

## General Description

Delta HN series connectors are medium-size, 50  $\Omega$  impedance connectors with  $\frac{3}{4}$ -20 threaded coupling and good power handling capability. They are best suited for use with cables in the range of .350" to .450" diameter, but are available for other cables from .200" to over 1" diameter. Our extensive line of HN receptacles includes configurations for virtually any packaging requirement, and we can supply any adapter or accessory you need to complete your system design. Adapters between HN and other series are shown starting on page 176.

Our HN series product line is still growing, so please call if you don't see what you need.

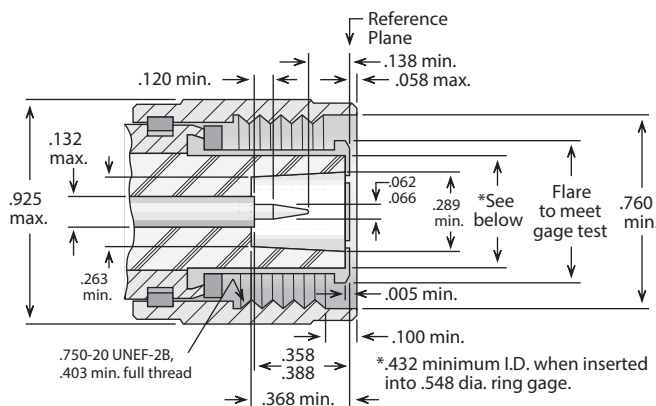
## HN Configurations

Straight Cable Plugs .....	2
Right Angle Cable Plugs .....	2
Straight Cable Jacks .....	3
Panel Cable Jacks .....	3
Panel Jack Receptacles (square flange) .....	4

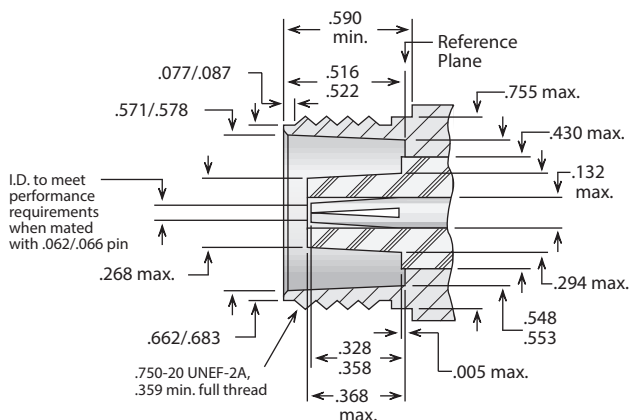
Panel Plug Receptacles.....	4
Bulkhead Jack Receptacles .....	4
Dummy Receptacles .....	4
Dust Caps .....	4
In-Series Adapters .....	5

## HN Specifications\*

### Plug Interface\*\*



### Jack Interface\*\*



\*\*Some proportions altered to illustrate detail.

### Electrical:

Nominal Impedance: 50 ohms.  
 Frequency Range: DC-4 GHz.  
 Voltage Rating: 1,500 volts RMS.  
 Dielectric Withstanding Voltage: 5,000 VRMS.  
 Insulation Resistance: 5,000 megohms.

### Materials/Finishes:

Insulators: Teflon per ASTM D1710, or  
 Rexolite per MIL-P-77.

Male Contacts: Brass per ASTM B16.

Female Contacts: Beryllium Copper per  
 ASTM B196.

Contact Plating: Silver per ASTM B700, or  
 Gold per MIL-DTL-45204.

Gaskets: Silicone rubber per ZZ-R-765,  
 Class II, Grade 50.

Other Metal Parts: Brass per ASTM B16, plated:  
 Silver - ASTM B700, or  
 Nickel - AMS-QQ-N-290.

All other specifications are in accordance with the latest issues of MIL-PRF-39012, or MIL-C-3643, or other applicable MIL specifications, and interfaces are in accordance with MIL-STD-348.

\*These specifications are typical and may not apply to all connectors. Detailed specifications for individual connectors are available on request.

## Straight Plug - Military Clamp For Flexible Cable

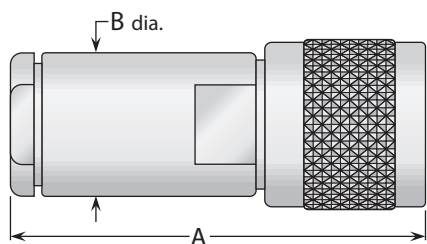


Figure 1

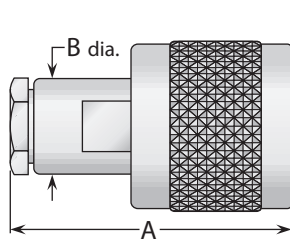


Figure 2

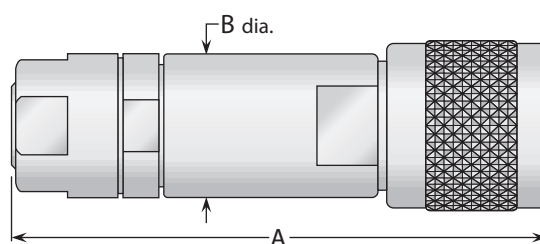


Figure 3 (Includes armor clamp)

Cable Group	Figure	Dimensions		Plating		Delta P/N	Assembly Procedure/Trim Code
		A	B	Body	Contact		
2, 3	1	2.38	.690	Nickel	Silver	UG-59B/U	***
2, 3	1	2.25	.750	Nickel	Silver	UG-59E/U	A/26
2, 3	1	2.81	.690	Nickel	Silver (C)	UG-1213/U	***
4	1	2.23	.750	Nickel	Silver (C)	1601079N001-000	***
5, 6	2	1.50	.500	Nickel	Silver	1601015N000-000	A/17
15	3	2.84	.750	Nickel	Silver	UG-925B/U	D/05
16	1	2.41	.880	Nickel	Silver	UG-494B/U	A/27
17	1	2.59	1.31	Nickel	Silver	UG-495D/U	A/28
17	3	3.53	1.31	Nickel	Silver	UG-1148/U	***
20	3	3.20	1.31	Nickel	Silver	UG-926A/U	D/06

## Right Angle Plug - Military Clamp For Flexible Cable

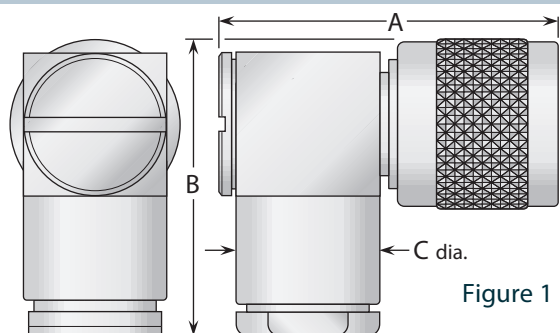


Figure 1

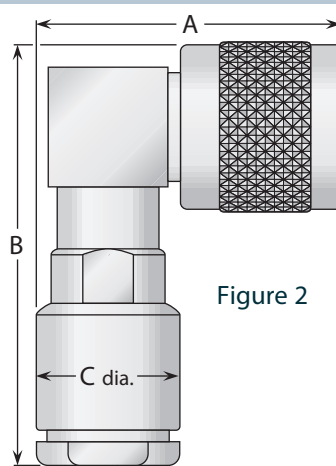


Figure 2

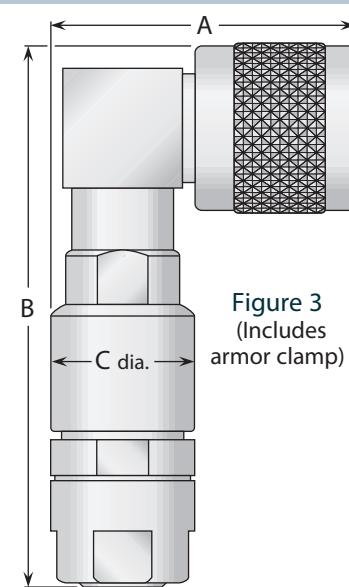
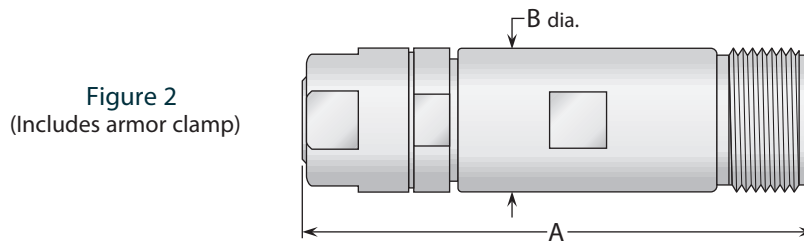
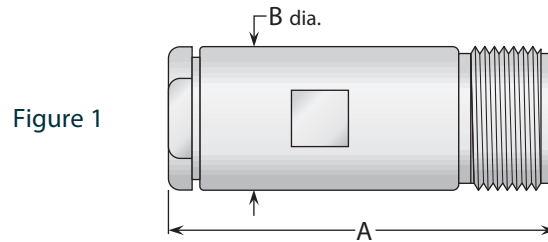


Figure 3 (Includes armor clamp)

Cable Group	Figure	Dimensions			Plating		Delta P/N	Assembly Procedure/Trim Code
		A	B	C	Body	Contact		
2, 3	1	1.73	1.63	.750	Nickel	Silver (C)	1605004N001-002	A/29
2, 3	2	1.53	2.25	.690	Nickel	Silver (C)	1604004N001-000	***
2, 3	2	1.56	2.48	.750	Nickel	Silver	1604005N000-000	A/27
4	2	1.56	2.48	.750	Nickel	Silver (C)	1604079N001-001	***
15	3	1.56	3.05	.750	Nickel	Silver	1604006N000-000	D/05

See page 209 for cable groups. • Assembly procedures start on page 210. • \*\*\*Contact factory for cable assembly instructions.  
 (C) in contact plating column indicates captive contact. • See page 6 for alternate body plating information.

## Straight Jack - Military Clamp For Flexible Cable



Cable Group	Figure	Dimensions		Plating		Delta P/N	Assembly Procedure/ Trim Code
		A	B	Body	Contact		
2, 3	1	2.53	.690	Nickel	Silver	UG-60B/U	***
2, 3	1	2.03	.750	Nickel	Silver	UG-60E/U	A/26
2, 3	1	2.94	.690	Nickel	Silver (C)	UG-1214/U	***
15	2	2.63	.750	Nickel	Silver	UG-927B/U	D/05
17	1	2.53	1.31	Nickel	Silver	UG-333C/U	A/28

## Panel Jack - Military Clamp For Flexible Cable

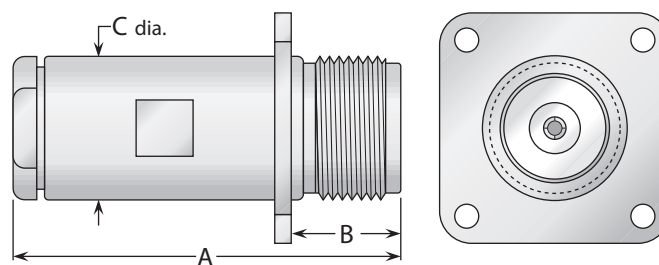


Figure 1

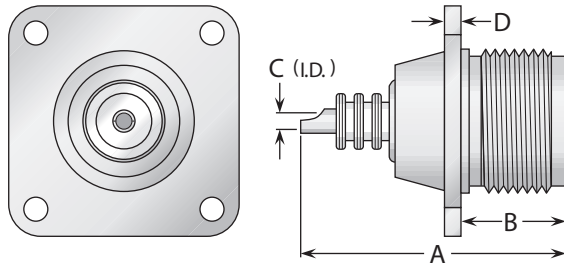
Cable Group	Fig.	Dimensions			Mounting Figure	Plating		Delta P/N	Assembly Procedure/ Trim Code
		A	B	C		Body	Contact		
2, 3	1	2.53	.590	.690	40	Nickel	Silver	UG-61B/U	***
2, 3	1	2.03	.590	.750	40	Nickel	Silver	UG-61E/U	A/26
2, 3	1	2.03	.590	.750	36	Nickel	Silver	UG-427C/U	A/26

See page 209 for cable groups. • Assembly procedures start on page 210.

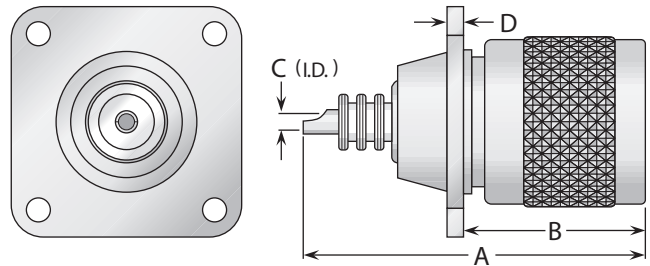
\*\*\*Contact factory for cable assembly instructions. • See page 208 for mounting dimensions.

(C) in contact plating column indicates captive contact. • See page 6 for alternate body plating information.

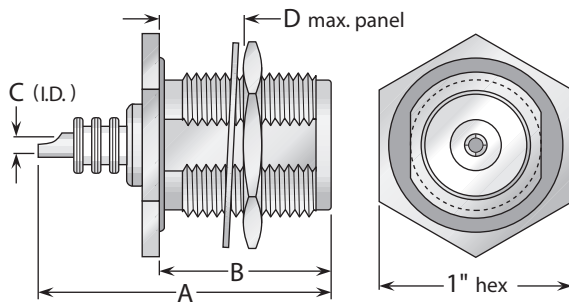
## Panel & Bulkhead Receptacles



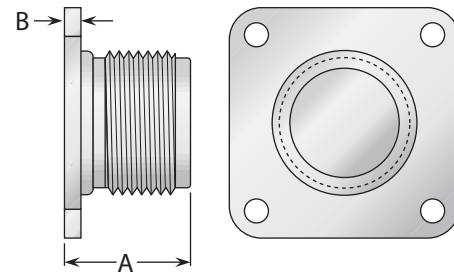
**Figure 1**  
(Panel jack receptacle)



**Figure 2**  
(Panel plug receptacle)



**Figure 3**  
(Bulkhead jack receptacle)

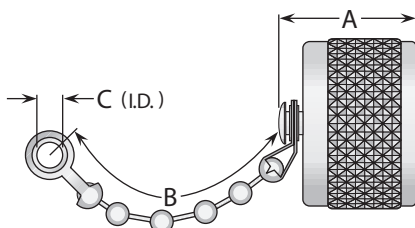


**Figure 4**  
(Dummy receptacle)

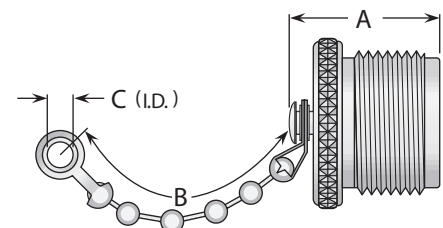
Figure	Dimensions				Mounting Figure	Plating		Delta P/N
	A	B	C	D		Body	Contact	
1	1.50	.590	.106	.080	40	Nickel	Silver (C)	UG-496/U
2	1.88	.940	.106	.080	40	Nickel	Silver (C)	1623000N401-000
3	1.55	.890	.106	.250	69	Nickel	Silver (C)	1621000N691-000
4	.875	.125	—	—	34*	Nickel	—	1663000N340-000

\* Except mounting holes are .120 diameter.

## Dust Caps



**Figure 1**

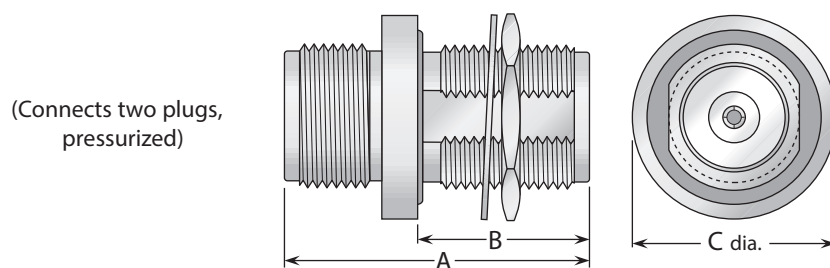


**Figure 2**

Figure	Dimensions			Features	Plating		Delta P/N
	A	B	C		Body	Contact	
1	.700	3.50	.144	Bead chain	Nickel	—	1632000N000-000
2	.700	3.50	.144	Bead chain	Nickel	—	1633000N000-000

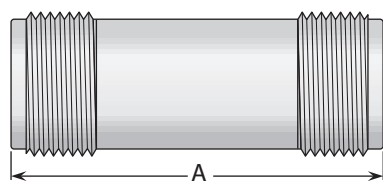
- See page 208 for mounting dimensions.
- (C) in contact plating column indicates captive contact.
- See page 6 for alternate body plating information.
- Dust caps available with other chain styles and lengths.

## Bulkhead Jack - Jack Adapter

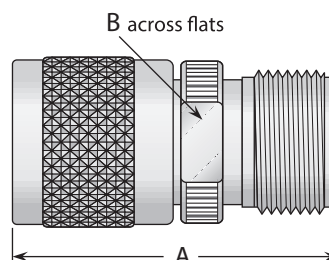


Dimensions			Max. Panel	Mounting Figure	Plating		Delta P/N
A	B	C			Body	Contact	
1.94	1.06	1.06	.250	69	Nickel	Silver (C)	UG-1019A/U

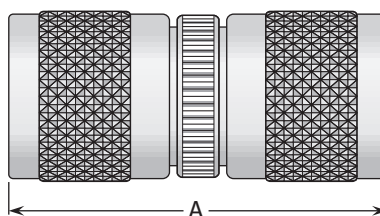
## Straight Adapters



**Figure 1**  
(Straight jack-jack;  
connects two plugs)



**Figure 2**  
(Straight plug-jack; connects one  
plug and one jack)

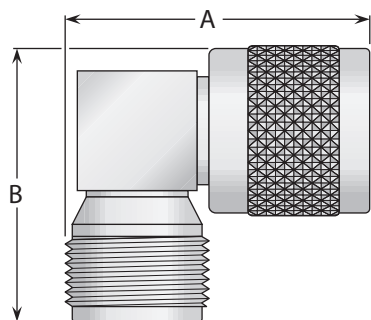


**Figure 3**  
(Straight plug-plug;  
connects two jacks)

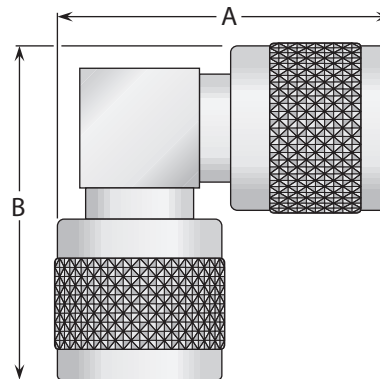
Figure	Dimension		Plating		Delta P/N
	A	B	Body	Contact	
1	2.00	—	Nickel	Silver (C)	1628000N000-000
2	1.63	.750	Nickel	Silver (C)	1634000N001-000
3	1.94	—	Nickel	Silver (C)	1627000N000-000

- See page 208 for mounting dimensions.
- (C) in contact plating column indicates captive contact.
- See page 6 for alternate body plating information.

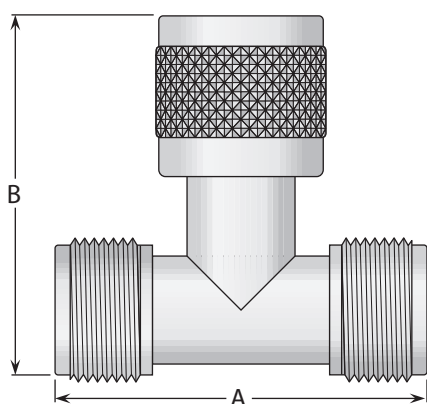
## Right Angle & Tee Adapters



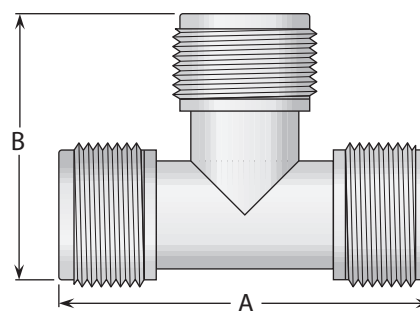
**Figure 1**  
 (Right angle jack-plug; connects  
 one plug and one jack)



**Figure 2**  
 (Right angle plug-plug;  
 connects two jacks)



**Figure 3**  
 (Tee jack-plug-jack; connects  
 two plugs and one jack)



**Figure 4**  
 (Tee jack-jack-jack;  
 connects three jacks)

**Figure 5**  
 (Tee plug-jack-plug; connects  
 two jacks and one plug)

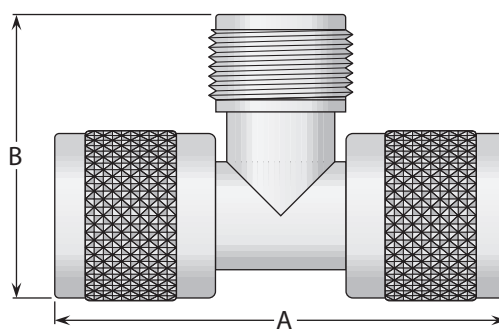


Figure	Dimensions		Plating		Delta P/N
	A	B	Body	Contact	
1	1.50	1.38	Nickel	Silver (C)	UG-212C/U
2	1.63	1.63	Nickel	Silver (C)	1637000N000-000
3	1.94	1.88	Nickel	Silver (C)	1630000N000-000
4	1.94	1.28	Nickel	Silver (C)	1638000N000-000
5	2.33	1.50	Nickel	Silver (C)	UG-1109/U

• (C) in contact plating column indicates captive contact.

• See page 6 for alternate body plating information.

## Panel Receptacles

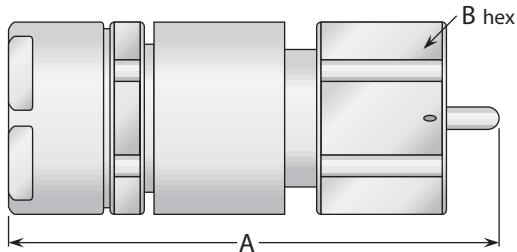


Figure 1  
(LC series)

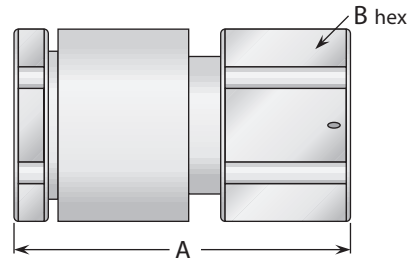


Figure 2  
(LT series; uses cable center conductor as contact)

Cable Group	Figure	Dimensions		Plating		Delta P/N	Assembly Procedure/ Trim Code
		A	B	Body	Contact		
17, 18	1	3.50	1.50	Nickel	Silver	UG-154B/U	***
20	2	3.03	1.50	Nickel	—	UG-532A/U	***

## Straight Plug - For Flexible Cable

Figure 1  
(LC series, Teflon insulator)

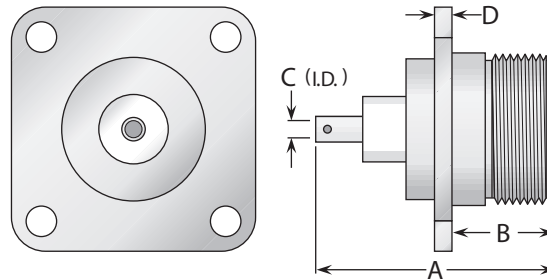


Figure 2  
(LC series, pressurized, Rexolite insulator)

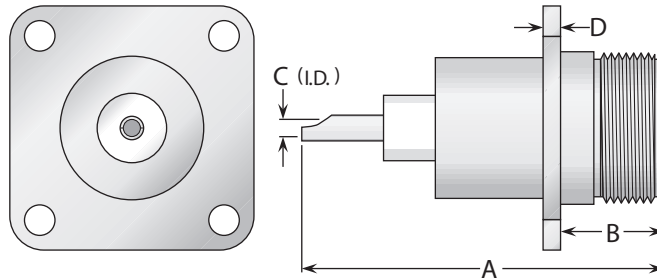
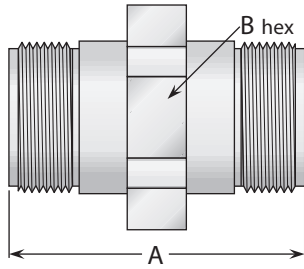


Figure	Dimensions				Mounting Figure	Plating		Delta P/N
	A	B	C	D		Body	Contact	
1	2.25	1.13	.187	.125	45	Nickel	Silver (C)	UG-352/U
2	3.06	.880	.203	.125	45	Nickel	Silver (C)	UG-352B/U

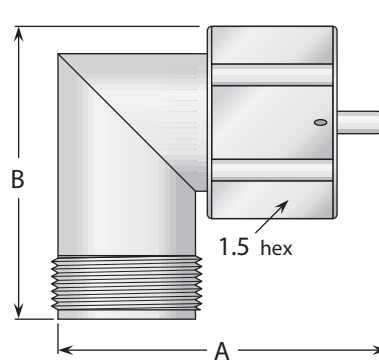
- See page 209 for cable groups.
- \*\*\*Contact factory for cable assembly instructions.
- (C) in contact plating column indicates captive contact.
- See page 208 for mounting dimensions.
- See page 6 for alternate body plating information.

**Note:** Not all LC series plugs and jacks are intermateable.  
 Contact factory for compatibility information on specific plug/jack combinations.

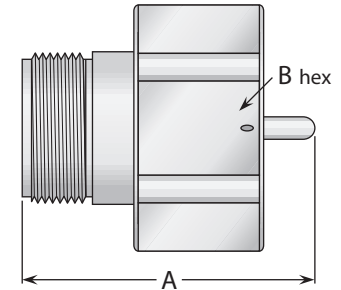
## LC Series Adapters



**Figure 1**  
(Straight jack-jack;  
connects two plugs)



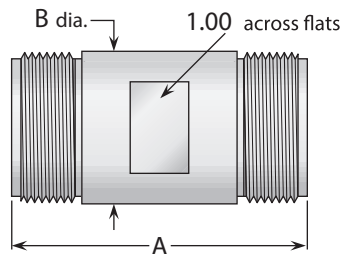
**Figure 2**  
(Right angle plug-jack;  
connects one plug and one jack)



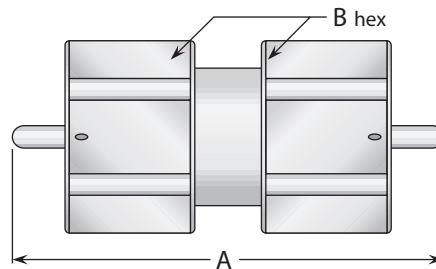
**Figure 3**  
(Straight LC jack-large LC plug;  
connects one LC plug  
and one large LC jack)

Figure	Dimensions		Plating		Delta P/N
	A	B	Body	Contact	
1	2.50	1.875	Nickel	Silver (C)	UG-157B/U
2	2.72	2.60	Nickel	Silver (C)	UG-216B/U
3	2.22	2.09	Nickel	Silver (C)	UG-220B/U

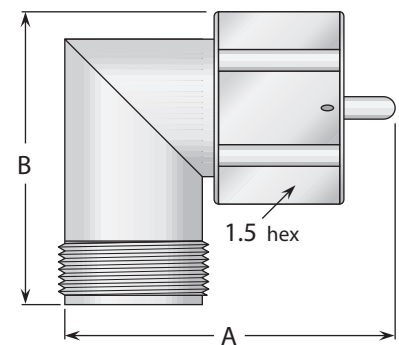
## LT Series Adapters



**Figure 1**  
(Straight jack-jack;  
connects two plugs)



**Figure 2**  
(Straight plug-plug;  
connects two jacks)



**Figure 3**  
(Right angle plug-jack;  
connects one plug and one jack)

Figure	Dimensions		Plating		Delta P/N
	A	B	Body	Contact	
1	2.50	1.25	Nickel	Silver (C)	UG-533B/U
2	3.70	1.50	Nickel	Silver (C)	3527000N001-000
3	2.81	2.56	Nickel	Silver (C)	UG-534B/U

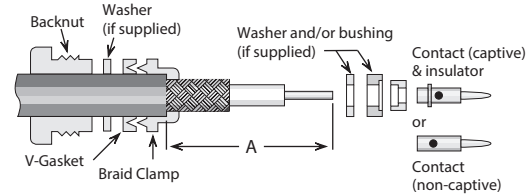
(C) in contact plating column indicates captive contact. • See page 6 for alternate body plating information.

**Note:** Not all LC series plugs and jacks are interchangeable.  
Contact factory for compatibility information on specific plug/jack combinations.

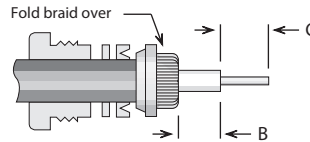


## Assembly Procedure A

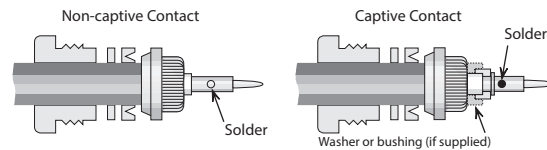
- 1) Trim cable jacket to dimension A.  
Slide backnut, washer, V-gasket, and braid clamp onto cable as shown.  
Cable jacket should bottom on step in braid clamp.



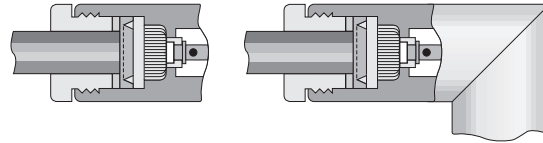
- 2) Comb braid wires out straight and fold back over front shoulder of braid clamp (braid wires should not overlap one another after folding). Trim braid wires flush with step of braid clamp. Trim cable dielectric and center conductor to dimensions B and C.



- 3) If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Assemble rear bushing or washer (if supplied), rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end. For right angle connectors with access cap, omit this step entirely.



- 4) Insert prepared cable and hardware into body and tighten backnut. For right angle connectors with access cap, solder center conductor into slot in contact and tighten access cap.

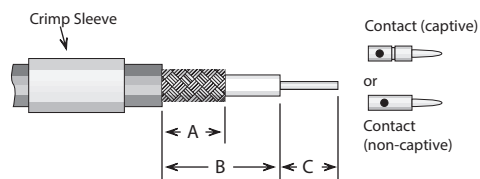


## Trim Codes For Assembly Procedure A

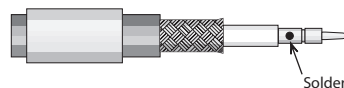
Code	A	B	C	Code	A	B	C
A/01	.375 (3/8)	.047 (3/64)	.203 (13/64)	A/20	.375 (3/8)	.047 (3/64)	.172 (11/64)
A/02	.375 (3/8)	.109 (7/64)	.203 (13/64)	A/21	.500 (1/2)	.313 (5/16)	.172 (11/64)
A/03	.438 (7/16)	.250 (1/4)	.188 (3/16)	A/22	.375 (3/8)	.188 (3/16)	.141 (9/64)
A/04	.281 (9/32)	.047 (3/64)	.125 (1/8)	A/23	.438 (7/16)	.078 (5/64)	.172 (11/64)
A/05	.313 (5/16)	.125 (1/8)	.109 (7/64)	A/24	.500 (1/2)	.094 (3/32)	.141 (9/64)
A/06	.594 (19/32)	.391 (25/64)	.156 (5/32)	A/25	.438 (7/16)	.141 (9/64)	.172 (11/64)
A/07	.375 (3/8)	.047 (3/64)	.125 (1/8)	A/26	.625 (5/8)	.281 (9/32)	.250 (1/4)
A/08	.281 (9/32)	.109 (7/64)	.094 (3/32)	A/27	.688 (11/16)	.281 (9/32)	.125 (1/8)
A/09	.344 (11/32)	.109 (7/64)	.094 (3/32)	A/28	.656 (21/32)	.297 (19/64)	.250 (1/4)
A/10	.406 (13/32)	.109 (7/64)	.203 (13/64)	A/29	.688 (11/16)	.125 (1/8)	.313 (5/16)
A/11	.500 (1/2)	.281 (9/32)	.156 (5/32)	A/30	.688 (11/16)	.469 (15/32)	.156 (5/32)
A/12	.343	.040	.219	A/31	.700 (21/32)	.453 (29/64)	.250 (1/4)
A/13	.375 (3/8)	.125 (1/8)	.156 (5/32)	A/32	.313 (5/16)	.078 (5/64)	.188 (3/16)
A/14	.355	.090	.188 (3/16)	A/33	.250 (1/4)	.078 (5/64)	.094 (3/32)
A/15	.425	.094 (3/32)	.259	A/34	.250 (1/4)	.062 (1/16)	.109 (7/64)
A/16	.328 (21/64)	.094 (3/32)	.188 (3/16)	A/35	.837	.575	.150
A/17	.375 (3/8)	.109 (7/64)	.125 (1/8)	A/36	.450	.250	.150
A/18	.375 (3/8)	.062 (1/16)	.172 (11/64)	A/37	.281	.038	.188
A/19	.375 (3/8)	.188 (3/16)	.094 (3/32)	A/38	.281	.069	.156

## Assembly Procedure B

- 1) Trim cable per chart. Slide crimp sleeve back onto cable.



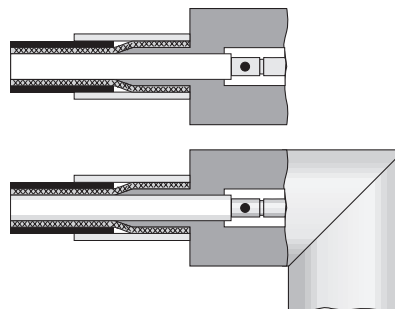
- 2) If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Solder contact onto center conductor; back of contact flush with trimmed end of cable dielectric (omit this step for right angle connectors with access caps). Flare cut end of braid slightly by rotating dielectric.



- 3) Insert cable/contact into rear of body, with all braid wires on outside of crimp tail.
- For captive contact connectors, push cable in until contact snaps into insulator.
  - For noncaptive contact connectors, push cable in until cable dielectric bottoms in connector.
  - For right angle or tee connectors with access caps, push cable in until end of braid touches connector body shoulder, and cable center conductor rests in contact slot.

Trim excess braid wires even with shoulder of body. Slide crimp sleeve forward until flush with body and crimp (see page 211 for hex die sizes).

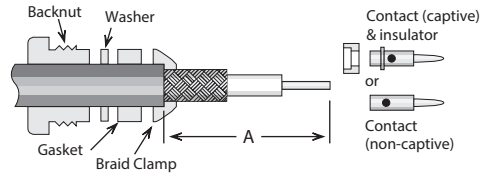
For right angle or tee connectors with access caps: Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.



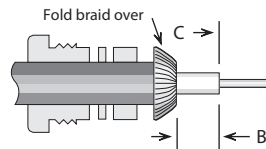
### Trim Codes For Assembly Procedure B

Code	A	B	C	Code	A	B	C
B/01	.320	.470	.140	B/20	.250	.375	.156
B/02	.422	.578	.172	B/21	.425	.550	.156
B/03	.406	.500	.187	B/22	.375	.500	.156
B/04	.285	.505	.140	B/23	.281	.469	.125
B/05	.335	.460	.140	B/24	.250	.700	.109
B/06	.187	.437	.219	B/25	.343	.775	.125
B/07	.422	.610	.156	B/26	.343	.437	.109
B/08	.422	.562	.219	B/27	.313	.437	.187
B/09	.313	.610	.203	B/28	.219	.271	.078
B/10	.280	.436	.187	B/29	.200	.320	.060
B/11	.430	.542	.156	B/30	.500	.650	.219
B/12	.300	.434	.156	B/31	.350	.840	.150
B/13	.300	.447	.156	B/32	.175	.260	.095
B/14	.420	.645	.187	B/33	.195	.270	.045
B/15	.300	.420	.120	B/34	.150	.250	.105
B/16	.312	.609	.125	B/35	.195	.280	.170
B/17	.250	.500	.156	B/36	.150	.325	.090
B/18	.437	.562	.109	B/37	.195	.295	.075
B/19	.343	.437	.156	B/38	.150	.225	.095
				B/39	.250	.300	.135

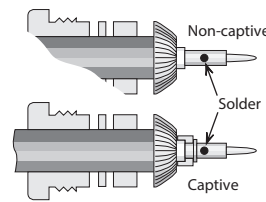
## Assembly Procedure C



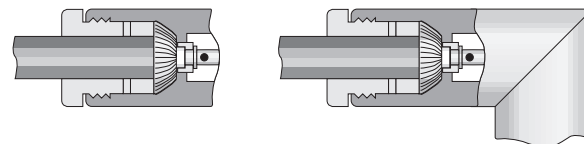
- 1) Trim cable jacket to dimension A. Slide backnut, washer, gasket, and braid clamp onto cable as shown. Cable jacket should bottom on step in braid clamp.



- 2) Comb braid wires out straight and fold back over front shoulder of braid clamp (braid wires should not overlap one another after folding). Trim braid wires flush with edge of braid clamp. Trim cable dielectric and center conductor to dimensions B and C.



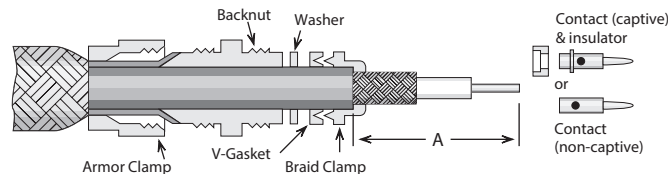
- 3) If support insulator is provided for RG-62 or 71 cable, insert into hollow in dielectric. Assemble rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end.



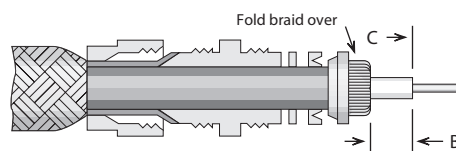
- 4) Insert prepared cable and hardware into body and tighten backnut. For right angle connectors with access cap, solder cable center conductor to slot in contact and tighten access cap.

Trim Codes			
Code	A	B	C
C/01	.656 (21/32)	.141 (9/64)	.250 (1/4)
C/02	.500 (1/2)	.125 (1/8)	.250 (1/4)
C/03	.450	.136	.187
C/04	.375 (3/8)	.109 (7/64)	.125 (1/8)
C/05	.375 (3/8)	.062 (1/16)	.250 (1/4)
C/06	.500 (1/2)	.188 (3/16)	.125 (1/8)
C/07	.575	.438	.094
C/08	.625 (5/8)	.141 (9/64)	.219 (7/32)

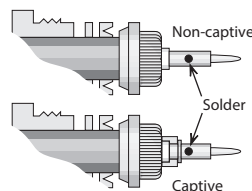
## Assembly Procedure D



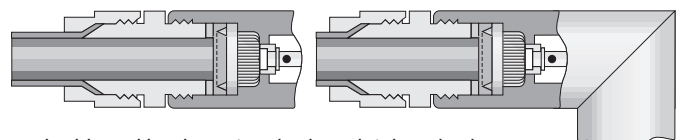
- 1) Slide armor clamp over cable. Push armor back to expose cable end. Slide backnut, washer (if supplied), gasket, and braid clamp onto cable as shown. Cable jacket should bottom on step in braid clamp. Trim cable jacket to dimension A.



- 2) Comb braid wires out straight and fold back over front shoulder of braid clamp (braid wires should not overlap one another after folding). Trim braid wires flush with edge of braid clamp. Trim cable dielectric and center conductor to dimensions B and C.



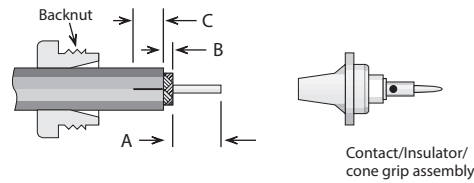
- 3) Assemble rear insulator (if captive contact) and contact, and solder contact to center conductor. Rear of contact should be flush with cable dielectric end.



- 4) Insert prepared cable and hardware into body and tighten backnut. Trim armor to fit between armor clamp and braid clamp. Tighten armor clamp.

Trim Codes			
Code	A	B	C
D/01	.375 (3/8)	.047 (3/64)	.250 (1/4)
D/02	.500 (1/2)	.188 (3/16)	.219 (7/32)
D/03	.344 (11/32)	.047 (3/64)	.219 (7/32)
D/04	.313 (5/16)	.047 (3/64)	.172 (11/64)
D/05	.625 (5/8)	.281 (9/32)	.250 (1/4)
D/06	.313 (5/16)	.062 (1/16)	.109 (7/64)

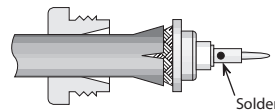
## Assembly Procedure E



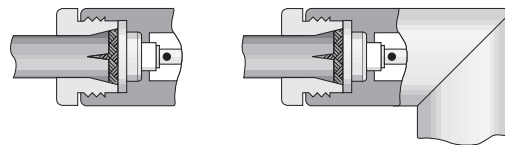
- 1) Slide backnut onto cable as shown. Trim cable to dimensions A and B as shown. Slit jacket to dimension C in two places, 180° apart.

Trim Codes

Code	A	B	C
E/01	.250 (1/4)	.141 (9/64)	.313 (5/16)
E/02	.219 (7/32)	.063 (1/16)	.250 (1/4)
E/03	.250 (1/4)	.031 (1/32)	.250 (1/4)



- 2) Slide cone/insulator/contact assembly under braid until braid is flush with shoulder. Solder contact to center conductor.

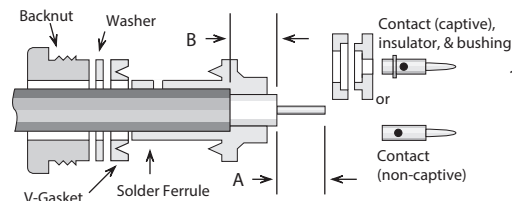


- 3) Insert prepared cable and hardware into body; tighten assembly by holding nut stationary and turning body.

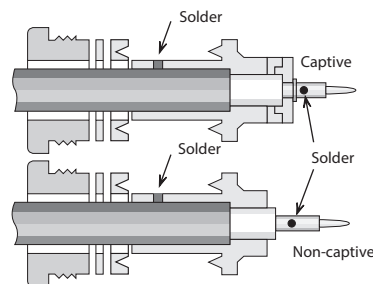
## Assembly Procedure F

Trim Codes

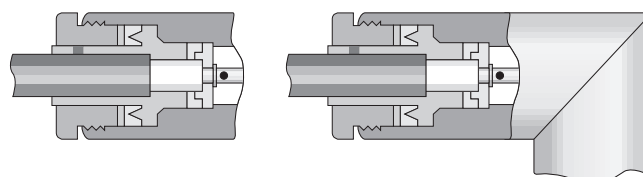
Code	A	B
F/01	.250 (1/4)	.219 (7/32)
F/02	.250 (1/4)	.172 (11/64)
F/03	.188 (3/16)	.188 (3/16)
F/04	.109 (7/64)	.265 (17/64)
F/05	.156 (5/32)	.250 (1/4)
F/06	.219 (7/32)	.250 (1/4)
F/07	.156 (5/32)	.172 (11/64)
F/08	.109 (7/64)	.219 (7/32)



- 1) Trim cable per chart. Slide backnut, washer, v-gasket, and solder ferrule onto cable. Trimmed end of cable jacket should bottom on step in solder ferrule.

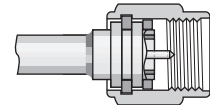
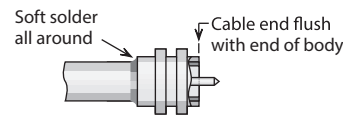
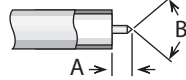
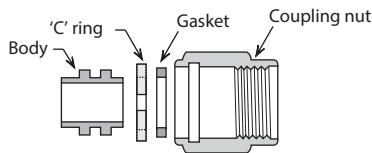


- 2) Solder ferrule to cable jacket as shown. Retrim cable dielectric to proper length if it has extruded from soldering heat. Slide bushing and rear insulator over cable dielectric if captive contact. Solder contact onto center conductor; back of contact flush with trimmed end of cable dielectric.



- 3) Insert prepared cable and hardware into body and tighten backnut.

## Assembly Procedure G



- 1) Trim cable as shown. Remove any burrs from jacket and center conductor.

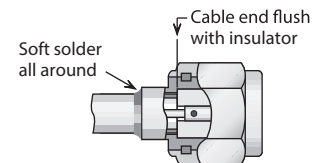
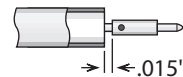
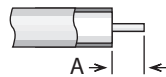
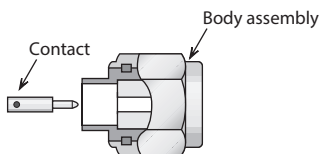
- 2) Soft solder cable jacket to body, making sure that end of cable is flush with end of body. After solder joint has cooled, retrim any protruding dielectric flush with end of body.

- 3) Assemble 'C' ring and gasket to body. Compress 'C' ring and slide body assembly into coupling nut until ring is seated in groove.

### Trim Codes

Code	A	B
G/01	.090	70-90°

## Assembly Procedure H



- 1) Trim cable as shown. Remove any burrs from jacket and center conductor.

- 2) Solder contact to center conductor, fixturing to maintain gap as shown. Remove any excess solder from outside of contact.

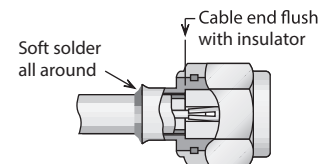
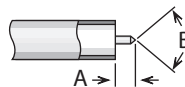
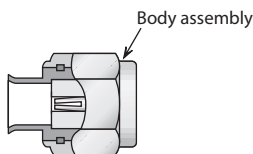
- 3) Insert cable into body and solder cable jacket to body, keeping end of cable flush with insulator as shown.

### Trim Codes

Code	A
H/01	.090
H/02	.060
H/03	.115
H/04	.150

Plug body assembly and contact shown; procedure is identical for jack connectors.

## Assembly Procedure I



- 1) Trim cable as shown. Remove any burrs from jacket and center conductor.

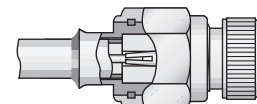
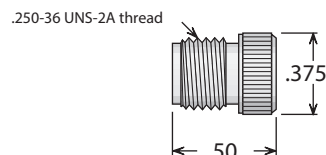
- 2) Insert cable into body and solder cable jacket to body, keeping end of cable flush with insulator as shown.

### Trim Codes

Code	A	B
I/01	.090	70-90°

Plug body assembly and contact shown; procedure is identical for jack connectors.

### Cable Positioner



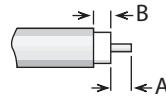
For .085" Cable:  
P/N 63-10072-2

For .141" Cable:  
P/N 63-10072-1

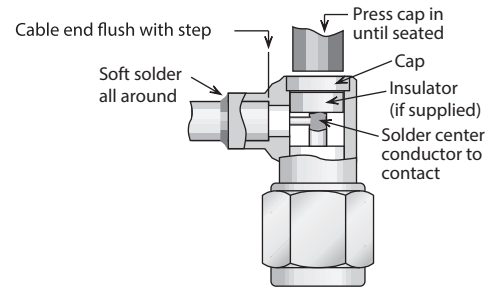
Using this positioner in the final step of assembly procedure H or I (for plugs only) will ensure that the contact and insulator are retained in the proper position to meet MIL-C-39012 requirements. The positioner should be screwed finger-tight into the mating end of the connector (as shown at right) before the cable jacket is soldered to the body assembly.

## Assembly Procedure J

Trim Codes		
Code	A	B
J/01	.109	.047
J/02	.059	.039
J/03	.059	.079
J/04	.050	.059

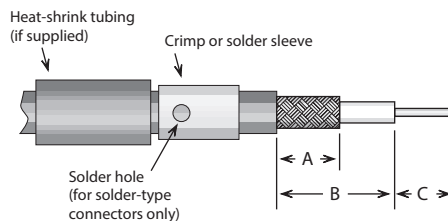


- 1) Trim cable as shown. Remove any burrs from jacket and center conductor.

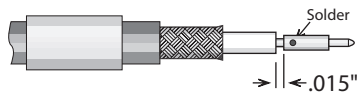


- 2) Soft solder cable jacket to body, making sure that end of cable is flush with step in body. Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.

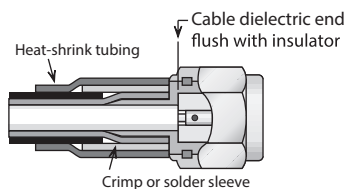
## Assembly Procedure K



- 1) Trim cable per chart. Slide crimp (or solder) sleeve and heat-shrink tubing (if supplied) back onto cable.



- 2) Solder contact onto center conductor, fixturing to maintain gap as shown. Flare cut end of braid slightly by rotating dielectric.



- 3) Insert cable/contact into rear of body, with all braid wires on outside of crimp tail. Push cable in until cable dielectric bottoms in connector. Trim excess braid wires even with shoulder of body. Slide crimp sleeve forward until flush with body and crimp (see page 211 for hex die sizes). (For solder-type connectors, solder braid to body and sleeve through hole in sleeve.) Slide heat-shrink tubing into place and shrink with hot-air gun.

Plug body assembly and contact shown; procedure is identical for jack connectors.

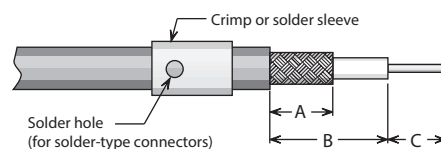
Trim Codes							
Code	A	B	C	Code	A	B	C
K/01	.250	.270	.110	K/07	.220	.290	.135
K/02	.200	.270	.140	K/08	.420	.620	.090
K/03	.225	.290	.110	K/09	.090	.135	.160
K/04	.225	.330	.110	K/10	.250	.415	.115
K/05	.250	.330	.110	K/11	.250	.400	.150
K/06	.250	.315	.095	K/12	.282	.390	.140

## Assembly Procedure L

Trim Codes

Code	A	B	C
L/01	.250	.438	.109
L/02	.125	.219	.109
L/03	.234	.344	.109
L/04	.195	.270	.050
L/05	.095	.155	.050
L/06	.281	.390	.070

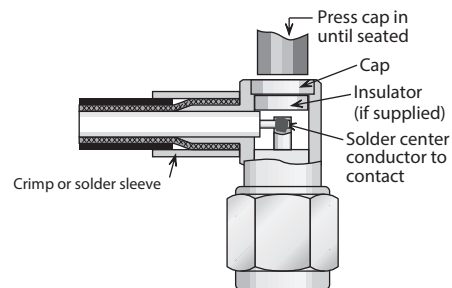
- 1) Trim cable per chart. Slide crimp (or solder) sleeve onto cable.



- 2) Insert cable into rear of body, with all braid wires on outside of crimp tail. Push cable in until end of braid touches connector body shoulder and center conductor rests in contact slot.

Slide crimp sleeve forward until flush with body and crimp (see page 211 for hex die sizes). (For solder-type connectors, solder braid to body and sleeve through hole in sleeve.)

Solder center conductor into contact slot, assemble insulator disc (if supplied), then press cap into body until seated or screw into place.

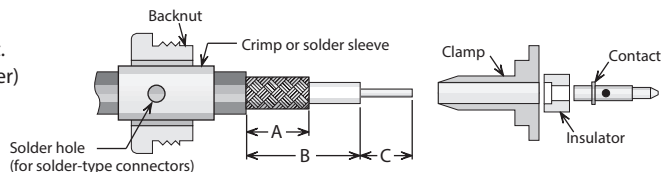


## Assembly Procedure M

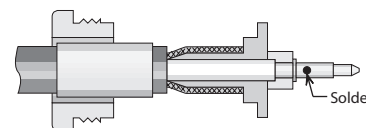
Cable Trim Codes

Code	A	B	C
M/01	.281	.390	.140

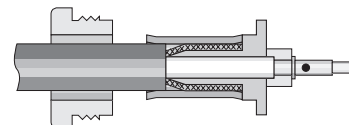
- 1) Trim cable per chart. Slide crimp (or solder) sleeve and backnut onto cable.



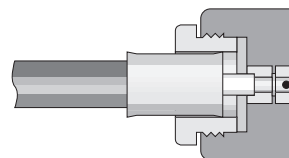
- 2) Flare cut end of braid slightly by rotating dielectric. Insert cable into rear of clamp, with all braid wires on outside of crimp tail. Slide insulator over cable dielectric until it is flush with front of clamp, and cable insulation bottoms inside insulator. Slide contact onto center conductor, with contact shoulder flush with front of insulator. Solder contact to center conductor.



- 3) Slide crimp sleeve forward until flush with clamp shoulder; crimp as close to shoulder as possible. (see page 211 for hex die sizes). (For solder-type connectors, solder braid to body and sleeve through hole in sleeve.)



- 4) Insert prepared cable into back of body. Slide nut forward and tighten to 12–15 inch-pounds.



## Crimp Tools For Flexible Cable

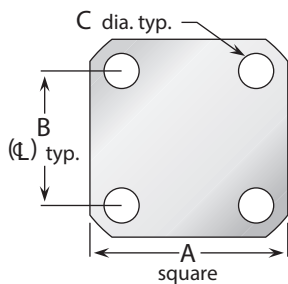


\* For Delta cable groups. See MIL-PRF-39012 specifications for die sizes used with M39012 cable groups.

Frame only—P/N M22520/5-01 —Use with interchangeable dies listed below.

Cable Group*	Hex Die Size	Die Set P/N	Closure
2, 3, 4	.429 hex, .400 wide	M22520/5-61	A
5, 6	.213 hex, .400 wide	M22520/5-19	B
7	.255 hex, .400 wide	M22520/5-19	A
9	.128 hex, .400 wide	M22520/5-35	B
10	.151 hex, .400 wide	M22520/5-37	B
11	.105 hex, .400 wide	M22520/5-33	B

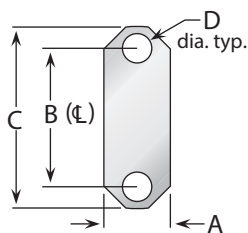
## Connector Flanges (Panel Mounted Connectors)



4-hole flanges

Figure	A	B	C
04	1/2	.360	.089
05	1/2	.340	.102
07	11/16	.500	#3-56 tap
08	11/16	.500	.136
09	11/16	.500	.125
10	11/16	.500	.120
12	11/16	.500	.109
18	3/4	.531	.136
26	1	.718	#6-32 tap
27	1	.718	#4-40 tap
30	1	.718	.166
32	1	.718	.136
32A	1	.718	.136*
33	1	.718	.125
34	1 3/32	.812	.150
36	1 3/16	.906	#6-32 tap
39	1 3/16	.906	.152
40	1 3/16	.906	.125
45	2	1.437	.257
91	.375	.250	.067
91A	.375	.232	.093

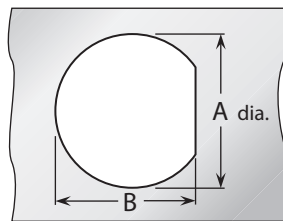
\* Countersunk to .245 dia.



2-hole flanges

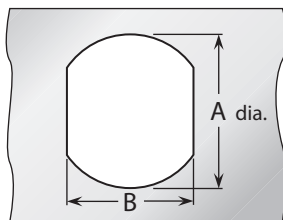
Figure	A	B	C	D
92	.223	.481	.625	.102
92A	.260	.481	.625	.102
95	.640	1.015	1.30	.125

## Panel Cutouts (Bulkhead Mounted Connectors)



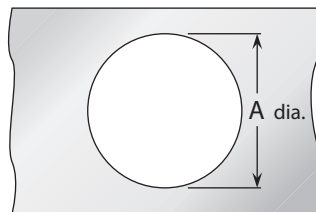
D-Hole

Figure	A	B
51	.755	.723
54	.630	.598
55	.630	.583
57	.557	.531
59	.505	.473
62	.442	.410
63	.407	.362
65	.380	.348
66	.319	.292
67	.255	.236
68	.195	.176



Double D-Hole

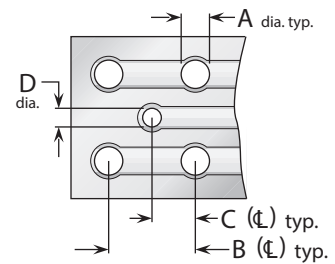
Figure	A	B
69	.755	.692
72	.630	.536
75	.380	.341
84	.319	.278



Round Hole

Figure	A
82	.255
89	.380

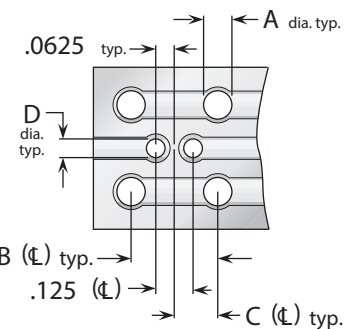
## P.C. Board Drilling



(PCB traces are shown for illustrative purpose only, and are not representative of actual circuitry.)

Coaxial connectors

Figure	A	B	C	D
PCB01	.067	.400	.200	.045
PCB02	.045	.500	.250	.045
PCB03	.067	.300	.150	.035
PCB05	.067	.200	.100	.055
PCB06	.067	.200	.100	.045
PCB07	.045	.177	.088	.045
PCB08	.032	.100	.050	.032



(PCB traces are shown for illustrative purpose only, and are not representative of actual circuitry.)

Twinax Connectors

Figure	A	B	C	D
PCB04	.045	.500	.250	.045



## Delta Cable Groups

Group	Cables
1	1A RG-5, 5A, 5B, 21, 21A; M17/73, /162
	1B RG-6, 6A; M17/2
	1C RG-143, 143A, 212, 222; M17/73, /112, /162
2	2A RG-8, 8A, 213; M17/74
	2B RG-11, 11A; M17/6
3	3A RG-9, 9A, 9B, 214; M17/75
	3B RG-13A, 216; M17/77
	3C RG-225; M17/127
4	RG-393; M17/127
5	RG-58, 58A, 58C, 141, 141A; M17/28, /111
6	6A RG-55A, 142, 142A, 223, 400; M17/60, /84, /128
	6B RG-55, 55B, 142B; M17/60, /84
7	7A RG-59, 59A, 59B, 62, 62A, 62B, 62C, 210; M17/29, /30, /97
	7B RG-71, 71A, 71B; M17/90
8	8A RG-122; M17/54
	8B RG-180, 180A, 180B, 195; M17/95, /137
9	9A RG-174, 188, 188A, 316; M17/152
	9B RG-179A, 179B, 187, 187A; M17/94, /136
10	Double-Shielded RG-174, 316; M17/152
11	RG-178, 178A, 178B, 196, 196A; M17/93
12	.250" semi-rigid; RG-401; M17/129
13	.141" semi-rigid; RG-402; M17/130
14	.085" semi-rigid; RG-405; M17/133
15	RG-10, 12, 215; M17/6, /74
16	RG-14A, 217; M17/78, /165
17	RG-17A, 218
18	RG-18A, 219
19	RG-115A
20	RG-118A, 228A
21	RG-126
22	RG-302
23	RG-303
24	RG-304
25	Special 8X cable; contact factory for details.
26	Belden 8281
27	RG-108, 108A; M17/45
28	RG-22, 22A, 22B; M17/15
29	Belden 9207; Dearborn 6207; IBM 7362211
30	M17/176
31	AT&T 735A

## Cable Group Finder

Cable	Group	Cable	Group
RG-5, 5A, B	1A	RG-225	3C
RG-6, 6A	1B	RG-228A	20
RG-8, 8A	2A	RG-302	22
RG-9, 9A, B	3A	RG-303	23
RG-10	15	RG-304	24
RG-11, 11A	2B	RG-316	9A
RG-12	15	RG-316DS	10
RG-13A	3B	RG-393	4
RG-14A	16	RG-400	6A
RG-17A	17	RG-401	12
RG-18A	18	RG-402	13
RG-21, 21A	1A	RG-405	14
RG-22, 22A, B	28	M17/2	1B
RG-55, 55B	6B	M17/6	2B
RG-55A	6A	M17/15	28
RG-58, 58A, C	5	M17/28	5
RG-59, 59A, B	7A	M17/29	7A
RG-62, 62A, B, C	7A	M17/30	7A
RG-71, 71A, B	7B	M17/45	27
RG-108, 108A	27	M17/73	1A
RG-115A	19	M17/162	1A
RG-118A	20	M17/112	1C
RG-122	8A	M17/74	2A
RG-126	21	M17/75	3A
RG-141, 141A	5	M17/127	3C
RG-142, 142A	6A	M17/77	3B
RG-142B	6B	M17/60	6A
RG-143, 143A	1C	M18/84	6A
RG-174	9A	M17/128	6A
RG-174DS	10	M17/97	7A
RG-178, 178A, B	11	M17/54	8A
RG-179A, 179B	9B	M17/95	8B
RG-180, 180A, B	8B	M17/137	8B
RG-187, 187A	9B	M17/152	9A
RG-188, 188A	9A	M17/93	11
RG-195	8B	M17/129	12
RG-196, 196A	11	M17/130	13
RG-210	7A	M17/133	14
RG-212	1C	M17/78	16
RG-213	2A	M17/165	16
RG-214	3A	M17/176	30
RG-215	15	AT&T 735A	31
RG-217	16	Belden 8281	26
RG-218	17	Belden 9207	29
RG-219	18	Dearborn 6207	29
RG-222	1C	IBM 7362211	29
RG-223	6A		

Note: MIL-PRF-39012 QPL connectors have cable groups defined by the MIL specification, not the Delta cable groups shown here. See page 185 for M39012 cable groups.

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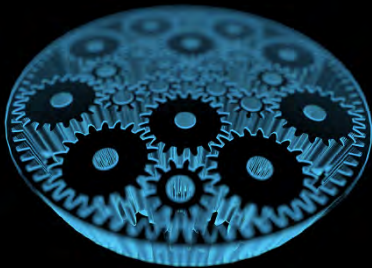
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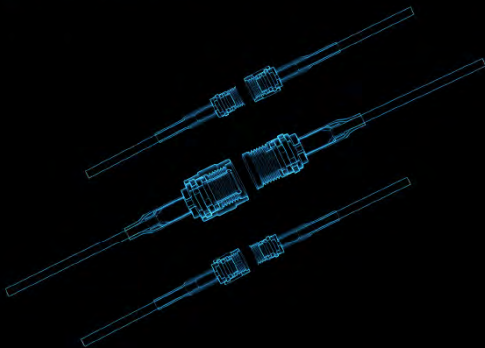
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