STRIPS CROSS CONNEXION NO. 1

Description and Installation

1 **DESCRIPTION** The Strips Cross Connexion No. 1 is designed to replace the Assemblies PC/100, on a one for one basis. It caters for up to 100 Exchange Side and 100 Distribution Side pairs.

The maximum terminating capacity of Cabinets Cross Connexion No. 1 and No. 3 is four and eight verticals respectively. The actual connections are made with Connectors Wire Insulated No. 1A, using Pliers Crimping No. 2.

2 **FUNCTION** The function of the Strip Cross Connexion No. 1 is to position and identify the exchange and distribution side cable pairs, to support the cable pairs and to allow the straight jointing and jumpering of cable pairs. Holes and slots through which conductors pass are all rounded and smooth to reduce the risk of insulation damage. The item as supplied is ready for bolting directly on to a Mounting Cabinet. See Fig 1(a).

2.1 To facilitate wiring and pair identification, raised letters and numerals indicate the distribution and exchange side and jumper wire positions. Fig 1(b).

3 **INSTALLATION IN CABINETS**

3.1 The assembly bar of Strips Cross Connexion No. 1 should be bolted directly onto a Mounting Cabinet using two $\frac{5}{16}$ x 2 BA CSK screws. These screws are fitted from the back of the mounting and screwed into the tapped holes of the assembly bar. The plastic moulded items should not be removed from the assembly bar.

3.2 The complete assembly is then installed in the cabinet on the assembly support bars. The assembly support bars should be fixed to the rear support lugs on the cabinet sides. The Strips Cross Connexion No. 1 should be positioned so that there are 115 mm ($4\frac{1}{2}$ in) spacings between the centres of the Mounting Cabinet. (See Fig 1(c)).

3.3 The first Strips Cross Connexion No. 1 installed in a cabinet should be positioned so that there is a 90 mm ($3\frac{1}{2}$ in) space between the centre of the fixed vertical bar on the extreme left of the cabinet and the centre of the vertical bar of the Mounting Cabinet, holding the first strip. (See Fig 1(c)).

4 **CABLING** Normally sufficient length of cable will be left to allow the cable to enter the cabinet and be terminated on the SCC No. 1 without the need for a joint. Not less than 1.2 m (4 ft) of cable measured from the base seal is required to allow the conductors to be threaded through the appropriate holes in the strip.

* The E-side cable should be 0.5 mm Cable Polyethylene Unit Twin Aluminium having aluminium alloy conductors. (Where this type of cable has not been introduced into the Area then 0.4 mm, 0.5 mm or 0.63 mm Cable Polytheylene Unit Twin should be used). The D-side cable should be 0.5 mm or 0.7 mm Cable Polyethylene Twin Aluminium having aluminium alloy conductors.

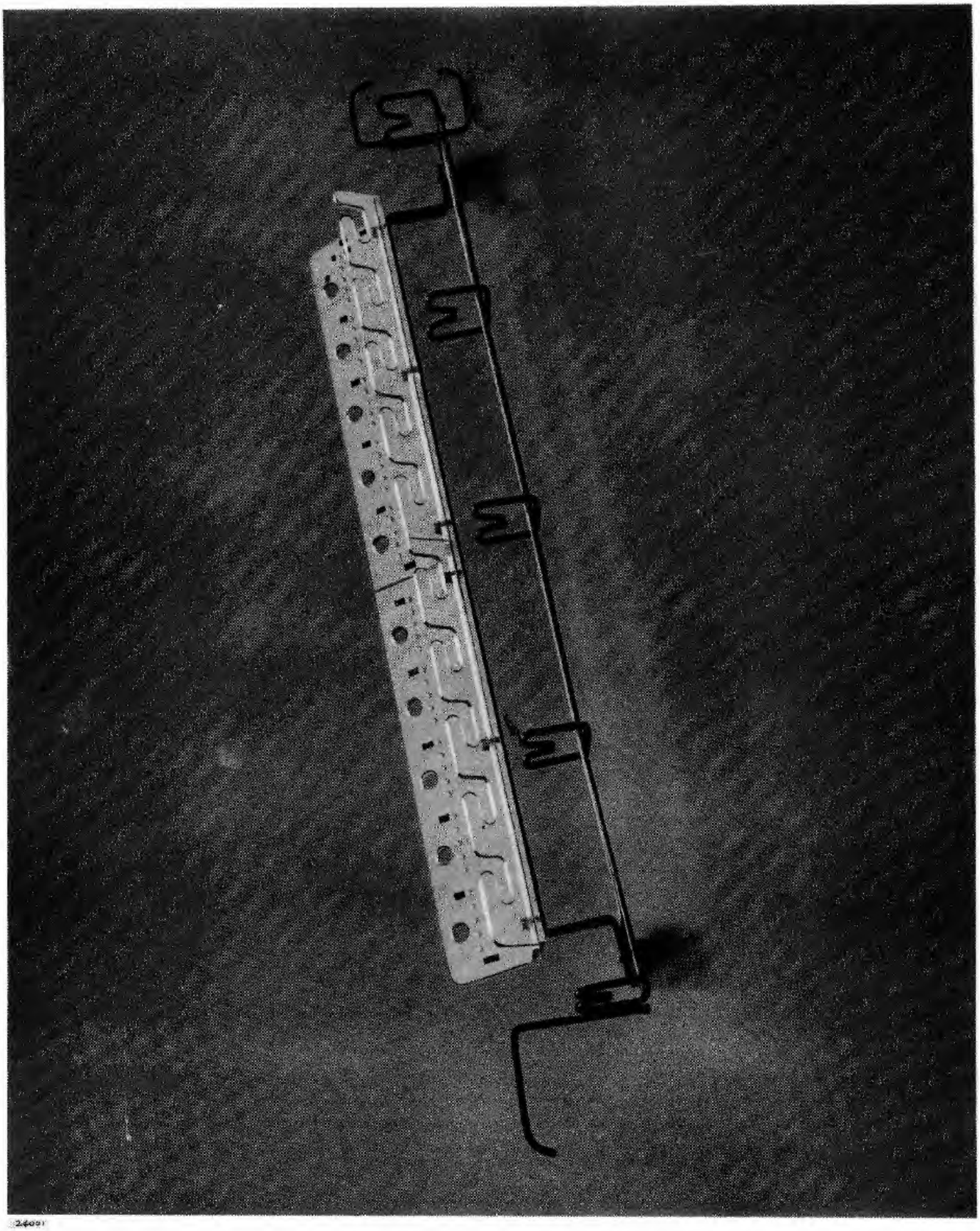


FIG.1(a) STRIPS CROSS CONNEXION No.1 FITTED TO MOUNTING CABINET

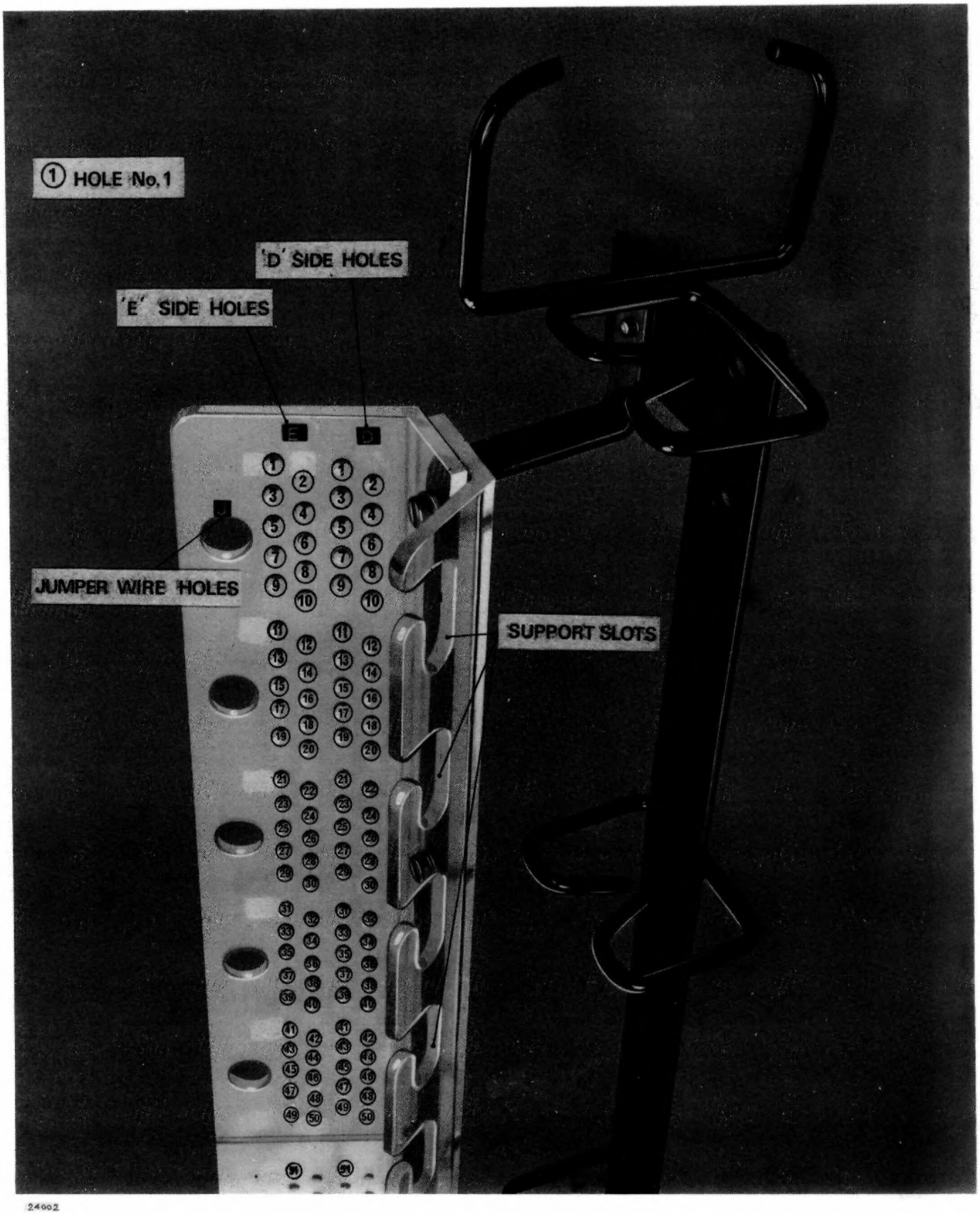


FIG.1(b) NUMBERING AND WIRING ARRANGEMENT

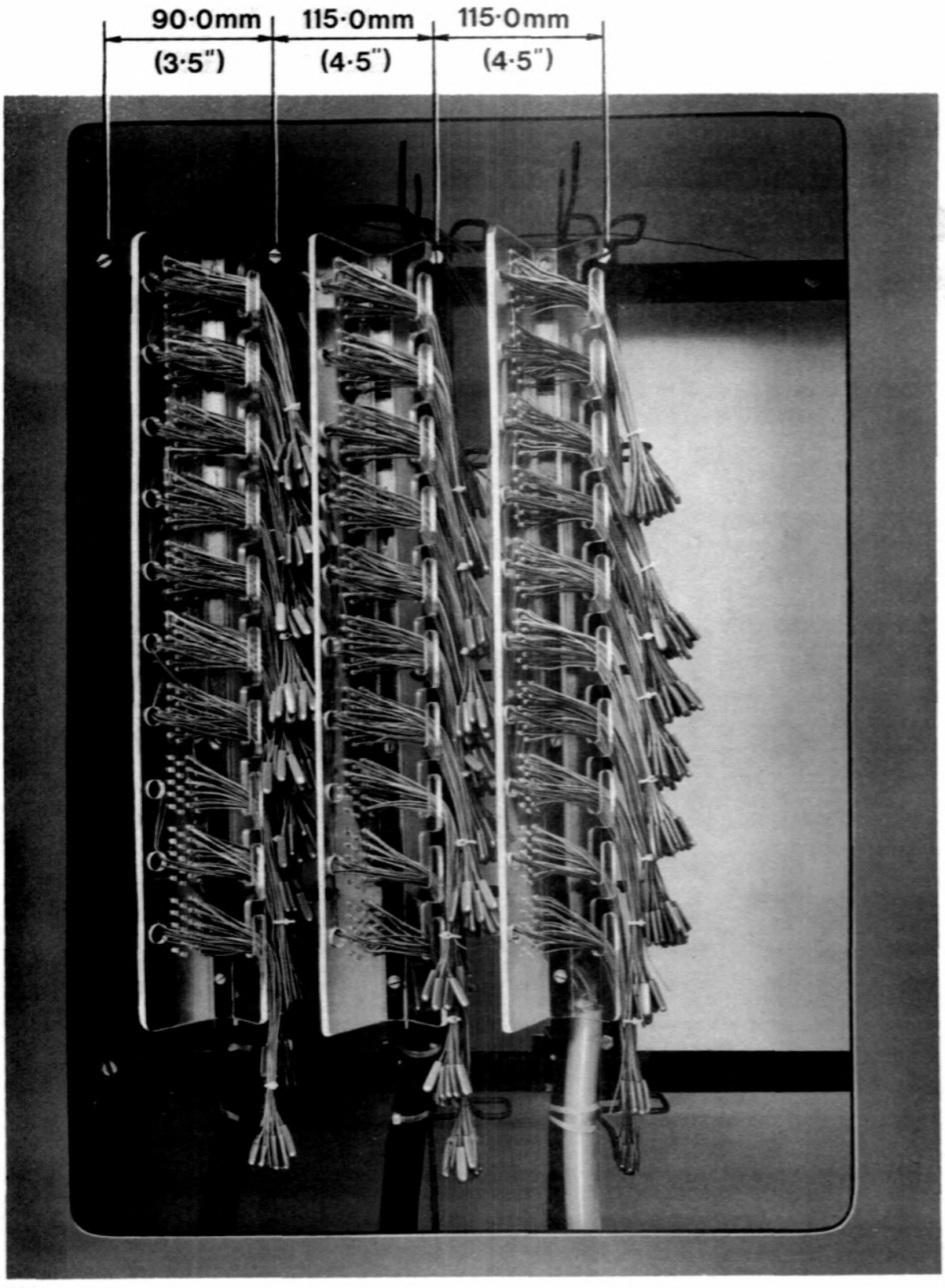


Fig. 1(c)

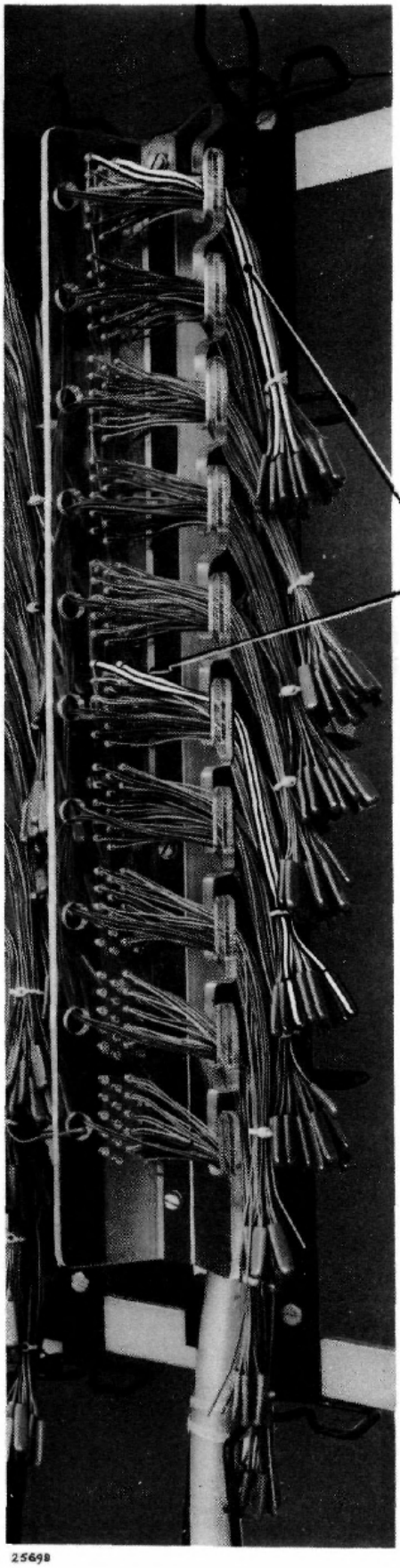


Fig.2(a)

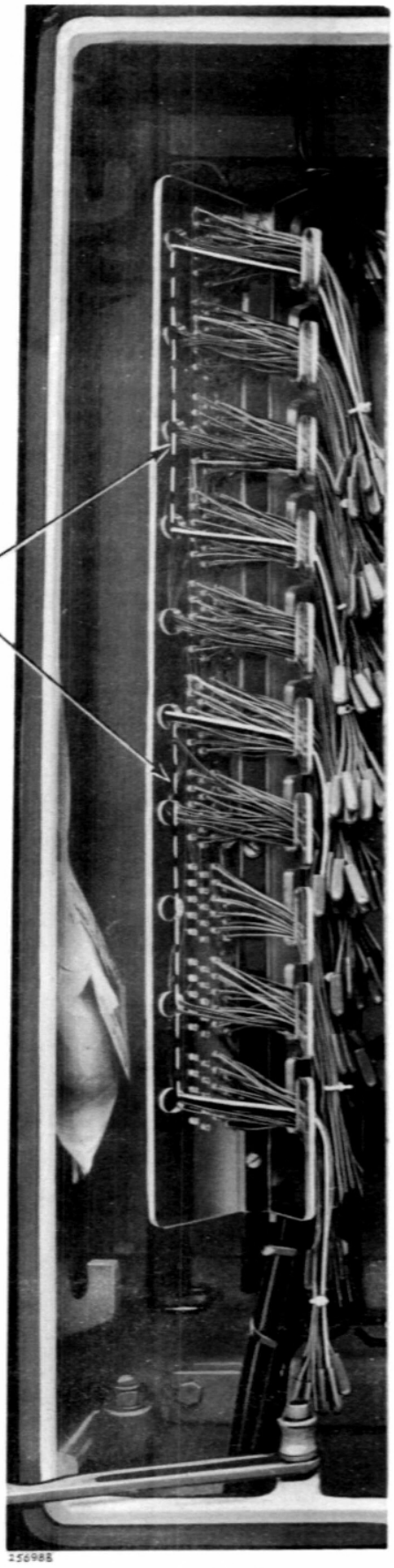


Fig. 2 (b)

If separate terminating tails are necessary they should be:-

(a) Cable Polyethylene Unit Twin 0.5 mm if they are to be connected to a pressurised or proposed pressurised E-side cable.

(b) Cable Polyethylene Twin Aluminium 0.5 mm having aluminium alloy conductors if they are to be connected to a fully filled or non-pressurised D-side cable.

4.1 Air blocks in accordance with A2 M2001 should be provided in the adjacent joint box on all Cable Polyethylene Unit Twin tail cables connected to pressurised cables.

4.2 The sheath should be removed to a point 25 mm (1 in) above the top of the lower assembly support bar.

4.3 The cable sheath(s) should be securely tied to the lowest jumper rings using Straps Cable Fixing No. 1A. The cable pairs should be numbered with Collets Pair, if required.

4.4 After the cables have been installed in the entry ducts, the ducts should be sealed in the usual manner, using Compound No. 16 and Waste Cotton, packed well down. Where no more cable 'tails' are to be threaded through a bend the duct should be sealed with Resin Pack 6A as indicated in TI A2 G0305.

5 WIRING See TI A2 H3012. Each cable pair should be passed through its designated hole commencing with the "D" side cable(s) starting at the bottom of the strip and working towards the top. The "E" side cable(s) should then be treated in a similar manner. The cable pairs at the back of the strip should be neatly formed and tied at selected points using Straps Cable Fixing No. 1 (NB: Straps Cable Fixing No. 1A must NOT be used for this purpose - the insulation will be damaged).

5.1 The "D" and "E" side holes are arranged in 10 groups of 10 and there is a support slot for each group of 10 (see Fig 1(b)).

5.2 Each pair should be positioned into the supporting slot on the right hand side of the strip and cut off 175 mm (7 in) beyond the slot. (NB: There is no need to collet at this stage since the pairs may be traced from the numbering on the strip).

6 JOINTING Use only Connectors Wire Insulated No. 1A. This connector will accommodate straight connexions of all wire combinations up to and including 0.7 mm Aluminium Alloy and Wire Equipment 2711. See A2 H2603.

*7 JUMPERING Wire Equipment 2506 (A-leg White, B-leg Red) should be used for jumpers when jumpering within Strips Cross Connexion. (This is the superseding item, for cabinet use, for Wire Jumper 7541 and 6541 Blue and Yellow). NB: See Para 7.2(c), when jumpering to Assemblies PC/100

7.1 Any "D" and "E" side pairs may be joined together provided both pairs are in the same group of 10. It is essential in order to keep the strips tidy that jumpers are used to connect pairs that are not in the same group of 10. The joints should be on the ends of the tail wires hanging over the support slots. The tails on the "D", "E" and jumper pairs are to allow for subsequent changes and rearrangements. (See Fig 2(a)).

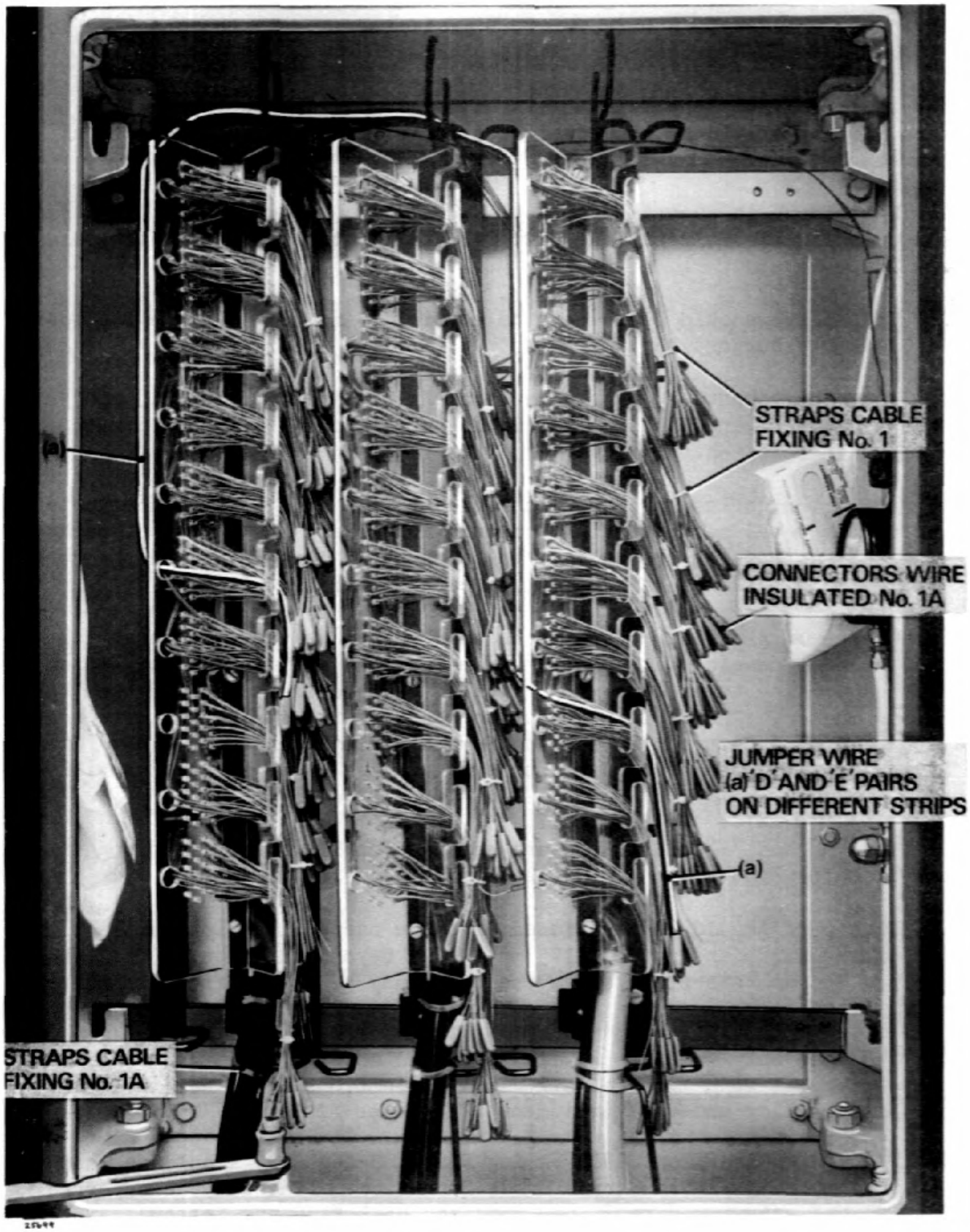


FIG. 3 JUMPER WIRES

7.2 Routing of Jumpers

(a) **Between Pairs on the Same Strip** The jumper wires should run from the "D" side pair, through its support slot and across the face of the strip. It must then pass through the jumper hole associated with the group of 10 holes that contain the "D" side pair. From there the jumper continues along the back face of the strip, in line with the jumper holes, then through the hole associated with the "E" side pair to which the jumper is to be connected. From this point it passes across the face of the strip to the "E" side pair, via the support slot. (See Fig 2(b)).

(b) **Between Pairs on Different Strips** The cabinet jumper rings are to be used. All jumpers are to run upwards in the vertical field and across the top in the horizontal field and down the vertical field of the strip or assembly to which the jumper is being run. (See Fig 3).

NOTE: The jumper rings to be used are to the left of the strip being wired.

(c) **Between Strips and Assemblies PC/100** When either end of a jumper terminates on an Assembly PC/100, Wire Equipment 2711 MUST be used. (A-leg Blue, B-leg Red). This is because the smaller diameter jumper wire is not always secured under the pressure plate on the Assemblies PC/100.

8 TEED CONNEXIONS

8.1 Where D-side cable having 0.5 mm conductors is used:

* 8.1.1 In cabinets which are fitted only with Strips Cross Connexion use Wire Equipment 2506 and tee either at the "E" side or one of the "D" sides, whichever is more convenient. (See Fig 4(a) and 4(b)).

8.1.2 When a teed connexion is made between an Assemblies PC/100 and a Strip Cross Connexion this necessitates the use of Wire Equipment 2711 as the jumper. Because the Connector Wire Insulated No. 1A will not accommodate two 0.7 mm conductors and a third conductor, the teed connexion must be made at the PC/100. This will involve teeing at the "E" side or one of the "D" sides, depending on the layout. (See Fig 5(a) and 5(b)).

8.2 Where D-side cable having 0.7 mm conductors is used:

Follow the guidelines of paras 8.1.1 and 8.1.2 regarding use of Wire Equipment 2711 at the Assemblies PC/100. There are various combinations of conductor sizes which cannot be accommodated in the CWI 1A because of their bulk. The table following covers most of the combinations.

Table 1 follows

TABLE 1

First Conductor	Second and Third conductors	Jointing allowed
0.7 mm Aluminium Alloy	2 x 0.4 mm Copper	Yes
	2 x 0.5 mm Copper	Yes
	1 x 0.5 mm Copper and 1 x 0.4 mm Copper	Yes
	2 x 0.5 mm Aluminium Alloy	Yes
	2 x 0.7 mm Aluminium Alloy	No
	2 x Wire Equipment 2506	No
	2 x Wire Equipment 2711	No
	1 x Wire Equipment 2506 1 x Wire Equipment 2711	No

Where possible tee at the Assemblies PC/100. Where this is not possible it will be necessary to 'piece-out' with a short length of 0.5 mm copper conductor.

9 FINAL ARRANGEMENTS AND GENERAL TIDINESS On completion of the jointing and jumpering, each group of 10 pairs should be straightened, laid in the appropriate support slot and loosely tied in a bunch using Straps Cable Fixing No. 1.

Pairs not to be jointed should be tied in with the jointed pairs in their appropriate group.

10 TI REFERENCES

A2 G0305
A2 H2603
A2 H3012
A2 M2001

Figs 4a and b, 5a and b follow

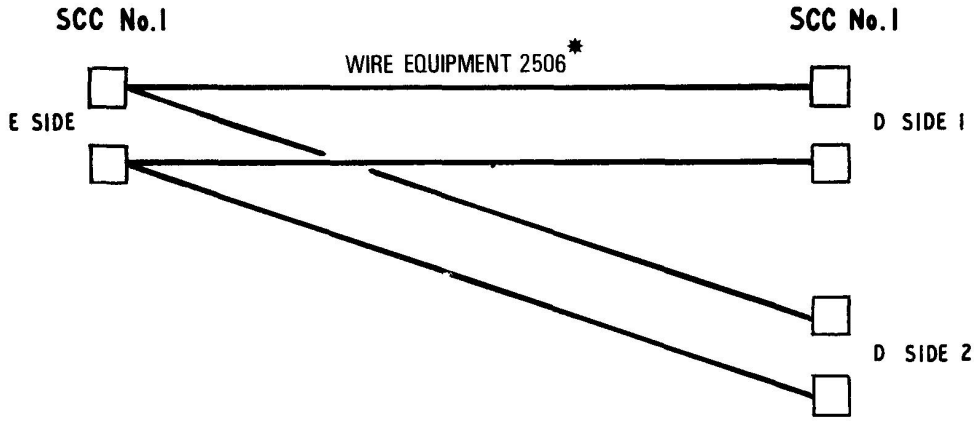
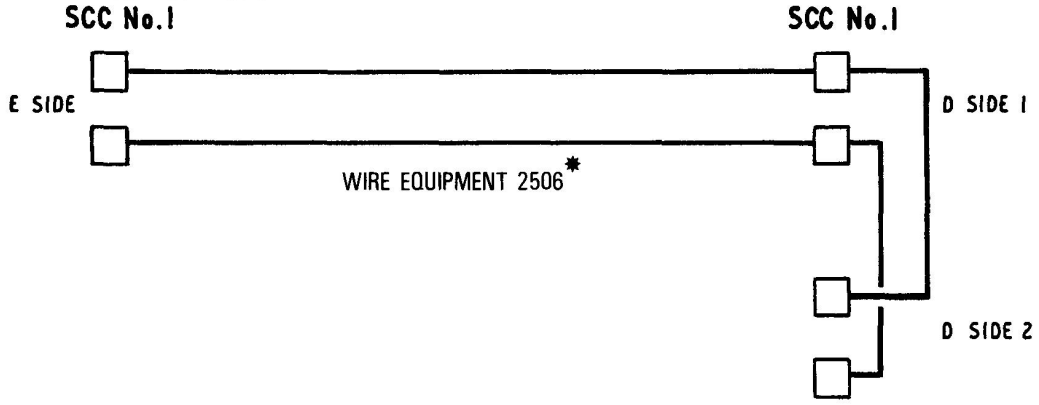


FIG. 4(a)

ALTERNATIVE METHOD



CWI No.1A CONNECTION

26700

FIG. 4 (b)

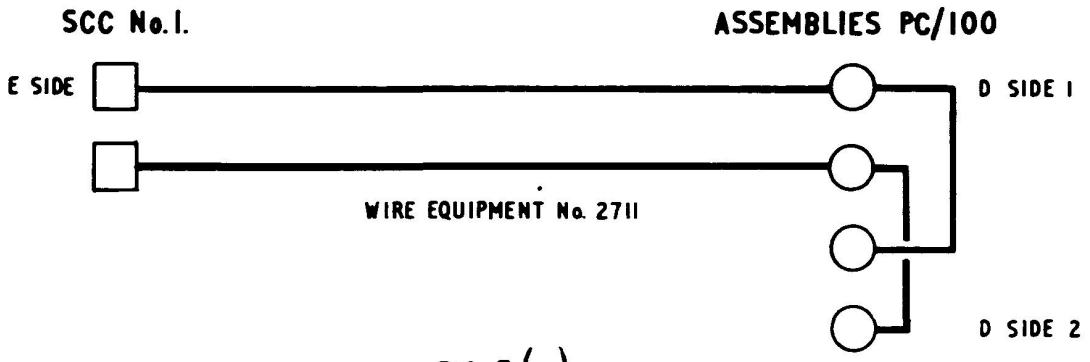

SCC No.1.
ASSEMBLIES PC/100
E SIDE
D SIDE 1
WIRE EQUIPMENT No. 2711
D SIDE 2

FIG. 5 (a)

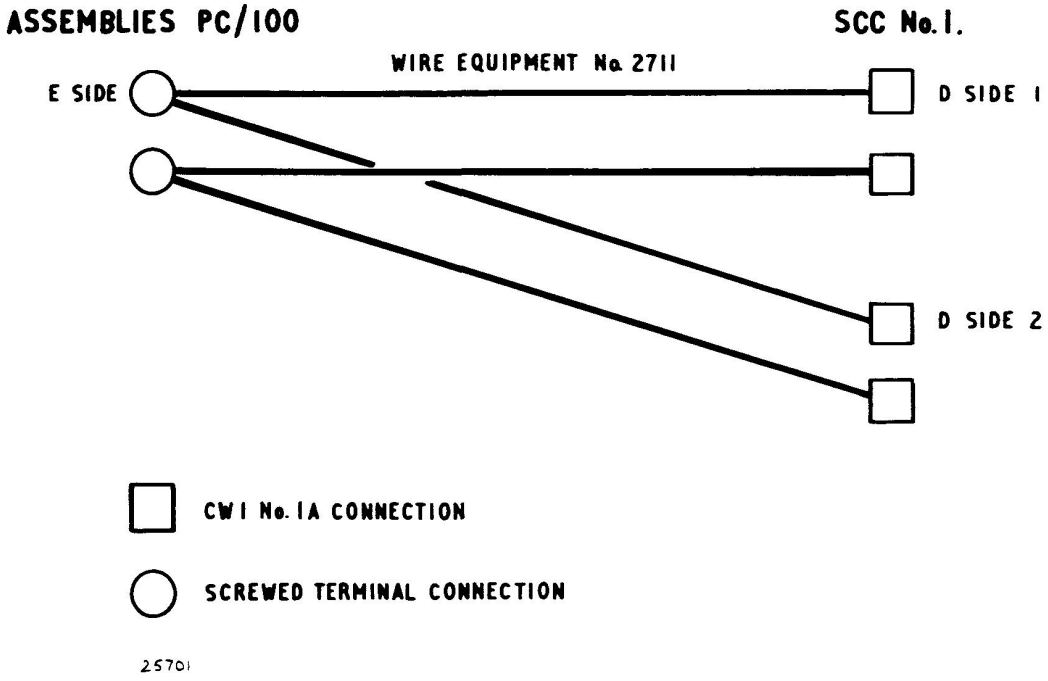

ASSEMBLIES PC/100
SCC No.1.
WIRE EQUIPMENT No. 2711
E SIDE
D SIDE 1
D SIDE 2
CW1 No. 1A CONNECTION
SCREWED TERMINAL CONNECTION
25701

FIG. 5 (b)