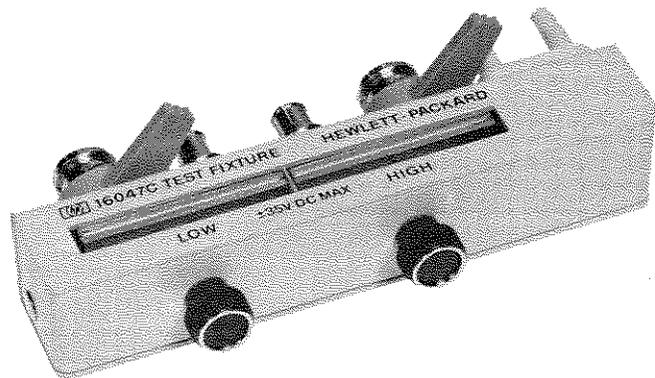


TEST FIXTURE

16047C



WARRANTY AND ASSISTANCE

All Hewlett-Packard products are warranted against defects in materials and workmanship. This warranty applies for one year from the date of delivery, or, in the case of certain major components listed in the operating manual, for the specified period. We will repair or replace products which prove to be defective during the warranty period provided they are returned to Hewlett-Packard. No other warranty is expressed or implied. We are not liable for consequential damages.

For any assistance, contact your nearest Hewlett-Packard Sales and Service Office. Addresses are provided at the back of this manual.

I. INTRODUCTION

This operating note provides complete information on the Hewlett-Packard Model 16047C Test Fixture. The 16047C is shown pictorially on the front-cover, its physical dimensions are given in Table 1, and typical characteristics related to offset error are given in Table 2. To order additional copies of this operating note, use the part number listed on the rear cover.

Table 1. Specifications.

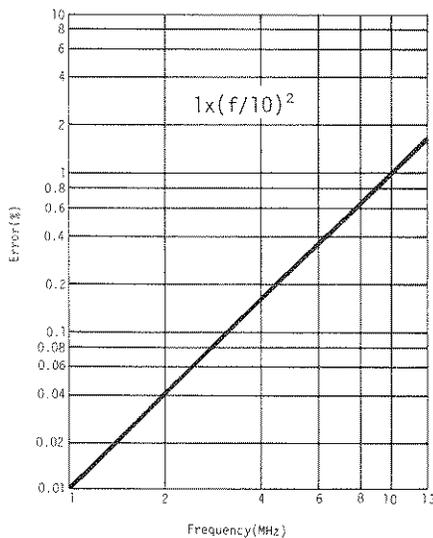
Function: For use with Hewlett-Packard Models 4274A, 4275A, 4276A, 4277A, and 4192A. Permits connecting axial and radial lead components to the UNKNOWN terminals (4-terminal pair configuration) of the 4274A, 4275A, 4276A, 4277A, or 4192A. DC Bias: $\pm 35V$ maximum Dimensions in mm (inches): 128(5.04) x 26(1.02) x 35(1.38) Weight in grams (lbs): 165(0.364)

Table 2. Typical Characteristics.

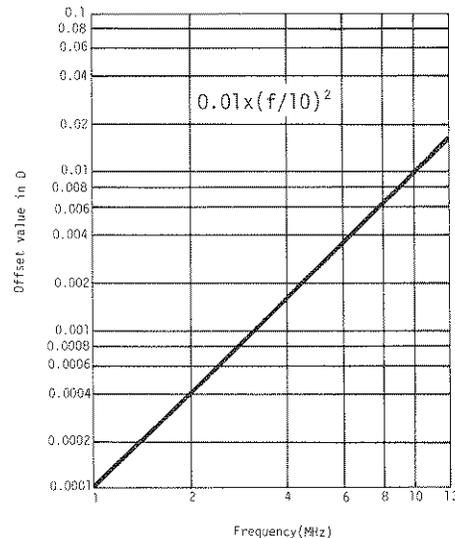
Model	Applicable Measurement Ranges		Incremental error at freq. $\geq 1MHz$	
	Parameter value	Measurement frequency	Parameter reading error	Offset value for D
4274A*	Full range	Full range	/	
4275A			$\pm 1 \times \left(\frac{f}{10}\right)^2 \%$	$\pm 0.01 \times \left(\frac{f}{10}\right)^2$
4192A				

Note: f is the measurement frequency in megahertz. The incremental errors calculated from the equation in the table for measurements at frequencies above 1MHz are additive.

*: The maximum frequency of the 4274A is 100kHz.



Parameter reading error vs frequency.



Offset value in D vs frequency.

Table 2. Typical Characteristics (Cont'd)

Model	Applicable Measurement Ranges		Incremental error at 1MHz	
	Parameter value	Measurement frequency	Parameter reading error	Offset value for D
4276A**	Full range	Full range	/	
4277A			±0.01%	±0.0001

**: The maximum frequency of the 4276A is 20KHz.

2. DESCRIPTION

The Model 16047C Test Fixture is designed for use with the following instruments:

- Model 4192A LF Impedance Analyzer
- Model 4274A Multi-Frequency LCR Meter
- Model 4275A Multi-Frequency LCR Meter
- Model 4276A LCZ Meter
- Model 4277A LCZ Meter

It is a direct attachment type test fixture that converts the 4-terminal pair configuration of the instrument's UNKNOWN terminals into a 2-terminal configuration. The 16047C should be used when making measurements at high frequencies. Two thumbscrews ensure optimum contact between the component leads and the test fixture's contact plates. The 16047C is useable at all 4274A, 4275A, 4276A, 4277A, and 4192A ranges. DC bias voltage up to ±35V can be applied to the device under test (DUT) through this test fixture. When used with the 4276A or 4277A, however, the 16047C can handle dc bias voltages up to ±40V. The 16047C is shown in Figure 1.

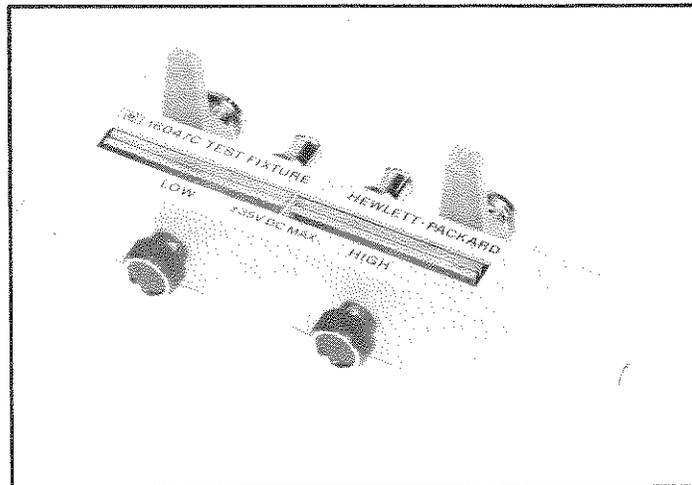


Figure 1. 16047C Test Fixture.

3. ZERO OFFSET ADJUSTMENT

The 16047C has inherent stray capacitance, residual inductance, and residual resistance that affect the accuracy of measured values. To compensate for, or negate, these residuals to minimize measurement error, the instrument's zero offset adjustment procedure should be performed. The procedure is given in Section III of the instrument's operating manual. For SHORT zero offset adjustments a low impedance copper or phosphor bronze shorting bar such as the one shown in Figure 2 is recommended.

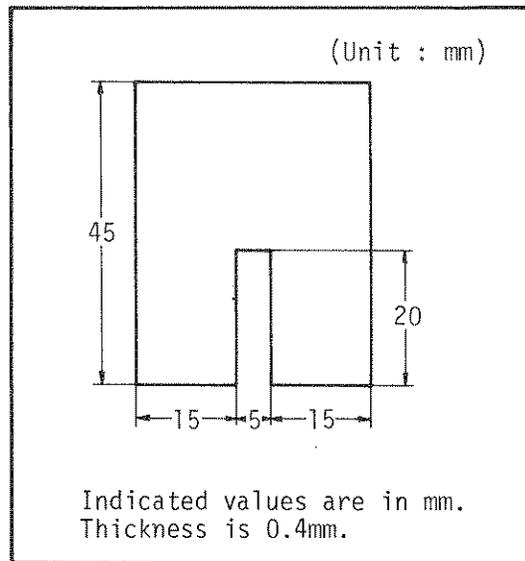


Figure 2. Shorting-bar dimensions.

4. OPERATION

Setup and measurement procedure is as follows:

- a. Set the CABLE LENGTH switch (4275A, 4277A and 4192A only) on the instrument's front-panel to 0m.
- b. Connect the 16047C directly to the UNKNOWN terminals of the instrument.
- c. Perform ZERO OFFSET ADJUSTMENT as described in Section III of the instrument's operating manual.
- d. Insert the DUT into the test fixture.

5. MAINTENANCE

An exploded view of the 16047C — for parts identification — is shown in Figure 3. Do not disassemble any further than shown. Maintenance consists principally of cleaning contacts and replacing worn or damaged parts. Take special care when cleaning contacts. To order parts, use the Hewlett-Packard part numbers listed in Figure 3. If a faulty part is located in an assembly that cannot be disassembled, order the next higher assembly or return the whole device to the nearest Hewlett-Packard Sales/Service Office for repair or replacement.

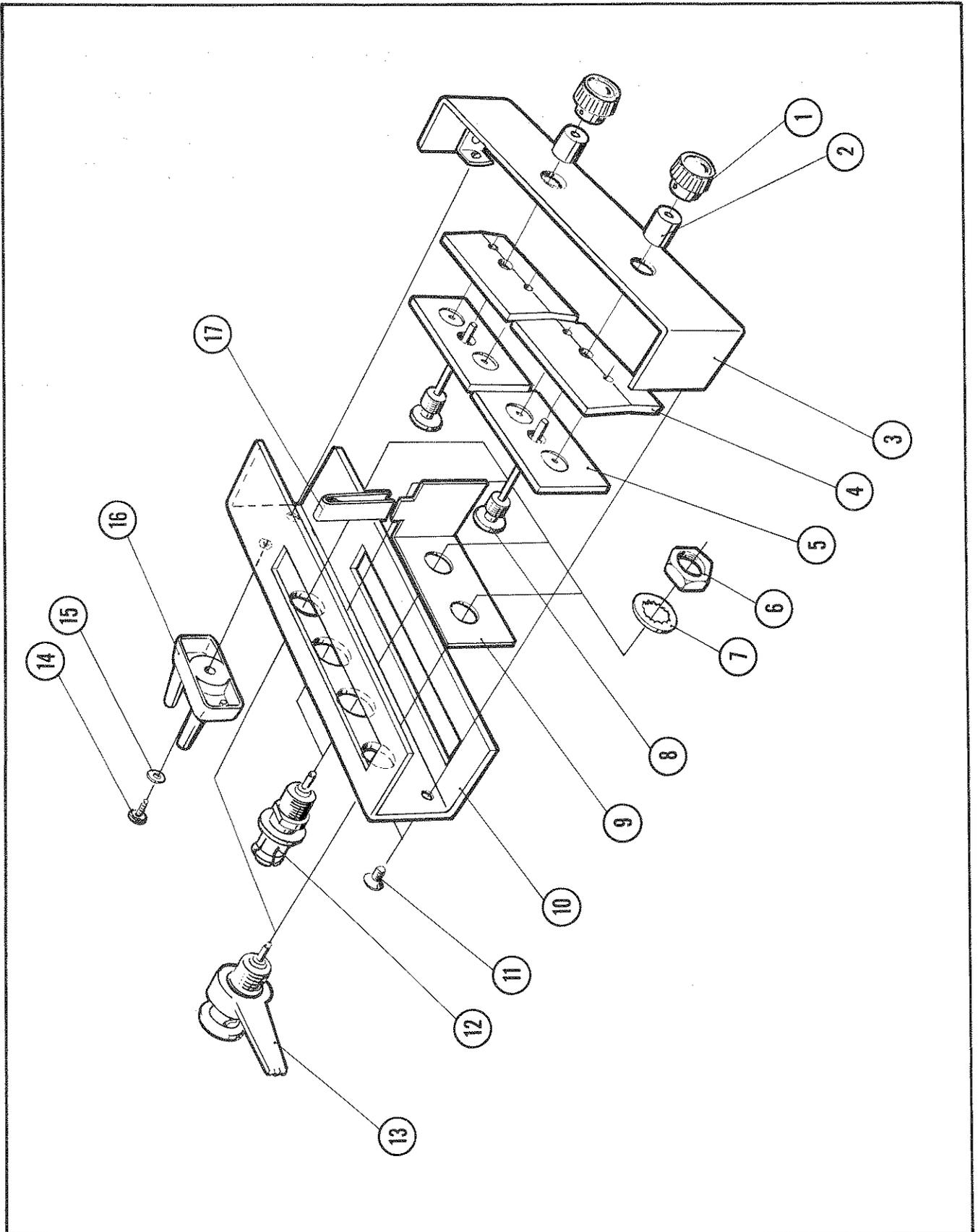


Figure 3. Parts Identification for 16047C (Sheet 1 of 2).

Reference	HP Part No.	Qty	Description
1	0370-2446	2	KNOB
2	16047-25001	2	INSULATOR
3	16047-04008	1	COVER-BOTTOM
4	16047-00610	2	CONTACT
5	16047-00609	2	CONTACT
6	2950-0043	4	NUT
7	2190-0016	4	WASHER
8	16047-23001	2	SHAFT
9	16047-00611	1	SHIELD PLATE
10	16047-04007	1	COVER-TOP
11	2360-0192	2	SCREW
12	1250-1798	2	CONNECTOR-BNC
13	16012-7122	2	CONNECTOR-BNC
14	2200-0105	1	SCREW
15	3050-0229	1	WASHER
16	16047-40000	1	STOPPER
17	16047-09001	1	INSULATOR

Figure 3. Parts Identification for 16047C (Sheet 2 of 2).



NORTH CENTRAL AFRICA
Hewlett-Packard S.A.
7 Rue du Bois du Loup
CH-1217 MERVILY, Switzerland
Tel: 022 83 19 10
Telex: 27810 NPSA
Cable: HEWPAKUSA Geneva

ASIA
Hewlett-Packard Asia Ltd
5th Floor, Sun Hung Kai Centre
20 Hart Ave. Rd.
P.O. Box 795
HONG KONG
Tel: 5 351 50 1
After hrs: 1 0984
479 Fax: China Resources Bldg
25 Harbour Rd. Wanchai
HONG KONG
Telex: 65573 HEWPA SA
Cable: HEWPAK HONG KONG

CANADA
Hewlett-Packard (Canada) Ltd
2611 Sheppard Avenue East
Mississauga, Ontario L4V 1M8
Tel: 416 678 8939
Telex: 510 432 4246
Cable: HEWPAK CAN

EASTERN EUROPE
Hewlett-Packard Ges m b H
Hofstrasse 1
P.O. Box 72
A-1070 VIENNA, Austria
Tel: 022 2 756 11 0
Telex: 1 3445 HEPA A

NORTHERN EUROPE
Hewlett-Packard S.A.
Jernbanveien 475
P.O. Box 995
N-1254 ÅS, AMSTEVEN
The Netherlands
Tel: 0 30 41 77 7

SOUTH EAST EUROPE
Hewlett-Packard S.A.
7 Rue du Bois du Loup
CH-1217 MERVILY, Switzerland
Tel: 022 83 19 10
Telex: 27810 NPSA
Cable: HEWPAKUSA Geneva

OTHER EUROPE
Hewlett-Packard S.A.
150, Rue de la Nef d'Or
CH-1217 MERVILY, Switzerland
Tel: 022 83 19 10
Telex: 27810 NPSA
Cable: HEWPAKUSA Geneva

MEDITERRANEAN AND MIDDLE EAST
Hewlett-Packard S.A.
Mehmet Akif Ersoy Caddesi
Atina Centre
P.O. Box 345
Istanbul, Turkey
ATHENS Greece
Tel: 682 80 11
Telex: 21 8488 HPAZ GR
Cable: HEWPAKUSA Athens

EASTERN USA
Hewlett-Packard Co
14600 Cherry Road
ROCKVILLE, MD 20850
Tel: (301) 258 7000

MIDWESTERN USA
Hewlett-Packard Co
5001 Tenth Avenue
ROLLING MEADOWS, IL 60058
Tel: (312) 255 9800

SOUTHERN USA
Hewlett-Packard Co
2802 South Pine Ridge
P.O. Box 150005
ATLANTA, GA 30348
Tel: (404) 255 1500

WESTERN USA
Hewlett-Packard Co
4338 14th Avenue Blvd
DENVER, CO 80202
Tel: (303) 756 3700

OTHER INTERNATIONAL AREAS
Hewlett-Packard Co
International Headquarters
3455 Deer Creek Road
PALO ALTO, CA 94304
Tel: (415) 857 1501
Cable: HEWPAK

ANGOLA
Empresa Portuguesa de Equipamentos
R. Barbosa Rodrigues, 411 DF
Cidade Nova 6487
LUANDA
Tel: 355 15 355 16
EP

ARGENTINA
Hewlett-Packard Argentina S.A.
Avenida Santa Fe 2035
Martinez 1640 BUENOS AIRES
Tel: 750 5736, 750 1293
Telex: 12555 BONDAR
Cable: HEWPAKARG

BRASIL
Hewlett-Packard do Brasil S.A.
Rua Santa Cruz 221, Pao 9
1309 BUENOS AIRES
Tel: 30 8466 30 185
Telex: 17055 BONDAR
Cable: HEWPAKARG

CHINA
Hewlett-Packard (China) Ltd
220 Wenshan Bldg, Unit #11
WILLOWDALE, Ontario M2L 1R5
Tel: (416) 459 9333
CH

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

CHINA, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

Canada, Australia Capital Territory Office
Hewlett-Packard Australia Ltd
11, Wellington Street
PSYCHIC, A.C.T. 2609
Tel: 625050
Cable: HEWPAK Canberra
CH-DEM P

Melbourne, Victoria Office
Hewlett-Packard Australia Ltd
11, Wellington Street
BLACKBURN, Victoria 3130
Tel: 885 2895
Telex: 31 0224
Cable: HEWPAK Melbourne
A.C.H.M.C.S.E.M.P.

Perth, Western Australia Office
Hewlett-Packard Australia Ltd
261 Spring Highway
GLAMORGAN, W.A. 6070
Tel: 305 2186
Cable: HEWPAK Perth
A.C.H.M.C.S.E.M.P.

Sydney, New South Wales Office
Hewlett-Packard Australia Ltd
17, 23 Tavara Road
P.O. Box 308
NORTH RIDE, N.S.W. 2113
Tel: 881 1111
Telex: 2156
Cable: HEWPAK Sydney
A.C.H.M.C.S.E.M.P.

AUSTRIA
Hewlett-Packard Ges m b H
Göppelstrasse 94
A-1050 WIEN
Tel: 022 2 756 11 0
Telex: 1 3445 HEPA A
Cable: HEWPAKUSA Geneva

Belgium
Hewlett-Packard Belgium S.A. IN V
Cité de St. Woluwe, 100
Woluwe
P.O. Box 1200
BRUSSELS
Tel: (02) 762 32 00
Telex: 23 804 BONDAR BU
A.C.H.M.C.S.E.M.P.

Brazil
Hewlett-Packard do Brasil S.A.
Rua Santa Cruz 221, Pao 9
1309 BUENOS AIRES
Tel: 30 8466 30 185
Telex: 17055 BONDAR
Cable: HEWPAKARG

Canada
Hewlett-Packard (Canada) Ltd
220 Wenshan Bldg, Unit #11
WILLOWDALE, Ontario M2L 1R5
Tel: (416) 459 9333
CH

China
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920
A.C.H.M.C.S.E.M.P.

China, People's Republic of
China Hewlett-Packard Rep. Office
P.O. Box 410
No. 10, Lane 2, Luchang St
Beijing, Rd. Xizhimen District
BEIJING
Tel: 32 1947, 33 2426
Telex: 20501 CTSR CN
Cable: 1920

