

Private Automatic Branch Exchange 7 (PABX 7)

April 1972

Descriptive
Leaflet

DLD 417

Private Automatic
Branch Exchanges

This automatic system meets the telephone requirements of organisations needing up to twenty exchange lines and one hundred extensions.

It offers internal telephone service and public exchange service on the same telephone.

A trim, desk-mounted, cordless switchboard is provided for the PABX operator.



Description

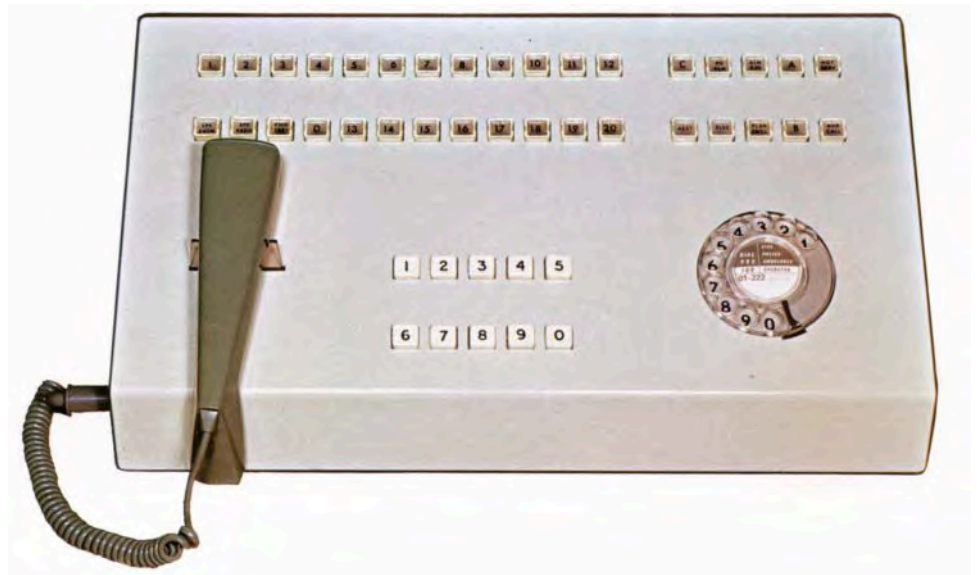
The installation can accommodate up to 20 exchange lines and 100 automatic extensions.

A few manual extensions can be provided. Lines can also be arranged to most other types of automatic or manually-operated Private Branch Exchanges (PBXs).

The PABX operator receives incoming exchange calls on the compact switchboard, illustrated right, and assists the extensions as necessary.

The automatic equipment housed in two steel cabinets, together with other apparatus, is sited in a small room near the switchboard.

The equipment is powered from a secondary-cell battery, automatically charged from a mains unit.



General facilities

A call can be made directly from one automatic extension to another or to a manual extension by dialling a three-digit number between 200 and 299, the range depending on the size of the installation.

Exchange calls can be made direct from automatic extensions by first dialling 9 to get an exchange line.

If required, any automatic extension can be connected in such a way that it can only make an exchange call through the switchboard.

Timing of any outgoing exchange call stops and the exchange line is released as soon as the extension handset is replaced.

Incoming exchange calls are received on the switchboard and connected by the operator to the required extensions through the automatic equipment.

Outgoing calls to one other PBX can be made direct from an automatic extension by first dialling either 5, 6 or 7. If additional equipment is provided it is possible to obtain up to six different PBXs by dialling 1, 3, 4, 5, 6 and 7.

It may be possible to dial direct to the extension of another PABX over an inter-PBX line. It is not possible, however, to interconnect other PBXs through the PABX 7.

Under certain conditions, additional PBX or private circuits, to different destinations if required, can be connected in place of an equivalent number of extensions. They are obtained by dialling the appropriate extension numbers. Exchange calls can be extended over these circuits.

The PABX operator can be called from an automatic extension by dialling 0.

All outgoing calls from manual extensions are made through the switchboard except during night service arrangements (see later). Incoming calls are received through the automatic equipment.

Calls are not interrupted if there is a mains failure. Service on the PABX can be maintained for several hours by the battery, subject to the load.

Switchboard facilities

The operator calls extensions from the switchboard by pushing buttons in turn for the last two digits of the required number. Ringing is normally applied automatically to the extensions.

Calls to or from extensions are released when the extension handset is replaced.

Ring-when-free is available if an extension is engaged. That is, the PABX operator can let an exchange line caller hold on, to be connected automatically to the required extension as soon as it becomes free. More than one caller can hold on for the same extension, but there is random selection of the one to be connected first.

The PABX operator can interrupt the call on an engaged extension to ask if another call can be accepted. A ticking sound (warn tone) lets the extension user know that the operator is on the line.

Exchange calls can be held at the switchboard simply by the operator restoring the speak key. The calls can be connected to extensions when required. When more than one call is held in this way, there is no overhearing.

Extension facilities

Calls between extensions are released when either extension handset is replaced.

On an exchange line call, an automatic extension user can hold the exchange call and make an enquiry call to another extension by pressing the button on the telephone once and dialling the number. The user can return to the original exchange call by pressing the button again.

If, however, the user replaces his handset after making an enquiry call, the exchange call is transferred to the other extension.

Night service facilities

When the night service button on the switchboard is pressed down, any incoming exchange call causes suitably sited bells to ring continuously until the call is answered.

Calls are answered by dialling 8 at any extension from which exchange calls can be made directly. The answering extension can transfer the calls to other extensions, if necessary.

Alternative methods can be provided which enable individual exchange lines to be connected to selected extensions, or one particular extension to be designated to answer calls.

Manual extensions are given facilities for making calls automatically on night service.

PABX 7 capacity

The capacity can only be increased beyond the limits shown by replacing the unit with a different type of PABX

Exchange lines	20
Reduced by one for each automatic or manual inter-PBX line, or manual extension provided.	
Automatic extensions	100
Reduced by one for each automatic inter-PBX line, or manual extension provided.	
Manual extensions	4
Inter-PBX circuits	20
Connecting circuits	12
Enquiry transfer circuits	2
Operator assistance circuit	1

General information

The switchboard is grey and olive green.

A Trimphone-type handset is normally provided for the operator, but this can be replaced by a lightweight headset, if preferred.

Dialling codes

1	– Spare
200 - 299	– For extensions
3	– Spare
4	– Spare
5	} – To one other PBX, or three other PBXs if additional equipment is provided
6	
7	
8	– For answering calls on night service
9	– To get exchange lines
0	– To call the PABX operator

Alarms

Audible and visual signals on the switchboard draw attention to incoming calls, mains failure and fault conditions.

The audible alarm is a tone caller which can be switched off if necessary. It is also switched off when the night service facilities are in use.

Tones and Ringing

Dialling, ringing, engaged, 'warn' and number unobtainable tones are provided from the PABX equipment.

A distinctive form of ringing can be provided to signal incoming exchange calls, to distinguish them from extension to extension calls.

Accommodation

The automatic equipment is housed in two cabinets which, together with the battery, mains unit and distribution frame, are installed in a separate room near to the switchboard.

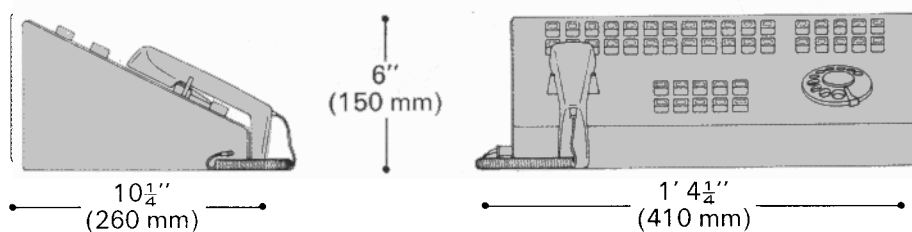
Sufficient space has to be left around the equipment for maintenance purposes. The cabinets have doors front and rear, so that the engineer can get at both sides of the equipment racks. In consequence, the room should be not less than 13' by 12' (4000 mm by 3700 mm) in area, and at least 7' 6" (2300 mm) high.

Heating, lighting and ventilation to normal office standards should be provided.

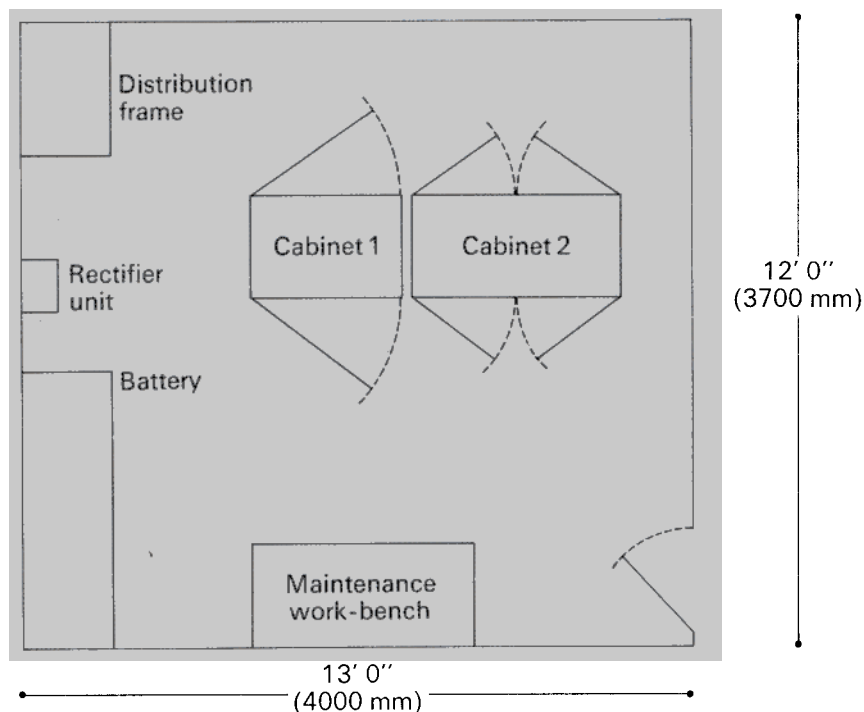
Dimensions and weights of equipment

Equipment	Width	Depth	Height	Weight
Cordless switchboard	1' 4 $\frac{1}{4}$ " 410 mm	10 $\frac{1}{4}$ " 260 mm	6" 150 mm	18 lb 8 kg
Equipment cabinet 1	3' 1" 940 mm	2' 0" 610 mm	6' 5 $\frac{1}{2}$ " 1970 mm	1100 lb 497 kg
Equipment cabinet 2	4' 7" 1400 mm	2' 0" 610 mm	6' 5 $\frac{1}{2}$ " 1970 mm	1250 lb 567 kg
Distribution frame	1' 1 $\frac{1}{2}$ " 340 mm	1' 6" 460 mm	5' 7" 1700 mm	100 lb 45 kg
Mains rectifier unit	1' 0" 310 mm	7 $\frac{1}{2}$ " 180 mm	1' 7 $\frac{1}{4}$ " 490 mm	60 lb 27 kg
Secondary cell battery	6' 0" 1830 mm	1' 0" 310 mm	5' 0" 1530 mm	900 lb 408 kg

Switchboard



Typical floor plan of equipment for a PABX7



Please note

We do our best to supply our customers with the apparatus they ask for but we may have to provide apparatus which does not accord exactly with the descriptions and illustrations in this leaflet.

Rental and connexion charges are quoted in DLD 1 the preface sheet for section D descriptive leaflets.

Your Telephone Sales Office will gladly supply any further information

**Post Office
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