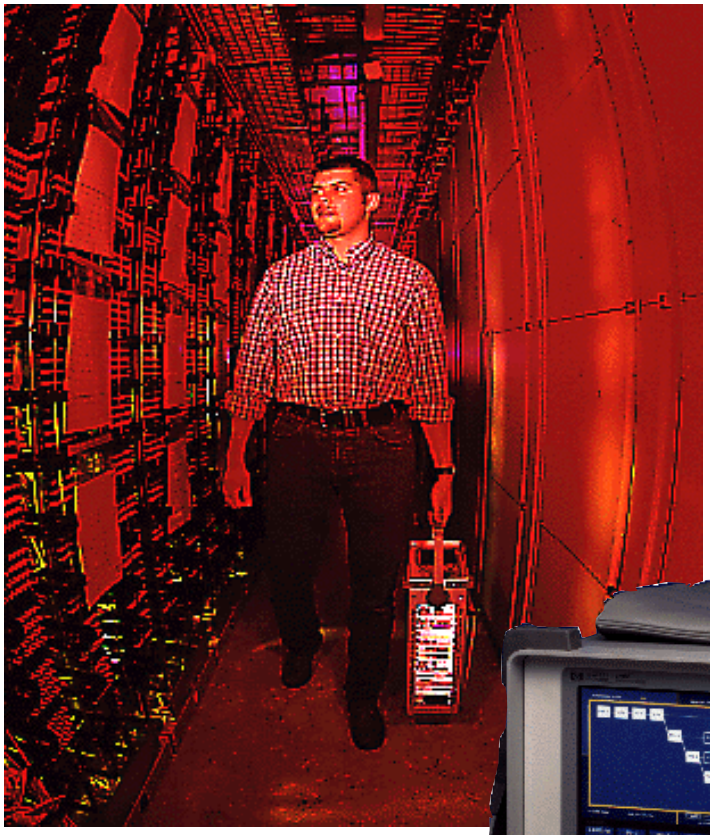
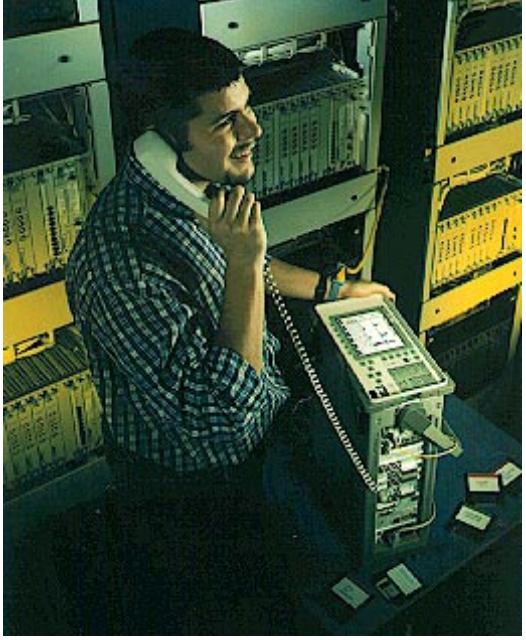
HEWLETT® PACKARD



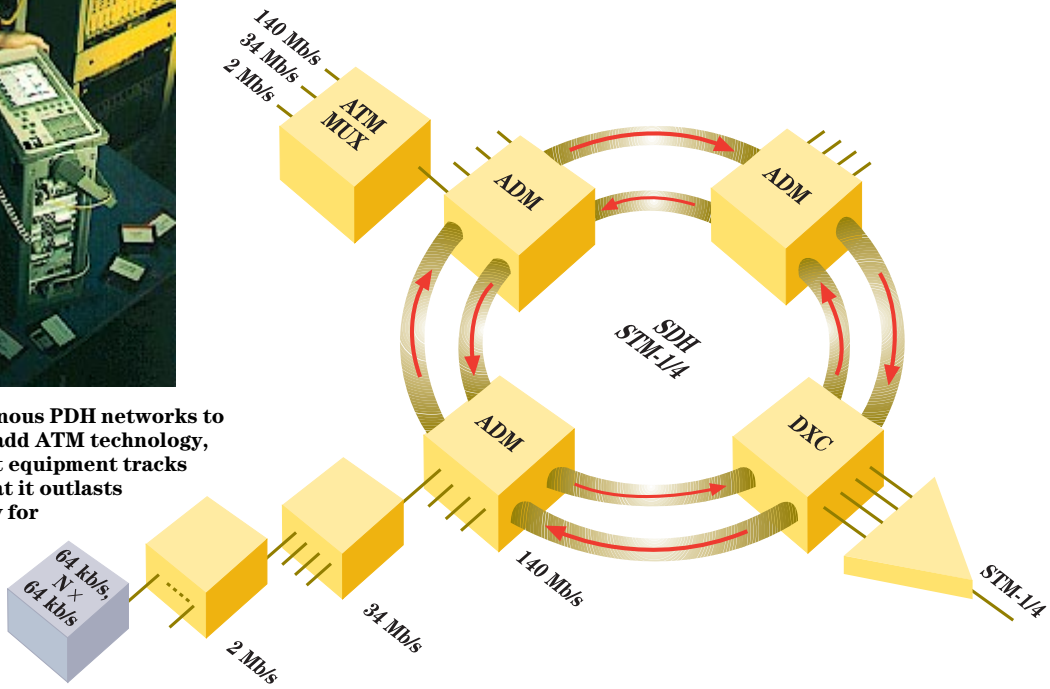
HP 37717B/C communications performance analyzer

Multi-application testing in a modular, portable analyzer – to ease your network's migration to SDH and ATM



As you migrate existing asynchronous PDH networks to synchronous SDH operation and add ATM technology, you must be certain that your test equipment tracks your network's development – that it outlasts today's standards – that it's ready for tomorrow's networks just as soon as you are.

Installing or maintaining digital telecom transmission equipment today?. . . Helping build and support the integrated services network of the future?



Whatever your involvement, keeping pace with new and emerging technologies, while minimizing test equipment investment to support today's hybrid network, can be a challenge.

Beat the new network challenges

Have at hand the test power and versatility to meet challenging test demands imposed by growing today's PDH networks into tomorrow's integrated services networks. At the same time, ease the transition to new technologies and increase the effectiveness of your maintenance and technical support teams.

As you encounter new technologies, there is no need to re-train your technicians on how to operate new test equipment. You can protect your investment in technology, training and equipment into the future . . .

Have one solution for multiple applications

Choose the HP 37717C communications performance analyzer and have an extensive range of PDH, SDH, ATM and jitter measurements added to help during network installation and to check performance to ITU-T recommendations. Or, if ATM service layer testing is not needed, or cost is a priority, select the HP 37717B analyzer for testing PDH, SDH, ATM cell layer and jitter only.

Configure your analyzer to simultaneously include PDH, SDH, ATM and jitter, or to contain PDH only, SDH only, ATM only or any combination.

Front cover
Be ready to tackle PDH, SDH, ATM and jitter test demands anywhere in your network.

Select the multiple window display to view Tx, Rx, graphics and results simultaneously – or choose the single window with large character display for easy legibility.

HP 37717C communications performance analyzer

Select parameters via easy-to-use pop-up menus or softkeys. You choose!

Confidently meet additional testing demands

Becoming familiar with the analyzer's operation is simple. There's all the usual time-saving capability built into each HP 37717B/C analyzer that you've come to expect from an HP tester. There are auto-setup and stored test settings, of course. 'TroubleScan' mode takes you straight to the important performance measurements and makes results interpretation easy, whether you're making PDH, SDH or ATM tests. 'AlarmScan' mode in the structured PDH module points you quickly to problem tributaries in your network. In SDH, the 'AlarmScan' mode for the overhead and stress module lets you identify problem tributaries embedded in the SDH signal quickly and easily.

And, when it comes to ATM, the 'Channel View' mode immediately lets you see what's happening on ATM.

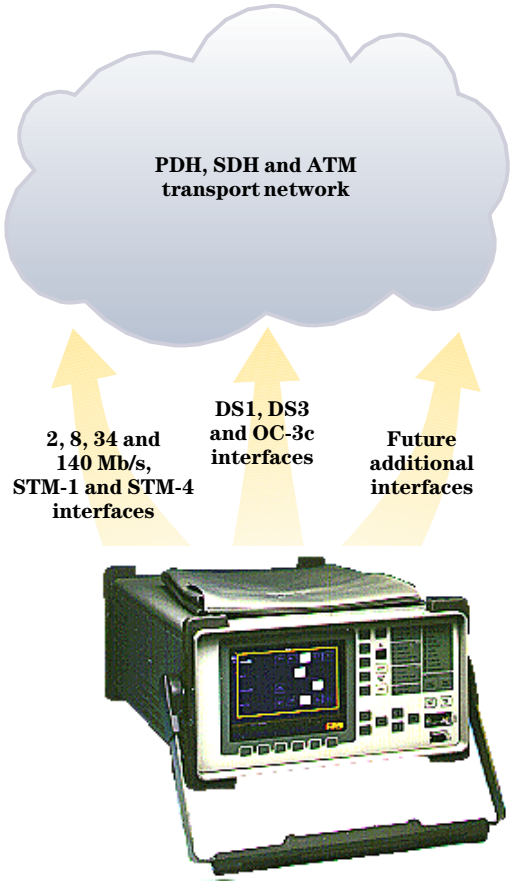
Correlation of errors and alarms from long-term tests is simplified, with the large, multi-window color screen on the HP 37717C analyzer clearly showing graphical results. Use pop-up menus and diagrams. or softkeys, for easy selection of parameters. You can even change Tx parameters and view the results immediately on the same screen, then pass these results directly to an internal or external printer. You can choose printout of results to be on event, on demand or conditional. Simplify testing further by storing your results on floppy disk. In addition, bright front-panel LEDs show alarm changes and history.

Save on test costs

Simply add the appropriate test and interface modules to either of these Hewlett-Packard analyzers as your needs change. There's a choice of electrical or optical interfaces that take you all the way to 622 Mb/s.

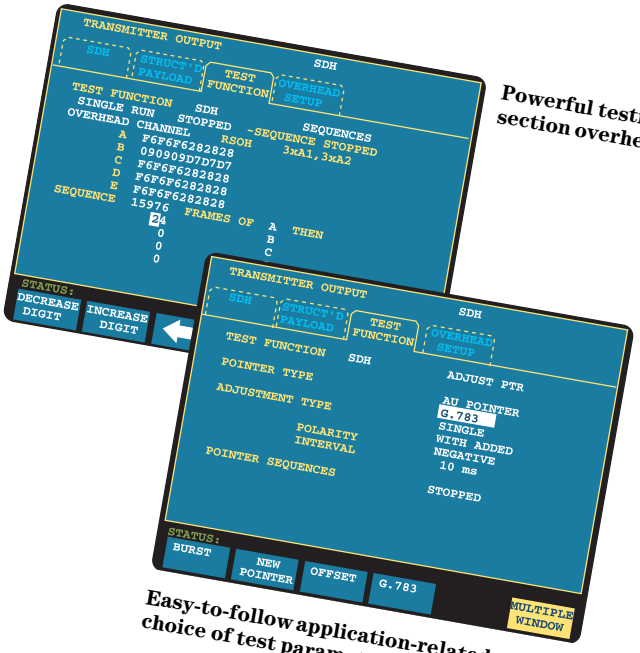
To upgrade your analyzer or test modules to the latest firmware revision, just plug the new firmware disk into the disk drive.

Savings on equipment costs are only part of the benefits of using the HP 37717B/C analyzer. As the same familiar user interface is used across all applications, users benefit from faster familiarization and easier acceptance of new technologies – so reducing your training costs as new technologies emerge.



Tailor Hewlett-Packard's modular test solution to your network requirements.

Be ready to extend today's PDH networks to tomorrow's SDH and ATM



Powerful testing of section overhead.

Easy-to-follow application-related choice of test parameters.

Create a test solution that includes PDH

Choose between unstructured or structured PDH capabilities. Extensive optional mux/demux PDH test capability means that from a single monitor point you can check structured signals in service at 140, 34, 8, and 2 Mb/s and perform analysis to ITU-T G.821/G.826 and M.2100/2110/2120.

Identifying troublesome network equipment is faster. The fully structured PDH signals generated and analyzed by the analyzer make it easy to insert and drop individual tributaries for cross multiplexer testing.

Have SDH available

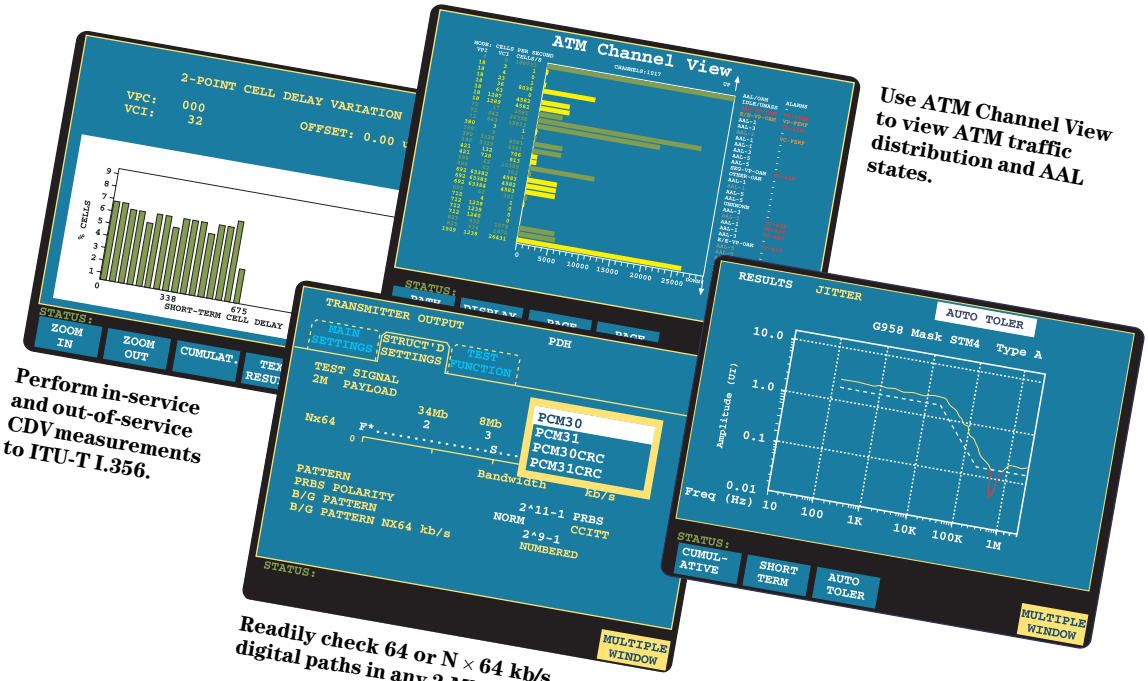
Add SDH test capability as your needs grow. Optional modules add electrical interfaces. And, for optical signals choose between 1310 nm, 1550 nm or dual wavelength STM-1/STM-4 optical modules.

Generate alarms and errors to stress network equipment and confirm tolerance to network degradations. There's PDH/SDH overhead framing, parity and alarm testing, as well as frequency offset tolerance tests and frequency measurement. When you need more exhaustive testing, check equipment response by changing the overhead byte by byte.

Excessive pointer movements can produce jitter at the desynchronizer tributary outputs. Use your analyzer to generate ITU-T G.783 and 87:3 controlled pointer sequences and measure resultant tributary jitter or BER at 2, 34 and 140 Mb/s.

Verify the pointer processing operation of your network equipment. Generate a frequency offset SDH signal then analyze pointer adjustments and payload BER. Or, use the pointer location graph to isolate network synchronization problems.

With the appropriate STM-1/STM-4 optical module fitted, use the optical power measurement to establish signal integrity quickly.



Perform in-service and out-of-service CDV measurements to ITU-T I.356.

Use ATM Channel View to view ATM traffic distribution and AAL states.

Readily check 64 or N × 64 kb/s digital paths in any 2 Mb/s stream.

Use the automatic jitter tolerance test to verify network equipment conformance to ITU-T G.823 (PDH) and G.958 (SDH) jitter masks.

Be ATM ready, too

If you're implementing a pilot ATM network, then there's more good news for you.

Adding the ATM cell layer modules gives you detailed ATM measurement capability and confirmation of those important quality-of-service objectives – performance that your customers count on you to provide.

A range of transmit and receive modules supplies an extensive suite of tests at the physical and ATM layers. Tests available for troubleshooting and alarm identification include full ITU-T G.826 analysis of errored events of the ATM cell header and information bytes, as well as a range of in-service and out-of-service tests to ITU-T O.191 with ITU-T G.832 and G.707 physical layers and I.356 ATM layer measurements from E1 (2 Mb/s) to STM-1. For broadband manufacturers, an ETSI/ANSI module adds DS1, DS3 and OC-3c.

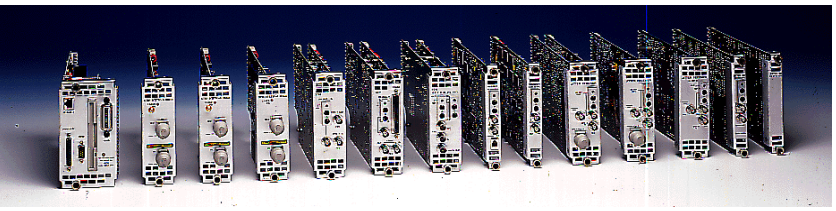
Add the services module to assess higher layer functionality and provide more ATM layer features. Perform AAL analysis and native LAN connectivity measurements; use Channel View to find and analyze up to 1023 virtual channels, and view real-time graphical displays of cell delay variation.

Include full jitter tests

During the transition from a PDH network to a fully SDH network, assessing jitter, jitter transients and jitter tolerance can be essential when installing new equipment.

That's when you need jitter test capability. Whether it's SDH line jitter measurements, or PDH tributary jitter measurements, or full jitter generation and analysis with tributary slips and wander that you need, you choose. For ATM, use optional jitter modules to add jitter to the internally generated ATM signal or, in thru mode, to an externally generated signal. That's in addition to the full range of PDH/SDH/ATM error testing available.

As standards change and develop, so can your analyzers



Choose your required test capability from the range of optional PDH, SDH, ATM (cell layer or services layer) and jitter test modules – that include electrical and optical interfaces up to 622 Mb/s.

HP 37717C
communications performance analyzer (with optional graphic printer)

HP 37717B
communications performance analyzer

Select the test capability to suit your needs

The HP 37717B/C analyzers are modular analyzers you can evolve as your needs change. Each analyzer is a portable, rugged unit that can pack a powerful set of PDH, SDH, ATM and jitter transmit/receive test capabilities. This flexibility allows users to tailor the analyzers for installation or maintenance/troubleshooting applications.

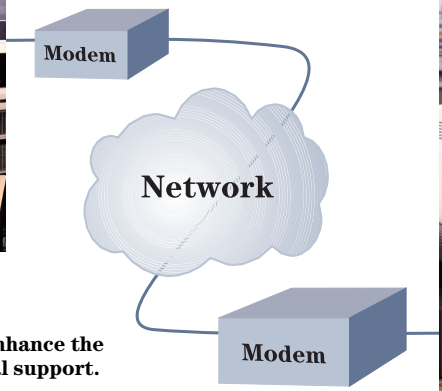
The HP 37717B/C analyzer can monitor non-intrusively via protected monitor points in the network, using an optical coupler (eg, HP 15744A optical coupler) or using SDH thru mode with the appropriate modules fitted.

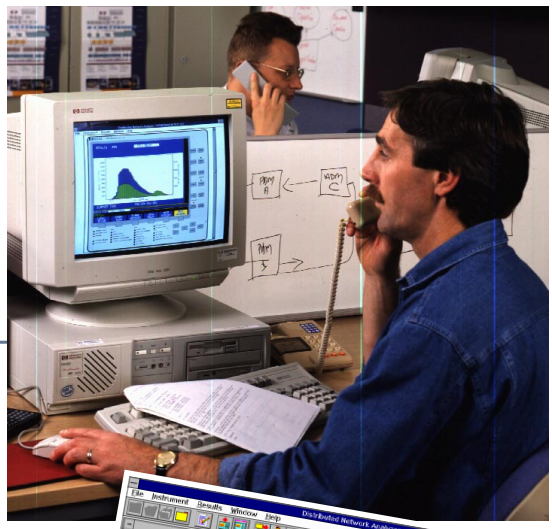
The HP 37717B analyzer has a monochrome display, floppy disk drive and integral 20-column wide printer. Use this analyzer for PDH, SDH or ATM transmission performance testing.

The HP 37717C analyzer has a large color display, floppy disc drive and optional high-resolution, 80-column wide graphic printer (with graphics screen dump facility). In addition to transmission testing, this analyzer also supports the ATM service layer test modules.

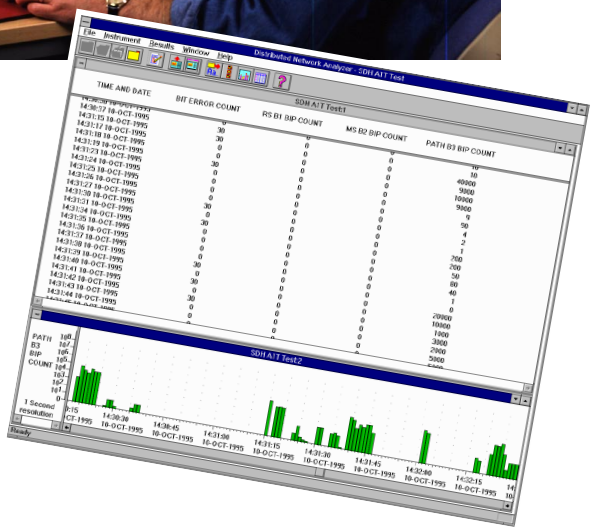
Call HP today and find out how HP multi-application error and jitter analyzers give you everything you need for PDH network installation and maintenance – and stay with you as your network is evolving to SDH and ATM

Enhance the effectiveness of your technical support





Use HP E4540A software to enhance the effectiveness of your technical support.



Gain better assistance

Use HP E4540A distributed network analyzer (DNA) software, for a PC or laptop, to increase the effectiveness of technical support. Now, when technicians contact the support center for assistance, the technical support team can access the remote analyzer's graphical user interface and help to resolve the problem interactively. Or, control the analyzer locally for easy data collection and detailed report generation. The easy-to-use, Windows®-based software requires no programming skills.

Avoid delay – fix problems rapidly

Because DNA can be used interactively, the impact of the support team's expertise is maximized – ensuring difficult problems cause minimal delay and disruption to the network's operating capacity. For testing, troubleshooting and even training, DNA' s virtual instrument display feature is a distinct asset for remote site technicians and technical support engineers alike.

DNA lets you automate complex or repetitive tests by recalling or constructing test sequences from stored test configurations.

When running long-term tests to gain detailed knowledge of network performance, use the DNA software to automatically log all measurement results to a PC or laptop.

Incorporate data easily into your reports

Provide superior quality-of-service information to managers and customers. Using the DNA software, you are able to transfer logged measurement results into other software applications to produce better graphs and reports detailing performance.

Refer to brochure 5964-2240E.

Related publications

Technical specifications for HP 37717B/C analyzers: 5964-2255E

Configuration guides (includes ordering information):

- HP 37717B analyzer: 5965-5764E
- HP 37717C analyzer: 5965-5621E

Application information in detail:

- ATM testing: 5965-4968E
- Jitter testing: 5965-5618E

Related products

HP 37778A STM-16 test set

This test set provides a comprehensive portable SDH test solution for STM-16 functional and jitter testing. Refer to product overview 5965-2747E.

Telecom production test

The HP 37717C analyzer also forms part of the HP TS-2000 range for communications functional test.

This range of systems consists of test instruments, dedicated optical and electrical switches optimized for both functional and parametric measurements, and mass interconnection systems – all fully racked and cabled. Programming is simplified by a library of measurement utilities that can be called from the user's own software environment or HP's own powerful test executive (available as a separate product). Refer to brochure 5964-3920E.

Hewlett-Packard manufactures the HP 37717B/C communications performance analyzers under a quality system approved to the international standard ISO 9001 plus TickIT (BSI Registration Certificate No FM 10987).

Class 3a laser product
EN60825-1: 1994

Class 1 laser product
FDA 23 CER CH.1 1040.10 (1994)

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For more information about Hewlett-Packard test & measurement products, applications, services, and for a current sales office listing, visit our web site, http://www.hp.com/go/tmdir. You can also contact one of the following centers and ask for a test and measurement sales representative.

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Test and Measurement Call Center
P.O. Box 4026
Englewood, CO 80155-4026
1 800 452 4844

Canada:
Hewlett-Packard Canada Ltd.
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Mississauga, Ontario
L4W 5G1
(905) 206 4725

Europe:
Hewlett-Packard
European Marketing Centre
P. O. Box 999
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