DATA GENERATORS & DATA ANALYZERS
9-Bit Parallel, 32-Bit Serial, 50 MHz Word Generator
Model 8016A

- 2 complementary outputs per channel, RZ/NRZ formats
- Variable RZ width, 4 delay channels
- Channel serializer
- TTL/ECL output levels selectable

The HP 8016A is a 9-channel data generator capable of serialization up to 256 bits. For the digital designer, the HP 8016A is a natural companion to multichannel data display devices such as logic analyzers. As a bench or systems component, the HP 8016A provides programmable digital patterns plus adjustable timing parameters necessary for testing ICs and circuit boards.

Functional Test
Bit pattern programmability combined with fast cycle time (50 MHz clock) make the HP 8016A especially effective in simulating worst-case conditions, e.g., high-speed IC testing. The HP 8016A saves time in component evaluation environments because test setups can be rapidly built and reconfigured to meet the demands of testing small quantities of a wide variety of IC types.

Specifications
Data capacity: 8 data channels plus 1 strobe channel, each 32 bits. 8 data channels can be serialized as 4 64-bit channels, 2 128-bit channels or a single 256-bit channel.
Data loading: address channel, enter 32 serial bits in that channel. Alternatively, address parallel word, enter (max 8) bits in that word. Addressing/entry by pushbuttons/LEDs or via HP-IB (option 001).

Data Outputs: (50 Ω source into 50 Ω load).
Format: independent RZ/NRZ selection in each channel.
RZ width: single continuous adjustment in ranges 10-100 ns, 0.1-1 µs
Width jitter: ≤0.2% ± 50 ps
Complement: simultaneous normal and complement outputs for each channel.
Delay: channels 2, 4, 6, 8 can be delayed independently within the ranges 0-100 ns, 0.1-1 µs with respect to odd channels.
Jitter: ≤0.1% ± 5 ps
Skew (undelayed): ≤ 1 ns
Levels: ECL/TTL selectable
Transition times: ≤ 3.0 ns (ECL ≤ 2.5 ns)
Bit Rate
Internal: 0.5 Hz to 50 MHz
External: dc to 50 MHz, or manual.

Data Cycling
Auto: Sequence recycles continuously.
Single cycle: Sequence is triggered/gated by external pulse/level.

General
Operating temperature: 0°C to +50°C
Power: 100/120/220/240 Vrms. +5%, −10%; 48 Hz to 66 Hz, 200 VA (maximum)
Weight: net, 14.5 kg (32 lb). Shipping 16 kg (35.3 lb).
Size: 177 H x 426 W x 422 mm D (7" x 16.8" x 16.6").

Ordering Information
HP 8016A Word Generator $8280
Opt 001: HP-IB for data loading* add $745
Opt 807: Front Handle Kit (Part No. HP 5061-0090) add $65
Opt 808: Rack Flange (Part No. HP 5061-0078) add $35
Opt 809: Opt 907, 908 combined (Part No. HP 5061-0084) add $90
Opt 910: Additional Operating and Service Manual add $48

*HP-IB cables: Refer to page 675

HP 8016A with Option 001

(Images and diagrams are not visible in the text.)