

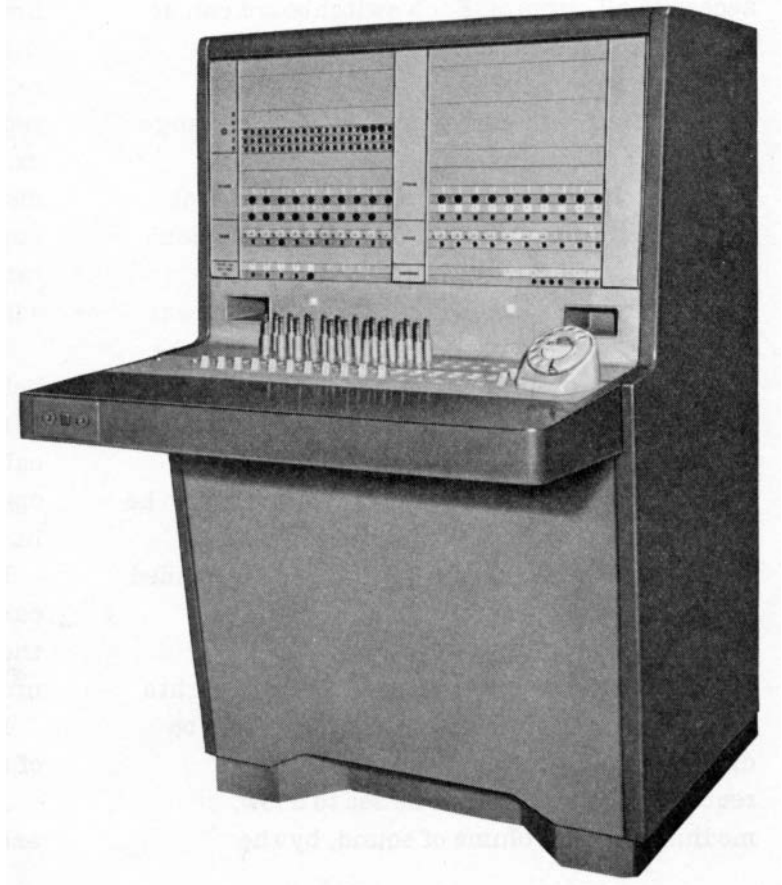
# Private Manual Branch Exchange 4



DESCRIPTIVE  
DLC 330  
August 1967

PRIVATE MANUAL  
BRANCH EXCHANGES

This manually-operated switchboard, in modern style, with plastic laminate finish, has been especially designed to meet the requirements of medium-sized businesses and commercial organisations. The basic switchboard caters for installations with up to 10 exchange lines and 40 extensions. Additional equipment and positions can be provided to accommodate up to a maximum of 40 exchange lines and 200 extensions. Lightweight headsets are provided for the operators, and the extension telephones are modern and can be in any of the standard colours.



## FACILITIES

A single switchboard position is basically equipped for up to 10 exchange lines, 5 private or interswitchboard circuits, and 40 extensions. Under normal working conditions the extensions, which may be internal or external, can be increased to 60 before the load is likely to be too much for one operator, but where the extension calling rate is low, up to 160 extensions can be provided. Two positions are normally required for up to 20 exchange lines and 120 extensions, and 3 or 4 positions for the maximum capacity of 40 exchange lines, 10 private or interswitchboard circuits, and 200 extensions.

Ten connecting cord circuits are normally provided on each position to enable 10 separate calls to be in progress at the same time. The cord circuits can be increased to 15 per position if required.

Each position has two panels of jacks and each operator on a multiple installation has full access to all circuits. Each switchboard can be coupled to the switchboard on its left when positions are unstaffed.

Signalling is by lights on all calls. Exchange lines, extensions, private circuits and interswitchboard circuits all have individual calling lamps. On a single position, extensions appear in numerical order. On multiple installations the extension signals can appear on one or two designated positions and may be arranged out of sequence to distribute the calls evenly between operators.

On installations of three or four positions visual indication of the next exchange line to be used is provided; an illuminated arrowhead points to the first free line. This can be provided on a two-position installation for an extra charge.

An alarm buzzer sounds as call signal lights appear on the switchboard. The alarm can be disconnected by means of a cut-off key, if required. The buzzer can be set to a low, medium or loud volume of sound, by the

engineer, when the switchboard is installed.

Power ringing is provided on the switchboard. The calling cord applies automatic ringing, 0.75 second on and 2.25 seconds off, repeated until the extension answers or the operator withdraws the plug. Continuous ringing is obtained on the answering cord by pressing a 'ring/answer' key while the appropriate 'speak' key is operated.

An exchange call can be held by the operator while speaking to an extension; a different connecting cord circuit can be used to prevent overhearing by the caller.

The operator can interrupt a call in progress to ask an extension if another call can be accepted.

All extension telephones are provided with press-buttons so that the operator can be recalled, if necessary.

Extension telephones can be provided with dials so that calls can be dialled direct from those extensions when connected to an exchange line.

On an outgoing exchange line call, the line is released immediately the extension handset is replaced. If an incoming call is received on the exchange line before the extension has been disconnected a flashing cord circuit supervisory lamp warns the operator to intercept the call and the extension telephone will not be rung.

A mains unit provides power for signal lamps, bells, and internal calls.

In the event of a mains failure, exchange calls in progress remain connected, and the operator can still make and receive exchange line calls.

In STD areas, cyclometer-type private meters can be associated with the exchange lines and the connecting cord circuits to record STD units actually debited on individual calls.

Night service is arranged by connecting any of the exchange lines to selected extensions.

A grey lightweight headset is provided for each switchboard position. Twin sockets on each

position enable an extra headset to be plugged in for training purposes.

Extension arrangements to plan 1, 1A, 2, 4, 9, 12A, 105, 105A, 107 and 107A can be provided on switchboard extensions.

Modern telephones, in any of the standard colours, are provided on extensions, without additional charge. When certain extension arrangements are provided the choice of colour is limited to black, two-tone grey, and ivory.

## GENERAL INFORMATION

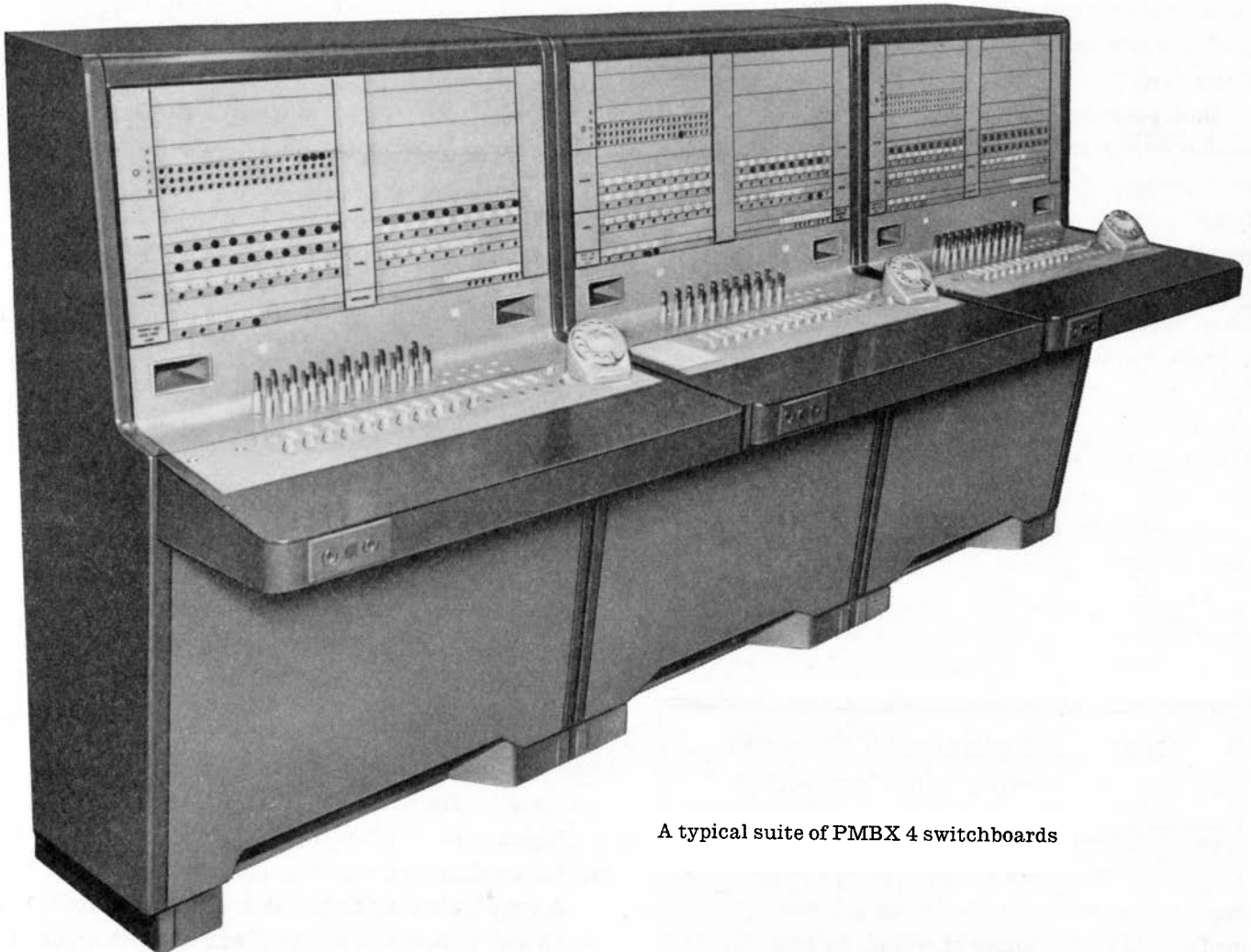
This type of apparatus can be used on practically any exchange system.

A single switchboard position is 28 $\frac{3}{4}$ " wide, 33 $\frac{1}{2}$ " deep and 48" high, and weighs

approximately 450 lb. The switchboards are free standing and require at least 3' clear space behind them to allow access for maintenance purposes.

The equipment is mains-powered from a standard 3-pin, 13-amp or 15-amp socket outlet provided by the customer.

Most of the equipment is contained in the switchboard itself, but the power unit, ringing and signalling units are separate. Additional equipment is necessary when more than twelve exchange lines per position are provided, and for signalling on some external extensions, private circuits or interswitchboard circuits. The space required for the separate equipment, and whether it is wall-mounted or floor



A typical suite of PMBX 4 switchboards

standing, depends on the size and facilities of the installation. For the simplest installation, this equipment occupies a space of approximately 30" by 30" and, when wall-mounted, protrudes 12".

Switchboard dials can be changed by the operator and a reserve dial is provided at each installation.

The switchboard is finished in grey plastic laminate. The working surfaces and face equipment are in french grey, and the surrounding panels in elephant grey.

**Rental and connexion charges  
are quoted in the preface sheet**

THE TELEPHONE MANAGER  
WILL GLADLY SUPPLY  
ANY FURTHER INFORMATION