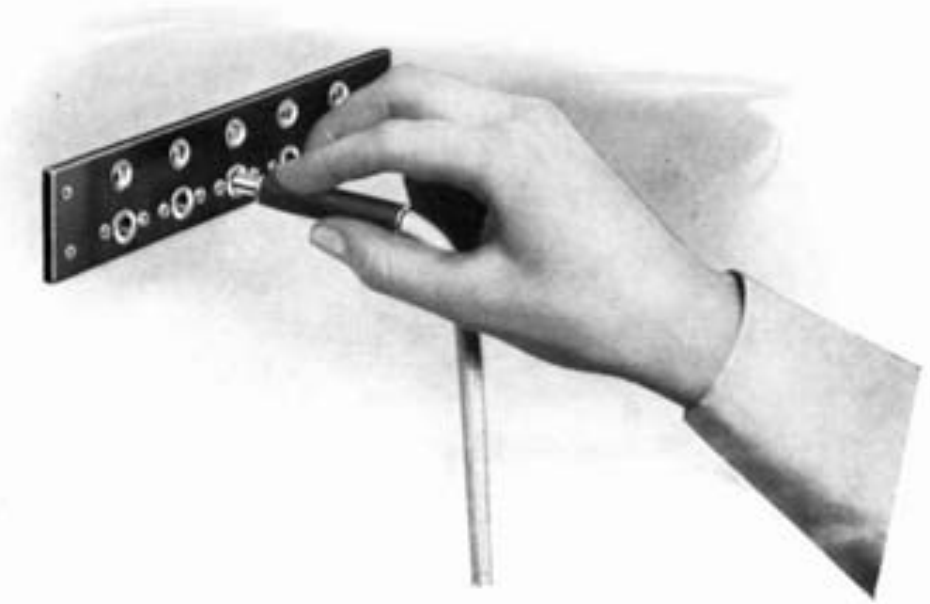
STROMBERG-CARLSON TEL.MFG.CO
ROCHESTER, NEW YORK, U.S.A.
CHICAGO, ILL. TORONTO, CANADA.

BULLETIN NO. 1015 EDITION 18

DURATEX



CORDS

Important Notice

THIS bulletin illustrates and describes **"Duratex"** tinsel telephone and switchboard cords for Stromberg-Carlson, Dean, and Garford apparatus.

We also make **"Duratex"** Cords finished for use with other kinds of telephone and switchboard apparatus not of our manufacture. When ordering cords for such apparatus be sure to furnish full information as to the number of conductors, length, and styles of terminals. If the cords are required for plugs of other manufacture, it is essential that a plug and also a sample or description of the terminal end of the cord accompany the order so that the cords may be finished perfectly.

Prices applying to the various types of standard **"Duratex"** Cords will be found on pages 19 and 20 of this bulletin. These prices are F.O.B. Rochester, N. Y. and Chicago, Ill. and because of the fluctuating costs of raw materials are subject to change without notice. Quotations on special cords not listed in this bulletin will be submitted promptly upon receipt of sample cord or detailed description.

Duratex Cords are manufactured only by

Stromberg-Carlson Telephone Mfg. Co.

Rochester, New York

Chicago, Ill. Kansas City, Mo. Toronto, Ont.

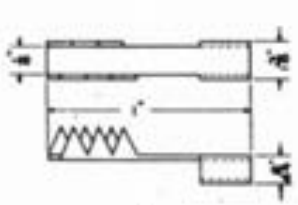
Index and Classification

Duratex Central Office Cords

Duratex Telephone Cords

Cord Tips

These are the cord tips used on our standard cords. Cord tips of other makes can be furnished when required.



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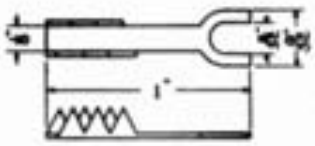

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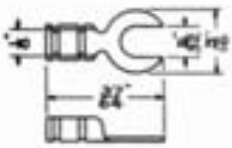

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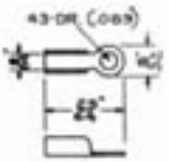

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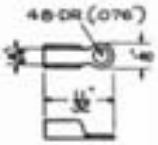

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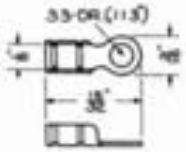

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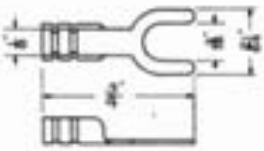

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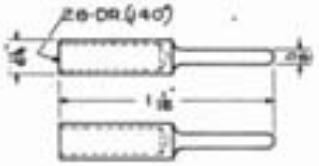

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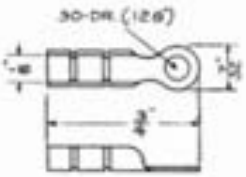

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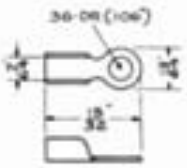

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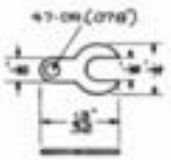

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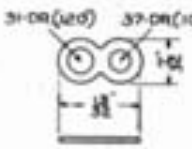

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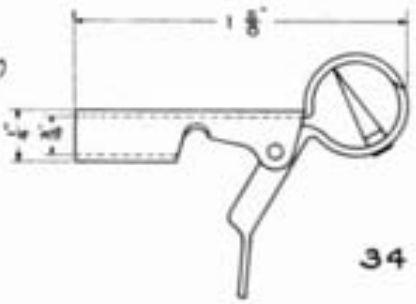

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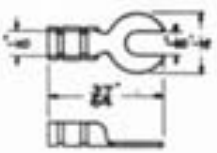

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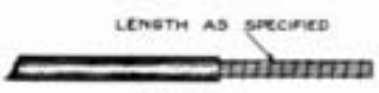
DET. A

LOOP



DET. B

STRAIGHT TERMINAL

Central Office Cords

Duratex Switchboard Cords

Developments of the Switchboard Cord

The first type of cord generally used for switchboard requirements was constructed of braided tinsel conductors, with one of the conductors uninsulated. The conductors lay parallel in a brass wire spiral which was protected by an outside braid. These cords were ideal as to flexibility and as to low resistance but, having *braided* tinsel conductors, the ribbons of tinsel would cut into adjoining ribbons of tinsel, wherever they crossed one another, every time the cord was worked. The constant rubbing of the uninsulated tinsel conductor against the brass wire spiral would soon wear breaks in the strands of tinsel. The strain of the cord weight when the plug was pulled home to its seat was taken up almost entirely by the tinsel strands, because the outside cotton braid was resilient, the brass spiral was, of course, extremely resilient and likewise the cotton braiding of each conductor was resilient. As a result of this cutting, rubbing and stretching, the ribbons of tinsel would become broken long before the life of the cord was reached and the ends of these ribbons would be rubbed against one another intermittently by the slightest movement of the cord, producing a scratchy noise in the telephone receivers during the conversations.

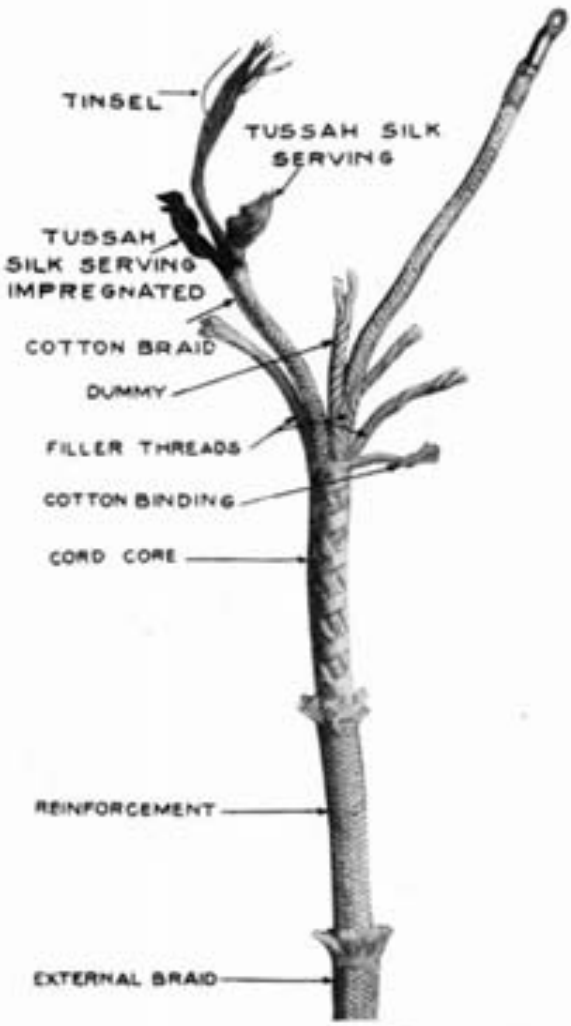
Steel cords overcame these difficulties and became very popular. They had considerably longer life and when they did "open," they opened all at once, making a clean break which could be readily located. They were not ideal however, because of having less flexibility (particularly when wax or oil was applied to the outside braid to give it moisture repelling properties) and especially because of the higher resistance of their conductors. The resistance of a steel cord is approximately nine ohms for the tip conductor and eleven ohms for the sleeve conductor per six foot length of cord as compared to a resistance of one ohm per conductor with the first type of tinsel cord. Numerous efforts have been made to cut down the resistance of the steel conductors, usually by combining steel with copper in some form, but not with a sufficient degree of success to permit the universal use of the records. Most companies that now use steel cords find it necessary to carry two stocks, one for toll and one for local use.

The Best Cord is a Duratex Cord

Our new type of cord overcomes all the defects of both. It has—(a) Long Life. (b) Flexibility. (c) Low Resistance. (d) Absence of noise as the cord grows old and (e) Moisture-proof properties.

It is a new type of tinsel cord which is far superior to all types of cords that we have heretofore manufactured. Each conductor is made up of three strands and each of the strands is made up of many tinsel threads. These threads and strands of tinsel are not *braided* together but are *twisted* together like the Manila threads and strands of a

rope. Herein lies the reason for the superiority of this new type of cord over our older types. Not only are the threads of tinsel and the strands twisted together like rope, but the conductors themselves are twisted in rope form, producing a cord of utmost flexibility and one that cannot put a stretch on any conductor.



This is the most satisfactory method of cord construction yet devised both regarding strength and wearing qualities. Tests show that the life of this type of cord is at least fifty per cent longer than that of steel cords.

This new type of cord has the utmost flexibility. Flexible cords undoubtedly increase the efficiency of the operating force.

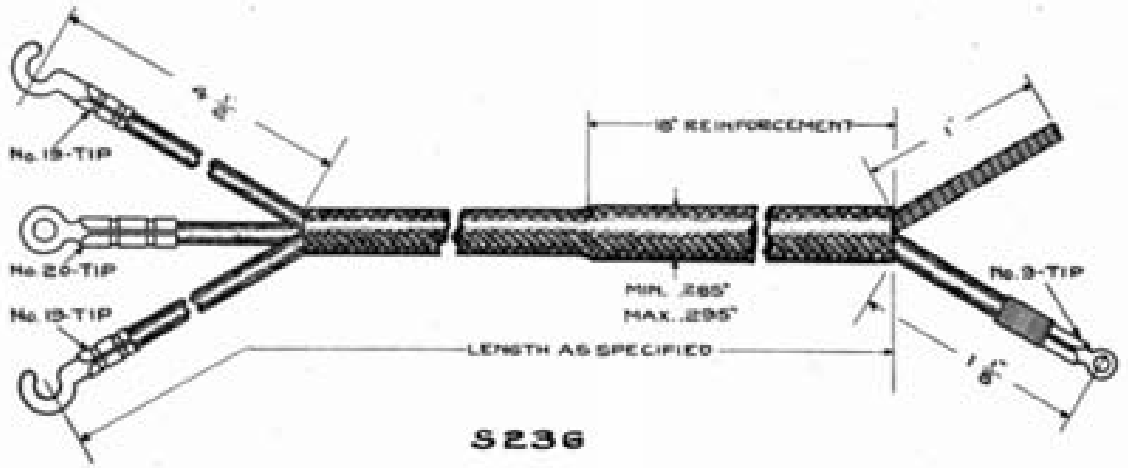
The resistance of each conductor is approximately one-half ohm per six foot length of cord.

As the strands of tinsel lie along side—not across—one another, as the brass spiral is eliminated, as strains are taken up by the body of the cord as a whole—not the individual conductors—and as each conductor is protected by two servings of Tussah silk and a cotton braid, all chances for cutting, rubbing or stretching the strands of tinsel have been eliminated, and cords of this new type are free from noise until long after the usual time for re-butting arrives.

The construction of the cord lends itself nicely to moisture-proof treatment. Each conductor is covered with two servings of Tussah silk and is then impregnated with a moisture-proof compound. The silk takes up enough of the compound to make the cord moisture-proof and yet contains enough oil to keep the compound from contact with the tinsel, thereby keeping each strand of tinsel as clean and bright as though the cord had not been treated. The moisture-proof compound we use does not harden nor crack with age but retains its elasticity or life. Tests of these cords, after 24 hours immersion in water, show no appreciable leakage. Moisture from the operator's hands has practically no effect on them and the practice of saturating the outer braid of the cord with beeswax to overcome this trouble is no longer necessary.

Duratex Switchboard Cords

The following are our standard cords which we regularly carry in stock. We carry in stock cordage ready to be finished into cords of other lengths and into cords for other makes of plugs. In ordering cords for plugs not of our manufacture, bear in mind that a sample plug and also a description or sample of the switchboard end of the cord should be furnished us so that your requirements will be fulfilled exactly.



S236

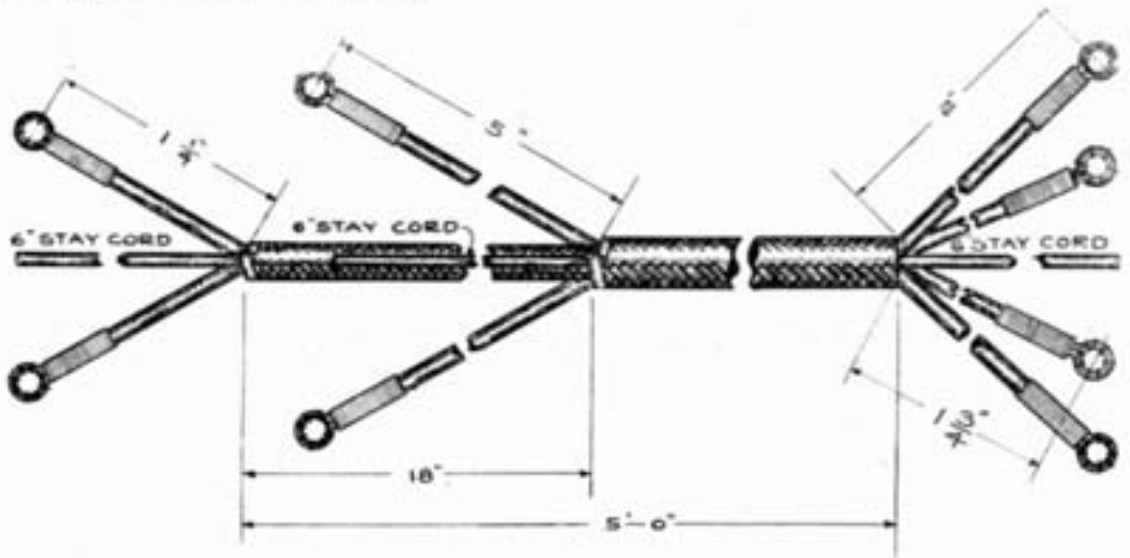
Code	Old Code	Cond.	For Plug No.	Outside Braid	Diameter	Tip	Finish Plug End Sleeve	Ring	Finish Swbd. Term.	End Tips
S21A-7'	1	2	12-18	Glazed Cotton	.225"-.235"	¾" & No. 9 tip	1" Straight tinsel		4½"	No. 1
S21B-7'	47	2	12-18	Glazed Cotton	.225"-.235"	¾" & No. 9 tip	1" Straight tinsel		4½"	No. 19
S21C-7'	86	2	33-39-52	Glazed Cotton	.225"-.235"	1¼" & No. 14 tip	1" Straight tinsel		4½"	No. 19
S22A-6'	2	2	11	Glazed Cotton	.230"-.240"	¾" & No. 9 tip	1" Straight tinsel		4½"	No. 1
S22B-6'	33	2	11	Glazed Cotton	.230"-.240"	¾" & No. 9 tip	1" Straight tinsel		4½"	No. 19
S22C-6' and 7'	78	2	36-48	Glazed Cotton	.230"-.240"	1¼" & No. 14 tip	1" Straight tinsel		4½"	No. 19
S22D-18"	29	2	11	Glazed Cotton	.230"-.240"	¾" & No. 9 tip	1" Straight tinsel		3"	Straight tinsel
S22E-18"	91	2	36	Glazed Cotton	.230"-.240"	1¼" & No. 14 tip	1" Straight tinsel		3"	Straight tinsel
S23F-6'	3	2	10-15	Glazed Cotton	.285"-.295"	1¼" & No. 9 tip	1" Straight tinsel		4½"	No. 1
S23G-6'	23	2	10-15	Glazed Cotton	.285"-.295"	1¼" & No. 9 tip	1" Straight tinsel		4½"	No. 19
S23H-6'	22	2	10-15	Glazed Cotton	.285"-.295"	1¼" & No. 9 tip	1" Straight tinsel		4½"	1" solid winding
S23I-3'	85	2	42-43	Glazed Cotton	.285"-.295"	1¼" & No. 14 tip	1" Straight tinsel		4½"	No. 19
S31J-6'	82	3	21-34	Glazed Cotton	.210"-.220"	1¼" & No. 14 tip	1" Straight tinsel	¾" & No. 14 tip	6½"	No. 19
S32K-6' and 7'	80	3	33-34-35	Glazed Cotton	.255"-.265"	1¼" & No. 14 tip	1" Straight tinsel	¾" & No. 14 tip	6½"	No. 19
*S32L-3'		3	33-34-35	Glazed Cotton	.255"-.265"	1¼" & No. 14 tip	1" Straight tinsel	¾" & No. 14 tip		
S33L-6'	89	3	44	Glazed Cotton	.285"-.295"	1¼" & No. 14 tip	1" Straight tinsel	¾" & No. 14 tip	6½"	No. 19

*Same as No. S32K except plug on both ends.

Duratex Operators' Cords

Operators' cords are manufactured on the same rope formation principle as the switchboard cords. The conductors are constructed the same as the conductors of the switchboard cords except a dark colored cotton braid is used if none of the conductors are exposed. Fast color dark red and black mercerized cotton is used for the braids of all exposed parts of the cords.

Operators' cords with this construction have a low resistance, a long life and an attractive appearance. The following is a list with specifications of operators' cords for our standard equipment. We can also furnish cords for any type of operators' equipment of other manufacture.



.04C

Breast Plate Type

Code	Old Code	Stand. Length	Cond.	Use	Outside Braid	Rec. End	Trans. End	Plug End	Rec. End	Trans. End	Plug End
04B	105	5'	4	Breast Plate Type with No. 17 Rec., No. 6 Trans., No. 23 Plug	Mercerized cotton	No. 18 Tips 6" stay cord	Loop 6" stay cord	Loop	2 2¼"	2 5"	2 1¾" 2 2"
04C	41 114	5'	4	Breast Plate Type with No. 15 or No. 20 Rec., No. 6 or No. 14 Trans., No. 23 Plug	Mercerized cotton	Loops 6"stay cord	Loop 6" stay cord	Loop	2 1¼"	2 5"	2 1¾" 2 2"

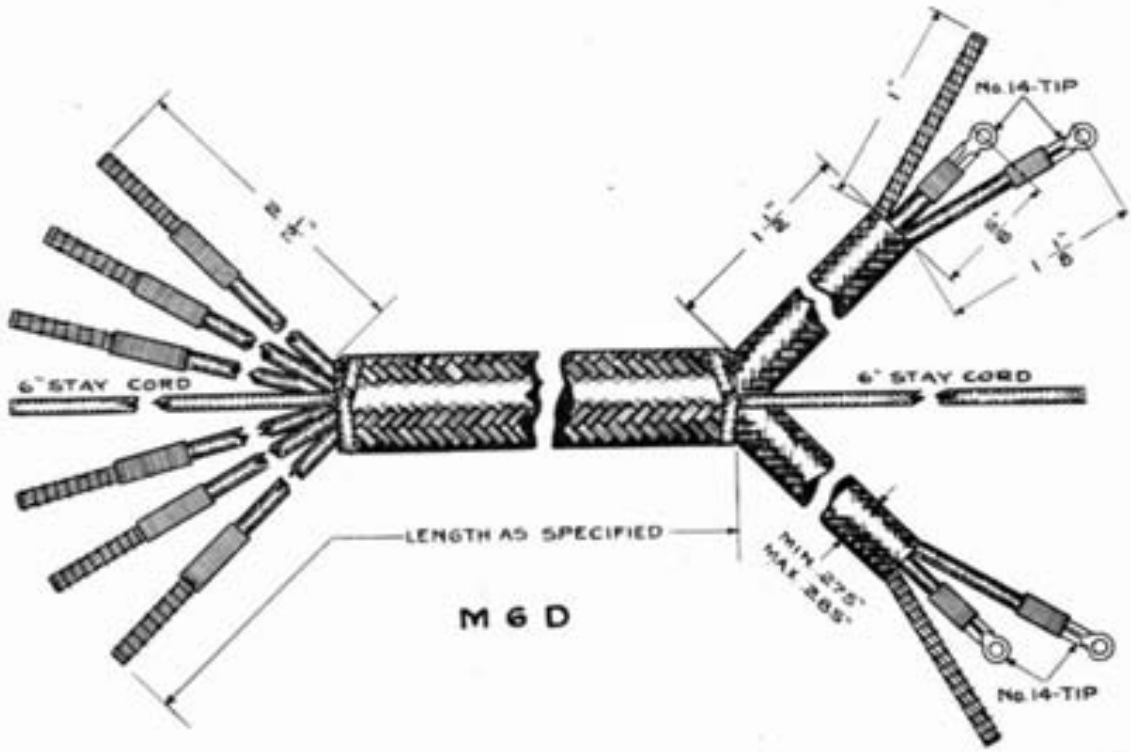
Suspended Transmitter Type

						Cord Tips Rec. End	Cord Tips Plug End	Length of Terminal Ends Rec. End	Length of Terminal Ends Plug End
02D	106	6'	2	No. 17 Rec. and No. 13 Plug	Mercerized cotton	No. 18 Tips 6" stay cord	Loops	2 2¼"	1 ⅝" 1 1"
02E	4 112	6'	2	No. 15 or No. 20 Rec. and No. 13 Plug	Mercerized cotton	Loops 6" stay cord	Loops	2 1¼"	1 ⅝" 1 1"
02F	87 113	6'	2	No. 15 or No. 20 Rec. and No. 40 Plug	Mercerized cotton	Loops 6" stay cord	No. 14 Tips	2 1¼"	1 ½" 1 1" 1 1"
						Cord Tips Trans. End	Cord Tips Swbd. End		
01A	10	5'	1	No. 8 and No. 16 Type Trans.	Green Mercerized cotton	Loops	No. 18		

Duratex Miscellaneous Central Office Cords

These cords are used with protector test plugs and protector soldering plugs, and with plugs for test panels.

The individual conductors are all of the same efficient construction as heretofore described and the cords are given a finish that is best suited for the purpose.



Code	Old Code	Stand. Length	Cond.	Use	Outside Braid	Cord Tips Plug End	Cord Tips Term. End	Length of Terminal Ends Plug End	Length of Terminal Ends Term. End
M6A	12	15'	6	Cook No. 14 Test Plug	Mercerized cotton	Straight tinsel 6" stay cord	Straight tinsel 6" stay cord	6 2"	6 4"
M4B	25	4½'	4	Cook No. 4 Test Plug	Mercerized cotton	Loops 6" stay cord	Loops 6" stay cord	4 3"	2 1½" 2 17"
M22C	65	6'	2	No. 31 Plug for Test Panels	Glazed cotton	Loops	No. 19 Tips	2 1¼"	2 4½"
M6D	75	15'	6	Cook No. 8, 10, 21, 44, 444, Test Plugs and our No. 35 and No. 38 Plugs	Glazed cotton	4 No. 14 Tips 2 Straight tinsel 6" stay cord	Straight tinsel 6" stay cords	2 ½" 2 1¼" 2 1" On 1½" extensions	6 2½"
M22E	83	15'	2	Cook No. 10 Soldering Plug and our No. 36 and No. 48 Plugs	Glazed cotton	1 No. 14 Tip 1 Straight tinsel	Straight tinsel 6" stay cord	1 1¼" 1 1"	2 2½"

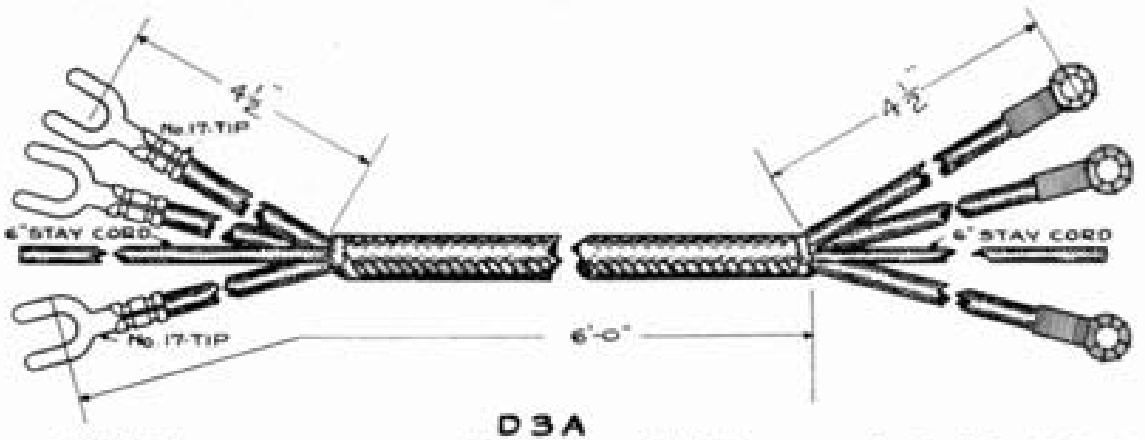
Telephone Set Cords

Duratex Desk Set Cords

In the construction of telephone set cords we have used the same care as in the manufacture of cords for switchboard and central office use. The individual conductors, with the exception of some of the single conductor cords, have the same formation as those in the switchboard cords.

Each conductor is composed of a number of ends of tinsel twisted together in rope form, insulated with two servings of Tussah silk. The outside serving is impregnated with our moisture-proofing compound. The outside braid of the individual conductor is made of green cotton with tracer threads. The cords consisting of two to five conductors inclusive are constructed in rope form over which is applied a spun silk green braid, or a dark red and black mercerized cotton braid.

The cords listed below are finished for our standard instruments. If cords are desired for desk stands of other manufacture, simply state your requirements and they will be taken care of quickly and satisfactorily.

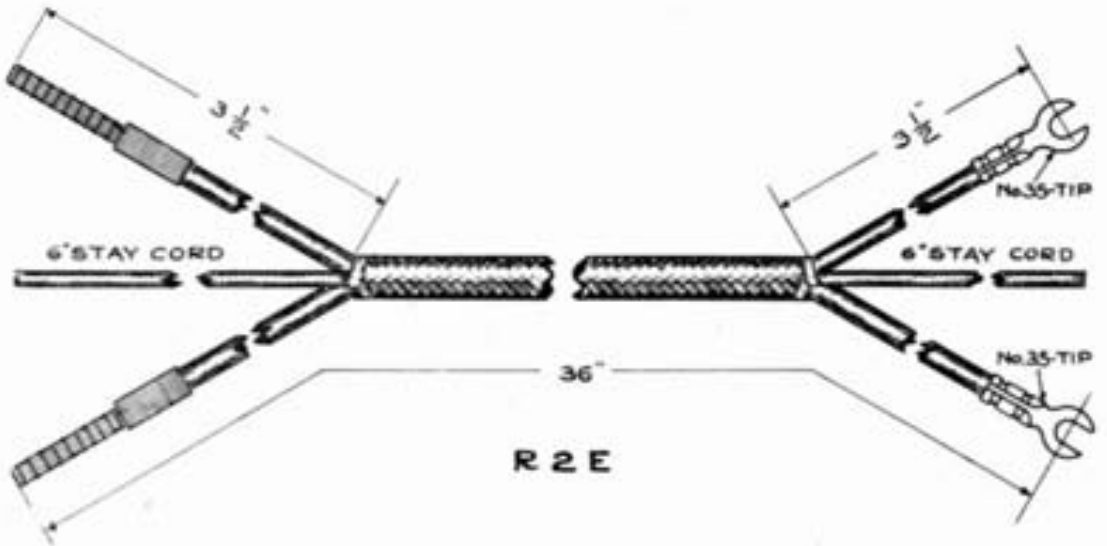


D3A

Code	Old Code	Stand. Length	Cond.	Use	Outside Braid	Cord Tips Stand. End	Cord Tips Term. End	Length of Terminal Ends Stand. End.	Length of Terminal Ends Term. End
D2A	24	6'	2	Desk Telephones Nos. 336, 849, 988, 993, 1111	Green silk	Loops 6" stay cord	No. 17 6" stay cord	2 4½"	2 4½"
D2B	113	6'	2	Desk Telephones with No. 20-A Receiver	Green silk	Loops 6" stay cord	Loops 6" stay cord	2 3"	2 1¼"
D3A	13	6'	3	Desk Telephones Nos. 429, 681, 986 992, 1109, 1113	Green silk	Loops 6" stay cord	No. 17 6" stay cord	3 4½"	3 4½"
D4A	43	6'	4	Desk Telephones Nos. 339, 517, 720, 721, 868, 1110, 1112	Green silk	Loops 6" stay cord	No. 17 6" stay cord	4 4½"	4 4½"
D4B	38	6'	4	Desk Telephones Nos. 337, 338, 340, 427, 442	Green silk	Loops 6" stay cord	Loops 6" stay cord	4 4½"	4 4½"
D4C	108	6'	4	Desk Telephones No. 989	Green silk	Loops 6" stay cord	No. 35 6" stay cord	4 4½"	4 4½"
D5A	74	6'	5	Desk Telephones Nos. 519, 682, 987 991	Green silk	Loops 6" stay cord	No. 17 6" stay cord	5 4½"	5 4½"
D5C	109	6'	5	Desk Telephones No. 990	Green silk	Loops 6" stay cord	No. 35 6" stay cord	5 4½"	5 4½"

Duratex Receiver Cords

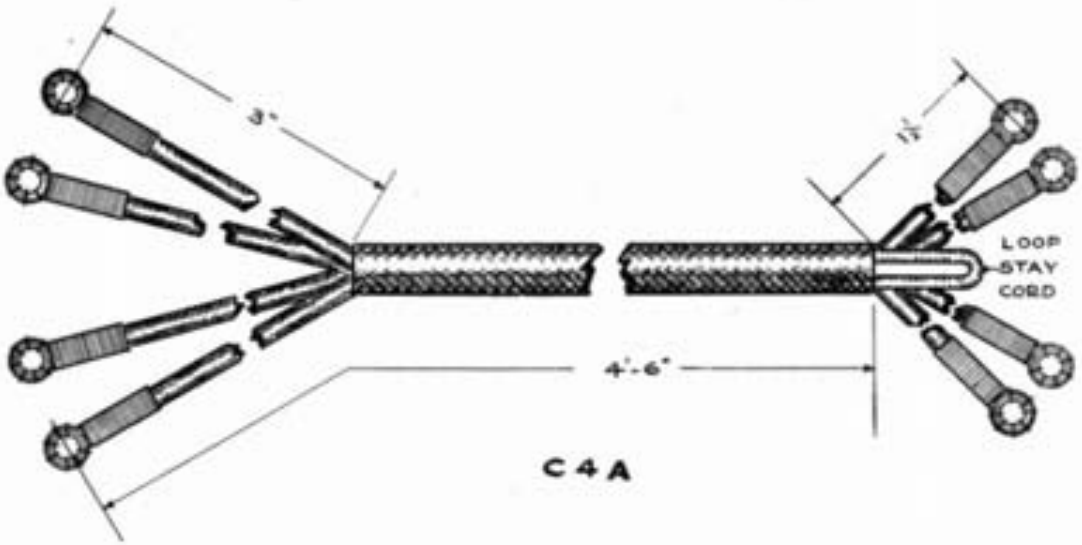
In the following list we code cords that may be used with nearly all makes of telephones. By specifying the proper finish at each end the cords may be adapted to any telephone.



Code	Old Code	Stand. Length	Cond.	Use	Outside Braid	Cord Tips Rec. End	Cord Tips Set End	Length of Terminal Ends Rec. End	Length of Terminal Ends Set End
R1A	7	36"	2	Telephones with receivers of our make	Green silk	Loops 6" stay cord	Straight tinsel 6" stay cord	2 3½"	2 3½"
R2B	27	36"	2	Telephones with receivers of other makes	Green silk	No. 18 Tip 6" stay cord	Loops 6" stay cord	2 3½"	2 3½"
R2C	51	36"	2	Telephones with receivers of other makes	Green silk	Loops 6" stay cord	Loops 6" stay cord	2 3½"	2 3½"
R2D	57	36"	2	Telephones with receivers of other makes	Green silk	No. 18 Tip 6" stay cord	No. 18 Tip 6" stay cord	2 3½"	2 3½"
R2E	102	36"	2	Our Standard	Green silk	No. 35 Tip 6" stay cord	Straight tinsel 6" stay cord	2 3½"	2 3½"
R2F		36"	2	Telephones with receivers of other makes	Green silk	No. 35 Tip 6" stay cord .	Loops 6" stay cord	2 3½"	2 3½"
R2G		36"	2	Telephones with receivers of other makes	Green silk	No. 35 Tip 6" stay cord	No. 35 Tip 6" stay cord	2 3½"	2 3½"
R2H		36"	2	Telephones with receivers of other makes	Green silk	No. 18 Tips 6" stay cord	Straight tinsel 6" stay cord	2 3½"	2 3½"

Duratex Combination Telephone Cords

Our combination telephone cords are of the highest conductivity, have a long life and present a fine appearance. They will not kink or twist as the rope construction reduces this trouble to a minimum. Combination telephones in testing equipments use a cord with an outside braid of green linen, all other cords are covered with a dark red and black mercerized cotton braid.



Code	Old Code	Stand. Length	Cond.	Use	Outside Braid	Cord Tips Set End	Cord Tips Term. End	Length of Terminal Ends Set End	Length of Terminal Ends Term. End
C2A	137	4½'	2	No. 9 X Comb. Phone	Mercerized cotton	Loops Loop stay cord	Loops	2 1½" 2 3"	
C2B		4½'	2	No. 10 X Comb. Phone	Mercerized cotton	6" stay cord	No. 35 Tips 6" stay cord	2 2"	2 3"
C2C	96	6'	2	No. 6-B, C, D, E. Comb. Phone	Green linen	Loops 6" stay cord	No. 34 Tips 6" stay cord	2 1"	2 4"
C3B		4½'	3	No. 10-C and 10-L Comb. Phone	Mercerized cotton	6" stay cord	No. 35 Tips 6" stay cord	3 2"	3 3"
C3D	95	4½'	3	No. 6-A Comb. Phone with No. 841 type Test Set	Green linen	Loops 1" stay cord	Loops 6" stay cord	1 1¼" 3 1½"	1 1¼" 3 1½"
C4D		4½'	4	No. 6 Combination Telephone	Green linen	Loops	Loops	2 1½" 2 2"	4 3"
C4E	127	4½'	4	No. 7-A and 7-B Comb. Phone	Mercerized cotton	Loops Loop stay cord	Loops	2 2" 2 9"	4 3"
C4A	138	4½'	4	No. 9-C and 9-L Comb. Phone	Mercerized cotton	Loops Loop stay cord	Loops	4 1½"	4 3"

Duratex Single Conductor Cords

We carry in stock two kinds of single conductor cords. One is made up of twisted tinsel insulated with two servings of Tussah silk with the outside serving impregnated with our moisture-proof compound and a green cotton braid over all. The other is made of No. 30 B&S Gauge copper wires twisted together and finished in the same way as the tinsel conductor cords.

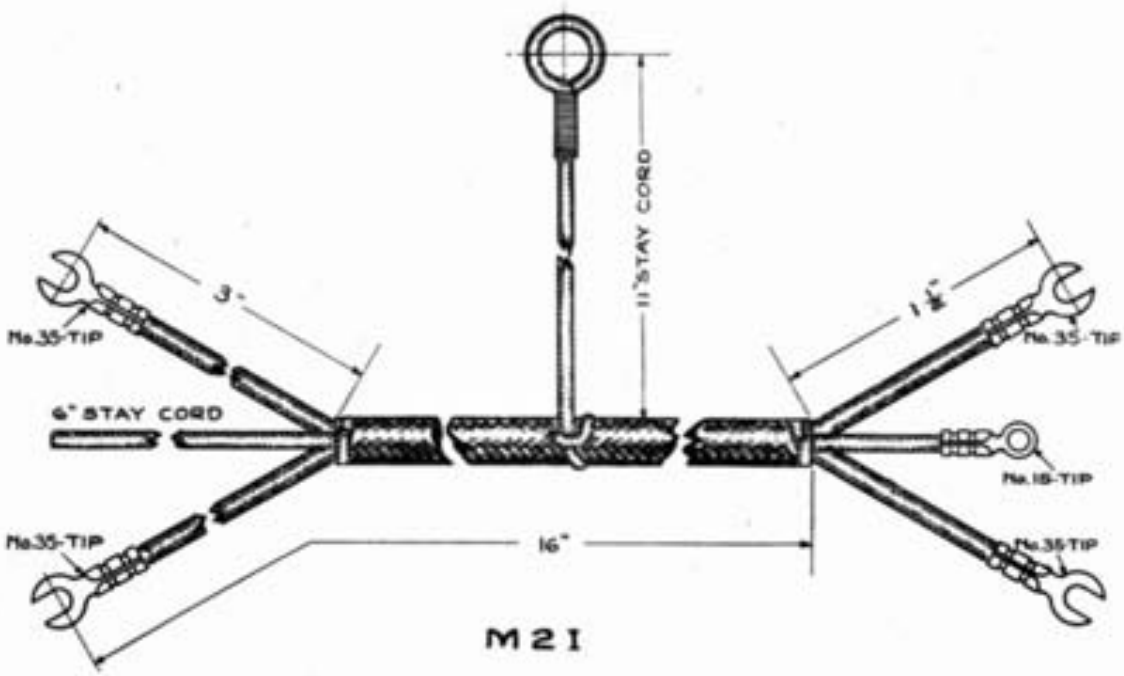
These cords are finished at each end to meet all requirements, such as transmitter cords and connecting cord for telephone sets. We can also furnish these in any length or end finish required.

T 1 F

Code	Old Code	Stand. Length	Conductors	Use	Outside Braid	Cord Tips Trans. End	Cord Tips Term. End
T1A	34	4' 6'	Tinsel	Connecting cord wall telephone	Green cotton	No. 35	Loop
T1B	36	4'	Tinsel	Nos. 10 and 17 Transmitters	Green cotton	No. 4	No. 4
T1C	42	8'	Tinsel	Trans. cord metal wall telephone	Green cotton	½" Straight tinsel	½" Straight tinsel
T1D	64	9' 11' 13'	Stranded copper	Trans. and connecting cord wall telephone	Green cotton	No. 35	1' Straight
T1E	92	13'	Stranded copper	Trans. cord desk telephone	Green cotton	No. 35	No. 24
T1F	110	11'	Stranded copper	Trans. cord compact wall telephone	Green cotton	No. 35	No. 35
T1G		11'	Stranded copper	Nos. 10-C and 10-L Combination Telephones	Green cotton	No. 24 Tip	½" Straight tinsel
T1H	39	2' 4' 6'		Extension Bell Boxes	Green cotton	Loop	Loop

Duratex Miscellaneous Cords

The cords listed under this heading are used only in our telephones developed for special purposes. Their construction is the same as that of cords previously described and they are the most serviceable cords for the purpose.



M21

Code	Old Code	Stand. Length	Cond.	Use	Outside Braid	Cord Tips Rec. End	Cord Tips Term. End	Length of Terminal Ends Rec. End	Length of Terminal Ends Term. End
M2F	14	3'	2 Tinsel	No. 18 receiver in Nos. 570 & 835 Railway telephones	Green silk	Loops 6" stay cord	Straight tinsel	2 1¾"	2 3½"
						Plug End		**Plug End**	
M2G	29	10'	2 Tinsel	Nos. 46 & 47 Plug in 570 & 835 Railway telephones	Green silk	No. 22 Tips 6" stay cord	Straight tinsel	1 1½" 1 3"	2 4"
M10H	66	4'-3"	10 Strand copper	Nos. 921, 922 & 923 Switching telephones	Green cotton	Straight copper	None	10 3"	10 30"
						Term. End	**Rec. End**	**Term. End**	**Rec. End**
M2I	116	16"	2 Tinsel	Nos. 890 and 950 Mine telephones	Linen	No. 35 Tips 1" stay cord	No. 35 Tips 6" stay cord	2 1½"	2 8½"
						11" center stay cord			
						Rec. End	**Term. End**	**Rec. End**	**Term. End**
M2J	134	24"	2 Tinsel	No. 844 Test Set	Green linen	Loops	Straight	2 1¾"	2 3½"

Duratex Cordage

For special purposes cordage is often required in bulk in various number of conductors. The construction of the individual conductors used in our standard cords is adapted to any purpose where a cord may be used.

We can furnish cordage with any number of conductors and our Engineering Department is always willing to co-operate with you in developing a cord to meet your special requirements.

Mercerized Cotton Covered Cords

We have developed an inexpensive cord to meet certain demands. Although this cord does not have all of the desirable features of *Duratex* moisture-proof cords it is a very good cord at the price.

Each conductor is made up of tinsel twisted in the same manner as the *Duratex* cords, insulated with the same two servings of Tussah silk—but not moisture-proofed—and over the conductor a fast dyed green cotton braid with tracer threads.

These conductors are laid up parallel in two conductor receiver cords; two, three and four conductor desk set cords with an over all braid of fast dyed green mercerized cotton. We will make up these cords in quantity with any end finish desired.

We have coded the following mercerized cotton covered cords:

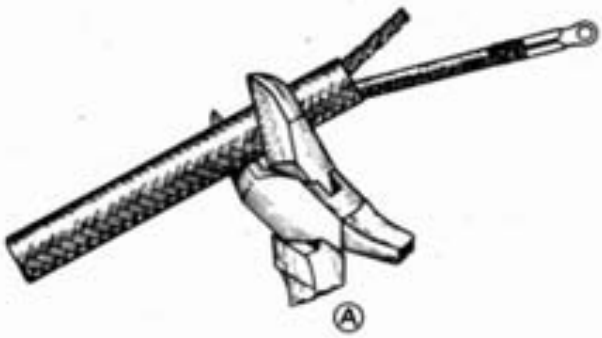
Receiver Cords

Code	Standard Length	Cond.	Cord Tips Rec. End	Cord Tips Set End	Length of Terminal Ends Rec. End	Length of Terminal Ends Set End
MR2A	36"	2	Loops 6" stay cord	Straight tinsel 6" stay cord	2 3½"	2 3½"
MR2B	36"	2	No. 18 Tips 6" stay cord	Loops 6" stay cord	2 3½"	2 3½"
MR2C	36"	2	Loops 6"stay cord	Loops 6" stay cord	2 3½"	2 3½"
MR2D	36"	2	No. 18 Tips 6" stay cord	No. 18 Tips 6" stay cord	2 3½"	2 3½"
MR2E	36"	2	No. 35 Tips 6" stay cord	Straight tinsel 6" stay cord	2 3½"	2 3½"
MR2F	36"	2	No. 35 Tips 6" stay cord	Loops 6" stay cord	2 3½"	2 3½"
MR2G	36"	2	No. 35 Tips 6" stay cord	No. 35 Tips 6" stay cord	2 3½"	2 3½"
MR2H	36"	2	No. 18 Tips 6" stay cord	Straight tinsel 6" stay cord	2 3½"	2 3½"

Desk Set Cords

Code	Standard Length	Cond.	Cord Tips Stand. End	Cord Tips Term. End	Length of Terminal Ends Stand. End	Length of Terminal Ends Term. End
MD2A	6'	2	Loops 6" stay cord	No. 17 Tips 6" stay cord	2 4½"	2 4½"
MD3A	6'	3	Loops 6" stay cord	No. 17 Tips 6" stay cord	2 4½"	2 4½"
MD4A	6'	4	Loops 6" stay cord	No. 17 Tips 6" stay cord	2 4½"	2 4½"

Repairing Duratex Switchboard Cords



Ⓐ

First—Remove plug and cut back cord as shown in Figure "A".

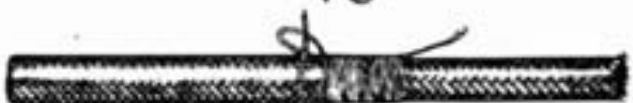
Ⓑ

Second—Slip outer braid back for a distance equal to the dimension from the end of the plug where the cord is inserted to the tip terminal, Figure "B." Trim off inside braid at this point.

Ⓒ

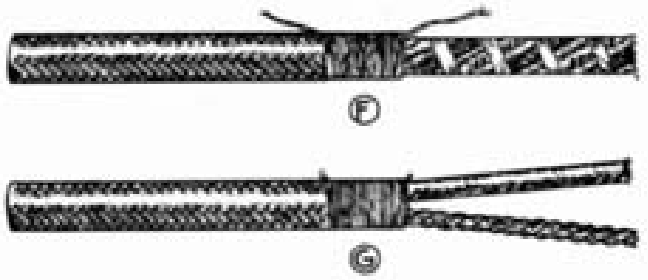
Third—Slip outer braid back to its original position, Figure "C."

Ⓓ

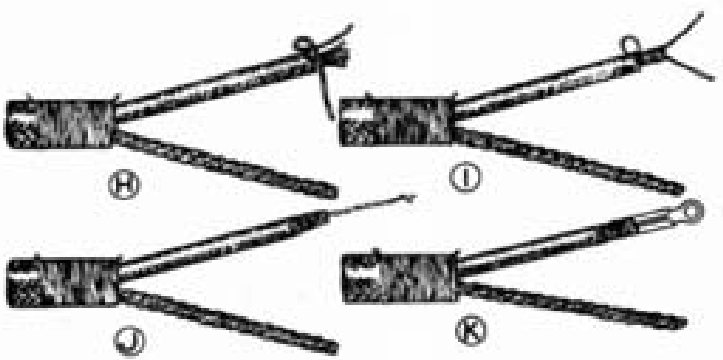


Ⓔ

Fourth—With 35/2 ply linen (which we furnish) start to bind at point where the inside braid is removed, Figure "D," and bind for $\frac{3}{8}$", Figure "E." Build up this $\frac{3}{8}$" to the same diameter as reinforced part of cord or in other words, to the original diameter of plug end of cord.



Fifth—Pull through the thread at the right of binding, thus tying it. Trim off outer braid, cotton binding, filler threads, dummy—in two conductor cords—and the insulation of sleeve conductor as shown in Figures "F" and "G."



Sixth—Trim back for ¼" the cotton braid and servings of silk of the tip conductor. With No. 32 B&SG copper wire make loops, Figure "H" and "I" in the same way as Figures "C" and "D" except finish as in Figure "J." Make connections in the plug by twisted wire under the screw terminal. If the cord tip is to be used finish as in Figure "K."

The same method is used in finishing three conductor cords. The length of the inside braid to cut off is always as previously stated and the ring conductor is shorter than the tip by the difference between the tip and ring terminals in the plug. The tip and ring conductors are finished the same.

Hints on the Correct Uses of Cords

The manufacturer of cords is sometimes accused of furnishing inferior cords when the trouble is due to misuse of the cords rather than to their construction. In investigating complaints we have found oftentimes that cords reported as unsatisfactory were of the same lot that have given desired service at other places, but the cords of the first instance had been misused in service.

Operating companies are now realizing the importance of training operators to handle switchboard cords correctly. Correct handling of cords and plugs improves service and cuts down maintenance expense. Connections should be put up and taken down by handling only the plugs, it is not necessary to touch the cords except when an operator is tracing out a pair of cords to disconnect when the ends are massed.

The accompanying illustrations clearly show the methods.

Fig. 1

This illustrates the correct method of inserting and removing a plug. The cord is not handled at all. The plug is inserted in one operation. This saves time and means quick service.

Fig. 2

Figure Two shows one of the many incorrect ways of inserting a plug. This method requires two complete motions to insert the plug, first the plug must be started in the jack and then shoved home as shown. By this method the cord is given unusually hard

wear against the rim of the plug body and the wear on the jack is considerably more than if the correct method is used. The result is, slower service and greater wear in the cord, plug and jack.

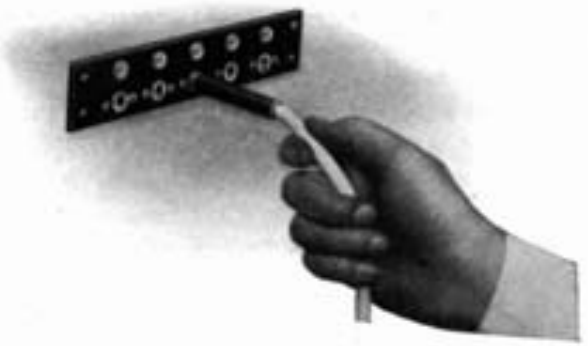


Fig. 3

Here is shown one of the incorrect ways of withdrawing the plug too often found. No time is saved by this method and the operator must exert more effort to remove the plug than if the plug were withdrawn in a line with the jack. The side pull produces an unusual and unnecessary wear on the jack thimbles, strains the jack and abuses the cord and plug.

Good cords are made to withstand the pounding caused by the cord weight pulling the cord home in the plug seat, but cords are not designed to stand the abuse above described. By insisting that the correct method of handling cords and plugs be followed in your operating room, you will be rewarded by longer life of your jacks, cords and plugs and better service for your subscribers.

With telephone set cords always use the stay cords to take the strain off the conductors. Where this is observed longer and better service is obtained from the cords.

If you are in doubt at any time regarding any phase of cord construction, do not hesitate to call on us. Our Engineering Department is always at your service.

Price List for Bulletin 1015

Duratex Telephone and Switchboard Cords

Corrected to October 15, 1919

Page 6 — Switchboard Cords

No. of Conductors	Length	List Price
Two	18 inches	$ .35 each
Two	3 feet	.40 "
Two	4 feet	.40 "
Two	5 feet	.45 "
Two	6 feet	.50 "
Two	7 feet	.55 "
Two	8 feet	.60 "
Three	2 feet	.55 "
Three	3 feet	.60 "
Three	4 feet	.60 "
Three	6 feet	.70 "
Three	7 feet	.75 "
Three	8 feet	.80 "

Page 7 — Operators' Cords

Code No.	Length	No. of Conductors	List Price
04B	5 feet	4	(obsolete) Replaced by O-4-C
04C	5 feet	4	$ .90 each
02D	6 feet	2	.45 "
02E	6 feet	2	.45 "
02F	6 feet	2	.45 "
02G	6 feet	2	.45 "
01A	5 feet	1	.25 "

Page 8 — Miscellaneous Central Office Cords

Code No.	Length	No. of Conductors	List Price
M6A	15 feet	6 (obsolete)	Not
M4B	4½ feet	4 (obsolete)	Replaced
M22C	6 feet	2	$ .60 each
M6D	15 feet	6	3.25 "
M22E	15 feet	2	1.10 "

Page 9 — Desk Stand Cords

No. of Conductors	Length	List Price
Two	6 feet	$ .45 each
Three	6 feet	.60 "
Four	6 feet	.75 "
Five	6 feet	.90 "
Six	6 feet	1.05 "

Page 10 — Receiver Cords

No. of Conductors	Length	List Price
Two	36 inches	$ .25 each

Duratex Cords

Page 11 — Combination Telephone Cords

Code No.	No. of Conductors	Length	Price
C2A	2	4½ feet	$ .50 each
C2B	2	4½ feet	.50 "
C2C	2	6 feet	.90 "
C3B	3	4½ feet	.70 "
C3D	3	4½ feet	.70 "
C4A	4	4½ feet	.90 "
C4D	4	4½ feet	obsolete
C4E	4	4½ feet	.90 "

Page 12 — Single Conductor Cords

All single conductor cords listed on Page 12 $ .10 each.

Page 13 — Miscellaneous Cords

Code No.	No. of Conductors	Length	Price
M2F	2 (Replaced by R-2-A)	3 feet	obsolete
M2G	2	10 feet	$1.50 each
M10H	10	4 ft. 3 in.	obsolete
M2I	2	1 ft. 4 in.	.45 "
M2J	2	2 feet	.45 "
M2K	2	6 feet	.90 "

Page 14 — Duratex Cordage

Pc. No.	No. of Conductors	Price per 100 ft.
0581	1	$3.00
0521	2	5.00
0522	3	7.00
0523	4	9.00
0524	5	11.00

Note—6, 7 and 8 conductor cordage cannot be furnished.

Mercerized Cotton Covered Cords

Code No.	Length	No. of Conductors	
MR2A	36 inches	2	
MR2B	36 inches	2	
MR2C	36 inches	2	Void
MR2D	36 inches	2	
MR2E	36 inches	2	Replaced
MR2F	36 inches	2	by R-2 Type
MR2G	36 inches	2	
MR2H	36 inches	2	

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