Output	: TTL pulses
Period accuracy	: 0.01%
Period range	: 1 microseconds to 10 minutes
Period	: 1, 10, 100 microseconds 1, 10, 100 milliseconds 1, 10, 30, 60 seconds
Multiplier	: 1, 2, 5, 10
Output pulse width	: 0.5 microseconds

