

## SONDES DE MESURE DE L'ANALYSEUR LOGIQUE HP 1600A

FICHE N° 3938

PRÉSERVER  
SAUVEGARDER  
VALORISER

Période de fabrication : 1975-1999

Fabricant : Hewlett-Packard

Domaines : Informatique et Communication, Physique

Sous-domaines : Electronique

Organisme : Université de Rennes

Ville : Rennes

Modèle : HP 10230 B et 10231B

Matériaux : Plastique

### Description

Une série de quatre sondes de mesures électriques est fournie avec l'analyseur logique Hewlett-Packard HP 1600A. Elles sont contenues dans des petites housses en plastique et se présentent sous la forme de petits boîtiers en plastique noirs reliés à l'appareil par un câble gris muni d'une prise ad-hoc. Des petits fils électriques munis de pinces "grippe fils" sortent du boîtier et vont pouvoir être connectés au circuit électronique à étudier, portes logiques par exemple.

Il existe plusieurs types de sonde selon la fonction que l'on souhaite utiliser : sonde de données 6 bit (HP 10231B) ou de signal d'horloge (HP 10230B).

### Utilisation

Ces sonde de mesures électriques équipaient l'analyseur logique Hewlett-Packard HP 1600A. Elles étaient branchées sur l'appareil par un connecteur et connectées aux circuits électroniques à étudier par des petites pinces en plastique. L'analyseur d'état logique était utilisé par les enseignants des travaux pratiques d'électronique de la faculté des sciences de Rennes pour initier les étudiants aux circuits logiques TTL.



**Fig. 1.** Model 1600A Logic State Analyzer monitors digital data appearing on as many as 16 lines and displays the data as words of 1's and 0's in tabular form running from top to bottom on the left half of the display. The right half of the display is used for data stored in an auxiliary memory or for data acquired by a companion instrument, the Model 1607A.

is pressed, initiating a new data acquisition cycle.

The trigger may be any of the words in the data stream. A front-panel switch register enables the user to select the word that serves as the trigger. It is thus possible to view any part of an executing digital program by using the first word of the sequence as a trigger. The delay capability may be used to page through long sequences. Or, the digital sequence leading up to an unallowed state caused by a fault may be examined, using the unallowed word as the trigger.

The trigger word also causes the instrument to generate an output pulse that can serve as a trigger for an oscilloscope or other instruments in a test set-up. This makes it possible to view the waveforms that occur at a defined point in time with respect to the trigger word.

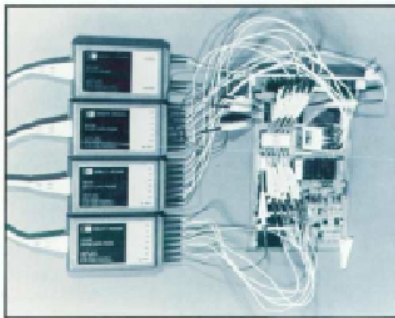
To provide flexibility in applications of the instrument, data may be clocked in on either the positive-going or negative-going edge of the clock pulses; the data may be interpreted as either positive-true or negative-true logic, and the logic threshold is adjustable. The miniature probe system developed for the Model 1601L, which facilitates making the many closely-spaced connections to the circuit under test, is also used with the new logic state analyzer (Fig. 2).

#### Branching Out

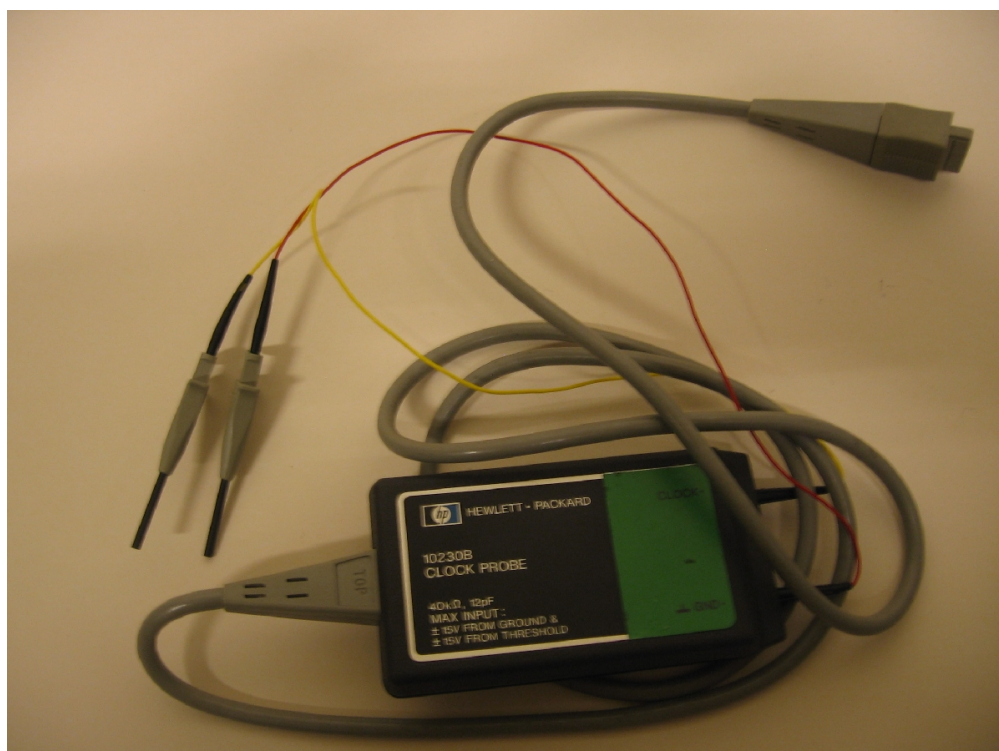
The new Model 1600A Logic State Analyzer broadens this basic capability by being able to look at 16 lines simultaneously, four more than the 12-bit capa-

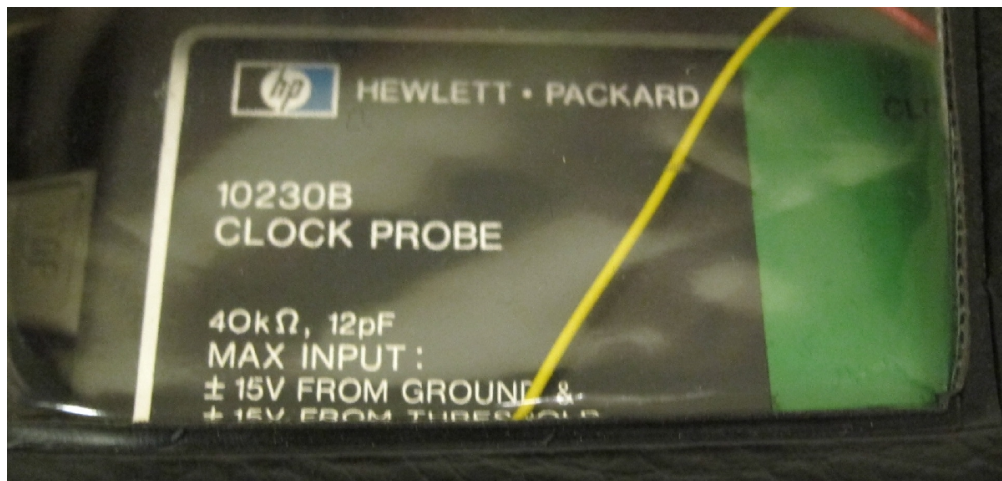
bility of the earlier Model 1601L. When working with Model 1607A, Model 1600A can look at and display data appearing at 32 points (Fig. 3).

Two qualifier inputs have been added. When used in the QUALIFIER DISPLAY mode, these make it possible to be selective in clocking data into memory. For example, when monitoring a multi-use bus that has time-multiplexed addresses, instructions, and data, only the information pertinent to a particular operation need be stored for display.



**Fig. 2.** Miniature probes facilitate connections to closely-spaced test points. The probes are connected through short leads to input circuits within the pods to minimize circuit loading.

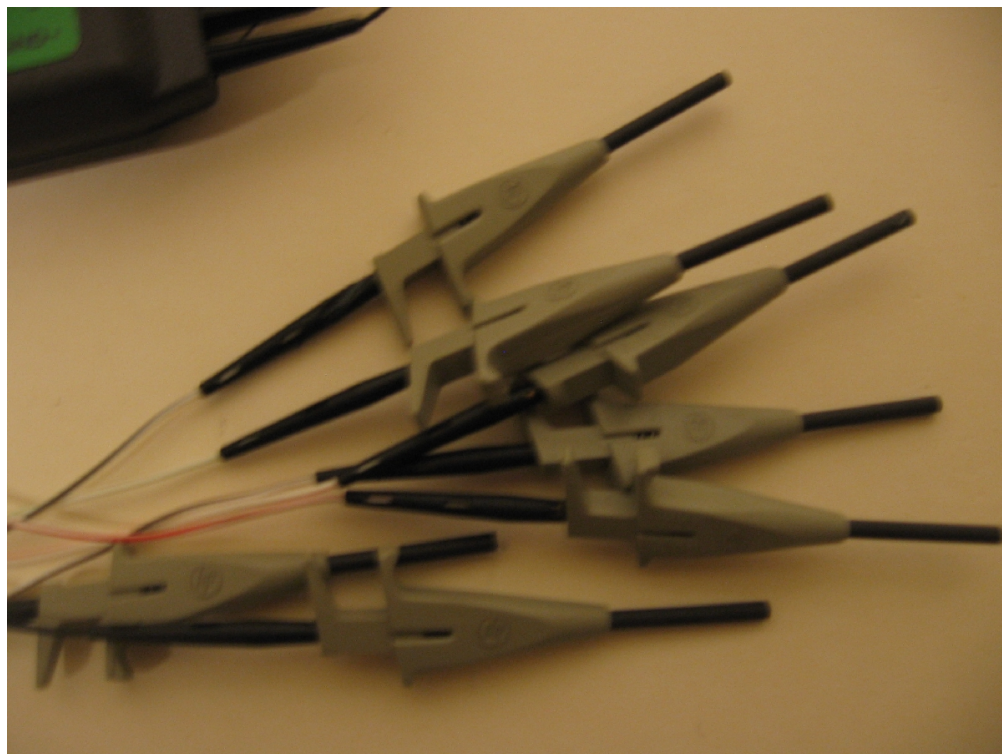
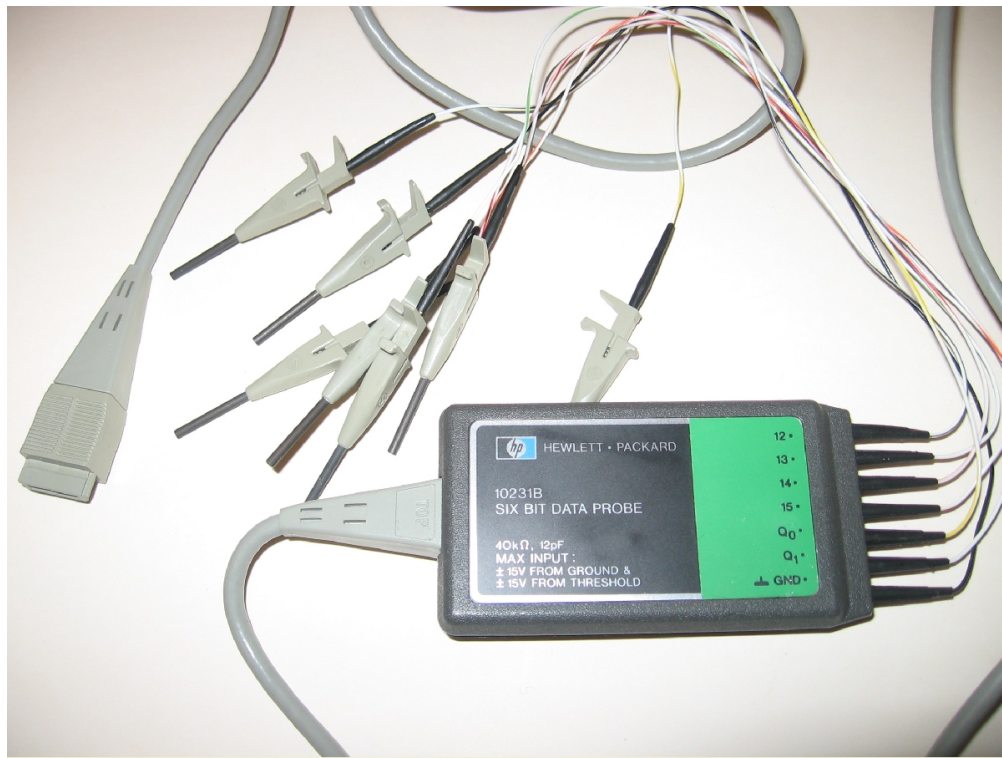












OPERATING NOTE/JANUARY 1976

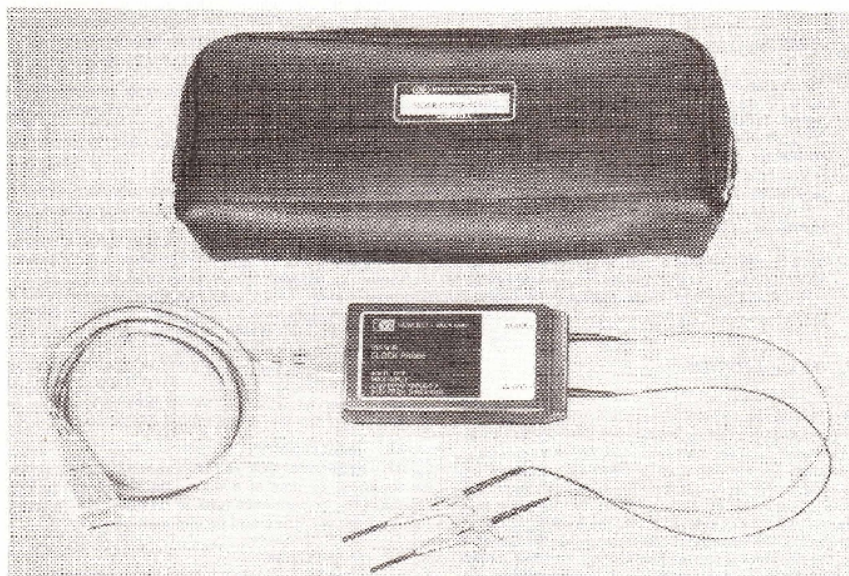


Figure 1. Model 10230B Clock Probe

10230B-901-01-78

**1. INTRODUCTION.**

2. This operating note provides service and operating information for the Hewlett-Packard Model 10230B Clock Probe (figure 1).

**3. DESCRIPTION.**

4. The Model 10230B is an active probe providing complementary TTL (transistor-transistor logic) clock signals to a logic analyzer (i.e., Hewlett-Packard Model 1601A Logic State Analyzer or Hewlett-Packard Model 1620A Pattern Analyzer) without significant loading of the circuitry under test. Minimal loading is maintained by placing active circuitry in a compact pod located near the point of test. Signal shaping

and amplification is accomplished by a comparator and a TTL line driver. Probe operating power is supplied by the logic analyzer through the interconnecting cable. The Model 10230B connects to a logic analyzer front panel by means of a 17-pin miniature snap-in connector. Refer to table 1 for complete specifications and instrument compatibility for the Model 10230B.

**5. CLAIMS.**

6. Upon receipt, inspect the instrument for damage and if none is noted, accomplish the performance checks. Hewlett-Packard Company guarantees the performance of the instrument as stated in the certification located near the back of this note. If the

Operating Note Part No. 10230-90905  
Microfiche Part No. 10230-90805

PRINTED IN U.S.A.

For More Information, Call Your Local HP Sales/Service Office or, in U.S., East (201) 260-8000, Midwest (312) 577-0400, South (404) 436-6181, West (213) 877-1282. Or, Write: Hewlett-Packard, 1501 Page Mill Road, Palo Alto, California 94304. In Europe, Post Office Box 85, CH-1217 Meyrin 2, Geneva, Switzerland. In Japan, YHP, 1-59-1, Yoyogi, Shibuya-ku, Tokyo, 151.

OPERATING NOTE/AUGUST 1974

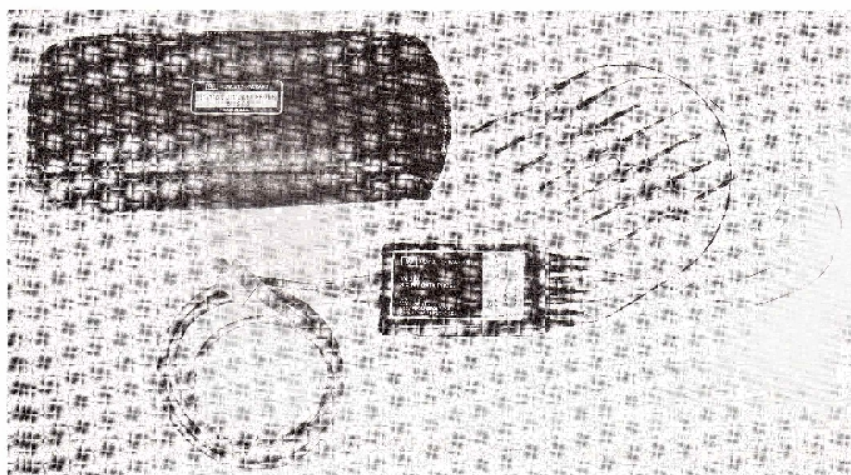


Figure 1. Model 10231B Six Bit Data Probe

### 1. INTRODUCTION.

2. This operating note provides operating and service information for the Hewlett-Packard Model 10231B Six Bit Data Probe (figure 1).

### 3. DESCRIPTION.

4. The Model 10231B is an active probe providing six channels of TTL (transistor-transistor logic) digital data to a Logic Analyzer (i.e., Hewlett-Packard Model 1601A Logic State Analyzer or Hewlett-Packard Model 1620A Pattern Analyzer) without significant loading of the circuitry under test. Minimal loading is maintained by placing active circuitry in a compact pod located near the point of test. Signal shaping and amplification is accomplished by comparators in series with each input. Probe operating power is supplied by the logic analyzer through the interconnecting cable. The Model 10231B connects to a logic-analyzer front panel by means of a 17-pin miniature snap-in connector. Refer to table 1 for complete specifications and instrument compatibility for the Model 10231B.

Table 1. Specifications

#### PROBE INPUTS

INPUT RC: 40  $\pm$ 3K $\Omega$  shunted by  $\leq$ 14 pF.  
INPUT BIAS CURRENT:  $\leq$ 20  $\mu$ A.  
INPUT THRESHOLD: TTL, fixed at  $-1.45 \pm 0.05$  Vdc. Variable to  $\pm$ 10 Vdc.  
MINIMUM INPUT SWING: 0.5V p-p  $\pm$ 5% of threshold voltage.  
MAXIMUM INPUT: Level,  $\pm$ 15 Vdc max. Swing, 15V peak from threshold.

#### INSTRUMENT COMPATIBILITY

HP Model 1601A, Logic State Analyzer.  
HP Model 1620A, Pattern Analyzer.

### 5. CLAIMS.

6. Upon receipt, inspect the instrument for damage and if none is noted, accomplish the performance

10231-90903



For more information, call the local HP Sales Office or East (201) 265-5000, Midwest (312) 677-0400, South (404) 435-6181, West (213) 677-1282. Or, write: Hewlett-Packard, 1501 Page Mill Road, Palo Alto, California 94304. In Europe, Cable "HEWPACKSA" Tel (022) 41.54.00 or write Hewlett-Packard, 1217 Meyrin-Geneva, Switzerland.

PRINTED IN U.S.A.

### Pour nous citer :

Base de la Mission nationale de sauvegarde et de valorisation du patrimoine scientifique et technique contemporain, PATSTEC, Sondes de mesure de l'analyseur logique HP 1600A (Hewlett-Packard), <https://www.patstec.fr/ressources/objets/detail?id=15956>, consulté le 2026-07-28