

MODE D'EMPLOI DU MODULE D'AFFICHAGE HP 141T

FICHE N° 3966

PRÉSERVER
SAUVEGARDER
VALORISER

Période de fabrication : 1975-1999
Fabricant : Hewlett-Packard Company
Domaines : Physique
Sous-domaines : Electronique
Organisme : Université de Rennes
Ville : Rennes
Modèle : HP 141T
Matériaux : Papier

Description

Ce mode d'emploi, en anglais, est relatif au module d'affichage HP 141T fabriqué par Hewlett-Packard. Il a été édité en juin 1976 et comprend 91 pages. Il décrit l'appareil, ses fonctions, ses caractéristiques physiques et les différentes opérations d'installation et de mise en fonctionnement.

Utilisation

Ce module d'affichage accueillait un analyseur de spectre HP 8553B. Cet analyseur de spectre, en provenance du CELAR de Bruz, près de Rennes, a été utilisé en travaux pratiques d'électronique par les étudiants de Maîtrise EEA. De par sa gamme de fréquence très large, il permettait d'analyser différents signaux produits par des montages électronique et d'effectuer ainsi des expériences de traitement du signal.

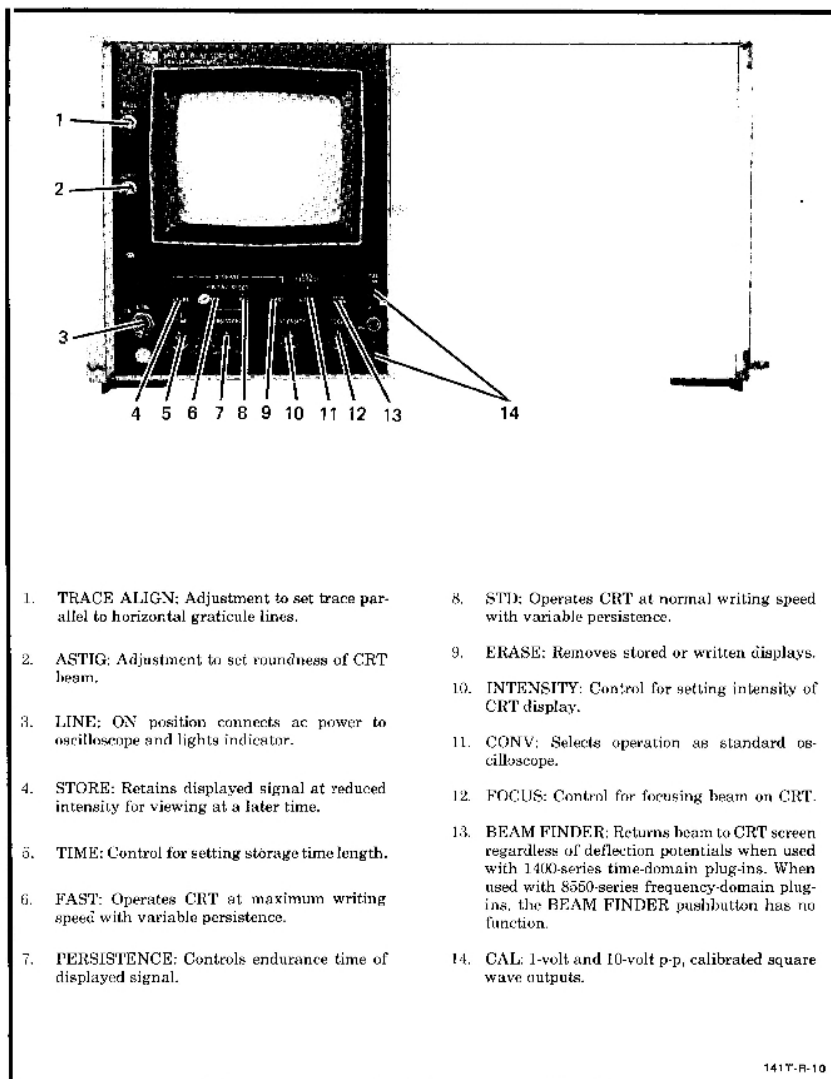


Figure 3-1. Model 141T Controls and Connectors

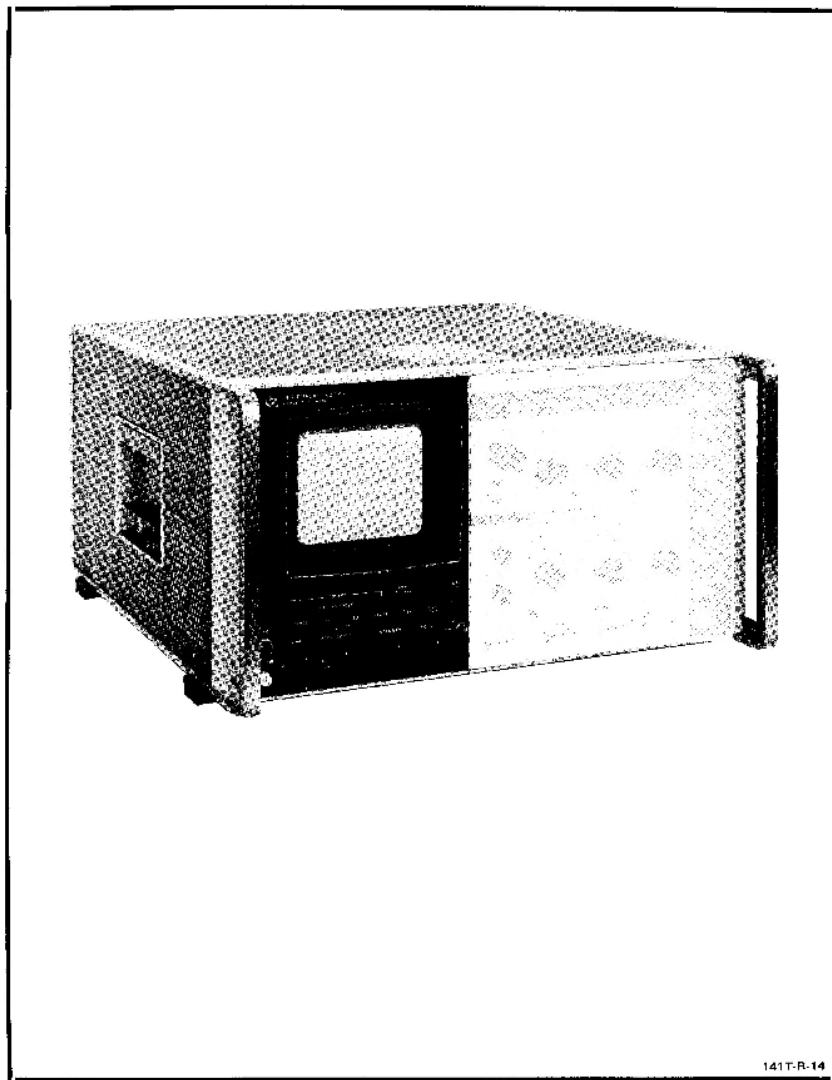


Figure 1-1. Model 141T Display Section

PLUG-INS

Accepts Model 8550-series IF and RF Section spectrum analyzer plug-ins without the use of a center divider shield.

Also, accepts all HP Model 1400-series plug-ins. All plug-ins operate directly into the horizontal and vertical deflection plates. Center shield may be removed to provide double-sized compartment for use with a single, dual axis Model 1400-series unit.

CATHODE-RAY TUBE**Type:**

Post-accelerator storage tube; 9000V accelerating potential; aluminized P31 phosphor; etched safety glass face plate.

Graticule:

8 x 10 divisions (approx. 7.1 x 8.9 cm) parallax-free internal graticule. Subdivisions of 0.2 div per major division on major horizontal and vertical axes.

Intensity Modulation:

AC coupled, +20 volt pulse will blank trace of normal intensity; input terminals on rear panel.

PERSISTENCE**Conventional:**

Natural persistence of P31 phosphor (about 40 usec).

Variable:

STANDARD Writing Speed Mode: Continuously variable from less than 0.2 second to more than one minute.

ERASE

Manual or optional remote (see Section VII options); Erasure takes approximately 350 msec; scope ready to record immediately after erasure.

WRITING SPEED PHOTOGRAPHIC

Conventional operation (using a HP Model 197A camera with f/1.9 lens and Polaroid® 3000 speed-film): 100 div/usec.

WRITING SPEED**Storage:**

Standard Mode: greater than 20 div/ms.
Fast Mode: greater than 1 div/usec.

STORAGE TIME

Standard Writing Speed: more than two hours at reduced brightness (typically four hours). Traces may be viewed at maximum brightness for more than one minute.

Fast Writing Speed: traces may be stored at reduced brightness for more than 15 minutes (typically 30 minutes) or stored at maximum brightness for more than 15 seconds.

Brightness:

100 foot-lamberts in standard mode.

CALIBRATOR**Type:**

Line-frequency rectangular signal, approximately 0.5 usec rise time.

Voltage:

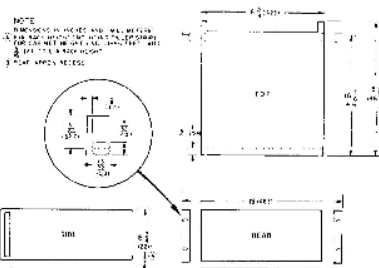
Two outputs: 1 volt and 10 volts peak-to-peak $\pm 1\%$ from 15°C to 35°C, $\pm 3\%$ from 0°C to 55°C.

BEAM FINDER

Pressing BEAM FINDER pushbutton brings trace on screen regardless of setting of horizontal, or vertical position controls.

GENERAL**Power Requirements:**

100, 120, 220 or 240 volts (± 5 to -10%), 48 to 66 Hz (Option H16 48 to 440 Hz), normally less than 285 watts (varies with plug-in units).

Dimensions:**Weight:**

Net, 40 lbs (18 kg) (without plug-ins). Shipping, 51 lbs. (23 kg).

SECTION I

GENERAL INFORMATION

1-1. INTRODUCTION.

1-2. This manual provides operating and service information for the Hewlett-Packard Model 141T Display Section (figure 1-1). The manual is divided into eight sections, each covering a specific topic or aspect of the instrument. All schematics are located at the rear of the manual and can be unfolded and used for reference while reading any part of the manual.

1-3. This section contains a description of the Model 141T. The instrument specifications are listed in table 1-1. Table 1-2 lists and describes the abbreviations used in this manual except Section VI. The parts list is a computer printout and uses computer-supplied abbreviations. Table 1-3 contains a list of current plug-ins available for use with the Model 141T.

1-4. DESCRIPTION.

1-5. The Model 141T is designed for use as a display section for the HP Model 141T/8550-series plug-in spectrum analyzer and as an oscilloscope when used with HP Model 1400-series plug-ins. The instrument has variable persistence (duration of trace afterglow) and storage of CRT displays. Persistence is variable from 0.2 second to more than 80 seconds. A display can be stored (at reduced intensity) for more than 2 hours or displayed at normal intensity for up to 1 minute. Stored displays can be erased in 350 milliseconds.

1-6. Variable persistence is especially useful for viewing slow-sweep signals. The persistence of the signals from electrocardiograms or other bio-chemical phenomena can be adjusted to provide a complete trace, yet to fade fast enough to prevent interference with the next trace. Display persistence of swept frequency and time domain reflectometry measurement readouts can be adjusted to eliminate flicker and still provide high resolution.

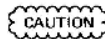
1-7. The storage feature of the instrument can be used to store single-shot waveforms and to later view or photograph the phenomena. Comparison of waveforms can be accomplished by storing several displays separately and then viewing them simultaneously.

1-8. The instrument accepts all HP Model 1400-series plug-in units. Amplifiers with bandwidths to

20 MHz and sensitivities to 100 microvolts per division are available as well as time domain reflectometry and swept frequency indicator units.

1-9. CATHODE RAY TUBE.

1-10. The Model 141T uses a post-accelerator CRT with a non-glare rectangular faceplate. An internal graticule is located on the same plane as the display to eliminate parallax errors. The tube has a 9-kV accelerating potential, and 8 vertical by 10 horizontal divisions. A type P31 phosphor is used in the standard CRT.



The warranty may be void for instruments having a mutilated serial number tag.

1-11. WARRANTY.

1-12. The instrument (except the CRT) is certified and warranted as stated on the inside front cover of this manual. The CRT is covered by a separate warranty. The CRT warranty and a warranty claim form are located at the rear of this manual. Should the CRT fail within the time specified on the CRT warranty page, complete the warranty claim form and return it with the defective CRT. The procedure for returning a defective CRT is described on the CRT warranty page.

1-13. ASSOCIATED EQUIPMENT.

1-14. Plug-ins available for use with the instrument are listed in table 1-3 and in the Hewlett-Packard Instrumentation Catalog. The instrument is normally operated with an IF section plug-in in the lower compartment and an RF section plug-in in the upper compartment. The instrument can also be used as an oscilloscope with a vertical plug-in in the lower compartment and a time-base plug-in in the upper compartment. Both plug-in compartments are the same size, and the plug-in instruments may be interchanged for any special application. The divider shield that separates the two compartments can be removed and one double sized plug-in installed. Blank plug-in kits, both single and double sized, are available for fabrication of special circuits. See table 4-1 for power supply current limitations.



OPERATING AND SERVICE MANUAL

MODEL 141T DISPLAY SECTION

(Including Option 009)

SERIAL NUMBERS

This manual applies directly to instruments with serial numbers prefixed 1615A.

With changes described in Section VII, this manual also applies to instruments with serial numbers prefixed 950— through 1502A.

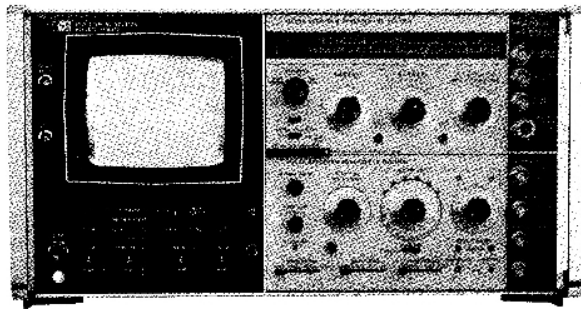
For additional information about serial numbers, see INSTRUMENT AND MANUAL IDENTIFICATION in Section I.

HEWLETT-PACKARD COMPANY/COLORADO SPRINGS DIVISION
1900 GARDEN OF THE GODS ROAD, COLORADO SPRINGS, COLORADO, U.S.A.

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Microfilm Part Number 00141-90814

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DISPLAY SECTION 141T



HEWLETT  PACKARD

HP 141T



Pour nous citer :

Base de la Mission nationale de sauvegarde et de valorisation du patrimoine scientifique et technique contemporain, PATSTEC, Mode d'emploi du module d'affichage HP 141T (Hewlett-Packard Company), <https://www.patstec.fr/ressources/objets/detail?id=15984>, consulté le 2026-07-28