

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G61.180.1**  
**Issue 1, February, 1959**  
**AT&TCo Standard**

## **DESCRIPTION OF 121 PROTECTORS AND FANNING STRIPS**

**(Dwg. No. ED-95109-70)**

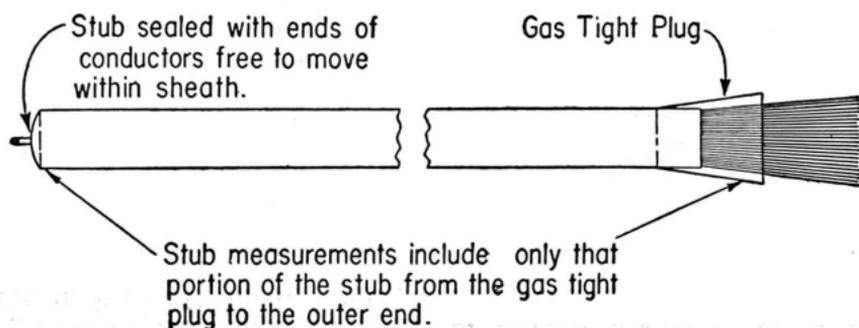
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### **1. GENERAL**

1.01 This section covers the description of 121 protectors and fanning strips (Dwg. No. ED-95109-70).

1.02 For the purpose of this practice, stubs designed for top mounting in connection with overhead racking, etc., will be referred to as top-stubs and stubs designed for bottom mounting for use in connection with cable vaults, etc., will be referred to as bottom-stubs.

1.03 Protectors designed for use in terminating exchange cables are furnished with a factory connected PVC insulated lead sheathed cable stub, fully color coded with the even pair count. The protectors are available with either 24-gauge or 22-gauge top-stubs or bottom-stubs, 15 to 50 feet long, in increments of 5 feet.



Extra pairs are contained in the stub for use when joining to odd count cables. These pairs are not connected to the protector.

1.04 The outside diameters of the stubs are as follows:

DIAMETER OF CABLE STUBS—INCHES

GAUGE	ACTUAL NUMBER OF PAIR					
	102	152	202	303	304	404
24	1.09	1.38	1.53	—	1.81	2.04
22	1.22	1.44	1.60	1.90	—	2.14

1.05 Protectors without stubs are available for special uses, such as, for plugging up lines and terminating certain central office cables.

1.06 **NOTICE: ON THE TEST PANEL SIDE OF 121 PROTECTORS, THE TIP SIDE OF THE CIRCUIT APPEARS ON THE RIGHT OR FRONT, AND THE RING SIDE APPEARS ON THE LEFT OR REAR.**

## 2. SELECTING THE GAUGE OF STUB

2.01 Generally, the proper gauge of stub will be specified on the detailed plans. However, the following factors control the gauge of stub to be used:

(a) If the underground or buried cable **does not connect** to exposed aerial plant, either 24- or 22-gauge stubs may be used.

(b) If the underground or buried cable **does connect** to exposed aerial plant, 24-gauge stubs may be used if the underground or buried cable is 26-gauge or if 26-gauge protective cable is installed between the underground and exposed aerial plant. Otherwise, the 22-gauge stub must be used and 24-gauge or smaller protective cable is required

at the junction of underground or buried and aerial plant, unless the underground or buried cable is 24-gauge or smaller.

### 3. DESCRIPTION OF 121 PROTECTORS

3.01 Following are the codes for the 121 protectors and a brief description indicating how each is equipped.

**PROTECTOR 121A2C:** This protector is furnished with a 24-gauge top-stub and is equipped with 76A heat coils, 32B and 33B protector blocks.

**PROTECTOR 121A2D:** This protector is furnished with a 24-gauge top-stub and is equipped with conducting 77A1 dummy heat coils and 34A1 dummy protector blocks.

**PROTECTOR 121B2C:** This protector is furnished with a 24-gauge bottom-stub and is equipped with 76A heat coils, 32B and 33B protector blocks.

**PROTECTOR 121B2D:** This protector is furnished with a 24-gauge bottom-stub and is equipped with conducting 77A1 dummy heat coils and 34A1 dummy protector blocks.

**PROTECTOR 121D2C:** This protector is furnished with a 22-gauge top-stub and is equipped with 76A heat coils, 32B and 33B protector blocks.

**PROTECTOR 121D2D:** This protector is furnished with a 22-gauge top-stub and is equipped with conducting 77A1 dummy heat coils and 34A1 dummy protector blocks.

**PROTECTOR 121E1C:** This protector is furnished with a 22-gauge bottom-stub and is equipped with 76A heat coils, 32B and 33B protector blocks.

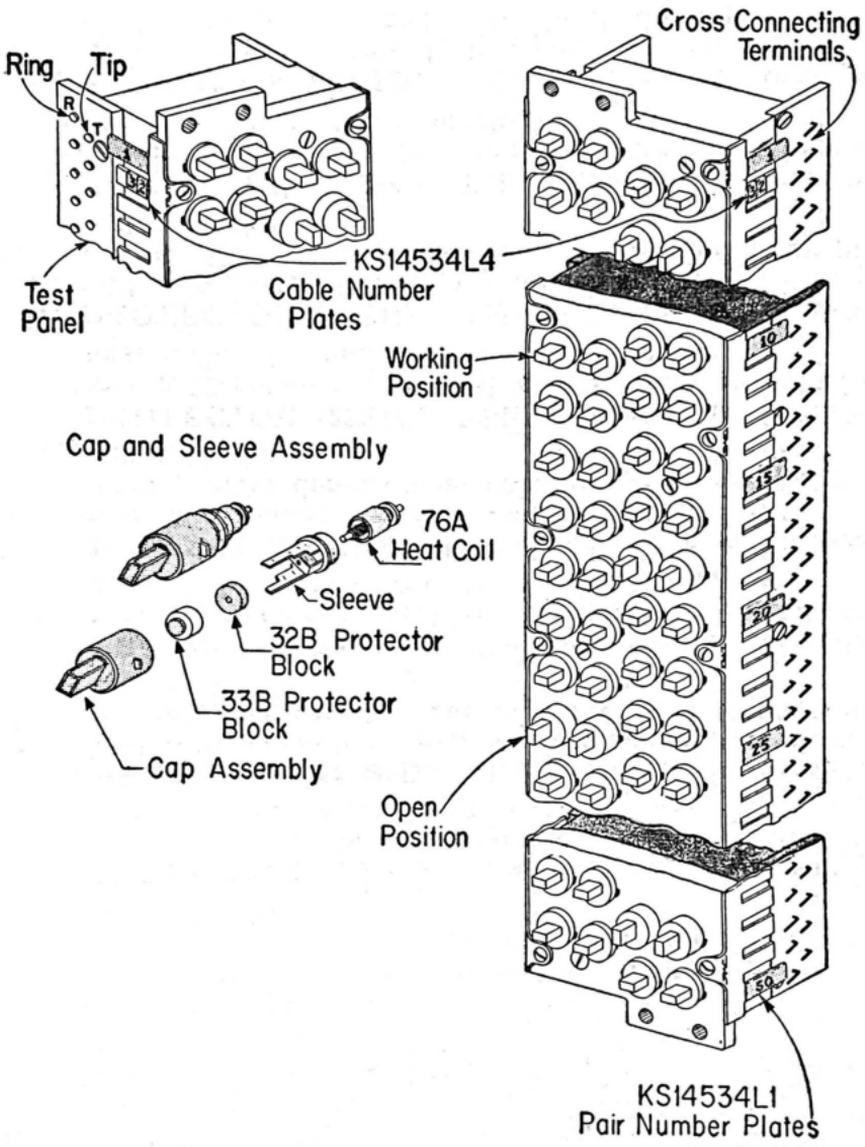
**PROTECTOR 121E1D:** This protector is furnished with a 22-gauge bottom-stub and is equipped with conducting 77A1 dummy heat coils and 34A1 dummy protector blocks.

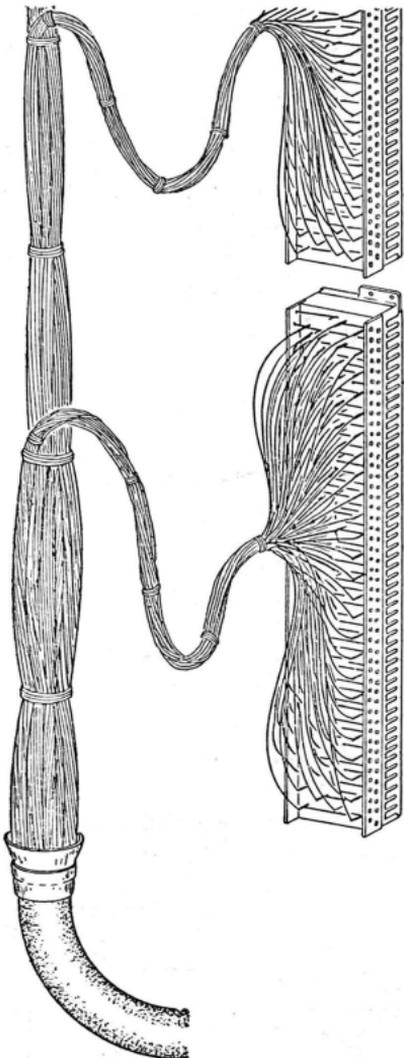
**PROTECTOR 121C1C:** This protector is furnished without a cable stub. It is equipped with 76A heat coils, 32B and 33B protector blocks.

**PROTECTOR 121C1D:** This protector is furnished without a cable stub. It is equipped with conducting 77A1 dummy heat coils and 34A1 dummy protector blocks.

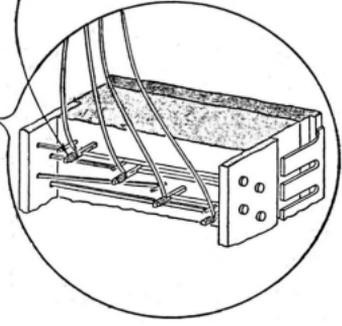
Following are illustrations of 121 protectors.

# 121 PROTECTOR MINUS STUB WITH STANDARD PROTECTION



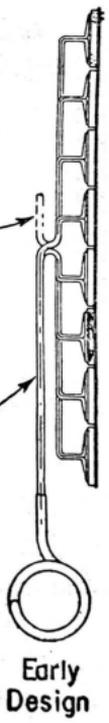


Conductors Terminated by wrap method



Position of Top Mounted Cable

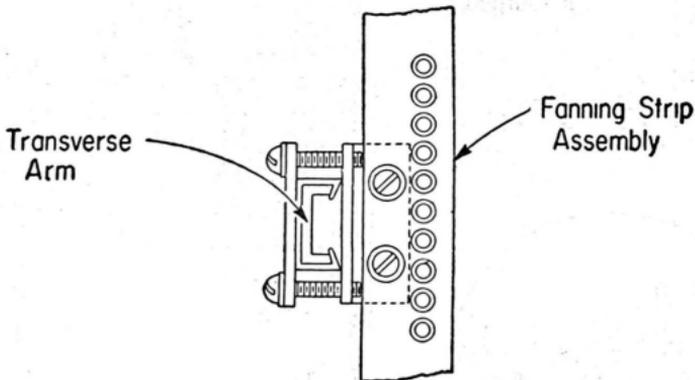
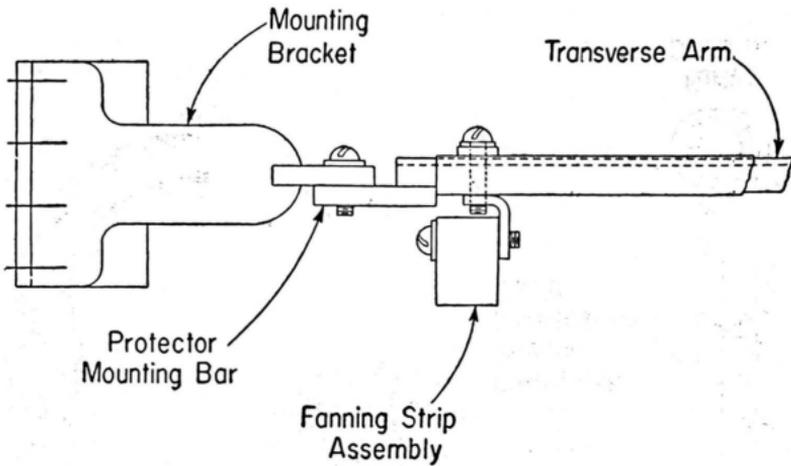
Position of Bottom Mounted Cable



#### 4. DESCRIPTION OF FANNING STRIPS

(Dwg. No. ED-95109-70)

4.01 Following are drawings of the fanning strips used with 121 protectors.



4.02 Information relating to the fanning strips and their use on the various types of frames follows:

Type of Frame	Maximum Capacity Per Vertical E/W 121 Type Prot.	Frame Dwg. No.	Fanning Strip Dwg. No. ED-95109-70	No. Reg. Per Vertical
MDF	200 Pairs	ED-10801-71	G-2	1
MDF	300 Pairs	ED-10802-71	G-3	1
MDF	300 Pairs	ED-91006-75,-76,-77	G-3	1
MDF	300 Pairs	ED-91306-30	G-4	1
MDF	300 Pairs	ED-91670-73,-74,-75	G-3	1
MDF	400 Pairs	ED-91235-75,-76,-77	G-6	1
MDF	400 Pairs	ED-91268-30	G-7	1
Prot F	600 Pairs	ED-90275-71,-72	G-5	2 (1 each side)
Prot F	800 Pairs	ED-90274-71,-72	G-8	2 (1 each side)
CDF	100 Pairs *	ED-91672-71,-72	G-1	1
CDF	100 Pairs *	ED-91673-71,-72	G-1	1
CDF	100 Pairs **	ED-91674-71,-72	G-1	1
CDF	100 Pairs **	ED-91676-71,-72	G-1	1
CDF	200 Pairs	ED-91672-71,-72	G-2	1
CDF	200 Pairs	ED-91673-71,-72	G-2	1
CDF	200 Pairs *	ED-91674-71,-72	G-2	1
CDF	200 Pairs *	ED-91676-71,-72	G-2	1
CDF	200 Pairs	ED-91677-71,-72	G-2	1
CDF	300 Pairs	ED-91674-71,-72	G-3	1
CDF	300 Pairs	ED-91676-71,-72	G-3	1
Toll DF	200 Pairs	ED-60643-71	G-2	1
Toll DF	200 Pairs *	ED-61936-70,-71	G-9	1
Toll DF	300 Pairs	ED-60585-71	G-3	1
Toll DF	300 Pairs	ED-62000-70	G-3	1
Toll DF	300 Pairs	ED-61936-70,-71	G-10	1
Toll Prot F (Single Side)	300 Pairs	ED-60242-72	G-4	1
Toll Prot F (Double Side)	600 Pairs (300 each side)	ED-60242-72	G-4	2 (1 each side)

\* With four 8 inch Terminal Strips  
 \* \* With nine 8 inch Terminal Strips