



How to Operate

THE 5 + 20 PMBX

DESCRIPTION OF THE SWITCHBOARD

The switchboard has a KEYSHELF and a FACE PANEL

THE KEYSHELF

ANSWERING CORD. For answering any type of call. It is the back cord of each pair.

CALLING CORD. For calling on any line. It is the front cord of each pair.

'RING/RING BACK AND DIAL' key. Push forward to ring on the calling cord. Pull towards you to ring on the answering cord or to dial.

'SPEAK' key. Push forward to speak on the answering and calling cords.

'POWER RING/HAND GEN' key. This key is fitted when power ringing is provided. To avoid ringing on the answering cord when you dial on the calling cord pull the key towards you. Some switchboards have a foot switch instead of a key for this purpose.

DIAL. For connecting calls over public automatic exchanges and distant PABXs.

OPERATOR'S HANDSET JACKS. One jack is for your handset, and the other for use by a supervisor or trainee operator, etc.

THE FACE PANEL

EXCHANGE LINE JACKS AND INDICATORS. Each exchange line

is connected to one of these jacks, and also to one of the square-flapped calling indicators. The flap will drop when a call is received, and must be restored by hand when the call has been answered.

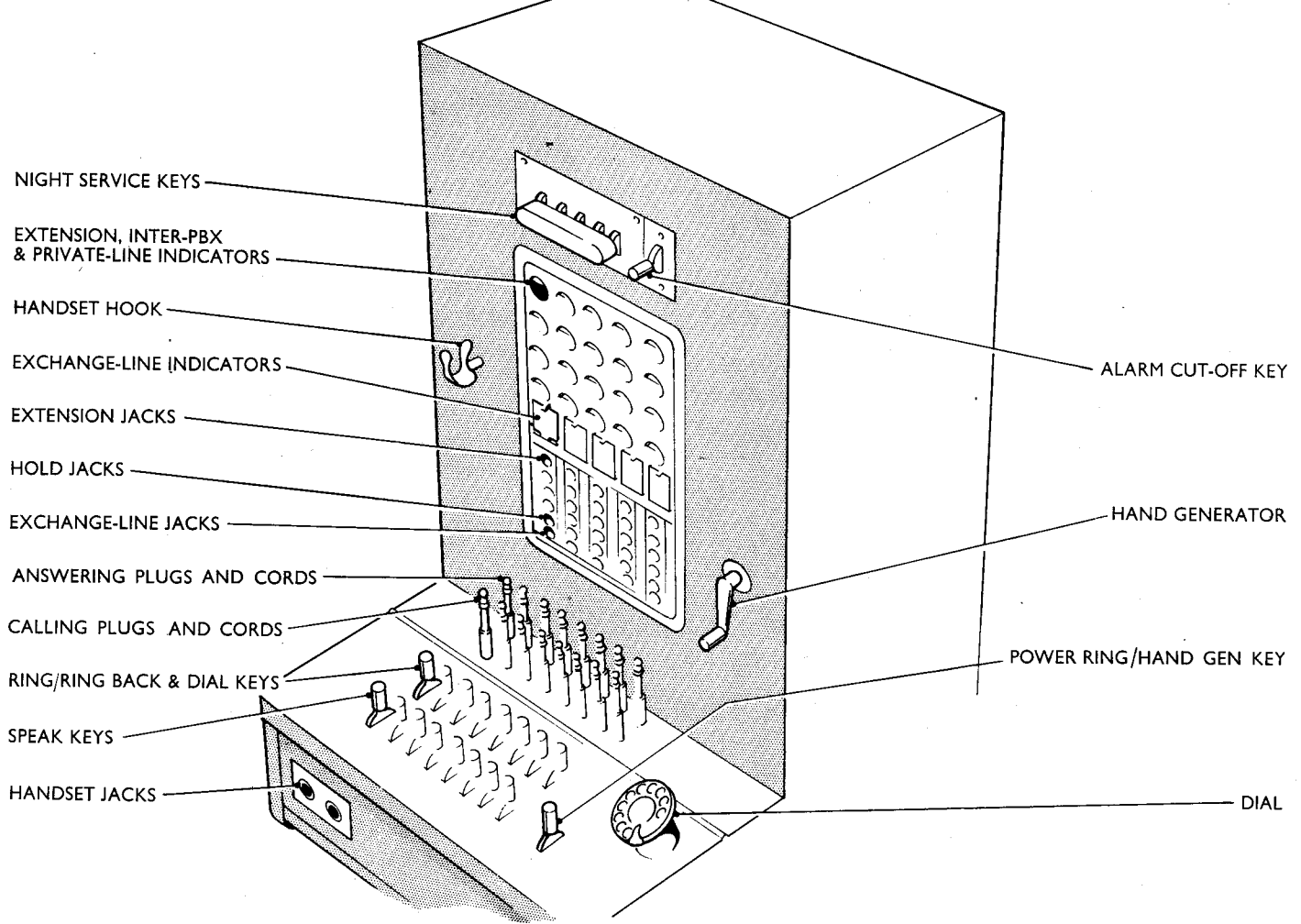
EXTENSION, INTER-PBX AND PRIVATE LINE, JACKS AND INDICATORS. Each extension inter-PBX and private line is connected to one of these jacks and also to one of the round (doll's eye) indicators. Each indicator is operated and restored under the control of the extension telephone. It acts as a calling indicator and supervisory signal.

HOLD JACKS are used for testing the cords and for holding exchange lines.

HAND GENERATOR. This is for ringing on extension and private lines where power ringing is not fitted, or should the power ringing fail.

OPERATOR'S TELEPHONE. This is usually a handset. When not in use, it should be placed on the hook situated to the left of the indicators.

ALARM BELL. A bell will ring (or a buzzer sound) whenever an indicator operates. On some switchboards the handset hook operates a switch, and the alarm will stop when the handset is lifted. If a fixed hook is fitted a separate 'ALARM-OFF' switch will be provided above the calling indicators.



'NIGHT SERVICE' KEYS. These keys disconnect the power from the calling indicators so that they do not operate when night service is set up.

HOW TO OPERATE

TO ANSWER A CALLING SIGNAL

check that all keys are in the normal (upright) position. Operate the 'SPEAK' key of a free pair of cords and insert the answering plug into the jack of the calling line.

If the call is from:

AN EXTENSION, announce 'Switchboard';

AN EXCHANGE LINE, announce the name of your firm or your telephone number;

AN INTER-PBX OR PRIVATE LINE, announce the name of your firm or department.

TO CONNECT A CALL TO AN EXTENSION, INTER-PBX, OR PRIVATE LINE

leave the 'SPEAK' key operated. Insert the calling plug into the required jack and operate the 'RING' key. (If your switchboard is not fitted with power ringing turn the generator handle briskly in a clockwise direction.)

The extension indicator will operate, and will remain operated until the extension user answers.

Some inter-PBX lines are arranged for automatic calling and it is not necessary to ring on these.

Connexions must not be made between an exchange line and a private line, or between exchange lines.

TO HOLD AN INCOMING CALL

An exchange-line call may be cut off if the 'SPEAK' key is not kept operated while the extension receiver is on its rest. If it is necessary to restore the 'SPEAK' key before the extension receiver is lifted, withdraw the plug from the extension jack and re-insert it in a 'HOLD' jack before restoring the 'SPEAK' key. Operate the 'SPEAK' key before removing it again.

TO CONNECT A CALLER TO THE PUBLIC EXCHANGE

leave the 'SPEAK' key operated. Insert the calling plug into a free exchange-line jack.

IF THE PUBLIC EXCHANGE IS AUTOMATIC

listen for dialling tone and operate the 'RING BACK and DIAL' key.

(If you have power ringing pull the 'POWER RING/HAND GEN' key towards you or press the foot-switch.) Dial the number or service you require. Restore the 'RING BACK and DIAL' key (and 'POWER RING/HAND GEN' key) to normal. If, after about ten seconds (longer for trunk calls), no tone has been heard withdraw the calling plug for at least two seconds, and try again.

An extension fitted with a dial may be connected to an exchange line so that the number can be dialled by the extension user. Keys in the cord circuit used must be in the normal position before the extension user starts to dial.

IF THE PUBLIC EXCHANGE IS MANUAL

wait for the operator to answer and then ask for the number or service you require.

If an extension user replaces his receiver while you are setting up his call he may be rung by pulling the 'RING BACK' key towards you (and turning the generator handle).

The public exchange operator may be recalled by steadily withdrawing and re-inserting the plug into the exchange-line jack.

SUPERVISORY SIGNALS

When an extension user replaces the receiver, at the end of a call, the extension indicator will operate. This is known as a clear, or clearing signal, and is a signal to you to take down the connexion. At the end of a call between two extensions, or between an extension and an inter-PBX or private line, both indicators will operate when both receivers are replaced, i.e. a double clear is received.

Generally, on those inter-PBX and private lines on which it is necessary to ring to call the distant end it is also necessary to ring for at least two seconds to give a clear to the distant end.

OPERATOR RE-CALL

When the indicator of an extension connected to an exchange line flashes (i.e. operates and releases) the extension user wishes to recall you.

To answer a recall signal, operate the associated 'SPEAK' key and announce 'Switchboard'.

An extension user can make the indicator flash by moving the receiver rest up and down or by pressing and releasing a button on the telephone. Moving the receiver rest will not only flash the indicator but will give a clear to the public exchange, and, if the call has been dialled, release the connexion.

NIGHT SERVICE

When the switchboard is left unattended the 'NIGHT SERVICE' keys should be operated. Any extension may be connected to any exchange line by means of cords 1-5 inclusive (1-8 on some switchboards). This enables the extension user to make and receive public exchange calls without the assistance of the operator. When the 'NIGHT SERVICE' keys are operated, all other keys should be in their normal (upright) position. The 'NIGHT SERVICE' keys and all connecting cords should be restored to normal when the switchboard is staffed again but challenge each connexion before you take it down, in case it is in use.

DAILY SWITCHBOARD TESTS

On taking up duty each morning

- (a) Insert each plug in turn into a 'HOLD' jack. Operate the 'SPEAK' key and shake the cord gently. A grating or clicking noise in your receiver indicates that the cord is faulty and should be withdrawn from use until repaired.
- (b) Examine the labels, etc, and report missing or damaged items.

POWER FAILURE

If your switchboard is powered by mains electricity and does not have a reserve battery supply, when a failure of the mains supply occurs you will not be able to speak to extension users and they will not be able to speak to each other. Calls to the public exchange will not be interrupted but all other calls will fail, and should be disconnected.

Meters fitted to the switchboard will not operate.

Operate the night-service keys.

The exchange-line indicators will be operated by incoming calls, and you will be able to speak to callers. You will have to use the hand generator to call extensions, and as the extension indicators will not operate you will need to operate the speak key periodically to check that a call is still in progress.

Alternatively, you can connect each exchange line to an extension, using only the first five cords—as for night service. The extensions so connected can make and receive calls but they will not be able to attract your attention to ask you to transfer a call to another extension. When the mains electricity supply is resumed restore the night-service keys and take down connections on which the extension indicators operate.

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