

Private Automatic Branch Exchange 2 (PABX 2)

April 1972

Descriptive
Leaflet

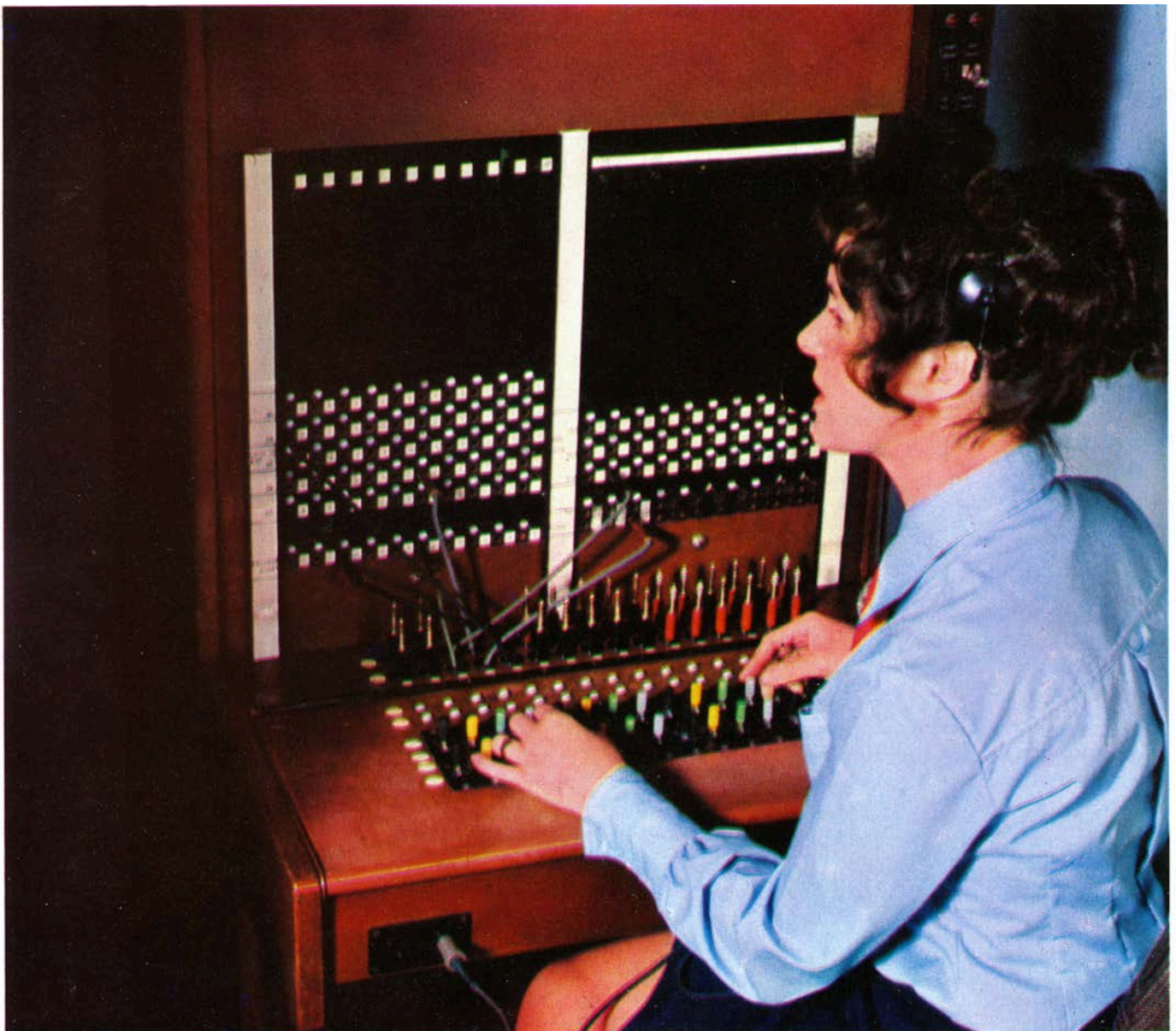
DLD 412

Private Automatic
Branch Exchanges

A PABX offers automatic internal telephone service and public exchange service in a single system.

Each automatic extension can dial other extensions and make or receive exchange calls.

The PABX 2 meets telephone requirements needing up to 10 exchange lines and 49 automatic extensions for organisations that wish to have, in addition, a more-personal service for up to 30 manual extensions.





description

The installation is available in four separate sizes. The largest can accommodate up to 10 exchange lines, 49 automatic extensions and 30 manual extensions.

Lines to other Private Branch Exchanges (PBXs) can be provided. The PBXs can be automatic or manually operated.

The PABX operator receives incoming exchange calls on the cord-type switchboard, illustrated above, and assists the extensions as necessary.

The automatic equipment is contained in a steel cabinet which is usually 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

Automatic extensions call each other by dialling two-digit numbers between 21 and 69, the range depending on the PABX size.

Automatic extensions dial 9 to get an exchange line to make outside calls. If required, selected extensions can be connected in such a way that they can only get 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.

Automatic extensions dial 7 to get a line connected to another PBX. It may be possible to dial direct to an extension of another PABX over these lines.

Two other PBX or private circuits, to different destinations if required, can be connected in place of two automatic extensions. They are obtained by dialling the appropriate extension numbers.

Automatic extensions dial 0 to call the PABX operator.

Manual extensions make and receive all calls through the switchboard. They are given three-digit numbers beginning with 0, such as 001 - 019, 070 - 079. If an automatic extension dials a manual extension number, the switchboard is called and connection is made by the operator.

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 all extensions from the switchboard by means of cord circuits. Ringing current is applied to extensions when the operator presses a ringing key.

All manual extension and operator-assisted calls are connected by cord circuits.

The PABX operator can connect both automatic and manual extensions to the lines to other PBXs.

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

The PABX operator can interrupt an engaged extension to ask if another call can be accepted.

A circuit is provided to prevent an incoming exchange call ringing an extension before the PABX operator has been able to disconnect it from a previous exchange line call. A flashing signal draws the operator's attention to the new exchange line call.

Exchange calls can be held on the switchboard by the cord circuits if a plug is left in the jack corresponding to the exchange line. The calls can then be connected to extensions as required.

extension facilities

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

An automatic extension, or a manual extension with a dial, can hold an exchange or PBX call and make an enquiry of another extension by pressing the button once and dialling its number. Pressing the button again, restores the extension to the original call.

On exchange calls, or calls to another PBX, the button on the telephone is pressed twice to call in the PABX operator, who can then hold or transfer the call as required.

Exchange or inter-PBX calls can be transferred as often as required. If the enquiry circuit is engaged the operator will be called in automatically.

PABX 2 sizes

Size	4 + 15	5 + 24	7 + 35	10 + 49
Size The capacity shown for each unit cannot be exceeded. Greater automatic capacity can be obtained only by changing the unit for a larger size; the manual capacity remains unchanged.				
Exchange lines If 3 inter-PBX lines are required, exchange lines on 10 + 49 are limited to 9.	4	5	7	10
Automatic extensions Reduced by one for each inter-PBX circuit obtained by dialling.	15	24	35	49
Manual extensions	30	30	30	30
Inter-PBX circuits Obtained by dialling 7, or connected by the operator to one particular PBX.	2	2	3	3
Inter-PBX circuits Obtained by dialling an extension number, or connected by the operator, to other PBXs.	2	2	2	2
Private circuits, obtained through operator Reduced by two for each inter-switchboard circuit obtained by dialling extension number.	4	4	4	4
Automatic connecting circuits	3	4	6	7
Enquiry transfer circuit	1	1	1	1
Operator assistance circuits	2	2	2	2
Switchboard cord circuits normally provided	12	12	12	12

night service facilities

Selected extensions can be directly connected to exchange lines by means of connecting jacks on the switchboard.

Each extension connected in this way receives only the exchange calls on one particular line, which can also be used for outgoing calls if the extension has a dial.

If extension bells have been provided, calls on exchange lines not directly-connected, can be answered from an automatic extension by dialling 8. The calls can be transferred to any extension that is not directly-connected to an exchange line.

conference facilities

It can be arranged, for extra rental, that up to ten internal or external extensions, or up to five extensions and an exchange line, can be connected together for a telephone conference.

An amplifier can also be rented, to allow up to seven extensions and an exchange line to have a conference.

general information

Dialling codes usually provided

- 7** – To get lines to another PBX.
- 8** – For answering calls on night service.
- 9** – To get exchange lines.
- 0** – To call the PABX operator.
- 21 to 35** – For 15 extensions.
- 21 to 44** – For 24 extensions.
- 21 to 55** – For 35 extensions.
- 21 to 69** – For 49 extensions.

Alarms

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

The audible alarm can be switched off when required. It is also switched off when the night service facilities are in use.

Tones

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

Accommodation

The manual switchboard needs a floor area of 10'9" by 7'3" (3300mm by 2200mm) to allow adequate space for the operator and for maintenance purposes behind the switchboard.

The automatic equipment cabinet, battery, mains unit and distribution frame should ideally be installed in a separate room as near as possible to the switchboard.

Sufficient space has to be left around the equipment for maintenance purposes. The cabinet has doors front and rear, so that the engineer can get at both sides of the equipment racks.

The equipment room should be at least 7'6" (2300mm) high, with not less than the following dimensions:

4 + 15 or 5 + 24 size –
8'6" by 6'8"
(2600 mm by 2000 mm)

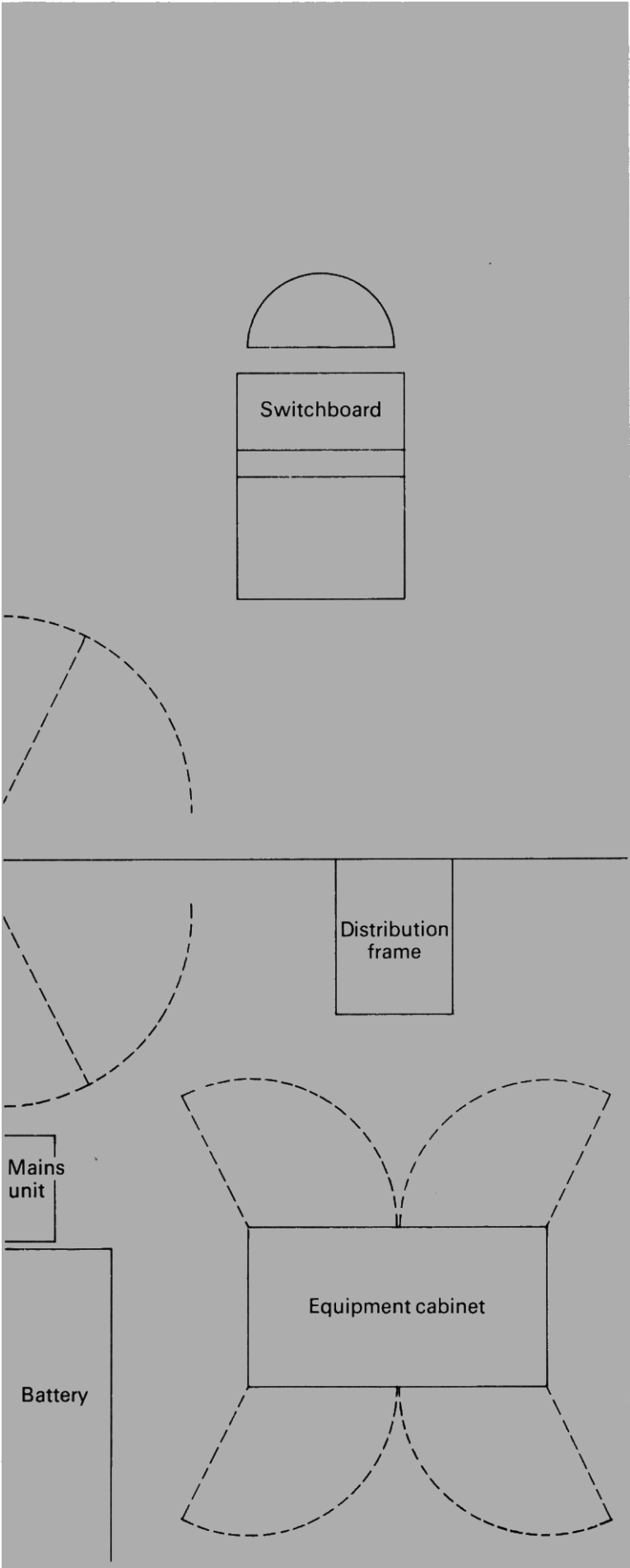
7 + 35 or 10 + 49 size –
9'0" by 8'0"
(2700 mm by 2400 mm)

The accommodation should have adequate heating, lighting and ventilation.

dimensions and weights of equipment

Equipment	Width	Depth	Height	Weight
Manual switchboard	2'2" 660 mm	2'9" 838 mm	4'8" 1422 mm	300-400 lb 136-181 kg
4 + 15 or 5 + 24 cabinet	2'10" 846 mm	2'0" 610 mm	6'11" 2108 mm	924-980 lb 419-445 kg
7 + 35 or 10 + 49 cabinet	3'9" 1143 mm	2'0" 610 mm	6'11" 2108 mm	1232-1288 lb 559-584 kg
Distribution frame	1'6" 457 mm	2'0" 610 mm	6'9" 2057 mm	160 lb 73 kg
Mains rectifier unit	1'3½" 394 mm	9½" 241 mm	1'8¾" 527 mm	53 lb 24 kg
Secondary cell battery				
4 + 15 or 5 + 24 size	3'4" 1016 mm	9" 229 mm	5'0" 1524 mm	308 lb 140 kg
7 + 35 size	3'4" 1016 mm	9" 229 mm	5'0" 1524 mm	392 lb 178 kg
10 + 49 size	4'1" 1245 mm	1'6" 457 mm	6'10" 2083 mm	1008 lb 457 kg

typical floor plan for a 10 + 49 PABX 2

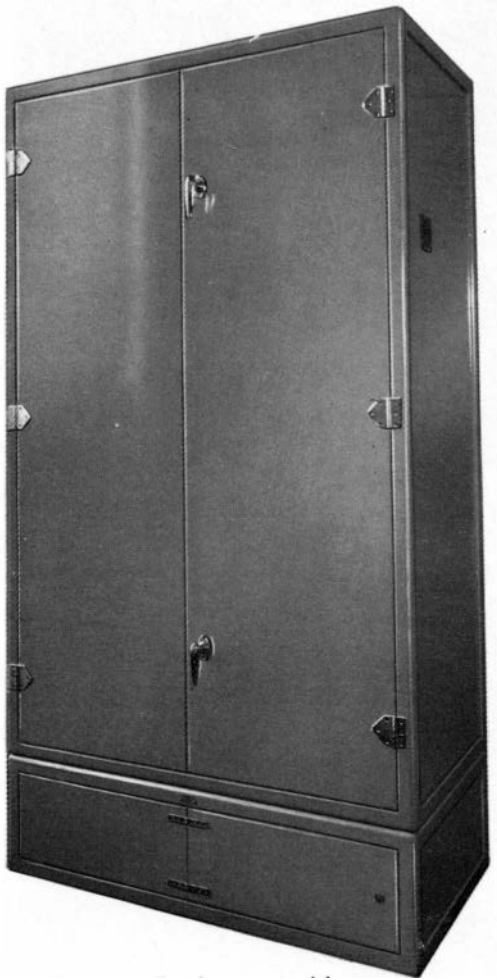


20'0"
(6100mm)

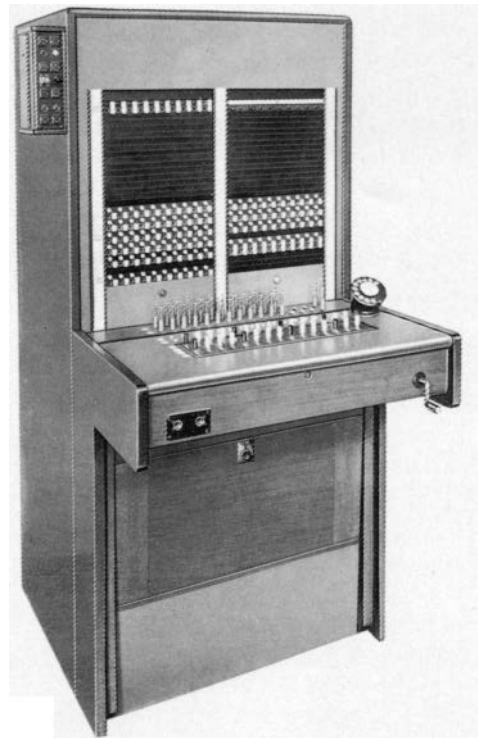
8'0"
(2400 mm)

equipment provided for 10 + 49 PABX2 installation

(The items are shown approximately in proportion)



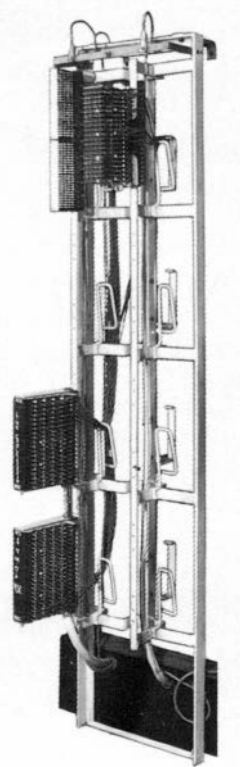
Equipment cabinet



Switchboard



Mains unit



Distribution frame



Battery

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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