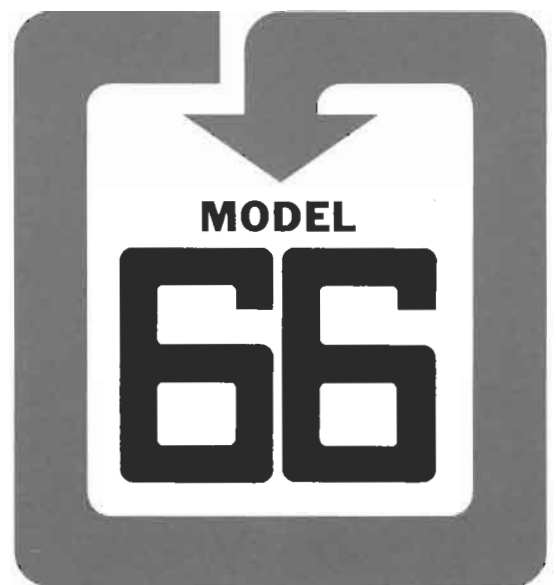
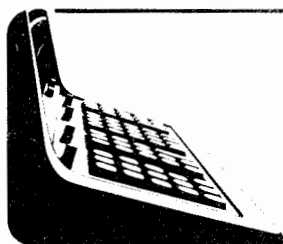




**HEWLETT-PACKARD 9866A PRINTER**  
**PERIPHERAL MANUAL**



# Manual Changes

HP 9866A PRINTER

Peripheral Manual

Part No. 09866-90000



Page 1-2:

Add these items to the accessories table:

| Description             | Qty.   | HP Part No. |
|-------------------------|--------|-------------|
| :                       | :      | :           |
| Option 21 Accessories   |        |             |
| Printer Control Section | 1      | 09820-90019 |
| Interface Cable         | 1      | 09866-51610 |
| Select Code Labels      | 1 pkg. | 7120-2940   |
| :                       | :      | :           |

Throughout the manual:

Change all references to the 9820A calculator to include the 9821A calculator.

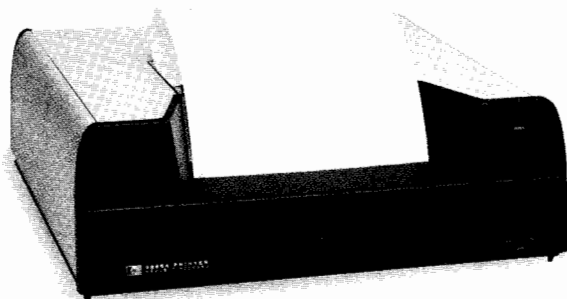
June 1974

Supplement A for 09866-90000





## **HEWLETT-PACKARD 9866A PRINTER**



**HEWLETT-PACKARD CALCULATOR PRODUCTS DIVISION**

P.O. Box 301, Loveland, Colorado 80537, Tel. (303) 667-5000

(For World-wide Sales and Service Offices see rear of manual.)

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## CHAPTER 2: PRINTER INSTALLATION

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## APPENDIX

Technical Specifications

## SALES & SERVICE OFFICES

This manual describes how to install and maintain the -hp- Model 9866A Printer. When the printer is to be used with 9800-Series Calculators, it must be supplied with one of the printer options listed below.

For instructions on how to control the printer with your 9800-Series Calculator, see the Model 30 Operating and Programming Manual if you are using a Model 30 Calculator, or see the Printer Control information supplied with the printer if you are using a Model 10 or 20 Calculator.

The following optional printers are each furnished with an interface cable for use with the indicated 9800-Series Calculator.

- 9866A Option 10 contains a 9810A Calculator interface.
- 9866A Option 20 contains a 9820A Calculator interface.
- 9866A Option 30 contains a 9830A Calculator interface.

When the printer does not contain an 'option', it is supplied with an unterminated interface cable and a manual containing general interfacing information.

The printer uses a unique thermal-printing method which permits a fast, non-impact printout by using special heat-sensitive paper. Thermal printer paper is available in packages of two rolls under the following part numbers (discounts are available for large quantities):

Two rolls, Black printout -hp- Part No. 9281-0413  
Two rolls, Blue printout -hp- Part No. 9281-0414

A list of printer technical specifications is at the back of this manual.

Service agreements are available for the printer from the nearest -hp- Sales and Service Office.

## PRINTER OPTIONS

## ORDERING PRINTER PAPER

## SPECIFICATIONS

## SERVICE CONTRACTS

SUPPLIED  
ACCESSORIES

The accessories listed below are supplied with the printer.

| Description                                                                    | Quantity | -hp- Part No. |
|--------------------------------------------------------------------------------|----------|---------------|
| Peripheral Manual                                                              | 2        | 09866-90000   |
| Interface Cable*                                                               | 1        | 09866-61606   |
| Power Cord†                                                                    | 1        | 8120-1378†    |
| Spare Fuses:                                                                   |          |               |
| 1.5A, 250V, Slow-blo                                                           | 2        | 2110-0304     |
| 3.0A, 250V, Slow-blo                                                           | 1        | 2110-0381     |
| Dust Cover                                                                     | 1        | 4040-0504     |
| Printer Paper                                                                  | 2 rolls  | 9281-0414     |
| <b>Option 10 Accessories:</b>                                                  |          |               |
| Printer Control Section                                                        | 2        | 09810-90080   |
| Printer Exerciser Program<br>(consists of a pre-recorded card<br>and envelope) | 1        | 09810-90081   |
| Interface Cable                                                                | 1        | 09866-61610   |
| Select Code Labels                                                             | 1 pkg.   | 7120-2940     |
| <b>Option 20 Accessories:</b>                                                  |          |               |
| Printer Control Section                                                        | 2        | 09820-90019   |
| Supplement 'J' for the Model 20 Electrical<br>Inspection Booklet               | 1        | 09820-90067   |
| Interface Cable                                                                | 1        | 09866-61610   |
| Select Code Labels                                                             | 1 pkg.   | 7120-2940     |
| <b>Option 30 Accessories:</b>                                                  |          |               |
| Interface Cable                                                                | 1        | 09866-61630   |
| Dust Cover                                                                     | 1        | 4040-0505     |
| Power Cord, inter-instrument                                                   | 1        | 8120-1575     |

\*This item is not supplied with Options 10, 20, or 30.

†A different U.L. approved power cord, -hp- Part No. 8120-0698, should be used for 220 or 240V operation in the U.S.A.

INITIAL  
INSPECTION

The printer and its accessories were carefully inspected before they were shipped to you. Please verify that the correct accessories are present; then inspect the printer for physical damage.

To check printer operation, refer to the Model 30 Operating and Programming Manual if the printer is supplied with Option 30, or refer to the Printer Checkout Procedure supplied with the printer if the printer is supplied with Option 10 or Option 20. The basic printer is not supplied with a checkout procedure, although printer electrical operation is described in a special manual supplied with the basic printer.

If any damage or electrical malfunction is found, contact the nearest -hp- Sales and Service Office; office locations are listed at the back of this manual.

The printer operates from nominal power line voltages of 100, 120, 220, or 240 volts ac. The range of operation is within +5% and -10% of each nominal voltage. Two switches on the printer back panel allow selection of any one of the four nominal voltages (see Figure 1). The line frequency must be within 48 to 66 Hz and the printer requires a maximum of 250 voltamps.

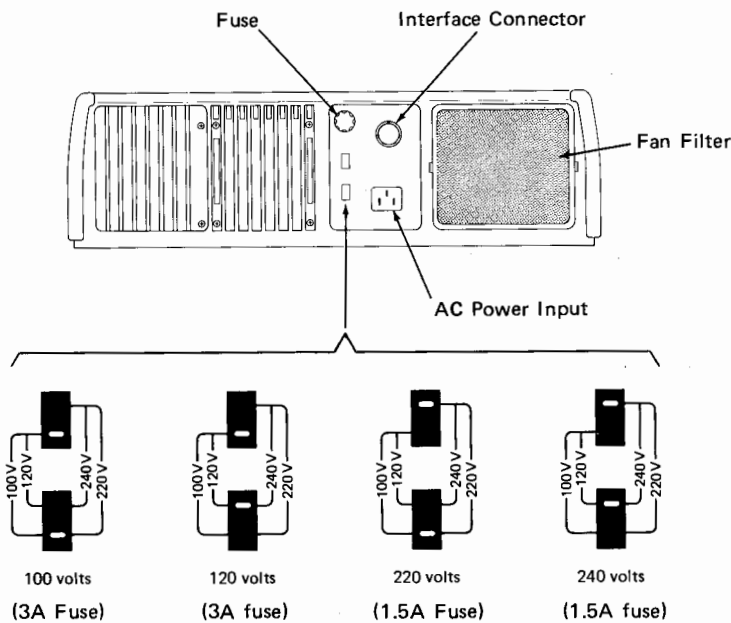


Figure 1. The Printer Back Panel

To protect operating personnel, the National Electrical Manufacturers' Association (NEMA) recommends that the printer cabinet be grounded. The printer is equipped with a three conductor power cable which, when connected to an appropriate power receptacle, grounds the printer cabinet.

The printer must be fitted with a 3.0 amp fuse for 100/120V operation and a 1.5 amp fuse for 220/240V operation.

### WARNING

BEFORE CHANGING THE FUSE, BE SURE THAT THE PRINTER IS DISCONNECTED FROM ANY POWER SOURCE.

Always be sure that the correct fuse is used, since failure to follow this precaution may result in needless damage to the printer if a printer malfunction or an unusual line voltage occurs.

### POWER REQUIREMENTS



### GROUNDING REQUIREMENTS

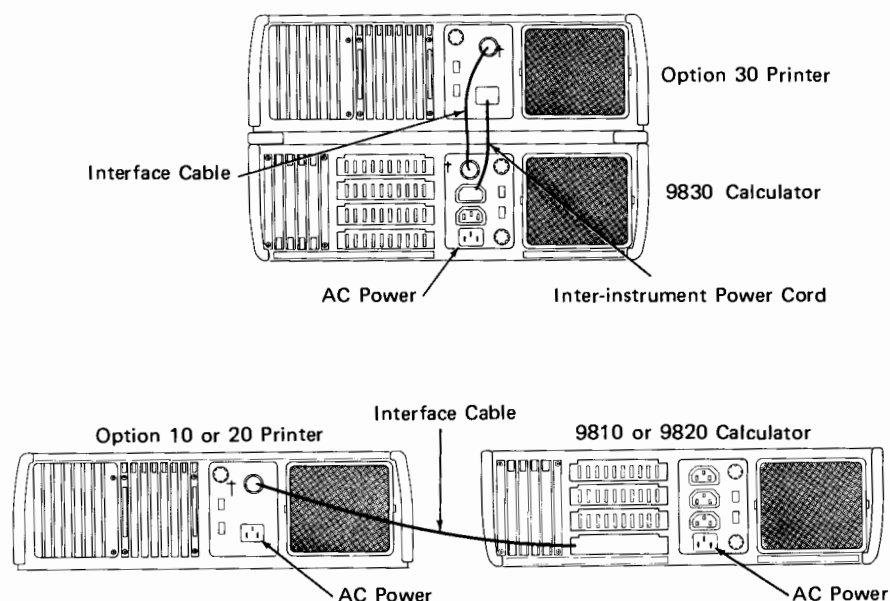
### PRINTER FUSE



### INITIAL TURN-ON PROCEDURE

1. With the printer disconnected from any ac power source, verify that the correct fuse is installed for the line voltage in your area (see the preceding paragraph).
2. The two slide switches located on the rear panel (see Figure 1) must be set to the particular line voltage to be used. Each switch is set by inserting the tip of a small screwdriver into the white slot and then sliding the switch so that the slot is opposite the line corresponding to the desired voltage.
3. Switch the LINE switch, located on the front of the printer, to the OFF position. Connect the power cord to the ac power input connector (see Figure 1) and plug the other end of the cord into a suitable ac power outlet.
4. If you are using the printer with a Model 10, 20, or 30 Calculator, connect the interface cable as shown in Figure 2. If the printer is not to be used with a 9800-Series calculator, refer to the interfacing information in the manual supplied with the printer.
5. Switch the LINE switch to the ON position; the light above the switch indicates when the printer is switched ON.

The amber light below the PAPER button lights when paper is not loaded in the printer mechanism (the printer will not operate unless it is loaded with paper).



† To connect the interface cable to the printer or a Model 30 calculator, rotate the connector until it is aligned with the socket on the instrument back panel, then twist the knurled sleeve clockwise to lock the connector in place (the connector is unlocked by twisting the sleeve counter-clockwise).

Figure 2. Printer Interface Connections

Printer paper is loaded by using the following procedure. The procedure assumes that the printer is turned ON.

1. Lift the access cover on the top of the printer.
2. Remove and discard the paper core of any previous roll. If the remaining roll is small and a new roll is to be used, remove the old roll by:
  - a. Unrolling and lifting it upwards until the roll is above the printer; then,
  - b. Grasp the roll firmly and pull it upward and forward; the paper guide will tear the paper off cleanly.
3. If any paper remains in the printer mechanism, remove it by pressing the PAPER button until the paper stops moving.
4. Remove the first layer of paper from a new roll. Be sure the paper has a cleanly torn or cut edge, as paper with a ragged edge will probably not load properly.
5. Insert the new roll such that the free end is positioned as shown on the back of the access cover. Press the PAPER button until paper appears at the front of the printer.

## LOADING PRINTER PAPER

If your printer is connected to a Model 30 Calculator, the printer is assigned select code '15', since Model 30 printer commands automatically specify that select code. However, when the printer is used with a Model 10 or Model 20 Calculator, you should read the following information on the printer select code.

## PRINTER SELECT CODE

Since all calculator peripheral devices are connected in a 'party-line' fashion, each device must have a unique 'address' so that the calculator can specify which device should respond to each operation. The printer address (or select code) consists of a one or two-digit number and is determined by the circuitry on the interface card (see Figure 2). Each calculator-to-printer command must include the correct select code, thereby specifying which interface card is to respond to which operation.

The printer can be set to any one of nine select codes by following the procedure given below. However, since each Option 10 or Option 20 interface card is preset to select code 8 at the factory, printer programming information (program listings and pre-recorded programs) supplied by -hp- will usually specify select code 8. Therefore, to run programs supplied by -hp-, you must either reset your printer to respond to select code 8 or modify each printer command in the program to specify the correct select code. The Printer Control section of your Peripheral Control Block Operating Manual describes which part of each printer command specifies the select code.

**PRINTER  
SELECT  
CODE**  
(continued)

1. Switch the calculator and the printer OFF.
2. Disconnect the printer interface card from the calculator. Remove the four screws located on the top of the card assembly; then, turn the card over and lift off the bottom cover.
3. Locate the Select Code Switch (see Figure 3). Raise the hinged cover on the switch. Using a small, flat-blade screwdriver; *carefully rotate* the selector tab until it is positioned at any desired select code number from 1 to 9 (numbers are printed on the side and on the top cover of the switch). Before closing the cover, be sure the slot in the selector tab is positioned perpendicular to the length of the switch.
4. Close the switch cover and replace the interface card bottom cover. Secure the cover with the four screws which were removed in step 2.
5. Replace the Select Code label on the interface card with one which indicates the new select code. A package of labels is supplied with Option 10 and 20 Printers.
6. Reconnect the interface card to the calculator and turn the calculator and printer ON. Verify that the desired select code is set by performing some printer operations (or running a program) which specify the new select code.

If you have difficulty in setting the select code, contact the nearest -hp- Sales and Service Office for assistance.

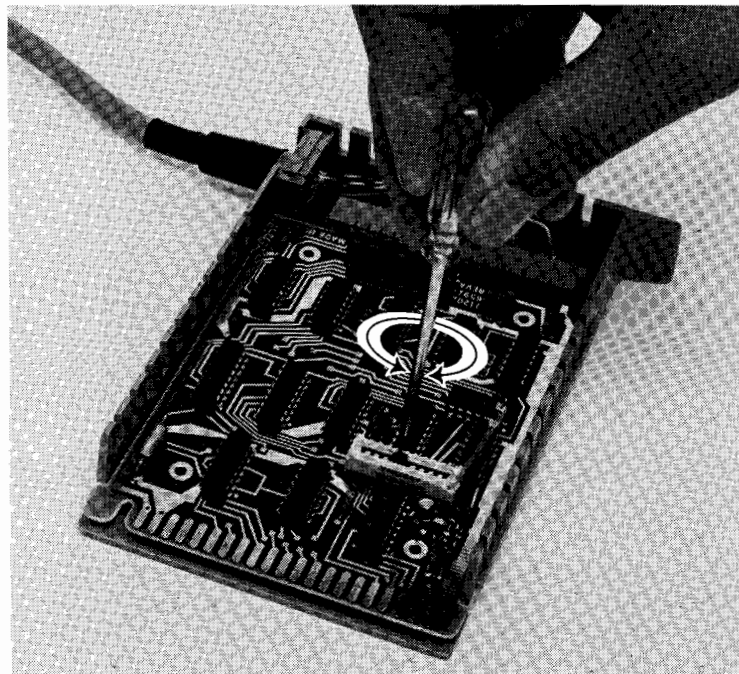


Figure 3. Setting the Printer Select Code

An appropriate peripheral control block (ROM block) must be used when the printer is connected to a Model 10 or Model 20 Calculator. This block provides the necessary output commands to enable your calculator to control the printer.

Any -hp- Sales and Service Office can assist you in determining which peripheral control block is correct for your calculator.

## THE PERIPHERAL CONTROL BLOCK

The printer can be cleaned by using a soft, damp cloth; however, do not use any abrasive cleaners and do not let moisture get inside the printer.

The fan filter (located at the back of the printer) should be cleaned at least once every three months. The filter can be removed by prying it out with a small, blunt instrument such as a screwdriver or nail file. Clean the filter by rinsing it in clean water. Dry the filter completely before re-installing it.

## CLEANING THE PRINTER

**2-6**

---

**NOTES**

## TECHNICAL SPECIFICATIONS



|                             |                                                                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Printing Speed:</b>      | 240 lines/minute                                                                                                                                                            |
| <b>Print Density:</b>       | 80 characters/line<br>6 lines/inch (2.4 lines/cm)                                                                                                                           |
| <b>Character Set:</b>       | 64 alphanumeric characters*, a complete character set is shown below:<br>ABCDEFGHIJKLMNOPQRSTUVWXYZ<br>. 1234567890<br>( ) + - * / ^ \ _ @ , ? ' & % \$ # = ! : < > [ " ; ] |
| <b>Data Input Format:</b>   | 7 line ASCII code, bit-parallel, character-series fashion                                                                                                                   |
| <b>Printer Paper:</b>       | 8-3/4" wide thermal sensitive paper, available in 250' rolls                                                                                                                |
| <b>Size:</b>                | 17-3/4" × 16" × 6" (45.09 cm × 40.64 cm × 15.24 cm)                                                                                                                         |
| <b>Weight:</b>              | 37.75 lbs. (17.1 kg)                                                                                                                                                        |
| <b>Power Requirements:</b>  | Nominal voltage ranges — 100, 120, 220, 240V ac; +5% to -10% of each range<br>Frequency range — 48 to 66 Hz<br>Power — 250 voltamps, maximum                                |
| <b>Temperature Range:**</b> | 0°C to 45°C                                                                                                                                                                 |
| <b>Humidity Range:**</b>    | 95% relative humidity maximum (non-condensing)                                                                                                                              |

\* All characters are not available with some calculator systems.

\*\* The printer paper is sensitive to high temperature and high humidity conditions.

## ELECTRONIC

### SALES & SERVICE OFFICES

#### UNITED STATES

##### ALABAMA

P.O. Box 4207  
2003 Byrd Spring Road S.W.  
Huntsville 35802  
Tel: (205) 881-4591  
TWX: 910-726-2204

##### ARIZONA

2336 E. Magnolia St.  
Phoenix 85034  
Tel: (602) 244-1361  
TWX: 910-951-1330

5737 East Broadway  
Tucson 85711  
Tel: (602) 298-2313  
TWX: 910-952-1162

##### CALIFORNIA

1430 East Orangethorpe Ave.  
Fullerton 92631  
Tel: (714) 870-1000  
TWX: 910-592-1288

3939 Lankershim Boulevard  
North Hollywood 91604  
Tel: (213) 877-1282  
TWX: 910-499-2170

6305 Arizona Place  
Los Angeles 90045  
Tel: (213) 649-2511  
TWX: 910-328-6148

1101 Embarcadero Road  
Palo Alto 94303  
Tel: (415) 327-6500  
TWX: 910-373-1280

2220 Watt Ave.  
Sacramento 95825  
Tel: (916) 482-1463  
TWX: 910-367-2092

9606 Aero Drive  
P.O. Box 23333  
San Diego 92123  
Tel: (714) 279-3200  
TWX: 910-335-2000

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Englewood 80110  
Tel: (303) 771-3455  
TWX: 910-935-0705

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New Haven 06525  
Tel: (203) 389-6551  
TWX: 710-465-2029

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2806 W. Oakland Park Blvd.  
Ft. Lauderdale 33307  
Tel: (305) 731-2020  
TWX: 510-955-4099

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6177 Lake Ellenor Dr.  
Orlando 32809  
Tel: (305) 859-2900  
TWX: 810-850-0113

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Atlanta 30328  
Tel: (404) 436-6181  
TWX: 810-766-4890

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Honolulu 96814  
Tel: (808) 955-4455

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Skokie 60076  
Tel: (312) 677-0400  
TWX: 910-223-3613

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Tel: (317) 546-4891  
TWX: 810-341-3263

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3239 Williams Boulevard  
Kenner 70062  
Tel: (504) 721-6201  
TWX: 810-955-5524

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Baltimore 21207  
Tel: (301) 944-5400  
TWX: 710-862-9157

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TWX: 910-563-3734

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Tel: (313) 476-6400  
TWX: 810-242-2900

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Tel: (816) 763-8000  
TWX: 910-771-2087

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Maryland Heights 63043  
Tel: (314) 567-1455  
TWX: 910-764-0830

##### \*NEVADA

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Tel: (702) 382-5777

##### NEW JERSEY

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Paramus 07652  
Tel: (201) 265-5000  
TWX: 710-990-4951

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Cherry Hill 08034  
Tel: (609) 667-4000  
TWX: 710-892-4945

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Station C  
6501 Lomas Boulevard N.E.  
Albuquerque 87108  
Tel: (505) 265-3713  
TWX: 910-989-1665

156 Wyatt Drive  
Las Cruces 88001  
Tel: (505) 526-2485  
TWX: 910-983-0550

##### NEW YORK

6 Automation Lane  
Computer Park  
Albany 12205  
Tel: (518) 458-1550  
TWX: 710-441-8270

1219 Campville Road  
Endicott 13760  
Tel: (607) 754-0050  
TWX: 510-252-0890

New York City  
Manhattan, Bronx  
Contact Paramus, NJ Office  
Tel: (201) 265-5000

Brooklyn, Queens, Richmond  
Contact Woodbury, NY Office  
Tel: (516) 921-0300

82 Washington Street  
Poughkeepsie 12601  
Tel: (914) 454-7330  
TWX: 510-248-0012

39 Saginaw Drive  
Rochester 14623  
Tel: (716) 473-9500  
TWX: 510-253-5981

5858 East Molloy Road  
Syracuse 13211  
Tel: (315) 454-2486  
TWX: 710-541-0482

1 Crossways Park West  
Woodbury 11797  
Tel: (516) 921-0300  
TWX: 510-221-2168

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TWX: 810-427-9129

330 Progress Rd.  
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TWX: 810-459-1925

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Tel: (215) 265-7000  
TWX: 510-660-2670

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Suite 100  
Houston 77027  
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TWX: 910-881-2645

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Tel: (512) 434-4171  
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TWX: 910-925-5681

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Bellevue 98004  
Tel: (206) 454-3971  
TWX: 910-443-2303

##### \*WEST VIRGINIA

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Tel: (304) 345-1640

##### WISCONSIN

9431 W. Beloit Road  
Suite 117  
Milwaukee 53227  
Tel: (414) 541-0550

##### FOR U.S. AREAS NOT LISTED:

Contact the regional office nearest you: Atlanta, Georgia . . . North Hollywood, California . . . Paramus, New Jersey . . . Skokie, Illinois. Their complete addresses are listed above.  
\*Service Only

#### CANADA

##### ALBERTA

Hewlett-Packard (Canada) Ltd.  
11748 Kingsway Ave.  
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Tel: (403) 452-3670  
TWX: 610-831-2431

##### BRITISH COLUMBIA

Hewlett-Packard (Canada) Ltd.  
4608 Canada Way  
North Burnaby 2  
Tel: (604) 433-8213  
TWX: 610-922-5059

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TWX: 610-671-3531

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2745 Dutch Village Rd.  
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Tel: (902) 455-0511  
TWX: 610-271-4482

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Ottawa 3  
Tel: (613) 255-6180, 255-6530  
TWX: 610-562-8968

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50 Galaxy Blvd.  
Rexdale  
Tel: (416) 677-9611  
TWX: 610-492-4246

##### QUEBEC

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Pointe Claire  
Tel: (514) 697-4232  
TWX: 610-422-3022  
Telex: 01-20607

##### FOR CANADIAN AREAS NOT LISTED:

Contact Hewlett-Packard (Canada) Ltd. in Pointe Claire, at the complete address listed above.

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Hewlett-Packard Argentina  
S.A.C.e.I.  
Lavalle 1171 - 3°  
Buenos Aires  
Tel: 35-0436, 35-0627, 35-0341  
Telex: 012-1009  
Cable: HEWPAC ARG

##### BOLIVIA

Stambuk & Mark (Bolivia) LTDA.  
Av. Mariscal, Santa Cruz 1342  
La Paz  
Tel: 40626, 53163, 52421  
Telex: 3560014  
Cable: BUKMAR

##### BRAZIL

Hewlett-Packard Do Brasil  
I.E.C. Ltda.  
Rua Frei Caneca 1119  
01307-Sao Paulo-SP  
Tel: 288-7111, 287-5858  
Telex: 309151/2/3  
Cable: HEWPAC Sao Paulo

Hewlett-Packard Do Brasil  
I.E.C. Ltda.  
Praça Oom Feliciano, 78  
90000-Porto Alegre-RS  
Rio Grande do Sul (RS) Brasil  
Tel: 25-8470  
Cable: HEWPAC Porto Alegre

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I.E.C. Ltda.  
Rua da Matriz, 29  
20000-Rio de Janeiro-GB  
Quito  
Telex: 210079 HEWPAC  
Cable: HEWPAC Rio de Janeiro

##### CHILE

Héctor Calcañi y Cia, Ltda.  
Casilla 16.475  
Santiago  
Tel: 423 96  
Cable: CALCAGNI Santiago

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Henrik A. Langebaek & Kier S.A.  
Carrera 7 No. 48-59  
Apartado Aéreo 6287  
Bogotá, D.E.  
Tel: 45-78-06, 45-55-46  
Cable: AARIS Bogotá  
Telex: 444001NSTCO

##### COSTA RICA

Lic. Alfredo Gallegos Guardián  
Apartado 10159  
San José  
Tel: 21-86-13  
Cable: GALGUR San José

##### ECUADOR

Laboratorios de Radio-Ingeniería  
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