



A New Service for Residences

By W. M. BEAUMONT
Local Circuit Development

NO longer is the telephone a luxury, something to be used only at rare intervals or from curiosity, but—like electric light and the automobile—it is an essential part of our daily existence. And the more it is used, the more are found other ways in which it may simplify and make easier our ordinary affairs. Few establishments, whether office, factory or private residence, can be adequately served by a single telephone. One does not want to be continually running back and forth or up and down stairs to answer or to place a call. Small business houses and the larger residences require a number of telephones, and to take full advantage of the service they offer, intercommunicating features are highly desirable.

For installations requiring fairly extensive intercommunicating facilities,

a number of private branch exchanges are available.* Where the intercommunicating needs do not require more than a single channel, however, and where privacy on this channel is not essential, facilities are now available in the form of the 15A and 23A key equipments. These two key equipments are alike except that the 23A provides for two central office lines, and the 15A for only one.

Hand telephone sets with five buttons in the base, as shown in the accompanying photograph, are employed at all stations that are to have access to the central office lines. From left to right these buttons are marked, 1, 2, H, L, and B, and are used to establish a connection with either of the central office lines, to hold an outside call while it is being transferred,

*One of these, the No. 750 P.B.X., was described in the RECORD for February, 1930, p. 278.

to connect to the intercommunicating circuit, and to signal other stations.

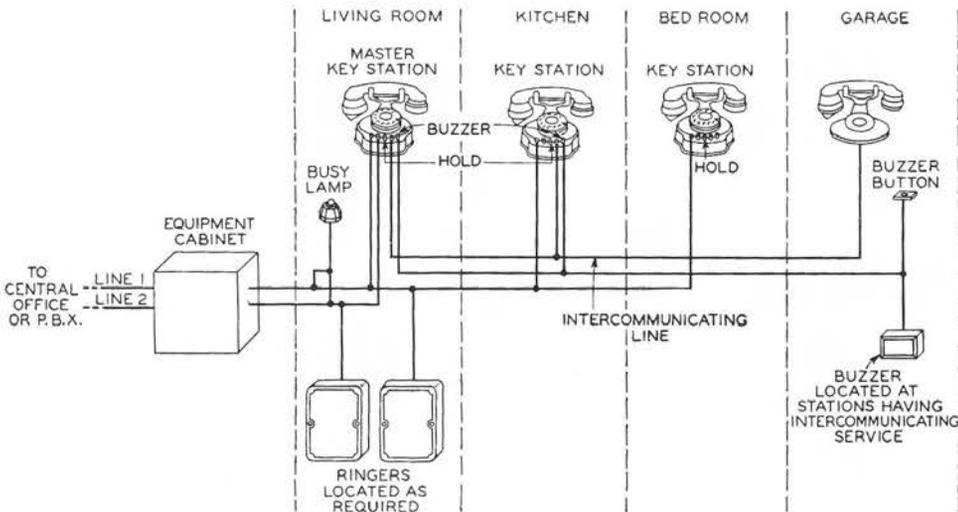
Incoming calls are signalled by bells—those on the two lines being arranged to give different tones to indicate which line is calling. To answer an incoming call one lifts the handset and presses button 1 or 2, depending on which line is being used, and then talks. Should the call be for someone who can answer more conveniently at some other station, the H button is pressed to hold the call, then the L button is pressed to connect to the intercommunicating line, and button B is pressed to signal the station wanted. Code signalling is usually employed for this purpose. When the person at the distant station answers on the intercommunicating line, the person at the calling station tells him there is a call waiting on line one or two, as the case may be. The second station then goes in on the line by depressing the push button associated with that line and the first station hangs up, thus making his station available for other calls.

Considerable flexibility is provided

in the facilities made available at various stations, a typical arrangement for residences being shown in Figure 1. A station may be given access to either or both of the outside lines, or it may have intercommunicating service without access to the outside lines. The latter type of station does not employ the push-button handset, but is provided with a separate button to enable other stations on the intercommunicating line to be signalled.

A small lamp, shown in the illustration, may be employed, if desired, to indicate a busy outside line. If, for example, a person should press button 1 to make a call and line 1 was busy, the lamp would light, and he would then place his call on line 2. A single lamp is employed for indicating a busy condition on both lines, associating itself automatically with the trunk corresponding to the button pushed.

When a station is using an outside line all the other stations are normally cut off from it, but if desired, arrangements may be made so that any other station or stations are not cut

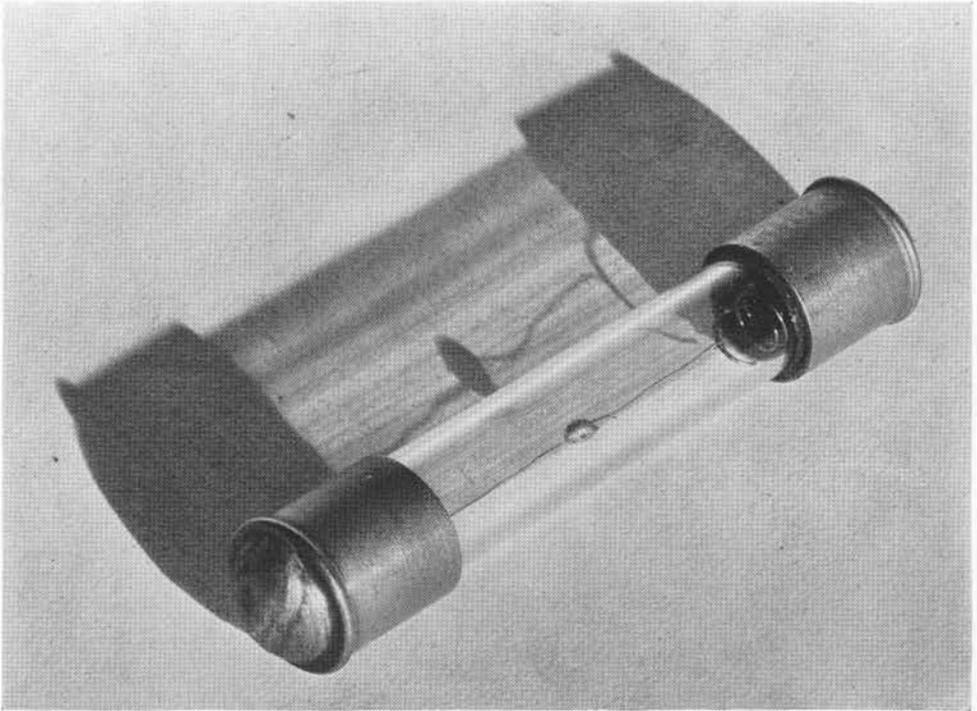


A typical arrangement for the 23A key equipment

off. This permits a flexible privacy system which may be arranged to accommodate the requirements of the subscriber.

These new equipments thus provide

very convenient and satisfactory telephone service features for small businesses and for residences which require a number of telephones but which do not need the 750 P.B.X.



In the No. 62 Fuse, a globule of low-melting alloy joins two heating wires which are placed under tension by a small helical spring