

SELECTION OF WIRE AND CABLE

1.00 GENERAL

1.01 This section covers the selection of station wire and cable used for inside wiring of telephone equipment.



Do not use privately owned wire or cable systems without the approval of supervisor.

1.02 In selecting wire or cable consider :

- **Location** of terminal, protector, connecting block, telephone set, etc.
- **Number of conductors** necessary to provide service and an economical allowance for future requirements.

- **Type and gauge** of wire or cable to meet the specific requirements of the job.
- **Customer satisfaction** with routing of inside wire or cable.

2.00 SELECTION OF CABLE

2.01 Type, number of pairs, color, and use are shown in Table A.

2.02 The improved sheath on D inside wiring cable and jacketed station wire will withstand the direct outdoor rays of the sun; however, advantage of protection offered by the projection of buildings should be utilized.

TABLE A
SELECTION OF CABLE

Type	No. of Pairs	Gauge	Sheath		Color		Use					Remarks
			Lead	Vinyl Thermo-plastic	Sheathless	Beige	Ivory	Duct and Conduit Systems	Terminals at		Runs Passing Locations Subject to Action of Steam or Close to Heat in Excess of 212° F	
BUA	6, 11, 16, 21, 26, 31, 41, 51, 76,	22	•							•	•	Tinned-copper conductors (textile covered) Color coded
OUA	101, 152, 202	22	•						•		•	Enamel-coated, tinned-copper conductors (textile covered) Color coded
Inside Wiring D	6, 12, 16, 21, 25, 50, 75, 100	24		•		•	•	•	•	•		Annealed-copper conductors (plastic covered) Color coded See 2.00
Inside Wiring E	6	24			•				•	•		Annealed-copper conductors (no over-all covering) Color coded See 2.08

TABLE B
SELECTION OF WIRE

Type		No. of Conductors	Gauge	Color						Use											Remarks					
				Beige	Brown	Ivory	Gray	Black	Red	Black and Red	Ground		Class of Service			Circuits						Cross Conn	Misc			
											Signal	Protector	Business	Residence	All									Coin	Individual	Pty
Station	Jacketed	2 (Pair)	20	•	•							•											Use for all interior station wiring including ducts and conduits, except where impracticable to route runs to avoid close proximity to temperatures which might exceed 212° F. May be run outside on wall of building for short runs between terminal and protector, protector and station, extension station, or bell where the wire run on building extends outdoors. See 3.03.			
		3 (Triple)	20	•	•							*	•	•	•			•	•							
		4 (Quad)	20	•	•										•	†										
	GS	1 (Single)	22	•	•						•													Not recommended for outdoors.		
		2 (Pair)	22	•	•							•							•							
		3 (Triple)	22	•	•								•	•	•			•	•							
		4 (Quad)	22	•	•										•	†										
SK	2 (Pair)	20	•															•				Shielded Wire				
		Ground Wire Capacity																								
				Size No.		Protectors																				
						Fused				Fuseless†																
Ground		1 (Single)	14	•							•												14	1 to 3		1
		1 (Single)	12				•				•												12	4 to 6	or	2
		1 (Single)	10				•				•												10	7 or more		3 to 6
		1 (Single)	6				•				•												6	Any number		Any number
Block D		1 (Single)	20				•			•																Use near heat sources in excess of 212° F, outdoors, in freezing rooms, factories, and for short runs in homes or offices. May be taped for appearance reasons.
		2 (Pair)	20				•				•								•							
		3 (Triple)	20				•				*	•	•	•				•	•							
Cross-conn B		1 (Single)	22				•	or	•													•			Do not use in central office or building distributing frame. Use red for battery and black for ground.	
		2 (Pair)	22						•												•					
Drop C		2 (Pair)	18				•																		May be substituted for block D wire.	
Flat Cord		4 (Quad)	18		•																		•			

2.03 D inside wiring cable and jacketed station wire may be used in conduit that is buried between buildings.

2.04 Do not use D inside wiring cable or jacketed station wire outdoors where:

- Run is not entirely on a wall or supporting surface. Do not span.
- A splice will be required.
- Drop or block wire can be used instead of jacketed station wire.

2.05 Where mechanical protection is required, eg, to seal a wire entrance hole, serve inside wiring cable or jacketed station wire with vinyl tape.

2.06 E inside wiring cable is intended for use in[†] rewiring of homes during construction.

2.07 The conductors are individually insulated with distinctively colored PVC and marked[‡]

at regular intervals (of approximately 3/4 inch)[†] with single dots of colored ink to provide tip, ring, and pair identification. See Table C. [‡]

3.00 SELECTION OF WIRE

3.01 Type, number of conductors, color, and use are found in Table B.

3.02 Refer to 2.00 for supplementary information on jacketed station wire.

3.03 Jacketed station wire may be used on short outdoor runs and terminate directly into an outside-type terminal located on wall of building. Do not use jacketed wire to span, eg, between buildings.

3.04 B cross-connecting wire is used in indoor and outdoor cross-connecting terminals. It should be used only within a single terminal box and should not be used between terminal boxes, either indoors or outdoors. Jacketed station wire should not be used for cross-connecting in terminals.

TABLE C

Pair No.	Ring Conductor		Tip Conductor	
	Insulation	Dot	Insulation	Dot
	Color		Color	
1	Blue	White ↓	White ↓	Blue
2	Orange			Orange
3	Green			Green
4	Brown			Brown
5	Slate			Slate
6	Blue	Red	Red	Blue