See TI C3 C3020

THE HOUSE EXCHANGE SYSTEM

Description of Equipment

★[*NOTE :—As this Instruction has been completely revised, individual paragraphs have not been "starred"*]

1. Scope of Instruction.—This Instruction describes the various items of equipment used on the House Exchange System. The terms 'multiple station', '1 + 5 system', etc., are defined in Q 1001. The installation of the system is described in Q 3001.

2. Contents.—The paragraphs dealing with the various items of equipment are as follows :—

	Par.
Telephones	3 to 8
Transfer units	9 to 14
Plugs, cords, jacks	15 to 18
Junction boxes	19
Other items	20 to 25

3. Telephones: Types in Use.—The present-day standard intercom. telephones for use on the house exchange system are :—

"Telephone, Intercom., No. 1/1 (Mk. 2)" for multiple stations on the '1 + 5' system

"Telephone, Intercom., No. 1/2A (Mk. 2)" for multiple stations on the '2 + 10' system.

Superseded designs of these telephones which may still be issued from Supplies Dept. for new work are :—

"Telephone, Intercom., No. 1/1 (Mk. 1) and No. 1/2 (Mk. 1 and Mk. 2)"

Earlier patterns which may still be met with on existing installations but which will no longer be issued for new work are :—

"Telephone, Intercom., Nos. 1 and 2"

These early telephones are not provided with a tray but are otherwise very similar in external appearance to the later models. The No. 1 type is superseded by the No. 1/1 type and the No. 2 type by No. 1/2 and No. 1/2A types.

Where a hearing-aid amplifier is required at a multiple station on the house exchange system, "Telephone, Intercom., No. 1/1B (Mk. 2A)" is used for the '1+5' system and "Telephone, Intercom., No. 1/2B (Mk. 2A)" for the '2+10' system. These telephones are described in par. 8.

4. "Telephones, Intercom., No. . . . (Mk. 2A)".—Future supplies of "Telephones, Intercom., Nos. 1/1, 1/2A, 1/1B and 1/2B" will be fitted with a new type of handset plunger, designed to reduce the possibility of sticking. Telephones with the new plungers will be distinguished by the addition of the letter A as a suffix to the mark number, e.g., "Telephone, Intercom., No. 1/2A (Mk. 2A)". In all other respects, these telephones will be as described elsewhere in this Instruction for items without the mark-number suffix A.

5. "Telephone, Intercom., No. 1/1" (Fig. 1).—This telephone is used on installations having one exchange line and five (or exceptionally, six) local stations. The mechanism is mounted on a metal base, measuring approximately 11 in. × 5 in., and is enclosed in a black, moulded cover ("Cover No. 4") with a cradle rest for the telephone handset ("Telephone No. 164"). On the sloping top surface of the telephone is a row of 7 plunger keys comprising, at the top, the exchange-line key (coloured red), followed by 5 black local-call keys and, below these, the conference key marked 'C' (coloured green). The operating procedure for the keys is described in Q 1003. Adjacent to the keys is a window under which a paper label bearing station numbers, etc. may be inserted via a slot in the top edge of the sloping key panel. The labels are described in A 3202 and are obtained separately, as required. The label may be removed by first moving it forward with the point of a pin inserted into a small slot provided for the purpose above the window. The handset of the "Telephone, Intercom., No. 1/1 (Mk. 2)" has a "Receiver, Inset, No. 2P"; that of the Mk. 1 telephone has a "Receiver, Inset, No. 1L". All new telephones will be Mk. 2 (or Mk. 2A, see par. 4) and will also include a "Coil, Induction, No. 27"; old telephones of either Mk. No. may contain an earlier pattern induction coil, such as the "Coil, Induction, No. 22". As issued from Supplies Dept., each telephone is fitted with a dummy dial which, in automatic areas, may be replaced locally as required by the appropriate "Dial, Auto., S.S. No. 10 . . .". A "Holder and Tray No. 2" is fitted under the base of the telephone and the complete telephone includes a desk cord (6 feet long) terminated on a plug fitted with a buzzer. For use at a main station, internal strapping points are provided in the telephone to enable exchange-line monitoring or trunk-offering facilities to be given. The use of these straps is described in Q 3001. The circuit of the telephone is shown on Dgm. Q(L) 131 and the wiring on Dgm. Q(L) 141. The complete telephone weighs approximately 9½ lb.

6. "Telephone, Intercom., No. 1/2A" (Fig. 2).—This telephone is used on installations with two exchange lines and ten (or exceptionally, eleven) local stations. The mechanism is mounted on a metal base and is housed in a moulded cover of the same type and dimensions as for the "Telephone, Intercom., No. 1/1". The telephone is similarly fitted with a tray and dummy dial and includes a desk cord (6 feet long) with plug and buzzer. The handset of the "Telephone, Intercom., No. 1/2A (Mk. 2)" has a "Receiver, Inset, No. 2P"; that of the Mk. 1 telephone a "Receiver, Inset, No. 1L". The Mk. 2 telephone also includes three resistors not fitted in the Mk. 1 type; the function of the resistors is

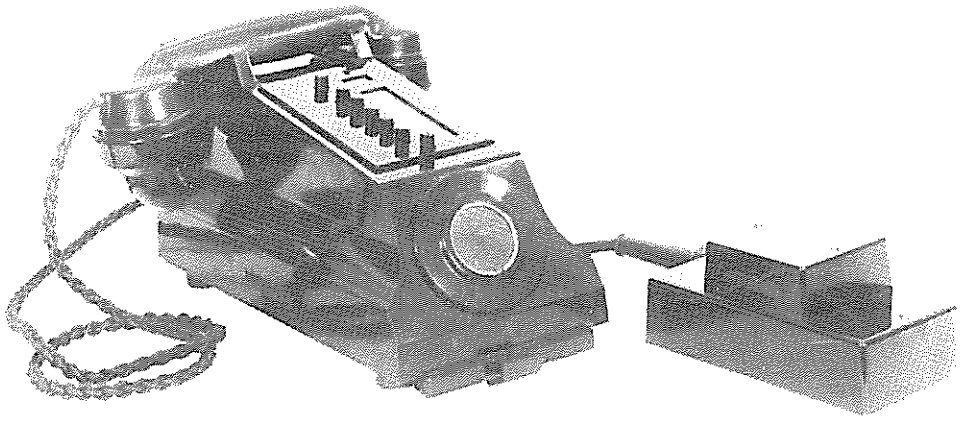

FIG. 1.—TELEPHONE INTERCOM., No. 1/1

described in Q 4001. All new telephones will be Mk. 2 (or Mk. 2A, see par. 4) and will include a "Coil, Induction, No. 27"; old telephones of either Mk. No. may contain earlier-pattern induction coils, such as the "Coil, Induction, No. 22". "Telephone, Intercom., No. 1/2A" has 13 plunger keys, comprising two exchange-line keys (coloured red and numbered 1 and 2) placed one above each of two rows of 5 black 'local' keys, with the conference key marked 'C' (coloured green) placed centrally below the others. Immediately above and associated with each exchange-line key is a trigger key (coloured red), the functions of which are described in Q 1003. A window for a 'local' station designation label is provided adjacent to each row of keys. In addition to internal strapping points to give exchange-line monitoring or trunk-offering, the telephone has strapping points for use when it is fitted on a main station to enable a local station to call the main when it is engaged on an exchange call. The use of these straps is described in Q 3001. The circuit of the telephone is shown on Dgm. Q(L) 231 and the wiring on Dgm. Q(L) 241. The complete telephone weighs approximately 10½ lb.

7. "Telephone, Intercom., No. 1/2".—The external appearance of this telephone is identical to that of the "Telephone, Intercom., No. 1/2A". The internal construction and circuits of the two telephones are also very similar but a "Telephone, Intercom., No. 1/2" cannot be used at a main station which is required to be called locally while engaged on exchange calls, because the necessary strapping points are not provided in the telephone. The circuit of this telephone is shown on Dgm. Q(L) 231 and the wiring on Dgm. Q(L) 241. The handset of the "Telephone, Intercom., No. 1/2 (Mk. 2)" has a "Receiver, Inset, No. 2P" and the Mk. 1 pattern has a "Receiver, Inset, No. 1L". Early versions of this telephone may be fitted with a "Coil, Induction, No. 22 (Mk. 1)", but those of later construction include a "Coil, Induction, No. 22 (Mk. 2)" [see Dgm. Q(L) 231].

8. "Telephones, Intercom., No. 1/1B (Mk. 2) and No. 1/2B (Mk. 2)" (Fig. 3).—These telephones are used with the hearing-aid amplifier, "Repeater, Telephonic, No. 17C", and are normally produced from the "Telephone, Intercom., No. 1/1 and No. 1/2A (Mk. 2)", respectively, by the addition of a "Potentiometer No. 8B" and a subsidiary terminal strip for connexion to the repeater. The control knob of the potentiometer projects through a slot cut in the side of the telephone cover. The circuits of the telephones are shown on Dgms. Q(L) 134 and Q(L) 235, respectively, and the wiring on Dgms. Q(L) 144 and Q(L) 244, respectively. Dgm. Q(L) 158 shows the method of connecting the telephone to the repeater.

9. Transfer Units. *Types in Use (Figs. 4 to 7).*—The present-day standard types of transfer unit for use on the house exchange system are :—

"Unit, Transfer, Intercom., No. 1 (Mk. 2)" for use at 1st- and 2nd-choice main stations on installations with one exchange line and without a non-

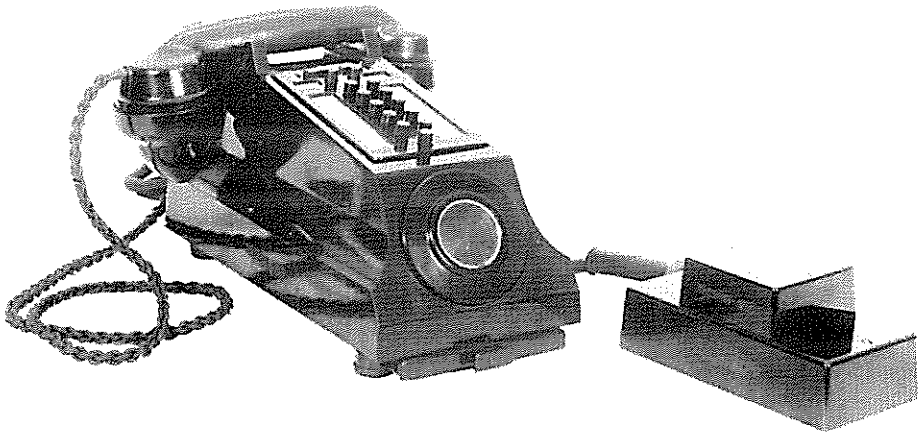

FIG. 2.—TELEPHONE, INTERCOM., No. 1/2A

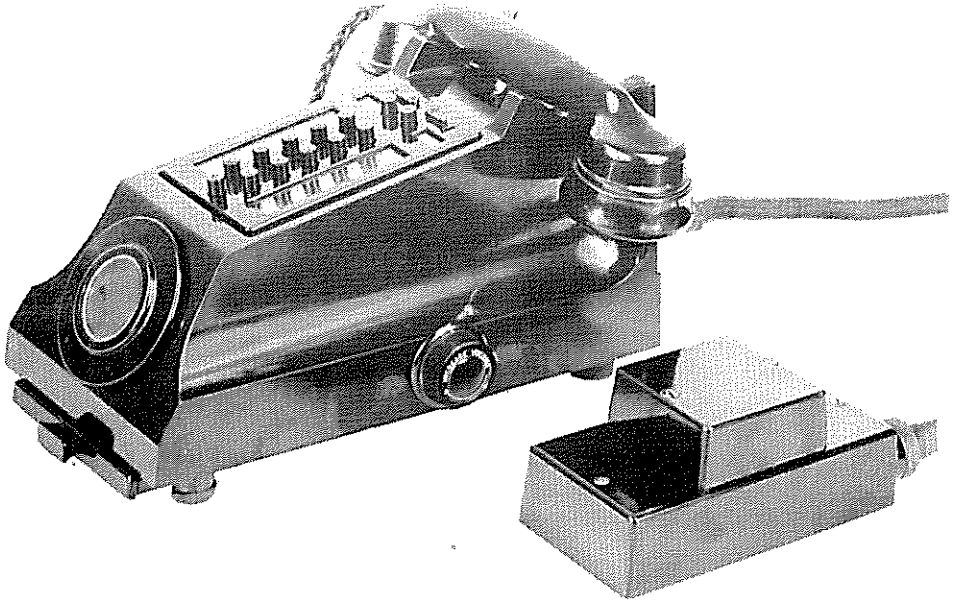

FIG. 3.—TELEPHONE, INTERCOM., No. 1/2B

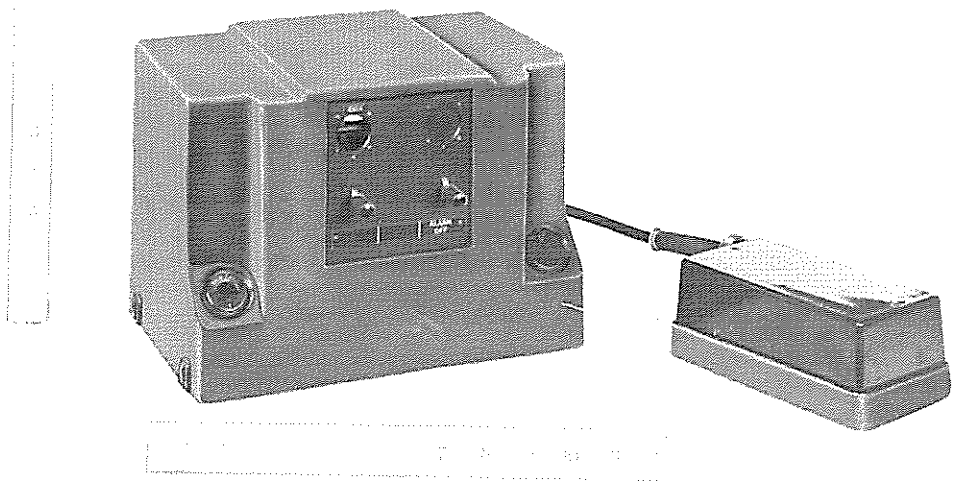

FIG. 4.—UNIT, TRANSFER, INTERCOM., No. 1

multiple station and at a 2nd-choice main station on installations having one exchange line and a non-multiple station. See also under " Unit, Transfer, Intercom., No. 3 ".

" Unit, Transfer, Intercom., No. 1A (Mk. 2) " for use at a 1st-choice main station on installations with one exchange line and a non-multiple station.

" Unit, Transfer, Intercom., No. 2 (Mk. 2) " for use at 1st- and 2nd-choice main stations on installations with two exchange lines and with, or without, a non-multiple station.

" Unit, Transfer, Intercom., No. 3 (Mk. 1) " for use together with a " Unit, Transfer, Intercom., No. 2 " at the 1st-choice main station on installations with two exchange lines and a non-multiple station. The unit may also be used together with a "Unit, Transfer, Intercom., No. 1 " at 1st-choice main stations on installations having one working exchange line but cabled for later expansion to take two exchange lines and with a non-multiple station.

" Units, Transfer, Intercom., Nos. 1, 1A and 2 (Mk. 1) " may still be met with on existing installations but will no longer be issued for new work. All such units will be converted to Mk. 2 either in the field in accordance with Works Specn. S504 or, when returned to stores, by Factory Dept. repair.

10. *Common Constructional Details.*—" Units, Transfer, Intercom., Nos. 1, 1A, 2 and 3 " are of a standard overall size, the base being approximately 10½ in. by 7¼ in. and the height 8¾ in. A standard black, moulded cover (" Cover No. 5 ") encloses the mechanism of the unit which is mounted on a metal chassis of the same form for all the units. The cover is located on the unit by slots in its lower edges, at the sides, which seat on four screws on the sides of the chassis. These screws which secure the cover in position are trapped, and cannot be completely removed from the chassis, but when they are loosened the cover may be lifted off the unit. Each unit includes a 25-conductor cord (" Cord, Instrument, No. 25/02G, Brown, 72-in.") terminated with a plug (" Plug No. 2404 "). The units contain exchange-line and/or non-multiple station calling- and clearing-indicators, with associated bell (or buzzer), transfer keys, night-service and alarm cut-off keys and keys for switching a non-multiple station to the exchange lines. The keys and indicators are mounted on the faceplate of the chassis. The cover, when being lifted off, should be moved forward to clear the key handles which project approximately ⅞ in. in front of the unit. Two recesses in the cover, one at each side of the unit, give access to one or two press-buttons, depending on the particular unit concerned. The functions of the keys, indicators and press-buttons are described in Q 1003 and Q 4001. Certain of the labels indicating the key functions are engraved on both sides and are reversible, as described in Q 3001, to enable a particular unit to serve at either a 1st- or 2nd-choice main station.

11. " Unit, Transfer, Intercom., No. 1 " (Fig. 4).—This unit, as supplied, is fitted with one ' doll's eye ' indicator (labelled EXCH) for exchange line calling and clearing. Space in the unit, with accommodation on the faceplate, and the necessary wiring are provided for a second ' doll's eye ' indicator which may be fitted to the unit locally (and labelled EXTN) for non-multiple station calling and clearing when the unit is to be used at a 2nd-choice main station on an installation with one exchange line and a non-multiple station. The circumstances and method of fitting the EXTN indicator are described in Q 3001. The position of the second indicator on the faceplate

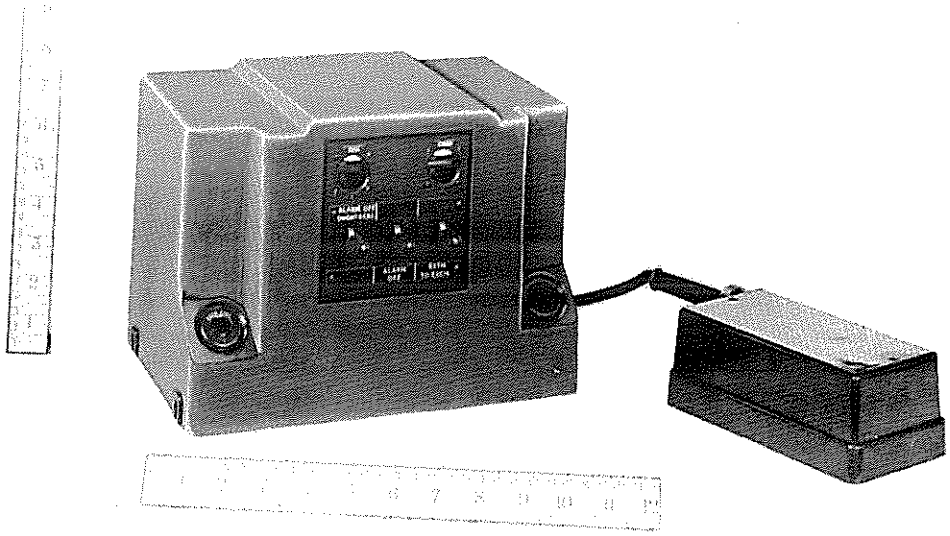

FIG. 5.—UNIT, TRANSFER, INTERCOM., No. 1A

is covered by a metal plate when the indicator is not fitted. Internal strapping points are also provided to convert the circuit for alternative use of the unit at 1st- or 2nd-choice main stations, as described in Q 3001.

The unit contains a trembler bell which can be operated by both indicators. Two single-throw, locking lever keys are fitted, the TRANSFER key below the EXCH indicator and the ALARM OFF key below the position for the EXTN indicator. A label fitted below the keys is engraved on both sides and is reversible to indicate either that the ALARM OFF key only or that both keys are in use depending on the function of the unit in the installation, as described in Q 3001. The unit is fitted with one EXCH CALL press-button in the left-hand position and a dummy button in the right-hand position. The circuit of this unit is shown on Dgm. Q(L) 132 and the wiring on Dgm. Q(L) 142. The weight of the unit complete is approximately 10¼ lb.

12. " Unit, Transfer, Intercom., No. 1A " (Fig. 5).—This unit is fitted with two ' doll's eye ' indicators, one (labelled EXCH) for exchange-line calling and clearing and one (labelled EXTN) for non-multiple station calling and clearing. The unit contains a buzzer (trembler bell without gong) which can be operated by both indicators. Three lever keys are fitted on the faceplate below the indicators. The left-hand key is a double-throw, locking key labelled ALARM OFF (NIGHT SCE) in the ' up ' position and TRANSFER in the ' down ' position (when used). The centre and right-hand keys are single-throw, locking lever keys, labelled respectively ALARM OFF and EXTN TO EXCH. The label fitted below the keys is reversible to suit the function of the unit in the installation, as described in Q 3001, and internal strapping points are provided to convert the circuit of the unit accordingly.

The unit is fitted with one EXCH CALL press-button on the left and a dummy button on the right. These units contain a special relay (BZ) for ringing the non-multiple station. The circuit of this unit is shown on Dgm. Q(L) 133 and the wiring on Dgm. Q(L) 143. The weight of the complete unit is approximately 14¼ lb.

13. " Unit, Transfer, Intercom., No. 2 " (Fig. 6).—This unit is fitted with two ' doll's eye ' indicators (labelled EXCH 1 and EXCH 2) for exchange-line calling and clearing. Space in the unit, with accommodation on the faceplate, and the necessary wiring are provided for a third ' doll's eye ' indicator (labelled EXTN) which may be fitted to the unit locally for non-multiple station calling and clearing when the unit is to be used at a 2nd-choice main station on an installation with two exchange lines and a non-multiple station. The circumstances and method of fitting the EXTN indicator are described in Q 3001. The position of the third indicator on the faceplate is covered by a metal plate when the indicator is not fitted. The unit contains a trembler bell which can be operated by all three indicators. Internal strapping points are also provided to convert the circuit for alternative use of the unit at a 1st- or 2nd-choice main station, as described in Q 3001. Three single-throw, locking lever keys are fitted below the indicators and are labelled with a reversible label. On the unit as supplied, the label is fitted to show only ALARM OFF against the centre key. When reversed, the label shows TRANSFER against each outer key in addition to ALARM OFF against the centre key.

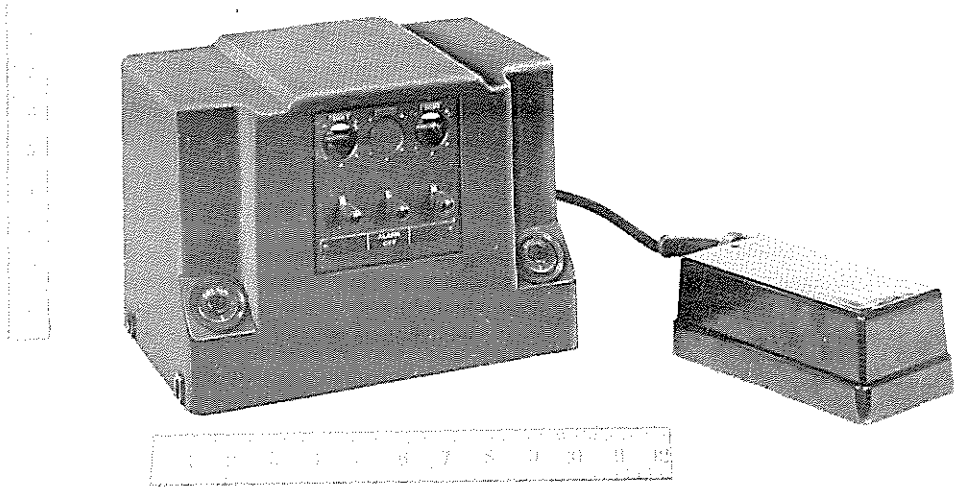

FIG. 6.—UNIT TRANSFER, INTERCOM., No. 2

The label is reversed to suit the function of the unit in the installation, as described in Q 3001. This unit is fitted with two press-buttons, labelled EXCH CALL 1 on the left and EXCH CALL 2 on the right. The circuit of this unit is shown on Dgm. Q(L) 232 and the wiring on Dgm. Q(L) 242. The weight of the complete unit is approximately 11½ lb.

14. "Unit, Transfer, Intercom., No. 3" (Fig. 7).—This unit is fitted with one 'doll's eye' indicator (labelled EXTN) for non-multiple station calling and clearing and contains a trembler bell operated by the indicator. Three double-throw, locking lever keys are fitted below the indicator. A single-sided label is fitted to designate the 'down' positions of the keys

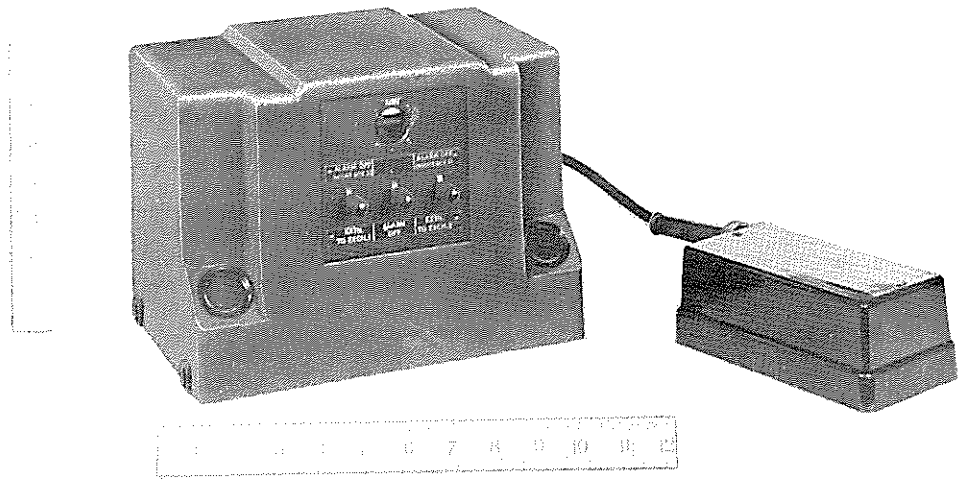

FIG. 7.—UNIT, TRANSFER, INTERCOM., No. 3

as EXTN TO EXCH 1, ALARM OFF and EXTN TO EXCH 2, respectively. The 'up' positions of the keys are designated with a reversible label, which, on units as supplied, is fitted to designate the left and right-hand keys ALARM OFF (NIGHT SCE 2) and ALARM OFF (NIGHT SCE 1), respectively. Reversed, the label shows the same designations for the outer keys and in addition shows TRANSFER against the 'up' position of the centre key. The label is reversed to suit the function of the unit in the installation, as described in Q 3001, and an internal strapping point is provided to convert the circuit of the unit accordingly. These units contain a special relay (BZ) for ringing the non-multiple station. Dummy buttons are fitted to both press-button positions on this unit. The circuit of this unit is shown on Dgm. Q(L) 233 and the wiring on Dgm. Q(L) 243. The weight of the complete unit is approximately 13½ lb.

15. Plugs.—The external appearances of the plugs which form part of the house exchange telephones and transfer units can be seen in Figs. 1 to 7. The plugs are of three types: "Plug No. 2404", which is part of each transfer unit; "Plug No. 2404A", which is part of "Telephone, Intercom., No. 1/1"; and "Plug No. 4001A", which is part of "Telephones, Intercom., Nos. 1/2 and 1/2A". A single type of black, moulded body is used for the three types of plug. The base of the plug body measures 2⅛ in. by 3$\frac{3}{16}$ in. and its height is 1½ in. Two 'trapped' screws are provided in the plug body for securing the plug to "Jack No. 53" or "Jack No. 54" (par. 17). A screwed cable-entry gland projects at one end for approximately ½ in. A rubber sleeve and clamping ring fitted to the cable-entry gland have previously been included as parts of the plugs but these will in future be parts of "Cords, Instrument, Nos. 25/01G, 25/02G and 38/02G", which are used with these plugs (see also par. 16). "Plugs Nos. 2404A and 4001A" include a "Buzzer No. 21", which is mounted on top of the plug. The buzzer has a separate black, moulded cover ("Cover No. 3") which includes two 'trapped' screws for securing it to the plug body. The overall height of the plug is increased by the buzzer and its cover to 2¾ in. approximately. The plug points, numbered from 1 to 40, are assembled in the form of a 'comb'. The "Plug No. 4001A" is fitted with all points from 1 to 40. The "Plugs Nos. 2404 and 2404A" are fitted only with points 5 to 28. The positions of the plug points are such that the No. 2404 and 2404A plugs may be interchanged with a "Plug No. 4001A" on a "Jack No. 54", without change of cabling to the jack points. By this means, it is possible to use "Telephones, Intercom., No. 1/1" initially, and replace them later by "Telephones, Intercom., No. 1/2 or No. 1/2A" on an installation cabled to accommodate two exchange lines and ten stations but having initially only one exchange line and not more than five (exceptionally, six) stations. The numbering of the plug-point terminations of the transfer units and telephones is shown on Dgm. Q(L) 152.

16. Cords.—The cords used on house-exchange telephones and transfer units are "Cord, Instrument, No. 25/01G, Brown, 72-in." (on a "Telephone, Intercom., No. 1/1"), "Cord, Instrument, No. 38/02G, Brown, 72-in." (on "Telephones, Intercom., Nos. 1/2 and 1/2A") and "Cord, Instrument No. 25/02G, Brown, 72-in." (on all "Units, Transfer, Intercom."). When obtained separately, the cords will, in future, include (as part of the cord) the rubber protective sleeve at each end with its clamping and securing rings and the cord guide at the telephone, or unit, end. These items have been included with the cords as the large diameter, approximately ½ inch, of the cords of present manufacture makes it impracticable to fit the parts once the cords have been made up. The procedure for the replacement of faulty cords is described in Q 5001. Non-standard cord lengths are not stocked and requests for them should be avoided by attention to the installation layout, as described in Q 3001.

17. Jacks.—"Jack No. 53" and "Jack No. 54" are used and are shown in Fig. 8. The former is required for all transfer units and for "Telephone, Intercom., No. 1/1" on installations cabled for a normal maximum of five stations. The latter is required for "Telephones, Intercom., Nos. 1/2 and 1/2A", but it may be used with a "Telephone, Intercom., No. 1/1" (see par. 15). The construction of the jacks is the same for both types, except for the number of jack points fitted. The jack points are numbered 1 to 40 and correspond to the plug points of the plugs described in par. 15. The "Jack No. 53" is fitted with jack points Nos. 5 to 28 but the "Jack No. 54" is fitted with jack points Nos. 1 to 40. The jack points are of the U-point type and are mounted on a black, moulded base (approximately 6½ in. by 3½ in.) open at the back. The height of the jack base is ⅞ in. and the total height of the assembly, with the plug screwed in position on the jack, is approximately 2½ in. with a "Plug No. 2404", and 3¾ in. with "Plugs Nos. 2404A and 4001A". Three slots in the base, one at each end and one at the side, are provided for cable entry to the back of the jack. The slots in new jacks are covered by a thin 'knock-out' web formed in the moulding. Jacks reissued after repair will be accompanied by a sufficient number of small plugs "Parts 1/SPL/391" to fill any previously used slots. The plugs will be wrapped with the fixing screws. Two wood-screws No. 8 × 1½ in. are supplied with each jack for use when fixing the jack to a wall or other support as described in Q 3001. A moulded baseplate, "Part 1/SBA/4", which may be fitted under the jack, is available for use if the jack has unavoidably to be

mounted on a damp wall. The baseplate is approximately 6⅝ in. by 3½ in. and its effective thickness is approximately ⅜ in. Three wood-screws No. 6 × 1 in. are supplied with the baseplate for fixing it to the wall and two screws 4 BA × 1⅛ in. for fixing the jack to the baseplate.

18. Junction Boxes.—Two sizes of junction box are used and are known as " Box, Junction, Intercom., No. 1 " and " Box, Junction, Intercom., No. 2 ". An external view of each box is shown in Fig. 9. Both boxes consist of a black, moulded base and cover containing four moulded terminal strips. The covers of the No. 1 and No. 2 boxes are known as " Cover No. 1 " and " Cover No. 2 ", respectively. The No. 1 box has 30 terminals per strip and No. 2 box 48 terminals per strip. The terminals are in two rows and are numbered 1, 3, 5, etc., on the left, and 2, 4, 6, etc., on the right of the strip. Each terminal provides a front and a rear screw connexion and the two rows are staggered in position so that corresponding terminals on adjacent strips may be connected together by lengths of bare wire passed through them across the front of the strips. " Wire, Copper, Tinned, No. 18 S.W.G." is used and a number of lengths of this wire cut to bridge the four strips is included with each box. " Jumper " cross-connexions between terminals may also be made with insulated wires. The portions of the terminals at the back of the strips provide screw connexions for terminating the house-exchange system multiple cable. The strips are grooved at the back to accommodate the cable ends and a cable clamp is fitted at each end of each strip. A bonding strip to connect together the sheaths of the cables, via the cable clamps, is included with each junction box. The method of using the bonding strip is described in Q 3001. Provision is made for cable entry at either end of the box, via

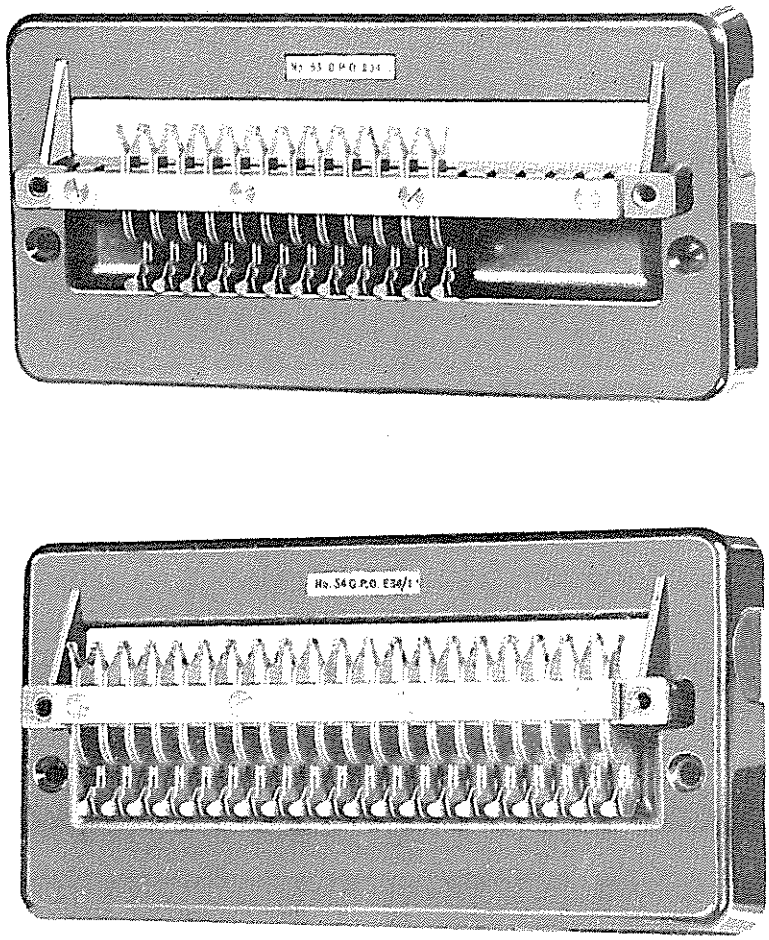

FIG. 8.—JACKS No. 53 (TOP) AND No. 54 (BOTTOM)

four slots in each end of the cover. The slots in new covers are filled by a thin 'knock-out' web formed in the moulding. Old covers may be reissued with used slots (if more than two) repaired by means of a small moulded plug, " Part 1/SPL/392 " for " Covers No. 1 " and " Part 2/SPL/392 " for " Covers No. 2 ".

Three rubber feet, " Parts 1/SBU/6 ", and three wood-screws No. 10, 1½ in. are included with each box for fixing. The overall dimensions of the " Box, Junction, Intercom., No. 1 " are approximately 8¾ in. × 7⅛ in. × 2¼ in. and it weighs 4 lb. The " Box, Junction, Intercom., No. 2 " is approximately 12 in. × 8 in. × 2½ in. and weighs 5 lb. " Labels No. 226 . . ." and " Labels No. 227 . . ." may be obtained separately from the Supplies Dept., for use with the junction boxes, as described in Q 3001. Stock engravings are shown in Fig. 10.

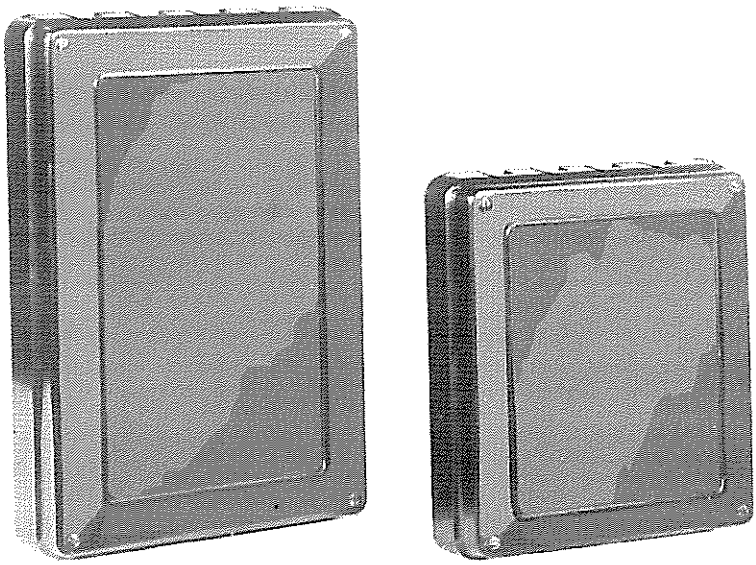

FIG. 9.—BOXES, JUNCTION, INTEROOM. No. 2 (LEFT) AND No. 1 (RIGHT)

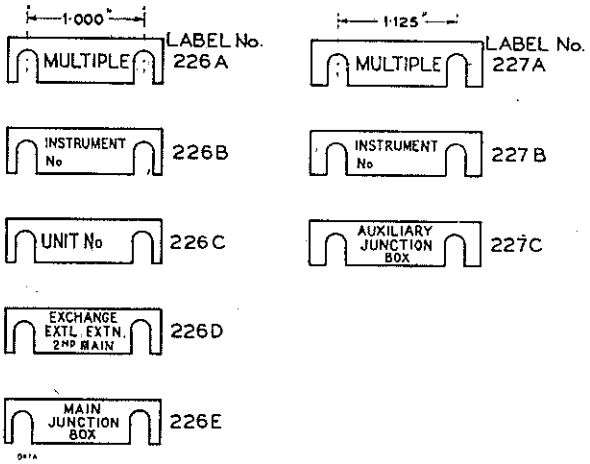

FIG. 10.—JUNCTION BOX LABELS.

19. Non-multiple Station Telephones.—Normally a "Telephone, No. 1/232 . . ." with "Bell-set No. 26" or a "Telephone No. 332 . . ." is used, but other standard alternative C.B. or auto. A.S.T.I.C. handset telephones may be used in appropriate circumstances.

20. Extension Bells, etc.—There are no special types of extension bell for use on the house exchange system. "Bells No. 56E", "Bells No. 64 . . ." and other standard types are used according to circumstances, as described in Q 3001. Descriptions of the bells and general conditions of installation are given in A 3113. General information on lamp-calling signals is given in A 3117.

21. Additional Receivers.—A "Receiver, Watch, No. 6L" and a "Hook, Receiver, X" are used.

22. Labels.—Particulars of labels used in junction boxes are given in par. 18. For labels used on "Telephone, Intercom.", see A 3202.

23. Cable.—"Cable, E. and C. Core, 12-pair/10" and "Cable, E. and C. Core, 20-pair/10" are used. A description of the cable appears in INTERNAL WIRING, Stations, A 1012.

24. Auxiliary Apparatus Units.—"Units, Auxiliary-Apparatus, CBS 536" and "Units, Auxiliary-Apparatus, CBS 1074" are used in conjunction with the house-exchange system in C.B.S. and magneto areas, respectively, in the manner indicated in Q 3001. The "Unit, Auxiliary-Apparatus, CBS 536" is described in P.B.X.s, A 3909.

25. Power Equipment.—The power supply for the house exchange system may be obtained from a direct power lead, from secondary cells float-charged via a power lead, or from secondary cells charged from the public supply mains or, exceptionally, where none of these supplies is available, from primary cells. Reference should be made to POWER, General, S 1010 for the principles and circumstances determining the particular power equipment to be used. See also Q 3001 for special circumstances affecting power equipment for the house-exchange system.

References :—A 3113, A 3117, A 3202, Q 1001, Q 1003, Q 3001, Q 4001, Q 5001
(S1) P.B.X.s, A 3909
INTERNAL WIRING, Stations, A 1012
POWER, General, S 1010

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