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TELECOMMUNICATIONS INSTRUCTION

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A PLANNING AND WORKS
2 External Plant
G0325

POSTS, JOINTING

1 GENERAL This instruction describes above-ground jointing posts, the primary purpose of which is to enable a number of underground service cables to be connected to a distribution cable. Posts, Jointing may also be used as above-ground sheath closures to accommodate conductor joints between several distribution cables, as an alternative to sheath closures using Collars, Polyethylene and/or Sleeves, Polyethylene.

Table 1 shows the maximum number of pairs that can be jointed in each size of post, but the number of services connected at any one post should be determined from economic considerations.

TABLE 1

	SMALL POST	LARGE POST
Approximate external dimension of Channel	75 mm x 40 mm x 1000 mm	140 mm x 40 mm x 1000 mm
Approximate external dimension of cover	90 mm x 50 mm x 250 mm	150 mm x 50 mm x 250 mm
Internal dimension of channel	70 mm x 35 mm	135 mm x 35 mm
Maximum number of pairs to be jointed		
Non looped cables	20	100
Looped cables	10	50
Maximum size of cable, looped method	20/0.5 or 20/0.7	100/0.5 or 50/0.7

2 POSTS, JOINTING, LARGE OR SMALL Consist of a channel section 1000 mm long which is set approximately 750 mm vertically in the ground. A metal face plate is welded to the channel to enclose the channel section just above and below the ground line. A 250 mm high aluminium cover is fitted over the channel and is secured to the welded plate by a triangular-headed bolt similar to those used on cabinets and pillars. Cables are led into the lower part of the channel and are jointed in the upper part, using Connectors, Wire, Insulated, No. 1A.

3 PROVISION OF CABLES Normally, the builder will be expected to lay service cables from inside the house to an agreed position in the footway as his contribution towards the cost of providing under-ground distribution but other arrangements may have to be made under joint trench agreements. If the agreed position in the footway does not coincide with the position chosen for the jointing post, the builder must leave sufficient cable to reach the post. Alternatively, if the footway section of service cables are laid first, coils of cable, sufficient to reach the agreed terminating points inside the houses, must be left outside each house.

The frontage distribution cable may either terminate in a post or it may be "looped" through several posts. Where the cable is looped, pairs on the outside layers of the cable should normally be allocated to the post nearer the exchange. Normally, when service cables share part of the run of the frontage cable, all cables will be laid at the same time. If the service cables are being laid in the footway in advance of having been provided from house to street, it will be necessary for the Works Supervisor/ELO to ensure that sufficient cable is provided to enable it to reach the house termination, and for it to be coiled on a stake outside the house.

4 The Estate Liaison Officer should co-operate with the builder laying the PO cables to ensure that suitable sections of trench can be opened in advance of paving. The distribution cable should then be laid in the trench provided along with the associated service cables. When more than one cable is provided in a trench, the cables should be taped together with Tape, Plastic, Adhesive at intervals of approximately 2 m. When laid in the same trench as a duct (for future extension of plant) the cables should preferably be laid alongside, and close to, the duct for mechanical protection. The cables should be coiled on a stake and sealed at the future site of the jointing post, leaving sufficient spare cable to allow for jointing. Service cables should be marked using Tape, Plastic, Adhesive or a suitable collet to indicate the house or plot number.

5 **SITING OF POSTS** Agreement on the final position of jointing posts should be sought from the developer at an early stage in the construction of the estate.

The following positions for siting the posts should be considered:-

- (a) incorporating the posts in frontage or boundary walls
- (b) adjacent to boundary walls or side walls of dwellings
- (c) close to a wall, fence or hedge.

Care should be taken in the final positioning of the posts, particularly on estates with open frontages where the movement of dogs is unrestricted and, where possible, long lengths of cable across adjacent private properties should be avoided as they might jeopardise future maintenance operations (TI E3 B0060 refers).

6 **ERECTION OF POSTS** The post should normally be erected by the jointer at the time he does the jointing. He should firmly consolidate the soil around the foot of the post to within 450 mm of the ground line (see Fig 1).

7 **JOINTING** Remove sufficient armouring from the cables to ensure that the end of the armouring will be approximately half way up the face plate when jointing is complete. Lead the cables into the post and remove the inner sheath, as shown in Fig 2, from a point 20 mm above the top of the face plate. Conductors should be trimmed to 180 mm (small post) or 230 mm (large post). In the case of looped cables, sheath removal will be necessary before leading the cable into the post and the conductors to be jointed should be cut at the mid-point of the loop to give a tail length of 180 mm (small post) or 230 mm (large post). The joints should then be made using Connectors, Wire, Insulated, No. 1A and the jointed conductors arranged in groups and neatly tied using scrap insulated wire. The second pairs of the 2 pair cables should be tied in with the jointed conductors and the back ends of the looped cable tied to the loop. The flat plastic cover plate, which is supplied with the post, should be placed on the channel over the joint and secured in position with two wrappings of adhesive tape before bolting on the aluminium cover.

8 **MAKING GOOD** Upon completion of jointing, the remainder of the trench should be filled and consolidated, taking care to ensure that the post is upright and square and that the height of the face plate above ground level is approximately as shown in Fig 1.

9 **GRAPHICAL SYMBOL** The symbol for a Post Jointing distribution point is shown in TI A1 J0101.

Figs 1 and 2 follow.

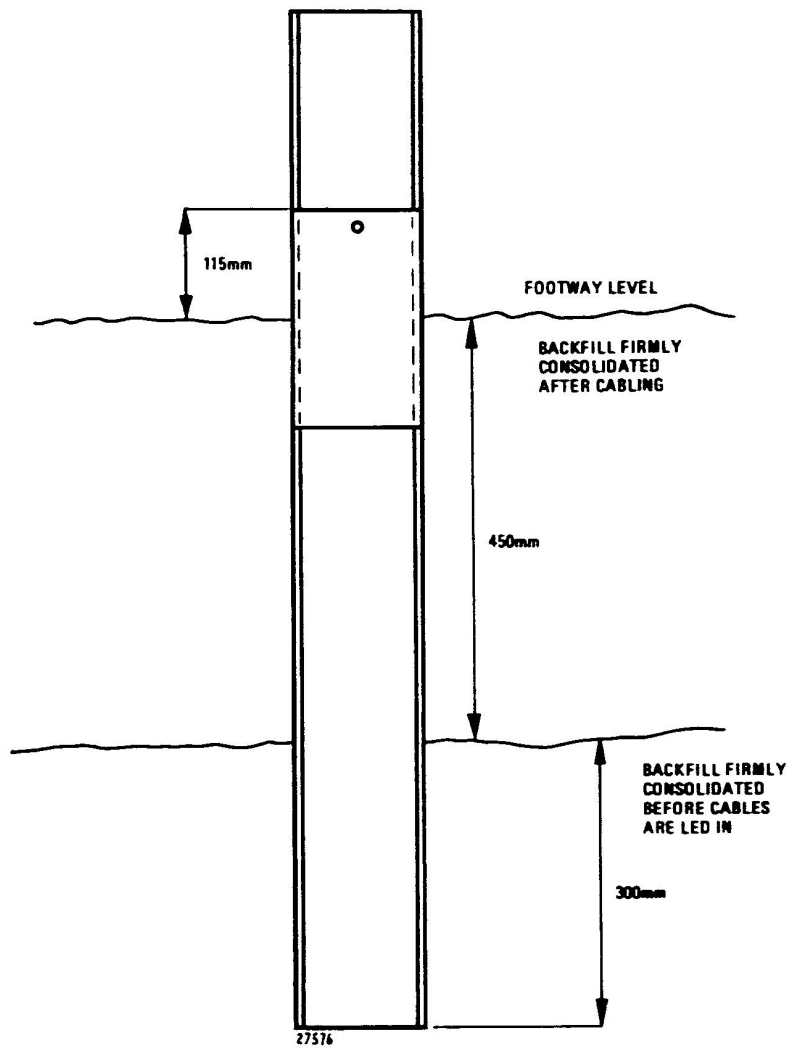


FIG.1 POST JOINTING:DEPTH OF SETTING

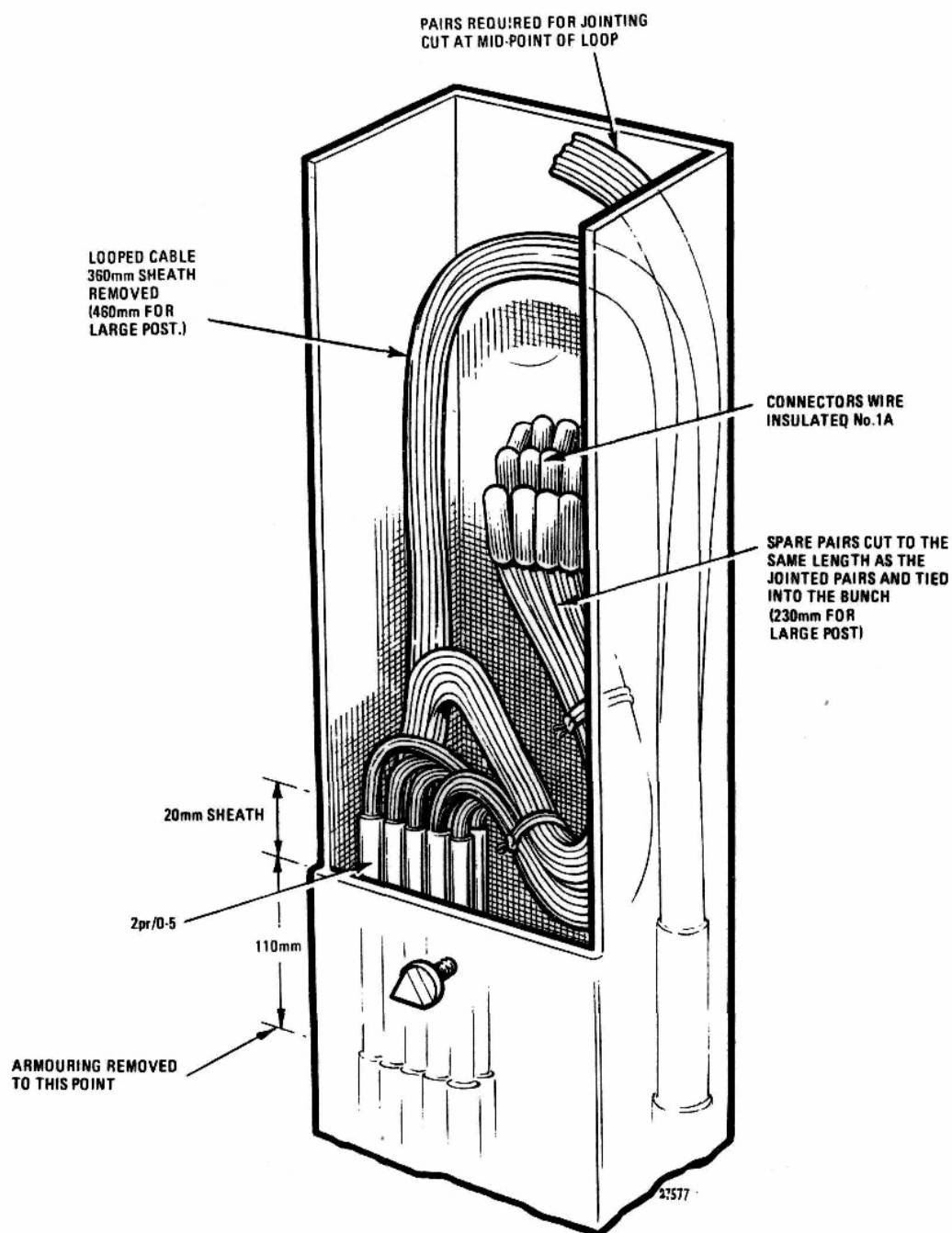


FIG.2 TYPICAL JOINT IN POSTS JOINTING SMALL