

# Private Automatic Branch Exchange No 5 (PABX 5)



DESCRIPTIVE  
DL D 401

PRIVATE AUTOMATIC  
BRANCH EXCHANGES



The PABX 5 is a modern, automatic telephone system designed to meet the communication needs of small or medium sized businesses and organisations. The system, which can have up to five exchange lines and twenty extensions, does not require a manual switchboard or an operator. Incoming exchange calls are answered at 'designated' extensions, and can if necessary be transferred to other extensions. There is full internal dialling between extensions.



A small number of lines to other PABXs or PMBXs can be connected to the system. The automatic equipment (which is entirely contained in a metal cabinet) and the power unit are mounted on a rack which can be fitted in any convenient position.

The PABX 5 is available in two sizes, and modern telephones are used throughout each installation.

## **EXTENSION FACILITIES**

Extensions call each other simply by dialling the number. The equipment is automatically released when the caller replaces his handset.

Extensions make outgoing exchange calls by first dialling 9 (or a similar single-figure code) for connexion to an exchange line.

Extensions make outgoing calls over inter-connecting circuits to other PABXs or PMBXs joined to the system, by first dialling the appropriate single-figure code to get a circuit.

Incoming exchange calls ring a special bell or bells sited within hearing of selected telephones known as 'designated' extensions. Any of these 'designated' extensions can answer an exchange call simply by lifting the handset. An external extension can be designated, but a special bell on a separate circuit must also be provided. Non-designated extensions cannot answer exchange calls.

A 'designated' extension can transfer an incoming exchange call to another extension by pressing a button on the telephone, dialling the required number, and, if the extension agrees to take the call, replacing the handset. If the extension cannot take the call, or asks that it should be given to another extension, the 'designated' extension returns to the original call by again pressing the button on the telephone.

In the same way, any extension engaged on an incoming or outgoing exchange or inter-PBX call can, while holding the original call, make an enquiry of another extension or use an inter-PBX line (providing it is not a private circuit) to make an enquiry, and then return to the call or transfer it, as required.

An incoming call can be offered by a 'designated' extension to an engaged extension, if necessary. By dialling an additional single-digit code the 'designated' extension can interrupt a call in progress on the required extension. A ticking tone warns that extension of the intrusion. If the extension agrees to end its call and take the new one, immediately the

telephone becomes free the bell rings, the extension answers, and the 'designated' extension transfers the waiting call by replacing the handset.

All incoming calls on inter-PBX lines are dialled direct into the required extension.

Any extension can be connected in such a way that it can be barred from dialling the codes for an exchange line or for an inter-PBX circuit, and from receiving incoming exchange-line and inter-PBX line calls.

Extensions can also be connected so that they can be barred from making trunk calls.

## **GENERAL FACILITIES**

Inter-PBX lines can be arranged as extensions over which exchange calls can be connected, or as private circuits over which connexion of exchange calls is prohibited. Subject to technical limitations, outgoing calls into a distant PABX can be dialled direct to the extension required. One PBX can dial another PBX over the lines connecting them to the PABX 5.

The automatic equipment cannot be held unnecessarily without being used. If when making a call an extension user fails to dial within 12-15 seconds of receiving dialling tone, the connecting equipment is released and number unobtainable tone is received by anyone calling that extension, until the handset has been replaced. Similarly, if a called extension handset is replaced at the end of a call but the extension is still held by the caller for longer than about 20 seconds, the called extension is automatically released.

Night service on a 'designated' extension requires no special arrangement. Night service on a non-designated extension can be provided by means of a night-service key fitted on any selected extension telephone. By operating the key, an extension having limited facilities during the day can be given full facilities during the night. It can also be arranged that additional or different calling bells can be rung

for incoming calls during night service.

A mains unit provides power for operating the whole of the installation.

In the event of mains failure all existing calls are disconnected and each exchange line is connected automatically to a predetermined extension, which then has all the facilities of a direct exchange line. Other extensions cannot be used during the failure. When the supply is restored, exchange-line calls in progress at the time are not interrupted, and the exchange lines are switched back to the PABX as the calls are completed.

In STD areas, cyclometer-type total meters can be provided on exchange lines and trip meters on extensions, to record STD units actually debited. The meters are usually fitted at a central point, such as in the vicinity of the equipment cabinet.

## PABX SIZES

Size	3+10	5+20
Exchange lines (see note 1)	3	5
Extensions	10	20
Inter-PBX lines (see notes 1 and 2)	3	5
Connecting circuits	2	4

Notes (1) The combined total of exchange and inter-PBX lines must not exceed the exchange-line capacity of each unit.

(2) PBX means either a PABX or a PMBX.

The capacity of either unit cannot be increased beyond the limits shown. Greater capacity can be obtained only by replacing the smaller unit with the larger unit, or the larger unit with a different type of PABX.

## GENERAL INFORMATION

### Numbering arrangements and dialling codes

Level 1—Used for offering calls to an engaged extension

Level 2—Extensions

Level 3—Extensions

Level 4—Not used

Level 5—Not used

Level 6—Not used

Level 7—Lines to another PBX  
Level 8—Lines to another PBX  
Level 9—Exchange lines  
Level 0—Lines to another PBX

} These can be varied to suit different requirements.

All extensions, 'designated' or otherwise, have two-digit numbers in the ranges 20-29 and 20-39 according to the size of the unit.

### Alarms

The equipment fuse alarm is extended to the telephone to which the night-service key is fitted or, if night service is not specially provided, to any selected extension. If a fuse blows in the equipment a light shines on the telephone and the exchange should be informed.

### Tones

Dialling, ringing, engaged, ticking and number unobtainable tones are provided from a ringing and tone relay set in the equipment. For certain technical reasons, the ringing tone on the PABX is slightly different in periodicity to that of the public exchange.

### Accommodation

The equipment rack can be installed in any convenient position, preferably near the focal point of the bulk of the extensions. The rack bearing the cabinet and power unit is the same size for both units; it stands on the floor and is fixed to a wall, and occupies a space 2' 6" wide, 1' 2½" deep, and 5' 9" high. The approximate weight of the (3+10) unit, when fully equipped, is 400 lb, and the (5+20) unit is 550 lb. A removable dust-cover is provided for maintenance purposes, and to give easy access

a clear space of at least 3 feet should be allowed in front of the cabinet. The equipment draws its power from AC mains, supplied from a 3-pin, 5-amp socket outlet provided by the customer. Power consumption is 320 watts.

**Connexion charges and rentals**

There is a connexion charge of £90 and a quarterly rental of £45 for the (3+10) PABX 5, and a connexion charge of £110 and a quarterly rental of £55 for the (5+20).

THE TELEPHONE MANAGER  
WILL GLADLY SUPPLY  
ANY FURTHER INFORMATION