

Fig. 8. Cutaway drawings of series LT, N, UHF, BNC, QDS and push-on connectors.

double flat requiring a special hole in the panel or a bent tab on the connector requiring a notched hole in the chassis. When large thick chassis are used, the connector may be screwed into, press fit or soldered to the chassis as desired.

### Outdoor use of connectors

While steps have been taken in all of the more modern coaxial connectors to achieve moisture-proofing, none of the connectors may be classified as entirely waterproof and suitable for outdoor use unless protected by additional coverings. The most common practice used to protect the mating surface between plug and receptacle is to pack one side with silicone grease. The connectors are then mated and any excess grease is forced to the outside of the connector where it may be wiped off. The grease tends to dry and form voids after a period of time however, and should be replaced periodically. If not replaced, the voids within the grease may become water traps during periods of temperature change with high humidity. In some cases packing will adversely effect the operation of the cable at UHF frequencies. This is because matched connectors for use above 1000 mc utilize high impedance compensating air sections at the mating surfaces. Silicone grease has a greater dielectric constant than air and packing the mating surface results in a low impedance section with resultant mismatch.

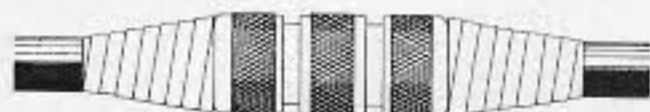
An alternate and preferred method of weatherproofing is to utilize connectors with

threaded mating surfaces such as type N or UHF. The mating threads on the receptacle side can be coated with a waterproof varnish such as Glyptal just prior to making the connection. Then, after assembly, the outer surface of the mated pair may be covered with the same varnish. UHF series connectors may be coated with varnish on the outside but not on the threaded surface, because in these connectors the rf current path takes place along the threaded surface. Unfortunately, the use of Glyptal varnish may only be used once since it renders connectors useless for future mating.

A third method of waterproofing coaxial connector assemblies is to wrap a good quality pressure-sensitive vinyl tape over the junction as shown in Fig. 9. As in the case of silicone grease protection, the tape should be periodically replaced.

For best results, the tape wrap should be installed in the following manner:

1. After the two lengths of cables are connected together, tightly wind tape behind each connector to obtain a smooth contour between connector and cable.
2. Tightly wrap several layers of tape over the entire assembly. Use a 50% overlap and wind each of the layers in opposite directions; a minimum of four layers should be used for maximum protection.
3. The completed tape covering should extend beyond each connector a minimum of eight times the diameter of the cable.



WIND PLASTIC ELECTRICAL TAPE AROUND CABLE IMMEDIATELY BEHIND CONNECTORS TO PROVIDE A SMOOTH CONTOUR BETWEEN CABLE AND CONNECTORS.



WRAP SEVERAL LAYERS OF TAPE WITH A 50% OVERLAP OVER THE CONNECTORS AND BUILT-UP JUNCTIONS. EACH OF THE LAYERS SHOULD BE WRAPPED IN REVERSE DIRECTIONS.

Fig. 9. Taping coaxial cable junctions.

The best method to remove the tape is to unwrap it. A knife may be used for this purpose, but care must be taken not to cut into the plastic jacket of the cable. The recommendation here is to cut the tape in the immediate vicinity of the metal connector and peel it off.

### Coaxial connector assembly

The coaxial connector is a highly engineered device and even the smallest mechanical dimension or material characteristic may be of great electrical or mechanical significance. Accordingly, the cable assembly operation must carry out the objective of the original design if the connector is expected to operate to its fully intended capabilities.

Where the assembly instructions show the cable's dielectric butting the connector's dielectric, every precaution should be taken that the assembly method insures a positive butt. If the connector is to be used at ultra high

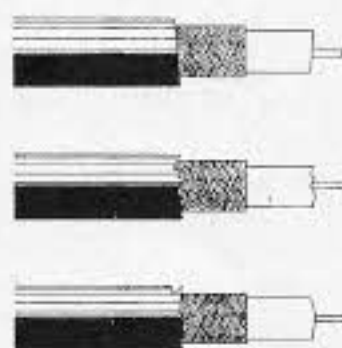
frequencies with a low SWR, the development of air pockets because of loose butt joints or rounded dielectric corners will give rise to impedance mismatches proportional to the frequency of operation. In high voltage cables air pockets or loose joints materially reduce the peak voltage capability of the entire assembly.

Loose butt joints usually develop unless the dielectric trimming process is made one of the last assembly operations. Rounded corners develop because of excess heating during soldering or through a mistaken notion that all "sharp edges should be avoided." It is extremely important that the dielectric be cut at perfect right-angles to the center conductor; no notches should be permitted. Correct methods of stripping the cable dielectric and jacket are shown in Fig. 10.

Air pockets between the inner conductor and the dielectric of the cable usually develop due to excessive heat when soldering the center contact of the connector onto the inner conductor of the cable. Some of the dielectric is softened, and through movement of the inner conductor, a larger hole is formed.

Finally, precautions should be taken during the assembly process to insure that the center contact of the connector rests at its proper lateral position as shown in Fig. 11. In many connectors, the exact axial distance between a point on the connector shell and the tip of the pin is an electrical matching circuit. In type N connectors this is the case where the male pin steps down before entering the female pin of the mating connector, leaving a deliberate radial notch—compensated by the overhung iris in the inside dimension of the outer conductor.

Many times, misalignment results from assembling connectors to both ends of a relatively long cable while it is still coiled. When



INCORRECT



CORRECT



INCORRECT



CORRECT



Fig. 10. Stripping coax cable jacket and dielectric.

Fig. 11. Installing center contact.



RG-/U	Cable Group	RG-/U	Cable Group	RG-/U	Cable Group
5	D	62	B	148	H
6	E	63	J	149	H
8	F	71	B	159	A
9	F	79	J	164	N
10	G	81	K	165	F
11	H	82	M	166	G
13	H	87	F	210	B
17	N	89	J	212	D
18	P	100	C	213	F
21	D	114	J	214	F
29	A	116	G	215	G
31	F	118	L	216	H
32	G	124	E	218	N
35	P	133	J	219	P
38	D	140	B	222	D
39	E	141	A	223	A
55	A	142	A	225	F
58	A	143	D	227	G
59	B	144	H	228	L

Table 8A. Coaxial cable assembly groups.

it is uncoiled, the ends of the center conductor may assume a different position with respect to the ends of the outer braid. For similar reasons, a connector should not be assembled to cable under temperature extremes.

Except for the UHF series of connectors, the only soldering operations encountered during connector to cable assembly is in joining the center contact of the connector to the inner conductor of the cable. However, there are two major precautions which must be observed during this operation. It is imperative that a good solder bond be made between the pin and the inner conductor of the cable over the entire depth of the pin. Otherwise, a significant inductive reactance may be created because the hole in the pin and the inner conductor form the conductors of a miniature short-circuited coaxial line having significant electrical length at UHF frequencies.

Also, any excess solder must be removed so that the step contour between the pin and the

cable conductor corresponds essentially to the original dimensions. A change in dimensions because of excessive solder acts like a shunt capacitor and is in effect a circuit change within the connector.

Complete assembly instructions for type BNC, N and UHF connectors are provided in Fig. 12 through 22. Note that standard series N connectors come in two different versions, one with a v-groove gasket, the other with a cylindrical gasket, but that the assembly sequence is basically the same.

During connector assembly, there are five basic rules which must be followed to obtain proper operation.

1. Closely follow the recommended assembly instructions to insure proper SWR and voltage ratings.
2. Do not apply more heat than necessary during soldering operations. Use crimped or clamped connections on cable braid to prevent heat distortion of the dielectric.
3. Do not exert excessive force in tightening fittings containing rubber or plastic gaskets as permanent deformation will result; occasional light retightening is preferred.
4. Carefully remove all filings, loose solder and other foreign objects from the connectors prior to assembly; observe cleanliness during all operations. Extraneous matter in connectors reduces power and voltage ratings and increases the SWR of the assembly.
5. Use extreme care in the assembly and grounding of connectors operating at high voltages to reduce corona and radiated noise.

Cable Group	Center Conductor	Maximum Dimensions				RG-/U Cables	Impedance (ohms)
		Dielectric	Braid	Jacket	Armor		
A	0.040	0.121	0.177	0.216	—	29, 55, 58, 141, 142, 159, 223	50
B	0.030	0.151	0.206	0.251	—	59, 124, 140, 62, 71, 210	75 93
C	0.096	0.151	0.206	0.251	—	100	35
D	0.061	0.194	0.263	0.342	—	5, 21, 38, 143, 212, 222	50
E	0.030	0.194	0.263	0.342	—	6, 39	75
F	0.096	0.295	0.357	0.435	—	8, 9, 31, 87, 165, 213, 214, 225	50
G	0.096	0.295	0.357	0.435	0.511	10, 32, 116, 166, 215, 227, 229	50
H	0.061	0.295	0.357	0.435	—	11, 13, 144, 148, 149, 216	75
J	0.030	0.295	0.357	0.435	—	133	95
K	0.081	0.334	0.379	—	—	63, 79, 89, 144	125
L	0.198	0.640	0.670	0.745	0.813	81	50
M	0.127	0.650	0.755	—	—	118, 228	50
N	0.198	0.695	0.761	0.888	—	82	50
P	0.198	0.695	0.761	0.888	0.963	17, 218	50
						164	75
						18, 219	50
						35	75

Table 8B. Coaxial cable assembly groups.

SERIES UHF  
AMPHENOL 83-1SP

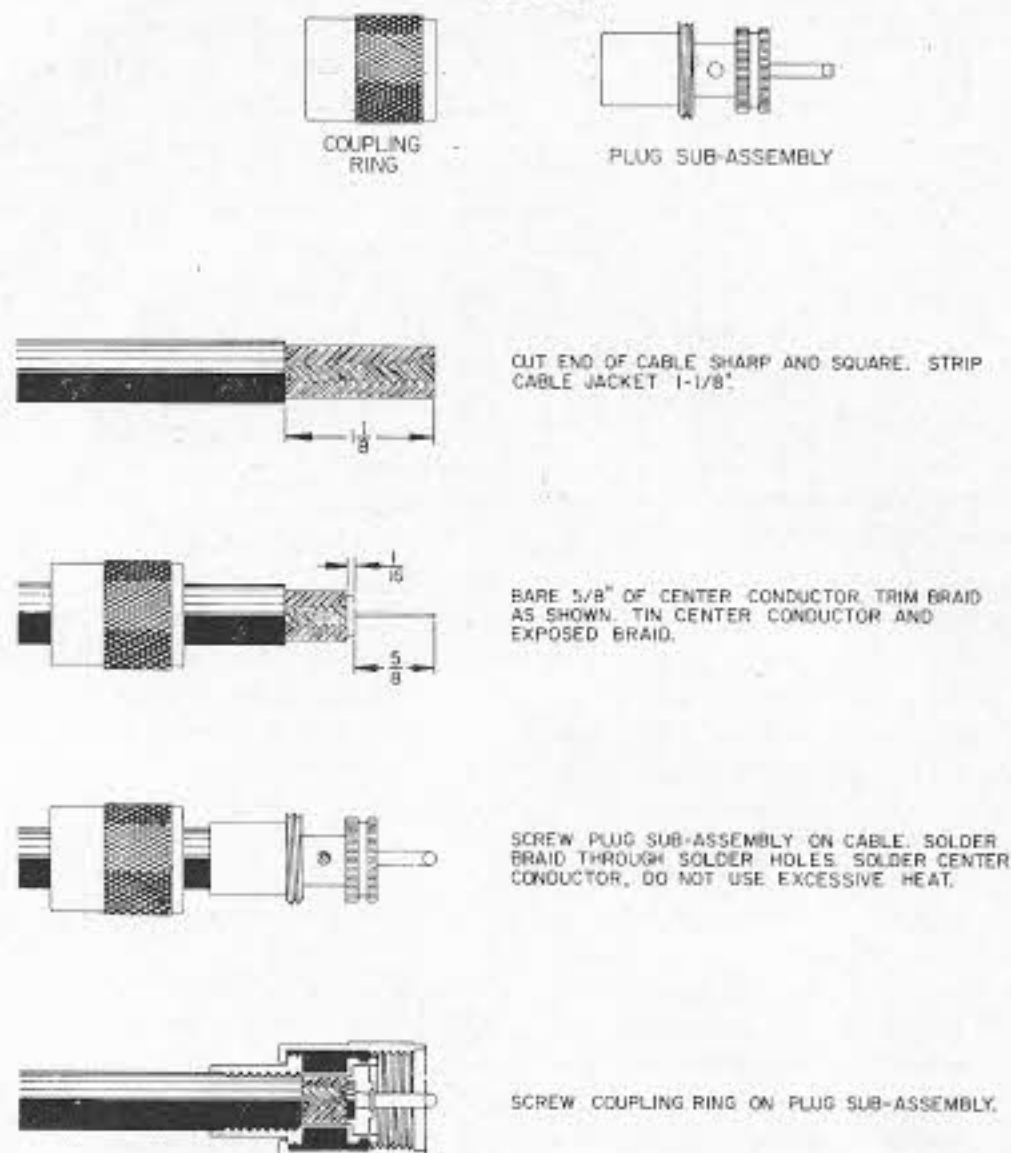


Fig. 12. Series UHF assembly instructions for Amphenol 83-1SP.

### Coaxial connector assembly group charts

The "Coaxial Cable Assembly Group Charts" in Table 8 are useful in selecting coaxial connectors for various size coaxial cables. The first part of the charts list 57 of the most popular coaxial cables and the lettered assembly group to which they belong. RG-8/U for example, is in assembly group "F."

The second part of the chart lists the dimensions of each of the cables within a group and their characteristic impedance. Cables within group "F" for example, include RG-8, -9, -31, -87, -165, -213, and -214/U.

The primary use of these charts is in the selection of coaxial connectors. In the "Coaxial Connector Index" in Table 9, only one type of RG-/U cable is listed for each connector. However, the same connector may be used with any other coaxial cable in the same assembly group. For example, the UG-21E/U type N improved plug is listed for cable type RG-8/U. This indicates that the UG-21E/U plug is

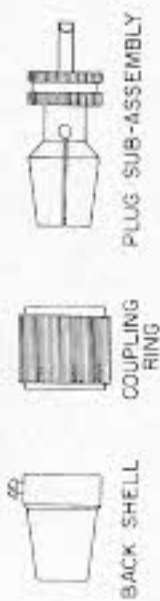
suitable for any of the other cables in the "F" assembly group.

These charts are also useful when selecting connectors for cables which are not listed. In this event, the various dimensions of the cable are compared to the group chart to determine which group is most applicable; suitable connectors are then selected accordingly.

As an aid in connector selection, identification and assembly, the "Connector Index" in Table 9 lists all of the type BNC, N and UHF coaxial connectors currently available along with description, type, equivalent Amphenol part number and applicable RG-/U cables. Many of these connectors have very subtle differences which may be recognized only from the information in the "engineering data" column of the table.

Type designation refers to standard (S), improved (I) and captivated contact (CC) assembly techniques. This index is indispensable in determining what method to use when assembling a particular connector.

SERIES UHF  
UG-203/U OR AMPHENOL 63-776



CUT END OF CABLE SHARP AND SQUARE. STRIP CABLE JACKET 1-1/8"



BARE 5/8" OF CENTER CONDUCTOR. TRIM BRAID AS SHOWN. TIN CENTER CONDUCTOR.

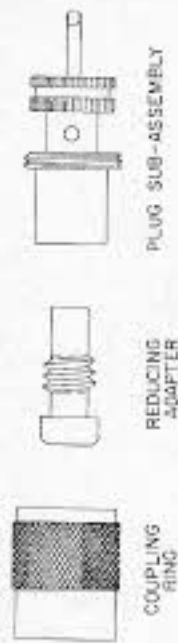


SCREW PLUG SUB-ASSEMBLY ON CABLE. SOLDER BRAID THROUGH SOLDER HOLES. SOLDER CENTER CONDUCTOR. DO NOT USE EXCESSIVE HEAT.



SLIP COUPLING RING OVER PLUG SUB-ASSEMBLY. ALLOW SUFFICIENT CLEARANCE TO PERMIT FREE ROTATION OF COUPLING NUT AND TIGHTEN SET SCREW.

SERIES UHF REDUCING ADAPTERS



CUT END OF CABLE SHARP AND SQUARE. STRIP CABLE JACKET 3/4"



SLIDE COUPLING AND ADAPTER ON CABLE. FAN BRAID SLIGHTLY AND FOLD BACK AS SHOWN.



POSITION ADAPTER AS SHOWN. PUSH BRAID DOWN OVER BODY OF ADAPTER AND TRIM TO 3/8" BARE 5/8" OF CENTER CONDUCTOR. TIN EXPOSED CENTER CONDUCTOR. AVOID EXCESSIVE HEAT.



SCREW PLUG SUB-ASSEMBLY ON ADAPTER. SOLDER BRAID THROUGH SOLDER HOLES TO SHELL. USE JUST ENOUGH HEAT TO BOND BRAID TO SHELL. SOLDER CENTER CONDUCTOR TO CONTACT.



SCREW COUPLING RING ON PLUG SUB-ASSEMBLY.

Fig. 13. Assembly instructions for UHF series UG-203/U.

Fig. 14. Assembly instructions for UHF series reducing adapters.

SERIES UHF HOODS



UG-177/U



UG-106/U



UG-372/U



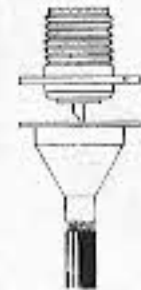
CUT END OF CABLE SHARP AND SQUARE STRIP JACKET TO APPROPRIATE LENGTH



REMOVE BRAID AND DIELECTRIC TO DIMENSION SHOWN. TIN CENTER CONDUCTOR.



STRIP BRAID FROM DIELECTRIC TO DIMENSION SHOWN. TIN BRAID.



SLIDE HOOD OVER BRAID. SOLDER CONDUCTOR TO CONTACT. SLIDE HOOD FLUSH AGAINST RECEPTACLE AND TUCK-SOLDER HOOD FLANGE TO RECEPTACLE FLANGE. SOLDER HOOD TO BRAID.



SLIDE HOOD OVER BRAID AND FORCE UNDER JACKET. SOLDER CONDUCTOR TO CONTACT. PUSH HOOD FLUSH AGAINST RECEPTACLE. TACK-SOLDER HOOD TO BRAID THROUGH SOLDER HOLES WITH DOUBLE BRAIDED CABLE HOOD GOES OVER INNER BRAID ONLY. OUTER BRAID IS SOLDERED TO OUTSIDE OF HOOD.



SLIDE HOOD OVER BRAID. PUSH RECEPTACLE FLUSH AGAINST HOOD. SOLDER CONDUCTOR TO CONTACT AND HOOD TO BRAID.

	UG-177/U	UG-106/U	UG-372/U
	$\frac{3}{4}$	$\frac{1}{8}$	$\frac{3}{4}$
	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{5}{16}$
	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{3}{8}$
	x	x	x

SERIES N



NUT



WASHER GASKET CLAMP



FEMALE CONTACT



JACK BODY



MALE CONTACT



PLUG BODY

CUT END OF CABLE SHARP AND SQUARE STRIP JACKET  $\frac{9}{16}$ " STRIP  $\frac{5}{8}$ " WHEN USING DOUBLE SHIELDED CABLE.



COMB OUT BRAID AS SHOWN. STRIP DIELECTRIC  $\frac{7}{32}$ " FROM END. TIN CENTER CONDUCTOR.



TAPER SHIELD AND SLIDE NUT, WASHER AND GASKET OVER JACKET. INSTALL CLAMP SO THAT ITS INNER SHOULDER FITS SQUARELY AGAINST END OF CABLE JACKET.



FOLD BRAID BACK AS SHOWN AND TRIM PROPERLY. SOLDER CONTACT TO CENTER CONDUCTOR. AVOID EXCESSIVE HEAT.



SLIDE ASSEMBLY INTO CONNECTOR BODY. FACE OF DIELECTRIC MUST BE FLUSH AGAINST INSULATOR. INSERT NUT, SCREW IN PLACE AND TIGHTEN WITH WRENCH.

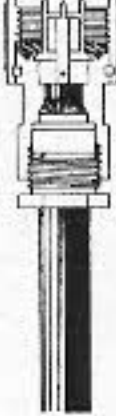
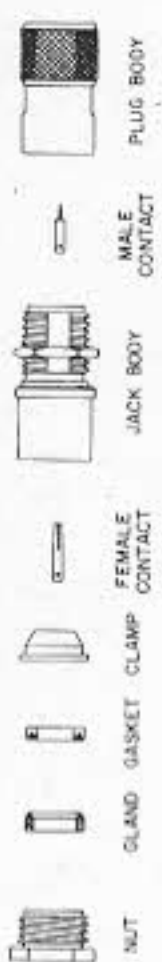


Fig. 15. Assembly of UHF series hoods.

Fig. 16. Assembly of series N connectors.



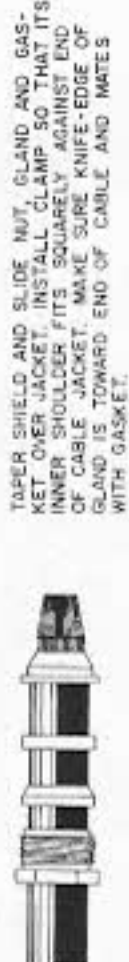
SERIES N



CUT END OF CABLE SHARP AND SQUARE. STRIP JACKET 9/16" STRIP 5/8" WHEN USING DOUBLE SHIELDED CABLE.



COMB OUT BRAID AS SHOWN. STRIP DIELECTRIC 7/32" FROM END. TIN CENTER CONDUCTOR.



TAPER SHIELD AND SLIDE NUT, GLAND AND GASKET OVER JACKET. INSTALL CLAMP SO THAT ITS INNER SHOULDER FITS SQUARELY AGAINST END OF CABLE JACKET. MAKE SURE KNIFE-EDGE OF GLAND IS TOWARD END OF CABLE AND MATES WITH GASKET.



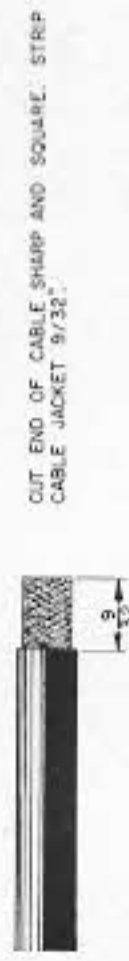
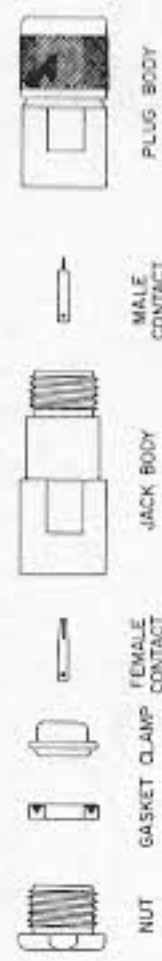
FOLD BRAID BACK AS SHOWN AND TRIM PROPERLY. SOLDER CONTACT TO CENTER CONDUCTOR. AVOID EXCESSIVE HEAT.



SLIDE ASSEMBLY INTO CONNECTOR BODY. FACE OF DIELECTRIC MUST BE FLUSH AGAINST INSULATOR. INSERT NUT, SCREW IN PLACE AND TIGHTEN WITH WRENCH. KNIFE-EDGE OF GLAND SHOULD CUT GASKET IN HALF WHEN SUFFICIENTLY TIGHTENED.

Fig. 17. Assembly of series N connectors.

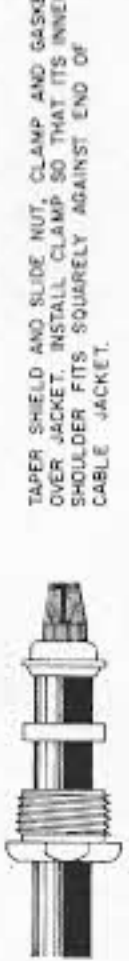
SERIES N IMPROVED



CUT END OF CABLE SHARP AND SQUARE. STRIP CABLE JACKET 9/32"



COMB OUT BRAID AS SHOWN. CUT OFF CABLE FLUSH 1/8" FROM END OF JACKET. TIN CENTER CONDUCTOR.



TAPER SHIELD AND SLIDE NUT, CLAMP AND GASKET OVER JACKET. INSTALL CLAMP SO THAT ITS INNER SHOULDER FITS SQUARELY AGAINST END OF CABLE JACKET.



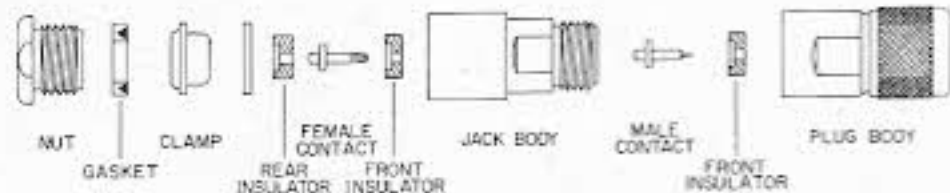
FOLD BRAID BACK AS SHOWN AND TRIM PROPERLY. SOLDER CONTACT TO CENTER CONDUCTOR. AVOID EXCESSIVE HEAT.



SLIDE ASSEMBLY INTO CONNECTOR BODY. FACE OF DIELECTRIC MUST BE FLUSH AGAINST INSULATOR. MAKE SURE SHARP EDGE OF CLAMP SEATS PROPERLY IN GASKET. INSERT NUT, SCREW IN PLACE AND TIGHTEN WITH WRENCH.

Fig. 18. Assembly of series N improved connectors.

## SERIES N WITH CAPTIVATED CONTACTS



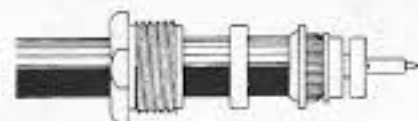
CUT END OF CABLE SHARP AND SQUARE. STRIP CABLE JACKET  $23/64$ ".



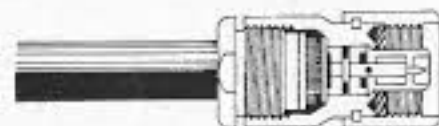
COMB OUT BRAID AS SHOWN. CUT OFF CABLE FLUSH  $1/8$ " FROM END OF JACKET. TIN CENTER CONDUCTOR.



SLIDE NUT, GASKET AND CLAMP OVER JACKET. INSTALL CLAMP SO THAT ITS INNER SHOULDER FITS SQUARELY AGAINST END OF CABLE JACKET. FOLD BRAID BACK AS SHOWN AND TRIM PROPERLY. SLIDE ON WASHER, REAR INSULATOR AND CONTACT. CABLE CORE, INSULATOR AND CONTACT SHOULDER MUST BUTT AS SHOWN. SOLDER CONTACT TO CENTER CONDUCTOR. AVOID EXCESSIVE HEAT.



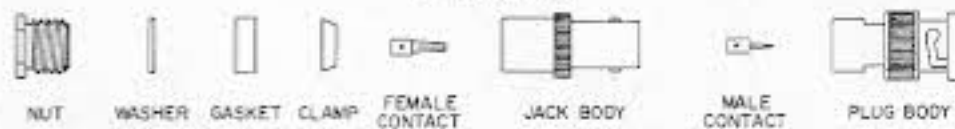
SLIDE FRONT INSULATOR OVER CONTACT. BE SURE TO PLACE COUNTER BORED END OF INSULATOR TOWARD MATING END OF CONTACT.



SLIDE ASSEMBLY INTO CONNECTOR BODY. MAKE SURE SHARP EDGE OF CLAMP SEATS PROPERLY IN GASKET. INSERT NUT, SCREW IN PLACE AND TIGHTEN WITH WRENCH.

Fig. 19. Assembly of series N with captivated contacts.

## SERIES BNC



CUT END OF CABLE SHARP AND SQUARE. STRIP CABLE JACKET  $9/64$ " FOR RG-58/U OR  $5/16$ " FOR RG-59/U.



COMB OUT BRAID AND FLARE AS SHOWN. STRIP CENTER DIELECTRIC  $1/8$ ".



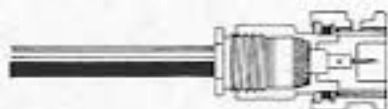
TAPER SHIELD AND SLIDE NUT, WASHER, GASKET AND CLAMP OVER BRAID. CLAMP IS INSTALLED SO THAT ITS INNER SHOULDER FITS SQUARELY AGAINST END OF CABLE JACKET.



WITH CLAMP IN PLACE, FOLD BRAID BACK AS SHOWN AND TRIM  $3/32$ " FROM END.



SLIP CONTACT IN PLACE, BUTT AGAINST DIELECTRIC AND SOLDER. REMOVE EXCESS SOLDER FROM OUTSIDE CONTACT SURFACE. APPLY MINIMUM HEAT SO DIELECTRIC IS NOT HEATED EXCESSIVELY AND SWOLLEN, PREVENTING ENTRANCE TO CONNECTOR BODY.

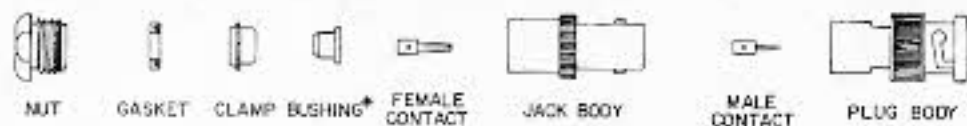


PUSH ASSEMBLY INTO CONNECTOR BODY AS FAR AS IT WILL GO. INSERT NUT, SCREW INTO PLACE AND TIGHTEN WITH WRENCH. HOLD CABLE AND BODY RIGID AND ROTATE NUT DURING THIS OPERATION.

Fig. 20. Assembly of series BNC connectors.



## SERIES BNC IMPROVED



\*FOR RG-62/U CABLES

CUT END OF CABLE SHARP AND SQUARE. STRIP CABLE JACKET  $5/16"$ COMB OUT BRAID AND FLARE AS SHOWN. CUT CENTER DIELECTRIC  $3/16"$  FROM EDGE OF JACKET. TIN CENTER CONDUCTOR.

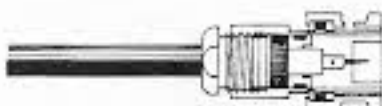
TAPER SHIELD AND SLIDE NUT, GASKET AND CLAMP OVER BRAID. PUSH CLAMP BACK AGAINST JACKET.



WITH CLAMP IN PLACE FOLD BRAID BACK AS SHOWN AND TRIM TO PROPER LENGTH. ADD BUSHING FOR RG-62/U TYPE CABLE.

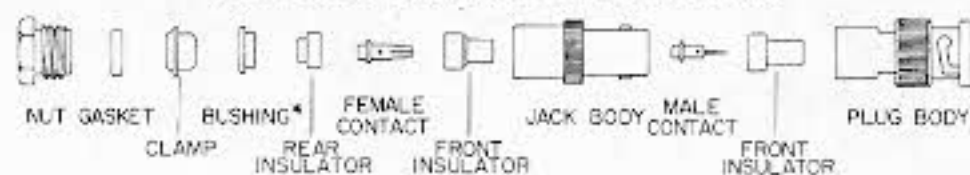


SOLDER CENTER CONDUCTOR TO CONTACT, AVOIDING EXCESSIVE HEAT WHICH MIGHT SWELL CABLE DIELECTRIC.



PUSH ASSEMBLY INTO CONNECTOR BODY AS FAR AS IT WILL GO. MAKE SURE SHARP EDGE OF CLAMP SEATS PROPERLY IN GASKET. TIGHTEN NUT.

## SERIES BNC WITH CAPTIVATED CONTACTS



\*FOR RG-62/U CABLES



STRIP CABLE JACKET TO "A" SHOWN IN CHART BELOW. CUT END OF CABLE SHARP AND SQUARE.

	31-301, 31-304	ALL OTHERS
"A"	$27/64"$	$3/8"$



COMB OUT BRAID AND FLARE AS SHOWN. CUT CENTER DIELECTRIC TO DIMENSION "B" SHOWN IN CHART BELOW.

	RG-58/U, 59/U	RG-62/U
"B"	$3/16"$	$5/32"$



TAPER SHIELD AND SLIDE NUT, GASKET AND CLAMP OVER BRAID. PUSH CLAMP AGAINST JACKET. TIN CENTER CONDUCTOR.



FOLD BRAID BACK AS SHOWN AND TRIM TO PROPER LENGTH. SLIDE ON BUSHING, REAR INSULATOR AND CONTACT. THESE PARTS MUST BUTT AS SHOWN. SOLDER CONTACT TO CENTER CONDUCTOR. APPLY MINIMUM HEAT SO CENTER DIELECTRIC IS NOT HEATED EXCESSIVELY AND SWOLLEN, THEREBY PREVENTING ENTRANCE TO THE CONNECTOR BODY.



SLIDE FRONT INSULATOR OVER CONTACT AND BUTT AGAINST CONTACT SHOULDER. DO NOT REVERSE DIRECTION OF INSULATOR.



PUSH ASSEMBLY INTO CONNECTOR BODY AS FAR AS IT WILL GO. MAKE SURE SHARP EDGE OF CLAMP SEATS PROPERLY IN GASKET. TIGHTEN NUT.

Fig. 21. Assembly of series BNC improved connectors.

Fig. 22. Assembly of series BNC connectors with captivated contacts.

Table 9. Coaxial connector index.

Charted by cable size and coupling method

Military Number	Series	Description	Type*	For RG/U Cables Type	Amphenol Number	Engineering Data					
UG-9/U	Z	Plug	S	U	—	—					
UG-10/U		Panel Jack									
UG-11/U		Jack									
UG-12/U		Jack									
UG-13/U		Panel Jack									
UG-14/U		Jack									
UG-15/U		Plug									
UG-16/U		Panel Jack									
UG-17/U		Jack									
UG-18/U		Plug									
UG-18B/U		Z					Plug	S	U	3400	Not Weather-Proof
UG-18C/U							Plug				
UG-18D/U							Plug				
UG-19/U							Panel Jack				
UG-19B/U							Panel Jack				
UG-19C/U							Panel Jack				
UG-19D/U							Panel Jack				
UG-20/U							Jack				
UG-20B/U	Jack										
UG-20C/U	Jack										
UG-20D/U	Jack										
UG-21/U	Plug										
UG-21B/U	Plug										
UG-21C/U	Plug										
UG-21D/U	Plug										
UG-21E/U	Plug										
UG-22A/U	Z		Panel Jack	S	U	82-3202	Teflon Insul.				
UG-22B/U			Panel Jack								
UG-22C/U		Panel Jack									
UG-22D/U		Panel Jack									
UG-22E/U		Panel Jack									
UG-23/U		Jack									
UG-23A/U		Z	Jack					S	U	7600	Not Weather-Proof
UG-23B/U			Jack								
UG-23C/U			Jack								
UG-23D/U			Jack								
UG-23E/U			Jack								
UG-27A/U			Right Angle Adapter								
UG-27B/U			Right Angle Adapter								
UG-27C/U			Right Angle Adapter								
UG-28A/U			Tee Adapter (F-F-F)								
UG-29/U			Straight Adapter								
UG-29A/U			Straight Adapter								
UG-29B/U			Straight Adapter								
UG-30/U	Z		Bulkhead Adapter (F-F)	—	—	82-101	Teflon Insul.				
UG-30C/U			Bulkhead Adapter (F-F)								
UG-30D/U	Z		Bulkhead Adapter (F-F)	—	—	82-201	Rexolite Insul.				
UG-57/U	Z		Straight Adapter (M-M)	—	—	16000	Glass Insul.				
UG-57A/U	Z		Straight Adapter (M-M)	—	—	45250	Rexolite Insul.				
UG-57B/U	Z		Straight Adapter (M-M)	—	—	82-100	Teflon Insul.				
UG-58/U	UHF	Receptacle (70 ohm)	—	—	82-24	—					
UG-58A/U		Receptacle (70 ohm)									
UG-73/U		Plug									
UG-83/U		Adapter, N (F) to UHF (M)									
UG-83A/U	—	Adapter, N (F) to UHF (M)	—	—	14000	Rexolite/Teflon Insulation					
UG-83B/U		Adapter, N (F) to UHF (M)									
UG-88/U	BNC	Plug	S	U	58	31-002					
UG-88A/U		Plug									
UG-88B/U		Plug									
UG-88C/U		Plug									
UG-88D/U		Plug									
UG-88E/U		Plug									
UG-89/U		Jack									
UG-89A/U		Jack									
UG-89B/U		Jack									
UG-89C/U		Jack									
UG-90/U		Panel Jack									
UG-91A/U		Z					Plug (70 ohm)	S	U	59	1300
UG-92A/U							Jack (70 ohm)				
UG-93A/U							Panel Jack (70 ohm)				
UG-94A/U							Plug (70 ohm)				
UG-95A/U							Jack (70 ohm)				
UG-96A/U							Panel Jack (70 ohm)				

Military Number	Series	Description	Type*	For RG/U Cables Type	Amphenol Number	Engineering Data
UG-106/U	N	Hood	—	—	83-1H	
UG-107/U	N	Tee Adapter (F-M-F)	—	—	4800	Rexolite Insul.
UG-107A/U	N	Tee Adapter (F-M-F)	—	—	82-36	Teflon Insul.
UG-107B/U	N	Tee Adapter (F-M-F)	—	—	82-102	Teflon Insul.
UG-111/U	UHF	Plug	—	59	83-730	Filled Bake-lite
JG-146/U	—	Adapter, N (F) to UHF (M)	—	—	4400	Not Weather-proof
UG-159A/U	N	Bulkhead Jack	S	5	17500	
UG-159B/U	N	Bulkhead Jack	I	5	15550	
UG-160A/U	N	Bulkhead Jack	S	8	82-67	
JG-160B/U	N	Bulkhead Jack	S	8	82-93	
UG-160C/U	N	Bulkhead Jack	I	8	—	
JG-160D/U	N	Bulkhead Jack	I	8	91025	
JG-167A/U	N	Bulkhead Jack	I	8	—	
UG-171/U	—	Plug	S	17	82-104	
UG-173/U	—	Adapter, UHF to British	—	—	—	
UG-175/U	UHF	Reducing Adapter	—	38	—	
UG-176/U	UHF	Reducing Adapter	—	58	83-185	
UG-177/U	UHF	Reducing Adapter	—	59	83-168	
UG-185/U	BNC	Hood	—	58	83-765	
UG-188/U	N	Receptacle	—	—	4500	
UG-197/U	—	Plug	S	58	23250	Not Weather-proof
UG-201/U	—	Adapter, UHF to British	—	—	—	
UG-201A/U	—	Adapter, N (F) to BNC (M)	—	—	31-830	
JG-202/U	N	Adapter, N (F) to BNC (M)	—	—	31-216	
JG-203/U	UHF	Right Angle Adapter (F-F)	—	—	—	
UG-204A/U	N	Plug	—	59	83-776	Filled Bake-lite
JG-204C/U	N	Plug	S	14	82-105	Rexolite Insul.
UG-223/U	UHF	Bulkhead Receptacle	I	14	82-214	Teflon Insul.
UG-224/U	UHF	Bulkhead Adapter (F-F)	—	—	29500	Rexolite Insul.
UG-231/U	N	Receptacle	—	—	2750	With Hood
UG-239/U	UHF	Hood	—	59	—	
UG-253/U	BNC	Bulkhead Jack, Pressurized	—	58	—	
UG-254A/U	BNC	Receptacle, Pressurized	—	—	31-016	Rexolite Insul.
JG-255/U	—	Adapter, BNC (F) to UHF (M)	—	—	2900	
UG-260/U	BNC	Plug	S	59	31-012	Rexolite Insul.
UG-260A/U	BNC	Plug	S	59	31-021	
JG-260B/U	BNC	Plug	I	59	31-212	Teflon Insul.
UG-260C/U	BNC	Plug	I	59	31-2212	Beryllium Contacts
UG-261/U	BNC	Jack	S	59	31-015	Rexolite Insul.
UG-261A/U	BNC	Jack	S	59	31-022	Rexolite Insul.
UG-261B/U	BNC	Jack	S	59	31-215	Teflon Insul.
UG-262/U	BNC	Panel Jack	S	59	31-011	Rexolite Insul.
UG-262A/U	BNC	Panel Jack	S	59	31-023	Rexolite Insul.
UG-262B/U	BNC	Panel Jack	S	59	31-211	Teflon Insul.
UG-266/U	UHF	Receptacle, Pressurized	—	—	4575	Rexolite Insul.
JG-273/U	—	Adptr, BNC (M) to UHF (F)	—	—	31-028	Non-constant Impedance
UG-274/U	BNC	Tee Adapter (F-M-F)	—	—	31-008	Rexolite Insul.
UG-274A/U	BNC	Tee Adapter (F-M-F)	—	—	31-208	Teflon Insul.
UG-281/U	N	Panel Jack	S	58	3525	Rexolite Insul.
UG-282/U	—	Adapter, BNC (M) to Binding Post	—	—	—	
UG-290/U	BNC	Receptacle	—	—	31-003	Rexolite Insul.
UG-290A/U	BNC	Receptacle	—	—	31-203	Teflon Insul.
UG-291/U	BNC	Panel Jack	S	58	31-001	Gold Plated Contacts
UG-291A/U	BNC	Panel Jack	S	58	31-020	Not Weather-proof
JG-291B/U	BNC	Panel Jack	I	58	31-201	
UG-295/U	UHF	Plug	—	8	—	
UG-296/U	UHF	Receptacle	—	8	—	
UG-297/U	UHF	Right Angle Adapter (M-F)	—	—	—	
UG-298/U	UHF	Tee Adapter (F-M-F)	—	—	—	
UG-299/U	UHF	Straight Adapter (F-F)	—	—	—	
UG-299/U	UHF	Straight Adapter (F-F)	—	—	—	
UG-300/U	UHF	Bulkhead Adapter (F-F)	—	—	—	
UG-306/U	BNC	Right Angle Adapter (M-F)	—	—	31-009	
JG-307/U	UHF	Straight Panel Mounting Adapter	—	—	—	
UG-314/U	—	Adapter, N (F) to UHF (M)	—	—	—	
UG-318/U	—	Adapter, N (F) to UHF (F)	—	—	26700	
UG-332/U	—	Adapter, UHF (M) to Binding Post	—	—	5800	Rexolite Insul.

Military Number	Series	Description	Type*	For RG/U Cables Type	Amphenol Number	Engineering Data
UG-335/U	—	Adapter, N (M) to BNC (F)	—	—	3025	Rexolite/Teflon Insulation
UG-349/U	—	Adapter, N (M) to BNC (F)	—	—	2975	Rexolite/Teflon Insulation
UG-349A/U	—	Adapter, N (M) to BNC (F)	—	—	31-217	Teflon Insul.
UG-357/U	UHF	Receptacle	—	34	83-21R	Filled Bock-lite
UG-358/U	UHF	Plug	—	34	83-21SP	
UG-360/U	UHF	Straight Adapter (F-F)	—	—	83-21J	Polystyrene Insulation
UG-363/U	UHF	Bulkhead Adapter	—	—	83-1F	Polystyrene Insulation
UG-365/U	BNC	Receptacle	—	—	4650	Turret Terminal
UG-366/U	UHF	Hood	—	—	—	
UG-367/U	N	Receptacle	—	—	—	
UG-372/U	UHF	Hood	—	8	83-1HP	
UG-414/U	BNC	Flanged Feedthrough Adapter (F-F)	—	—	47000	
UG-447/U	BNC	Receptacle	—	—	31-817	Rexolite Insul.
UG-464/U	N	Tee Adapter (F-F-M)	—	—	—	
UG-483/U	N	Jack	S	81	14175	Not Weather-proof
UG-484/U	N	Jack	I	82	—	
UG-486/U	N	Plug	I	81	—	
UG-487/U	N	Plug	I	81	—	
UG-491/U	BNC	Straight Adapter (M-M)	—	—	8425	
UG-491A/U	BNC	Straight Adapter (M-M)	—	—	31-218	
UG-492A/U	BNC	Pressurized Bulkhead Adapter (F-F)	—	—	31-220	Glass/Teflon Insulation
UG-492B/U	BNC	Pressurized Bulkhead Adapter (F-F)	—	—	31-2220	Glass/Teflon Insulation
UG-527/U	BNC	Plug	—	100	—	
UG-535/U	BNC	Right Angle Receptacle	—	—	5675	
UG-536/U	N	Plug	S	58	3400	Rexolite Insul.
UG-536B/U	N	Plug	I	58	34025	Teflon Insul.
UG-556/U	N	Bulkhead Jack	S	58	35250	
UG-556A/U	N	Bulkhead Jack	I	58	—	
UG-557/U	N	Plug	S	118	—	
UG-557A/U	N	Plug	I	118	—	
UG-589/U	BNC	Plug	—	—	—	For Single Wire
UG-593/U	N	Panel Jack	S	59	35500	
UG-593A/U	N	Panel Jack	I	59	—	
UG-594A/U	N	Right Angle Jack	I	8	15425	
UG-602/U	N	Jack	S	59	36500	Rexolite Insul.
UG-602A/U	N	Jack	I	59	36525	Teflon Insul.
UG-603/U	N	Plug	S	59	34500	Rexolite Insul.
UG-603A/U	N	Plug	I	59	34525	Teflon Insul.
UG-604/U	BNC	Receptacle	—	—	—	
UG-606/U	—	Adapter, N (M) to BNC (M)	—	—	—	
UG-624/U	BNC	Bulkhead Jack	S	59	2075	Rexolite Insul.
UG-625/U	BNC	Receptacle	—	—	5575	Rexolite Insul.
UG-625B/U	BNC	Receptacle	—	—	31-236	Teflon Insul.
UG-646/U	UHF	Right Angle Adapter (M-F)	—	—	83-1AP	Polystyrene Insulation
UG-657/U	BNC	Pressurized Receptacle	—	—	31-102	Rexolite Insul.
UG-680/U	N	Receptacle	—	—	82-811	Glass/Teflon Insulation
UG-909/U	BNC	Bulkhead Jack	S	58	31-206	1/2" Thread Mounting
UG-909B/U	BNC	Bulkhead Jack	I	58	—	1/2" Thread Mounting
UG-910/U	BNC	Bulkhead Jack	S	59	31-207	
UG-910B/U	BNC	Bulkhead Jack	I	59	—	
UG-911A/U	BNC	Pressurized Receptacle	—	—	31-237	Glass/Teflon Insulation
UG-912/U	BNC	Pressurized Receptacle	—	—	31-238	
UG-913/U	BNC	Right Angle Plug	S	58	31-204	
UG-913A/U	BNC	Right Angle Plug	I	58	—	
UG-914/U	BNC	Feedthrough Adapter (F-F)	—	—	31-219	
UG-928/U	BNC	Receptacle	—	—	1100	Rexolite Insul.
UG-935A/U	N	Panel Jack	I	10	82-211	
UG-936A/U	N	Bulkhead Jack	I	8	16250	
UG-940A/U	N	Jack	I	8	82-212	Armor Clamping
UG-941A/U	N	Plug	I	8	82-204	Armor Clamping
UG-959/U	BNC	Plug	S	8	6775	
UG-959A/U	BNC	Plug	I	8	—	
UG-978/U	—	Adapter, BNC to Banana Jack	—	—	—	
UG-982/U	N	Plug	I	17	92125	Armor Clamping
UG-987/U	—	Adapter, BNC to two Male Banana Plugs	—	—	8975	
UG-997A/U	N	Right Angle Receptacle	—	—	84975	
UG-1003/U	N	Plug	S	63	12400	Armor Clamping



Military Number	Series	Description	Type*	For RG/U Cables Type	Amphenol Number	Engineering Data	
UG-1006/U UG-1017/U	N	Plug Adapter, UHF to Banana Jack	I	74	—	Rexolite Insul.	
UG-1018/U UG-1033/U UG-1034/U	N BNC	Straight Adapter Plug Adapter, BNC (F) to N (F)	— I —	— 122 —	— 84975 5225		
UG-1052/U UG-1055/U UG-1056/U	N BNC BNC	Panel Jack Panel Jack Jack	I I I	58 122 122	36000 84625 84650		
UG-1082/U UG-1094/U UG-1095A/U UG-1098/U	BNC BNC N BNC	Plug Receptacle Panel Jack Right Angle Receptacle	I — I —	— — 58 —	— 31-221 36250 31222		
UG-1104/U UG-1174/U	BNC BNC	Male Receptacle Right Angle Receptacle	— —	— —	— 38425		
UG-1185/U UG-1185A/U UG-1186/U UG-1187/U UG-1195/U	N N N N N	Plug Plug Jack Panel Jack Plug	CC CC CC CC CC	8 8 8 8 18	82-312 82-3312 82-313 82-314 —		
MX-367 MX-539 MX-543 MX-913 MX-195A	BNC UHF UHF N BNC	Hood Hood Hood Cap and Chain (M) Hood	— — — — —	59 58 8 — 58	10925 5375 5475 82-106 87175		
PL-258	UHF	Straight Adapter (F-F)	—	—	83-1J		
PL-259 PL-259 PL-259A	UHF UHF UHF	Plug Plug Plug (Clamp set screw)	— — —	8 8 8	83-1SP 83-822 83-1SPN		Filled Bakelite Teflon Insul. Mica Filled
PL-259A	UHF	Plug (Clamp set screw)	—	8	83-756		Teflon Insul.
PL-274	UHF	Bulkhead Adapter (F-F)	—	—	83-1F		
SO-239 SO-239 SO-239A	UHF UHF UHF	Receptacle Receptacle Receptacle	— — —	— — —	83-1R 83-1RTY 83-798		Mica Filled Polystyrene Teflon Insul.

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