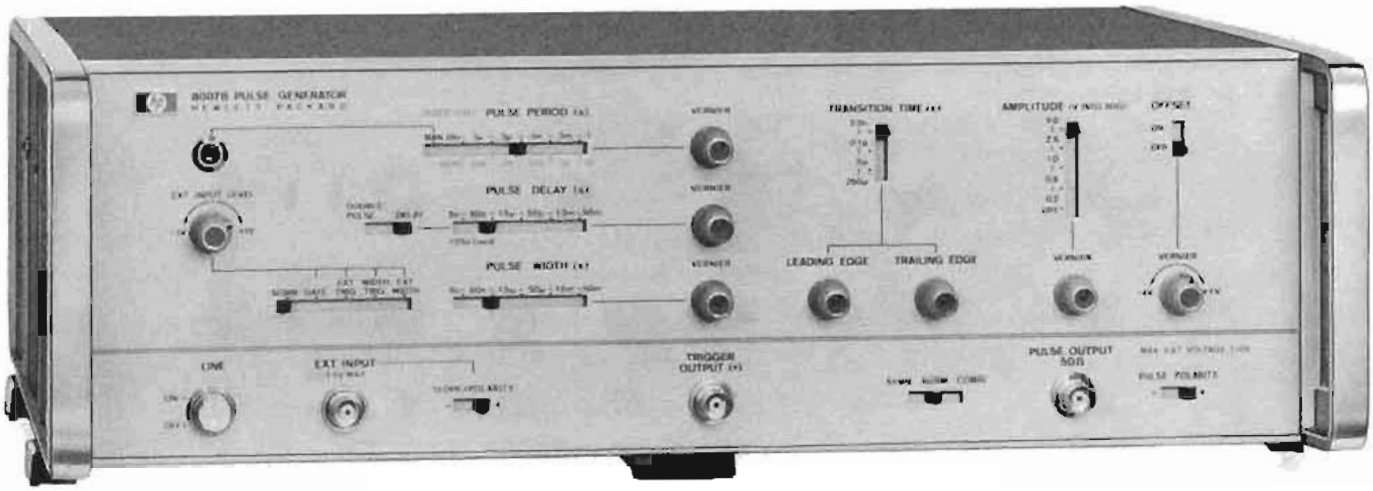
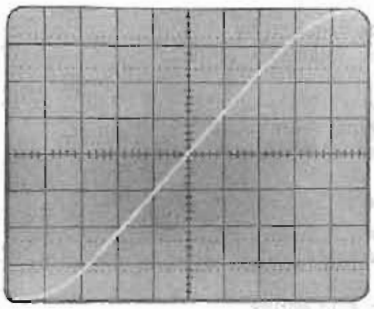
PULSE GENERATORS

Clean waveshape, all parameters variable

Model 8007B

- 100 MHz repetition rate
- Variable transition times down to 2 ns.
- Extremely linear slopes
- Designed to drive TTL-S and commonly used ECL





1 ns/cm

0.5 V/cm

1 GHz bandwidth

The 8007B is a high speed pulse generator that is well suited for STTL and ECL applications.

The output can be set to positive or negative polarity, complement or symmetrical to ground. A high dc-offset of up to ±4 V is also included.

External triggering and synchronous gating are provided. The trigger level is adjustable for all externally controlled modes with the slope polarity selectable. This is very useful for avoiding malfunctions caused by noise and ringing on the external trigger signal.

In "External Width" mode the external input and pulse output have equal width. Transition times and amplitude of the output pulse can be set by the front panel controls. This mode is useful for shaping NRZ signals, as the width information is passed on to the output pulse unchanged.

The "Width Trigger" mode is suitable for RZ signal shaping. Delay, width, transition times and amplitude are determined by the front panel controls.

Specifications

Pulse characteristics

(50Ω source and load impedance):

Transition times: <2 ns to 250 μs, three ranges (common for both transition times). Independent verniers for adjusting leading and trailing edge within each range up to maximum ratios of 1:50 or 50:1.
Linearity: maximum deviation from a straight line between 10% and 90% points ≤5% of pulse amplitude.
Preshoot, overshoot, ringing: <±5% of pulse amplitude.
Pulse width: <5 ns to 50 ms in five ranges. Vernier provides continuous adjustment within ranges.
Width jitter: <0.1% on any width setting.
Maximum duty cycle: normal >50%; complement approx. 100%.
Amplitude: 5 V max (10 V across open circuit) to 0.2 V in four ranges; vernier adjustment within ranges. Pulse can be switched off.
Pulse output: + or − polarity selectable; normal, complement, or symmetrical to ground.
Source impedance: 50Ω ± 4Ω shunted by typ. 10 pF.
DC-offset: ±4 V across 50Ω load. Independent of amplitude setting, can be switched off.
Pulse delay: <30 ns to 50 ms with respect to trigger output. Five ranges, with continuous adjustment within ranges.
Delay jitter: <0.1% on any delay setting.

Repetition rate and trigger

10 Hz to 100 MHz in 5 ranges.
Continuous adjustment within ranges.
Period jitter: <0.1%.
Double pulse: available only up to pulse rate setting of 50 MHz, representing an output pulse rate of 100 MHz.
Trigger output: >+1 V across 50Ω, 4 ns ± 2 ns wide.

External triggering (0 to 100 MHz)

Delay: approx. 15 ns between trig. input and trig. output.
Manual: front panel pushbutton for single pulse.

External width and width trigger

External width: output pulse width determined by width of drive input.
Width trigger: external drive input switched to the width generator. Pulse width determined by front panel width setting.
Rate generator: provides trigger pulses independent of drive input.

Synchronous gating

Gating signal turns generator "on." Last pulse is completed even if gate ends during pulse.

External input

Impedance: 50Ω, dc-coupled. Max input ±5 V.
Level: adjustable from +1 V to −1 V. Polarity: + or −
Sensitivity: sine waves 1 V p-p; pulses 1 V.

General

Operating temperature range: 0°C to +55°C.
Power requirements: 115 or 230 V +10%, −15%, 48 to 440 Hz, 100 VA (maximum).
Weight: net, 8 kg (17.6 lb). Shipping, 9 kg (19.8 lb).
Dimensions: 425 mm wide × 140 mm high × 344 mm deep (16¾" × 5½" × 13⅝").

Options	Price
908: Rack Flange Kit	add $10
8007B Pulse Generator	**$2000**