

Post Office  
Datel Services

DLZ 9  
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## What does Datel do ?

Datel Services provide rapid communication between computers and remote data stations. Using appropriate Post Office circuits, they allow instant access to a computer, regardless of distance.

A Datel Service includes where necessary the modulators/demodulators (modems) to translate the data into a form suitable for transmission, before presentation to the computer or terminal.

## What are the benefits to business ?

Computers represent enormous capital investment. A better return on that investment comes from more effective use of the computer's facilities. Datel can make these facilities available to more people in more locations.

Scientists, engineers and designers benefit increasingly from the information storage and problem-solving capabilities of powerful computers. Datel can put them on-line.

Remote offices can be linked to a central computer, saving in overheads connected with payroll, personnel and other administrative functions. Using Datel.

Over-production and storage of merchandise represent money which could be employed elsewhere. High-speed computerised production and stock control can lower operational margins – liberating capital. Datel makes it possible.

In a competitive business environment, up-to-the-minute management information is vital to effective decision making. The speed and accuracy of computer analysis is useful only when the information reaches the right place at the right time. Datel gets it there.

For those organisations without their own computer power, Datel can provide the link with shared computer services or time-sharing bureaux.

Every business is different ; these brief examples are only an indication of the possible applications of Datel.

## Which Datel Service should you use ?

There is a range of Datel Services to meet your requirements according to the application, speed and volume of data transmission required. This leaflet describes briefly the facilities of each service.

### Datel 100

Provides data transmission facilities on telegraph type circuits at speeds up to a maximum of 110 bits per second (bit/s). The service includes the provision of a private telegraph circuit or connection to the telex switched network.

### Datel 200

Offers serial data transmission over telephone type circuits (either the Public Switched Telephone Network – PSTN – or private circuits) at speeds up to 300 bit/s. Full duplex working is available for simultaneous incoming and outgoing transmission.

### Datel 400

A service designed for telemetry applications. Digital data can be transmitted at up to 600 bit/s and analogue data at up to

300 Hz. The service operates over the PSTN or over two-wire private circuits, in one direction only. The outstation modulator can be supplied in a special metal case to provide environmental protection.

### Datel 600

A serial data transmission service over telephone type circuits (either private or PSTN). Two operational modes offer (a) Transmission at speeds up to 600 bit/s. (b) Transmission at speeds up to 1200 bit/s. An optional 75 bit/s supervisory channel is available.

### Datel 2400

Provides serial data transmission at a fixed rate of 2400 bit/s over 4-wire private circuits, with an optional 75 bit/s supervisory channel. Alternative working over the PSTN is available, at a fixed speed of 600 bit/s and, in many cases, 1200 bit/s.

### Datel 2400 Dial Up

Data transmission at 2400 bit/s over the PSTN.

### Datel 48k

Provides full duplex facilities at fixed rates of 40.8K bit/s, 48K bit/s and 50K bit/s, operating over 48Khz wideband links with special local end circuits.

### International Datel

With the exception of Datel 2400 Dial Up, Datel 400 and Datel 48K, these services can operate to most of Europe, the U.S.A. and a number of other countries.

### Additional facilities

#### Automatic Calling and Answering

Incoming calls to suitably equipped data terminals using the *inland* Datel Services on the PSTN can be "answered", after a period of up to two seconds, by the automatic connection of the modem to the line. **International** data calls can be answered automatically by data terminals using the Data Control Equipment No. 2 (DCE 2).

Computers can automatically originate and answer calls over the *telex* network using the DCE 3. In these circumstances no telex terminal is required at the instation.

Over the PSTN, automatic origination and answering is achieved with the DCE 1. This service is available for use in conjunction with Datel 200, 400, 600, 2400 and 2400 Dial Up.

#### Midnight Line

For a fixed annual rental, an unlimited number of STD inland calls can be made over an exchange line between midnight and 6 a.m. Substantial savings can result, especially where the service is used in conjunction with automatic calling facilities (see above).

#### Dataplex

Costs on renting long private circuits can be reduced by "multiplexing" a number of simultaneous data calls over a single circuit, enabling several remote terminals to communicate with the same computer centre. The two P.O. Dataplex systems comprise multiplexors, lines and modems in one package.

Dataplex system 1 uses Frequency Division Multiplexing

techniques and caters for speeds up to 110 bit/s with a choice of 6 or 12 channel working.

Dataplex 2, using Time Division Multiplexing, handles certain speeds up to 1200 bit/s. The maximum number of derived circuits depends on the modem employed (either 2400 bit/s or 4800 bit/s.)

### Control Systems

Control Systems are available for use with Datel 200, 600 and 2400.

Specially equipped racks, housed in an attractive cabinet, provide the termination point for the circuits, and hold the modems, control units and other necessary equipment.

The systems are modular; as the user's needs increase, more 'building bricks' are added.

### Racking

Racks are available to house large numbers of modems. The

rack 73B-1 is enclosed in a grey cabinet with a stainless steel door, and occupies only four square feet of floor space. The number of modems mounted in the rack varies with their size, but typically, 20 modems No. 2 can be fitted.

### Advice

The Post Office understand that customers need to balance efficiency of operation with economy. The *Datel Advisory Service* can help you find ways to reduce costs to a minimum.

For more information, ring or write to the Special Services section of your Telephone Sales Office (see your local Telephone Directory), or write to:

The Datel Advisory Service,  
Data Communications Marketing,  
FREEPOST,  
London EC2B 2TX.  
(Telephone 01-432 1812)

### At a glance . . .

Service	Signal Path	Maximum Speed – bits per second		Operating Mode	Remarks
		Assured	Possible		
<b>Datel 100</b>	Private Telegraph Circuit	50		Asynchronous	The PO can provide a teleprinter for 50 bit/s working.
	Private Telegraph Circuit*	110		Asynchronous	The PO can provide a teleprinter for 75 bit/s working.
	Public Telex Network	50		Asynchronous	Telex terminal equipment is supplied by the PO.
<b>Datel 200</b>	Public Telephone Network	200	300	Asynchronous	
	Private Circuit	200	300	Asynchronous	
<b>Datel 400</b>	Public Telephone Network	600 or 300 Hz (Analogue)		Asynchronous	Transmission direction outstation to instation only.
	Private Circuit	600 or 300 Hz (Analogue)		Asynchronous	Transmission direction outstation to instation only.
<b>Datel 600</b>	Public Telephone Network	600	1200	Asynchronous	
	Private Circuit	1200		Asynchronous	A four wire private circuit is required.
<b>Datel 2400</b>	Private Circuit	2400		Synchronous	A four wire private circuit is required.
	Public Telephone Network (Standby)	600	1200	Synchronous	
<b>Datel 2400 Dial Up</b>	Public Telephone Network		2400	Synchronous	The Post Office can give no assurances for satisfactory transmission at 2400 bit/s. The modem can be switched to operate at 600 and 1200 bit/s.
<b>Datel 48K</b>	Wideband Circuit	40.8K 48K 50K		Asynchronous or	Asynchronous operation is used for facsimile working.
				Synchronous	Data Transmission.

