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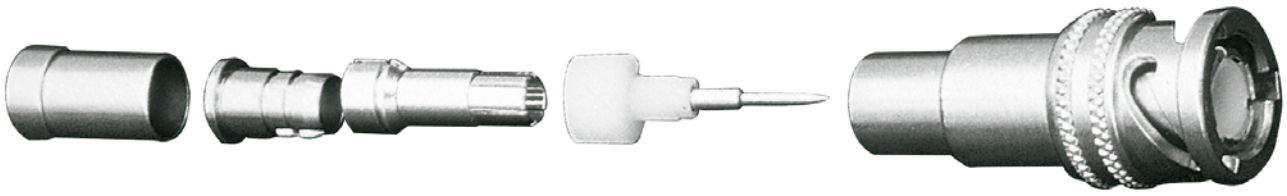
Teflon is a registered trademark of the Dupont Company.

Introduction

Established in 1960, Trompeter is a manufacturer of high value wireline coax, triax, and twinax transmission line connectors, cable, and the tools required for assembly. In addition, the company has a broad line of patch panel insertion-controlled interconnect modules and a rapid response cable assembly business. The firm is ISO-9001 registered and enjoys an international presence in the Telecommunications, Broadcast, and Military/Aerospace markets.



MIL-STD-1553B Digital Data Bus Applications

Twinax /Triax connectors are used in military applications to protect data signals from extraneous noise through non-signal-carrying shielding. Interfacing connectors must provide contact surfaces isolated from each other and from their outer shields. MIL-STD-1553B addresses twinax applications for computerized/multiplexed digital data distribution systems servicing the many functions of **C**ommand, **C**ontrol, **C**ommunications, **C**omputers and **I**ntelligence (**C^{4}I**) which was originally designed for military aircraft. MIL-STD-1553B applications are found in military surface ships, battle tanks, helicopters, missiles, space vehicles, combat aircraft and in many ground applications such as data networks and perimeter security for airports, armories, and other government installations.

The great advantages of additional information, automation and weight savings, which are necessary for the complex demands of aircraft operations are realized by using a single transmission cable instead of the complicated, heavy, dedicated multiple cable used in the past. A 78Ω twinax cable was selected to provide the transmitted digital information with the needed protection from magnetic, electrostatic and electromagnetic pulse (EMP) interference. Complete shielding of the twisted pair along the transmission path and all electrical contacts within multi-pin connectors must be maintained.

Trompeter provides matching components of Twinax/Triax connectors and cable for improving the transmission capabilities and interference rejection of data transmission systems. Trompeter components will meet or exceed MIL-STD-1553B requirements (for airborne and ground checkout) and MIL-STD-1760 "External Stores".

Quality Standard and Custom Components

For over thirty years, Trompeter's product offering have grown as a result of new and modified designs for unusual applications. With Trompeter's tradition of custom components comes our reputation for providing rugged products that have been designed to perform to your expectations and to meet your specific mechanical requirements. The growth of our product line, from 78 components in 1964 to more than 7,000 end items (over 20,000 configurations), is proof of our engineering and manufacturing capabilities.

Why compromise your design?

A minor modification might be an affordable solution to your design needs.

Why settle for less than Trompeter?

Superior quality is paramount.

Trompeter components meet your most demanding requirements...

When performance is critical.
When compromise is not an acceptable solution.
When cost savings detract from the integrity of your design.

ISO 9001 Registration

The main value of being an ISO 9001 Registered company is in the assurance to our customers that we have a solid quality system in place, and that it is well documented. DET Norske Veritas (DNV) has certified that Trompeter is in compliance with established systems and policies. ISO 9001 Quality System Standard is a document outlining twenty elements of quality that Trompeter has addressed in order to meet registration requirements. An accredited ISO 9001 auditor must verify, through on-site audits, that a company has a well documented quality system in place that meets the requirements of ISO 9001, and that the company is working in accordance with the documented system. Trompeter's quality system is also certified by numerous other accredited agencies. ISO 9001 registration makes Trompeter an edge in the global market by giving customers the assurance that they are dealing with a company dedicated to meeting their quality expectations.

3-Year Warranty

All Trompeter products carry a **"Three Year Warranty"** (*except the battery powered cable stripper*) and meet or exceed the highest industrial and government standards, such as MIL-C-39012 and MIL-C-49142. More importantly, Trompeter connectors are designed to meet your design specifications which are often more demanding and less forgiving. We have built our business on responding to your special needs for uncompromising performance in a world of increasing pressure from global competition. If, within three (3) years of shipment, any of our products fail to meet your expectations due to defects in material or workmanship, we will gladly repair or replace it free of charge.

Custom Product Requests

The products in this catalog are your first resource for solving your special interconnect problems. If you cannot find an adequate solution, then we invite you to consult with us for your special requirements. If you have an application which requires a new product, or a modification to one of our existing products, please fill out a copy of the Custom Products Request Form on page 137 and fax it to us. Please submit one complete form for each product requested. Requests for new/modified products are evaluated weekly, and you will receive a response within 3-5 working days.

Outgassing Requirements for Space Rated Connectors

Trompeter has a long and proud history of servicing space applications. **NASA** uses the specification **(SP-R-0022)**, Vacuum Stability Requirements of Polymeric Material for Space Application, to qualify materials for use in spacecraft. This has also become the standard in the commercial space industry. This specification governs the "outgassing" of non-metallic materials. Outgassing occurs when a non-metallic material is placed into a vacuum, subjected to heat, and some of its constituents are volatilized.

One of the bi-products of outgassing is that the material loses a portion of its mass. This is referred to as Total Mass Loss, or TML. Under the NASA specification, the material's TML should not exceed 1.0% of the total specimen mass. This issue is very important because shrinkage may contribute to the failure of a connector as the connector components will no longer fit properly.

Another bi-product of outgassing is Collectable Volatile Condensable Material (CVCM). This represents the quantity of outgassed matter that condenses and collects on a surface. Under the NASA specification, the maximum condensable material allowed is 0.1% of the total specimen mass. This is very critical in a thermal/vacuum environment because it is the condensed material that will contaminate optical and sensory surfaces causing them to possibly fail.

Some polymeric materials meet the requirements of a TML less than 1.0% and CVCM of less than 0.1% through the normal manufacturing process. Other polymeric materials, while not within limits after their manufacture, can be brought within vacuum stability limits by vacuum baking for a specific period of time (usually 48 hours at maximum use temperature at a pressure less than 10^{-5} torr). If a material cannot be vacuum baked, its exposure area is 13cm^2 or less, and is out of sight of a payload or other critical surfaces, then a TML not greater than 3.0% and a CVCM not greater than 1.0% is acceptable.

Test conditions are ASTM E-595 or ASTM F-1227. The test consists of heating a sample to 125°C for 24 hours under a 10^{-5} torr vacuum and measuring the weight loss and any material that condenses on an adjacent cold surface area (25°C). The most common candidates for outgassing in Trompeter product lines include:

1. Silicon rubber per ZZ-R-765E/GEN (Federal Spec), Class 2B, Grade 40, 50, 60, and 70. Almost all of Trompeter's gaskets are manufactured from this material. These materials require a post process (by Trompeter) at 200°centigrade for 6 hours minimum.

2. Ink. Trompeter uses Markem™ series 7224 inks (in a variety of colors) for part marking. Only blue 7224 Markem ink has acceptable TML (0.43%) and CVCM (0.07%) readings after a post cure process. While this is acceptable, Trompeter recommends impression stamping the connector rather than ink marking.

3. Shrinkable strain relief/sealing sleeve. Sleeves made from Kynar™ material meets the requirement for outgassing at 0.14% TML and 0.02% CVCM.

4. Insulators. At Trompeter, the majority of dielectric insulators are made from PTFE. (Teflon™ is Dupont's trademark for PTFE, FEP, and PFA fluoropolymer resins). PTFE has excellent TML (0.07%) and CVCM (0.01%) readings. The loss rate is about one-tenth of the acceptable maximum rates for spacecraft uses.

For a list of connectors which meet outgassing requirements, contact our technical support staff.

Trompeter offers a broad line of connectors manufactured to meet or exceed the Mil-Specs governing twinax connectors. In fact, Mil-C-49142 was created from the Trompeter concentric twinax/triax connector design.

The following information reflects the specification requirements for each family of connectors in both twinax and triax applications. Use this chart to determine the proper connector type to be used in your application, based on the environment and electrical requirements of your design. Trompeter's technical support staff is available to answer any specification questions you may have.

MIL-STD-1553B Data Bus General Specifications Guide

Characteristic Requirements	70 Series TRB/TRT	80 Series TRC/TRN	150 Series TRS/TTM	450 Series TCS
Nominal Impedance	Non-constant	Non-constant	Non-constant	Non-constant
Frequency Range	0-500 MHz	0-500 MHz	0-500 MHz	0-2 MHz
Voltage Rating (max.) @ **sea level**	400 VRMS	500 VRMS	400 VRMS	900 VRMS
Voltage Rating (max.) @ **70,000 ft.**	100 VRMS	125 VRMS	100 VRMS	N/A
Insulation Resistance	5000 MΩ	5000 MΩ	5000 MΩ	5000 MΩ
Dielectric Withstanding Voltage (between center cond. & inter. cond.)	1200 VRMS	1500 VRMS	1200 VRMS	900 VAC
Dielectric Withstanding Voltage (between inter. cond. & outer cond.)	500 VRMS	500 VRMS	500 VRMS	N/A
RF High Potential Withstanding Voltage (between center cond. & inter. cond.)	800 VRMS	1000 VRMS	500 VRMS	900 VAC @ 60 Hz
RF High Potential Withstanding Voltage (between inter. & outer cond.)	200 VRMS @ 5-7.5 MHz	350 VRMS @ 5-7.5 MHz	125 VRMS	N/A

Specifications continued on page 6...

** Specifications are minimum unless otherwise stated. Trompeter connectors are designed to exceed all minimum specifications.*

MIL-STD-1553B Data Bus General Specifications Guide (cont.)

Characteristic Requirements	70 Series TRB/TRT	80 Series TRC/TRN	150 Series TRS/TTM	450 Series TCS
Corona Level (min.)	200 VRMS @ 70,000 ft.	375 VRMS @ 70,000 ft.	125 VRMS @ 70,000 ft.	250 VAC @ 50,000 ft.
Rise Time Degradation (max.)	400 rs	N/A	800 rs	800 rs
Permeability of Nonmagnetic Material	<2.0 mu except hermetic versions			
Hermetic Seal (Where Applicable)	<1 x 10^{-8} cc/sec	N/A	<1 x 10^{-6} cc/sec	N/A
Connector Durability	500 cycles minimum @ 12 cycles per minute max.			
Temperature Range	-65° to +165°C	-65° to +165°C	-65° to +200°C	-65° to 125°C
Force to Engage and Disengage				
Longitudinal (max.)	4 pounds	5 pounds	4 pounds	3 pounds
Torque (max.)	2.5 inch-pounds	4 inch-pounds	2.5 inch-pounds	2.5 inch-pounds
Center Contact Retention				
Axial Force (min.)				
Plug	6 pounds	6 pounds	4 pounds	6 pounds
Jack	6 pounds	6 pounds	2 pounds	6 pounds
Coupling Proof Torque (Threaded types only)	15 inch-pounds	15 inch-pounds	10 inch-pounds	N/A
Coupling Mechanism Retention Force (min.)	100 pounds	100 pounds	70 pounds	100 pounds
Cable Retention Force (min.)	40 pounds .200-.325 inch cable OD	65 pounds .242-.419 inch cable OD	40 pounds .120-.215 inch cable OD	40 pounds .120-.180 inch cable OD
Salt Spray (corrosion)	48 hrs minimum exposure (Standard nickel plating) 500 hrs minimum available (Call factory for plating types). Standard for 450 Series.			
Moisture Resistance (10 cycles)	Total 240 hour minimum exposure			
Thermal Shock (5 cycles) (No physical damage/Pass DWV)	Total 5 hours 50 minutes min -65°C to +85°C			-65°C to +125°C
Specified Shock (sawtooth waveform, within peak - 50g's, duration -11ms)	No discontinuity allowed. Velocity-change of shock pulse 10% of ideal value			
Vibration, High-frequency (36 cycles) (15g peak, 10-2000 Hz-10Hz in 20 Minutes)	Total 12 hour minimum. No physical damage or loosening of parts. No discontinuity allowed.			

** Specifications are minimum unless otherwise stated. Trompeter connectors are designed to exceed all minimum specifications.*

Twinax/Triax Connectors

Built to Last Premium Quality
Superior Mechanical Performance
Rugged Physical Properties
Extreme Reliability

Signals require protection from extraneous noise through non-signal carrying shielding. These interfacing connectors must provide contact surfaces isolated from each other, as well as from the outer shield. Trompeter twinaxial/triaxial connectors are designed with two (2) concentric contacts that are isolated from each other and the shielding connection.

FEATURES

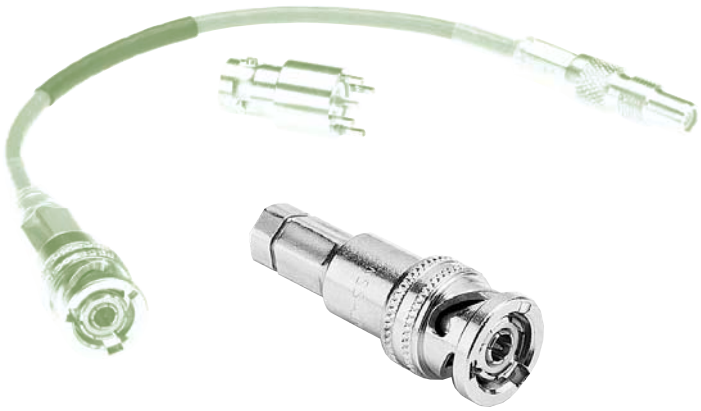
- All metallic parts are machined/formed to extremely close tolerances.
- All bodies are made of top quality brass with bright nickel-plated, non-tarnish finish.
- Fully enclosed, heat-treated, beryllium-copper outer conductor spring (not half hard slotted brass) a patented feature!
- Heat-treated, beryllium-copper center socket contact with 50 millionths inch gold plating.

70 Series

Miniature 2, 3, 4 lug, and Push-on (TRB)

370 Series

Miniature Threaded (TRT)



These concentric twinax/triax connectors are ideal for applications where weight is not a primary concern. They are commonly used in digital data bus, video pair, MIL-STD-1553B (airborne/ground, primary/redundant), base-band circuit and any application for "noise-free guarded" circuits.

FEATURES

- Same size as BNC/TNC connectors. Large body versions are available to accommodate larger cables.
- Field serviceable, wrench crimp versions for cables with up to .475" outer diameters.
- Tool crimp versions for quick termination of cables with up to .250" outer diameters.
- 3-lug, 4-lug, and threaded versions provide different levels of mechanical stability and keying.
- Does not require mechanical alignment for mating.
- QPL'd to MIL-C-49142 (see list on page 8).
- Meets MIL-C-49142, 48-hour salt spray requirement.
- Special plating available to satisfy MIL-STD-1344, 500-hour salt spray requirement.
- Push-on versions for test cable applications.
- Fewer pieces to assemble.
- Hermetically sealed versions are available (page 13).

MIL-C-49142 Qualified Products List

Trompeter has always been a leader in twinax connector design and development. This time we've designed a new connector style to meet the requirements of MIL-C-49142, Category G. Trompeter is the only manufacturer to be qualified to category G.

What is category G? It is the section of the Mil-Spec that requires tool crimping of the TRB (70) series connectors. We are also qualified to category A which is for wrench crimp TRB connectors.

The following is the latest list from Defense Electronic Supply Center (DESC) of qualified Trompeter Electronics' parts. Keep this list handy and make as many copies as needed. QPL'd parts must be ordered by the *MIL-Number*. Many of Trompeter's 70 Series concentric twinax connectors are QPL'd to MIL-C-49142. QPL'd versions are silver plated and can be ordered using the ***Government Designation part numbers listed***. Corresponding standard nickel plated connectors can be ordered using the standard part numbers.

MIL-NUMBER	TROMPETER NUMBER
M49142/03-0001	PL75-7
M49142/03-0002	PL75-7
M49142/03-0005	305-0042-1
M49142/03-0007	PL75-9
M49142/03-0008	PL75-47
M49142/03-0009	PL75-60
M49142/03-0011	305-0811-1
M49142/03-0016	PL75MC213
M49142/03-0017	PL75MC-201
M49142/03-0101	PL75Y-7
M49142/03-0102	PL75Y-7
M49142/03-0105	305-0042Y-1
M49142/03-0107	PL75Y-9
M49142/03-0108	PL75Y-47
M49142/03-0109	PL75Y-60
M49142/03-0111	305-0811Y-1
M49142/03-0116	PL75MCY-213
M49142/03-0117	PL75MCY-201
M49142/03-0201	PL75S-7
M49142/03-0202	PL75S-7
M49142/03-0205	305-0042S-1
M49142/03-0207	PL75S-9
M49142/03-0208	PL75S-47
M49142/03-0209	PL75S-60
M49142/03-0211	305-0811S-1
M49142/03-0216	PL75MCS-213
M49142/03-0217	PL75MCS-201
M49142/04-0004	BJ76
M49142/04-0104	BJ76Y
M49142/04-0204	BJ76S
M49142/05-0001	BJ79-7
M49142/05-0002	BJ79-7
M49142/05-0006	305-0042-7
M49142/05-0007	BJ79-9
M49142/05-0008	BJ79-47
M49142/05-0009	BJ79-60
M49142/05-0011	305-0811-3
M49142/05-0016	BJ79MC-213
M49142/05-0017	BJ79MC-201
M49142/05-0101	BJ79Y-7
M49142/05-0102	BJ79Y-7
M49142/05-0106	305-0042Y-7
M49142/05-0107	BJ79Y-9
M49142/05-0108	BJ79Y-47
M49142/05-0109	BJ79Y-60
M49142/05-0111	305-0811Y-3
M49142/05-0116	BJ79MCY-213
M49142/05-0117	BJ79MCY-201
M49142/05-0201	BJ79S-7
M49142/05-0202	BJ79S-7
M49142/05-0206	305-0042S-7
M49142/05-0207	BJ79S-9
M49142/05-0208	BJ79S-47
M49142/05-0209	BJ79S-60
M49142/05-0211	305-0811S-3
M49142/05-0216	BJ79MCS-213
M49142/05-0217	BJ79MCS-201

MIL-NUMBER	TROMPETER NUMBER
M49142/06-0001	CJ70-7
M49142/06-0002	CJ70-7
M49142/06-0006	305-0042-4
M49142/06-0007	CJ70-47
M49142/06-0008	CJ70-9
M49142/06-0009	CJ70-60
M49142/06-0011	305-0811-2
M49142/06-0016	CJ70MC-213
M49142/06-0017	CJ70MC-201
M49142/06-0101	CJ70Y-7
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M49142/06-0107	CJ70Y-47
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M49142/06-0117	CJ70MCY-201
M49142/06-0201	CJ70S-7
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M49142/06-0216	CJ70MCS-213
M49142/06-0217	CJ70MCS-201
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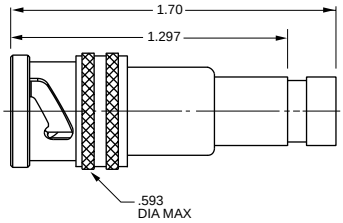
M49142/08-0006	PL375-47
M49142/08-0008	PL375-60
M49142/08-0010	305-0811-5
M49142/08-0011	305-0486-1
M49142/08-0016	PL375MC-213
M49142/08-0017	PL375MC-201
M49142/09-0001	BJ379-7
M49142/09-0002	BJ379-7
M49142/09-0006	BJ379-47
M49142/09-0007	305-0042-11
M49142/09-0009	BJ379-60
M49142/09-0011	305-0811-7
M49142/09-0012	305-0486-3
M49142/09-0016	BJ379MC-213
M49142/09-0017	BJ379MC-201
M49142/10-0001	BJ376
M49142/11-0001	CJ370-7
M49142/11-0002	CJ370-7
M49142/11-0006	CJ370-47
M49142/11-0007	305-0042-12
M49142/11-0009	CJ370-60
M49142/11-0011	305-0811-6
M49142/11-0012	305-0486-2
M49142/11-0016	CJ370MC-213
M49142/11-0017	CJ370MC-201

Miniature plugs & jacks 70/370 series, TRB/TRT

PL75MC-202 Shown

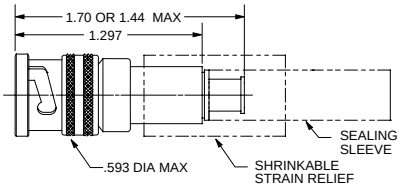


Cable Plug
Tool Crimp

3-lug	PL75MC- [1]
2-lug	PL74MC- [1]
4-lug	PL75MCFL- [1]
Threaded	PL375MC- [1]

For polarizations, call factory

PL74C-202 Shown

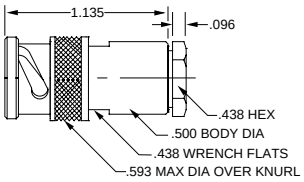


Cable Plug
Tool Crimp

2-lug	PL74C- [1]
3-lug	PL75C- [1]
4-lug	PL75CFL- [1]
Threaded	PL375C- [1]

** Length depends on Cable Group*

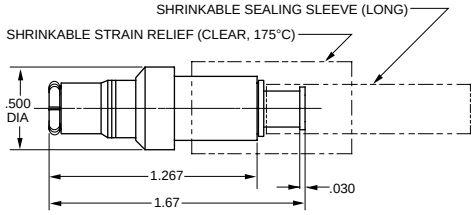
PL74-9 Shown



Cable Plug
Wrench Crimp

2-lug	PL74- [1]
3-lug	PL75- [1]
4-lug	PL75FL- [1]
Threaded	PL375- [1]

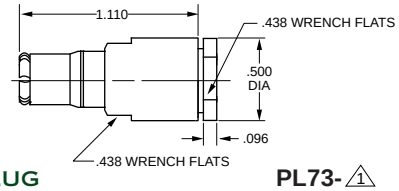
PL73C-202 Shown



Cable Plug
Tool Crimp, Push-on

PL73C- [1]

PL73-9 Shown

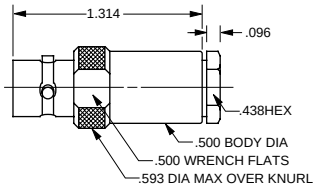


Cable Plug
Wrench Crimp, Push-on

PL73- [1]

Order Large Body version for cables with jacket dia. greater than .323".

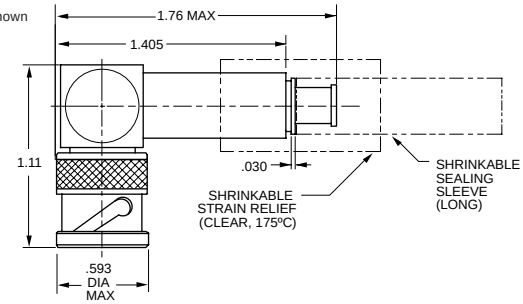
CJ70-9 Shown



Cable Jack
Wrench Crimp

3-lug	CJ70- [1]
2-lug	CJ70TL- [1]
4-lug	CJ70FL- [1]
Threaded	CJ370- [1]

PLR74C-201 Shown

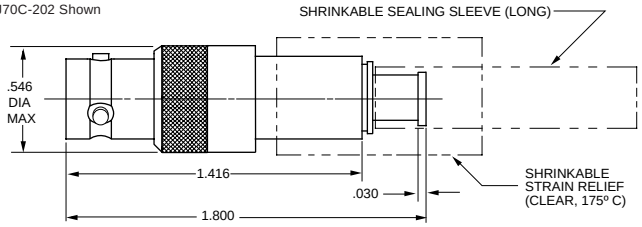


Right Angle Cable Plug
Tool Crimp

2-lug	PLR74C- [1]
3-lug	PLR75C- [1]
4-lug	PLR75CFL- [1]
Threaded	PLR375C- [1]

For cable groups 201-223 only. Contact the factory for other cables.

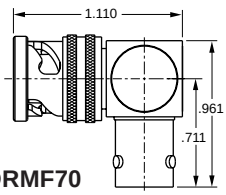
CJ70C-202 Shown



Cable Jack
Tool Crimp

3-lug	CJ70C- [1]
2-lug	CJ70CTL- [1]
4-lug	CJ70CFL- [1]
Threaded	CJ370C- [1]

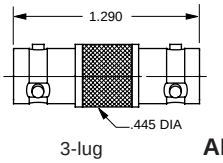
ADRMF70 Shown



Right Angle TRB Adapter
TRB male to female

3-lug	ADRMF70
2-lug	ADRMF70TL
Threaded	ADRMF370
4-lug	ADRMF70FL

AD78 Shown



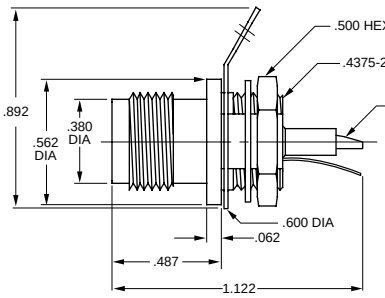
TRB Coupling Adapter
(Barrel connector)

3-lug	AD78
2-lug	AD78TL
4-lug	AD78FL
Threaded	AD378

[1] - *Refers to the cable group table on pages 91-133*

Miniature bulkhead jacks 70/370 series, TRB/TRT

BJ377 Shown

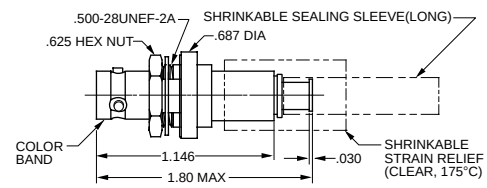


Bulkhead Jack
Front Mount, Solder Pot

3-lug	**BJ770**
Ground tab	**BJ770GL**
2-lug	**BJ77TL**
4-lug	**BJ77FL**
Threaded	**BJ377**

(Hermetically sealed version available, pg.13) Mounting Hole: D4.125

BJ79C Shown

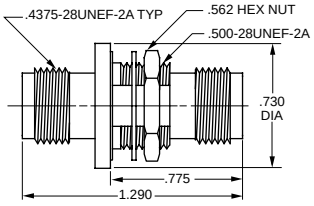


Bulkhead Cable Jack
Tool Crimp

3-lug	**BJ79C-**[1]
2-lug	**BJ79CTL-**[1]
4-lug	**BJ79CFL-**[1]
Threaded	**BJ379C-**[1]

For polarizations, contact the factory. Mounting Hole: D3.109

BJ378 Shown

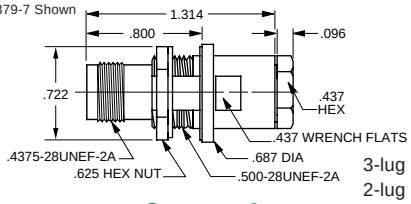


Feed-Thru Bulkhead Jack

3-lug	**BJ78**
2-lug	**BJ78TL**
4-lug	**BJ78FL**
Threaded	**BJ378**

(Hermetically sealed version available, pg.13) Mounting Hole: D3.187

BJ379-7 Shown

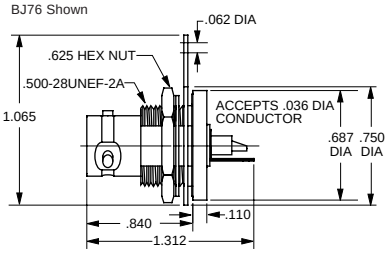


Bulkhead Cable Jack
Wrench Crimp

3-lug	**BJ79-**[1]
2-lug	**BJ79TL-**[1]
4-lug	**BJ79FL-**[1]
Threaded	**BJ379-**[1]

Mounting Hole: D3.160

BJ76 Shown

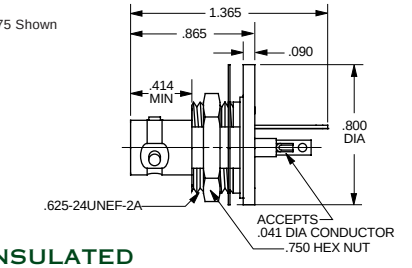


Bulkhead Jack
Rear Mount, Solder Pot

3-lug	**BJ76**
2-lug	**BJ76TL**
4-lug	**BJ76FL**
Threaded	**BJ376***

Mounting Holes: D3.240 w/o solder lug/D3.208 w/ solder lug
(* Hermetically sealed version avail. pg.13)

BJ75 Shown

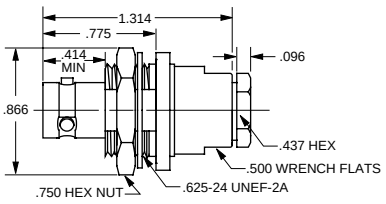


Insulated Bulkhead Jack
Rear Mount, Solder Pot

3-lug	**BJ75**
2-lug	**BJ75TL**
4-lug	**BJ75FL**
Threaded	**BJ375**

Mounting Hole: D2.140

BJ74-9 Shown

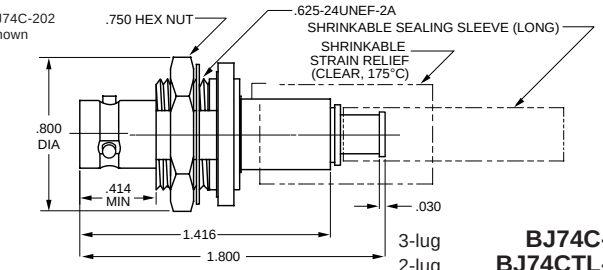


Insulated Bulkhead Cable Jack
Wrench Crimp

3-lug	**BJ74-**[1]
2-lug	**BJ74TL-**[1]
4-lug	**BJ74FL-**[1]
Threaded	**BJ374-**[1]

Mounting Hole: D2.140

BJ74C-202 Shown

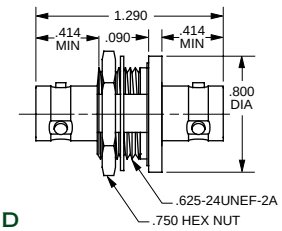


Insulated Bulkhead Cable Jack
Tool Crimp

3-lug	**BJ74C-**[1]
2-lug	**BJ74CTL-**[1]
4-lug	**BJ74CFL-**[1]
Threaded	**BJ374C-**[1]

Mounting Hole: D2.140

BJ73 Shown

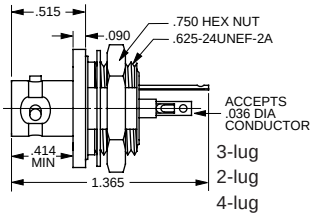


Insulated Feed-Thru Jack

3-lug	**BJ73**
2-lug	**BJ73TL**
4-lug	**BJ73FL**
Threaded	**BJ373**

Mounting Hole: D2.140

BJ72 Shown



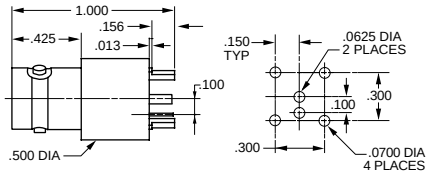
Insulated Bulkhead Jack
Front Mount

3-lug	**BJ72**
2-lug	**BJ72TL**
4-lug	**BJ72FL**
Threaded	**BJ372**

Mounting Hole: D2.140

[1] - *See cable group table on pages 91-133. "D" mounting holes see page 54. For polarizations, contact the factory.*

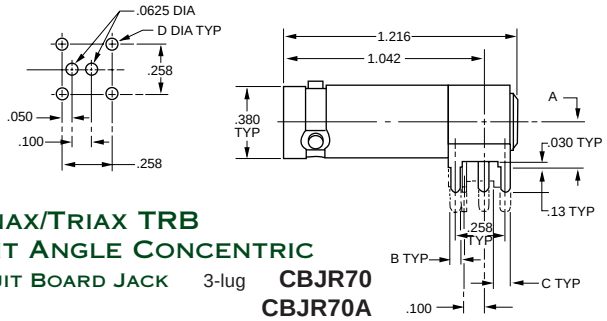
CBJ70 Shown



TWINAX/TRIAX TRB CONCENTRIC CIRCUIT BOARD JACK

3-lug	**CBJ70**
2-lug	**CBJ70TL**
4-lug	**CBJ70FL**
(TRT) Threaded	**CBJ370**

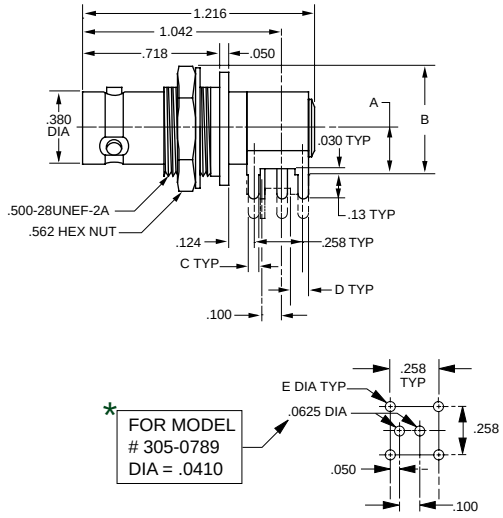
MODEL NO.	LTR CODE	A DIM	B DIM	C DIM	D DIM
CBJR70	-	.24	.050	.090	.0625
CBJR70A	A	.34	.058	.090	.070



TWINAX/TRIAX TRB RIGHT ANGLE CONCENTRIC CIRCUIT BOARD JACK

3-lug **CBJR70**
CBJR70A

MODEL NO.	LTR CODE	A DIM	B DIM	C DIM	D DIM	E DIM
CBBJR79	-	.24	.565	.050	.090	.0625
CBBJR79A	A	.34	.665	.058	.090	.070



RIGHT ANGLE CIRCUIT BOARD BULKHEAD JACK

Standard Version

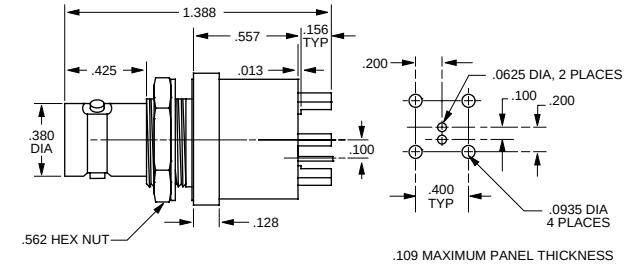
3-lug	**CBBJR79**
2-lug	**CBBJR79TL**
4-lug	**CBBJR79FL**
Threaded	**CBBJR379**

Add "A" for tall versions
example: CBBJR79A

See diagram above *** 305-0789**

Mounting Hole: D3.125

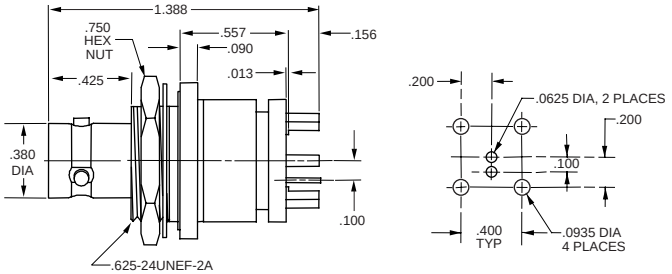
CBBJ79 Shown



TWINAX/TRIAX TRB NON-INSULATED CONCENTRIC FEMALE 3-LUG BULKHEAD MOUNT

3-lug	**CBBJ79**
2-lug	**CBBJ79TL**
4-lug	**CBBJ79FL**
Threaded	**CBBJ379**

Mounting Hole: D3.109



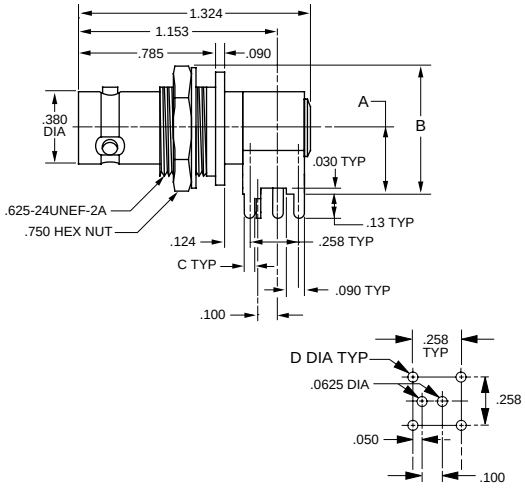
TWINAX/TRIAX TRB INSULATED CONCENTRIC FEMALE 3-LUG BULKHEAD MOUNT

3-lug **CBBJ74**

Mounting Hole: D2.109

MODEL NO.	LTR CODE	A DIM	B DIM	C DIM	D DIM
CBBJR74	-	.345	.778	.050	.0625
CBBJR74A	A	.445	.878	.058	.070

MAX PANEL THICKNESS .140



RIGHT ANGLE INSULATED CIRCUIT BOARD BULKHEAD JACK

Insulated Version

3-lug	**CBBJR74**
2-lug	**CBBJR74TL**
4-lug	**CBBJR74FL**
Threaded	**CBBJR374**

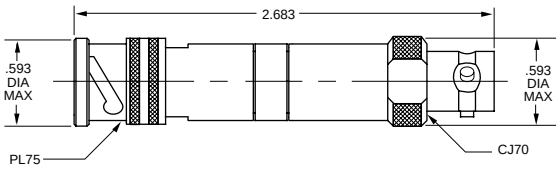
Add "A" for tall versions example: CBBJR74A

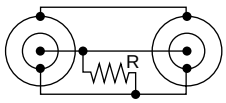
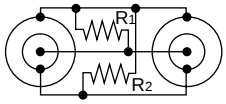
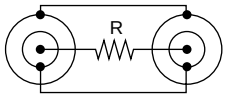
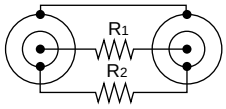
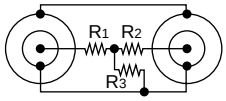
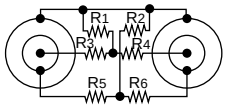
Mounting Hole: D2.140

"D" mounting holes see page 54.

TRB SERIES PAD / PARALLELING / T ADAPTER

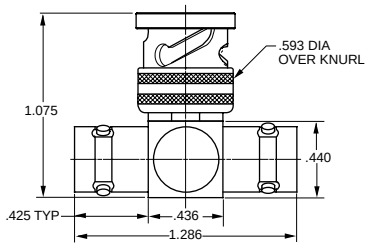
TRB SERIES PAD
TRB 3-LUG PLUG AND JACK



PART NUMBER	CIRCUITRY SCHEMATIC
TNG2-R	
TNG2A-R1-R2	
TNG3-R	
TNG3A-R1-R2	
TNG4-R1-R2-R3	
TNG4A-R1-R2-R3-R4-R5-R6	

R-Resistance (1/2 W 1%)
Substitute resistive value for each "R_N" unless all values are identical.

BN73 Shown



TRB "T" ADAPTER

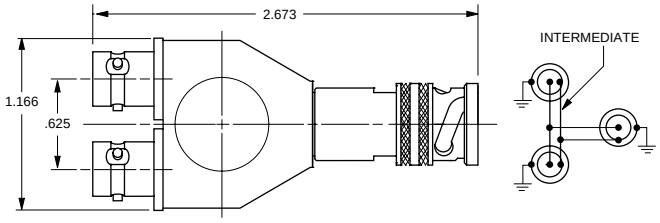
3-lug	**BN73**
2-lug	**BN73TL**
4-lug	**BN73FL**

TRT "T" ADAPTER

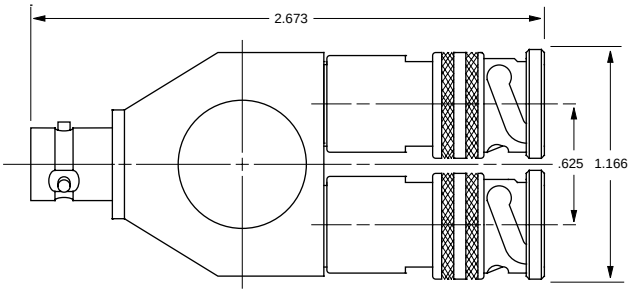
Threaded	**BN373**

FIXED PARALLELING JACKS

TN2A Shown



TN2 Shown



FIXED PARALLELING JACK

Two Plugs, One Jack	3-lug	**TN2**
	2-lug	**TN2TL**
	4-lug	**TN2FL**
	Threaded	**TN2T**
Two Jacks, One Plug	3-lug	**TN2A**
	2-lug	**TN2TLA**
	4-lug	**TN2FLA**
	Threaded	**TN2TA**

** Other options available including Random Paralleling. Contact the factory for more information.*

For Adapters, see pages 47-50. For Terminations, see page 45-46. For Impedance Matching Adapters, see page 47.

Concentric Twinax/Triax

Hermetic seals *prevent leakage* through the bulkhead from ***inside*** of the connector. Trompeter's miniature size hermetically sealed connectors include the feed-through BJ78HS, the front mounted BJ77HS, the rear mounted BJ79HS and the newly designed threaded BJ379HS. In the subminiature size we offer the front mounted BJ157HS and BJ157FLHS (four lug version). The BJ3150HS and BJ3150SHS offer a threaded rear mount version with a safety wire option. These connectors are designed for bulkhead mounting in vacuum chambers, or where toxic and other gases are present. These connectors have leakage rates of $1x10^{-8}$ atm cc/second. The 150 Series have leakage rates of $1x10^{-6}$ atm cc/ second.

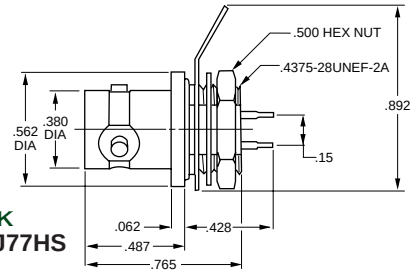
FEATURES

- ▲ Standard TRB/MIL-C-49142
- ▲ Glass to Metal Seals
- ▲ Sustains Extreme Temperature Ranges
- ▲ Standard Brass Body
- ▲ Gold Plated Contacts

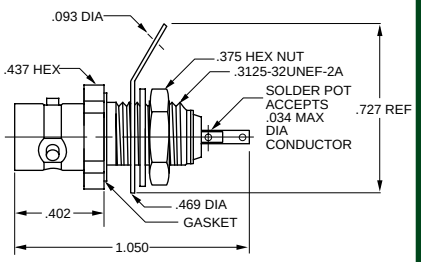
BENEFITS

- ▲ The Most Mechanical and Environmentally Reliable Method
- ▲ Wide Range of Application Usage
- ▲ More Cost Effective than Stainless Steel
- ▲ Reliable Connections

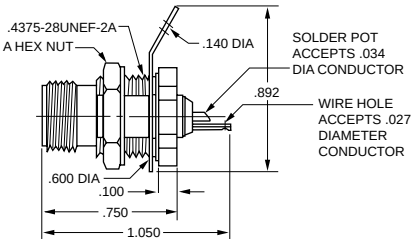
They all meet MIL-C-49142 specifications. Standard non-hermetic connector types such as the BJ78 could leak between the contacts and dielectrics. Hermetically sealed connectors can be used in commercial, military, and industrial applications where toxic gas maybe present. Hermetic connectors are highly beneficial in reactors, gas/petro plants, oil drilling sites, liquid test and measurement, and space applications. They are reliable under the most severe atmospheric conditions.



HERMETICALLY SEALED BULKHEAD JACK
FRONT MOUNT **BJ77HS**
Mounting Hole: **D4.125**

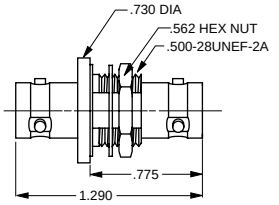


HERMETICALLY SEALED BULKHEAD JACK
3-lug **BJ157HS**
4-lug **BJ157FLHS**
Mounting Hole: **D6.187**

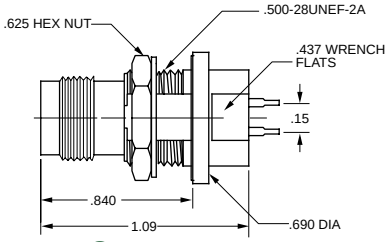


HERMETICALLY SEALED
SUBMINIATURE TWINAX/TRIAX
REAR MOUNT **BJ3150HS** A = .500
SOLDER POT BULKHEAD **BJ3150SHS** A = .562
Mounting Hole: D4.200

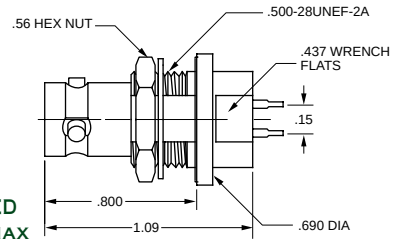
BJ78HS Shown



HERMETICALLY SEALED MINIATURE TWINAX/TRIAX
FEED-THRU BULKHEAD MOUNT
Mounting Hole: D3.187 **BJ78HS**
BJ378HS (Threaded Version Not Shown)
INSULATED VERSION
Mounting Hole: D2.187 **BJ73HS** (Not Shown)



HERMETICALLY SEALED
MINIATURE TWINAX/TRIAX TRT/THREADED **BJ376HS**
Mounting Hole: D3.160



HERMETICALLY SEALED
MINIATURE TWINAX/TRIAX
REAR MOUNT,BULKHEAD MOUNT **BJ79HS**
Mounting Hole: D3.160

Note: Only a select few of our hermetically sealed connectors are shown here. Contact the factory for more information. *"D" Mounting holes see page 54*

Twinax/Triax 150 Series Intro / Size 8 Mating Contacts

150 Series

Miniature 2,3, 4-lug, & Push-on (TRS)

3150 Series

Miniature Threaded (TTM)

150/3150 Series are concentric twinax/triax connectors for high density and weight reduction applications. They are commonly used in digital data bus, video pair, MIL-STD-1553B (primary/redundant), baseband circuit and in any application for "noise-free guarded" circuits. TRS/TTM push-on connectors are designed for blind mate rack and panel applications. The male plug mates with any TRS/TTM jack and are ideally suited for test cable applications.

Features

- Same size as TPS/TCM connectors.
- Solderable Wrench Crimp versions for cables with up to .215" outer diameter.
- Tool Crimp versions for quick termination of cables with up to .250" outer diameter.
- 3-lug, 4-lug, and threaded versions provide different levels of mechanical stability and keying.
- Does not require mechanical alignment for mating.
- Meets MIL-C-49142, 48-hour salt spray requirement.
- Special plating available to satisfy MIL-STD-1344 500-hour salt spray requirement.
- Push-on versions for test cable applications.
- Fewer pieces to assemble.
- Hermetically sealed versions available (see page 13).

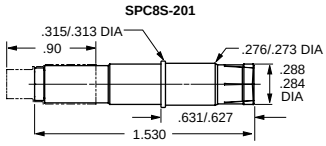
Mating Twinax Size 8 Contacts

for Digital Data Bus Multi-pin Connectors

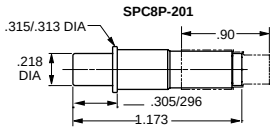
This pair of **scoop-proof** concentric contacts fits the Size 8 cavity of MIL-C-38999 series 1, 3, & 4 and MIL-STD-1760 "External Stores" type connectors.

Features

- Fits MIL-C-17/176-00002 and other twinax/triax cables
- Heat treated beryllium copper spring members
- Gold plated, Full Crimp contacts



Trompeter Part No.
Socket **SPC8S-201**

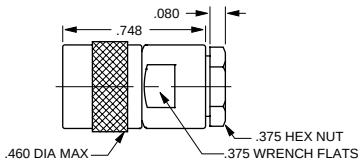


Trompeter Part No.
Pin **SPC8P-201**

Sub-miniature Jacks & Plugs

Sub-miniature concentric twinax/triax connectors increase packing density up to 246%. They are designed for high density applications where digital, video pair or baseband noise-free guarded circuits are required. The 3-lug, 4-lug, and threaded versions improve mechanical stability and provide "error-free" redundant data bus capabilities. The wrench crimp version accommodates cables with other jacket diameters up to .215" and the tool crimp versions up to .250".

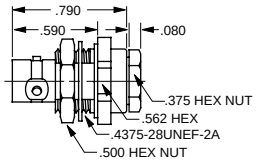
PL155-29 Shown



CABLE PLUG
WRENCH CRIMP

3-lug	PL155-1
4-lug	PL155FL-1
Threaded	PL3155-1

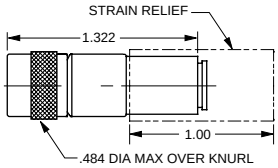
BJ159-29 Shown



BULKHEAD JACK
REAR MOUNT, WRENCH CRIMP
Mounting Hole: D4.125

3-lug	BJ159-1
4-lug	BJ159FL-1
Threaded	BJ3159-1

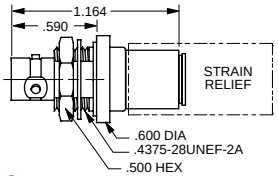
PL155AC-207 Shown



CABLE PLUG
TOOL CRIMP

3-lug	PL155AC-1
4-lug	PL155ACFL-1
Threaded	PL3155AC-1

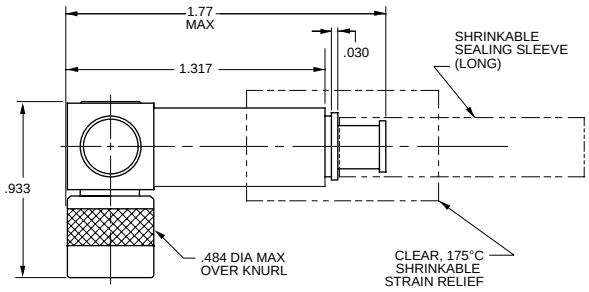
BJ159AC Shown



BULKHEAD JACK
REAR MOUNT, TOOL CRIMP
Mounting Hole: D4.125

3-lug	BJ159AC-1
4-lug	BJ159ACFL-1
Threaded	BJ3159AC-1

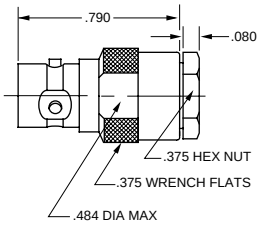
PLR3155AC-201 Shown



RIGHT ANGLE CABLE PLUG
TOOL CRIMP

3-lug	PLR155AC-1
4-lug	PLR155ACFL-1
Threaded	PLR3155AC-1

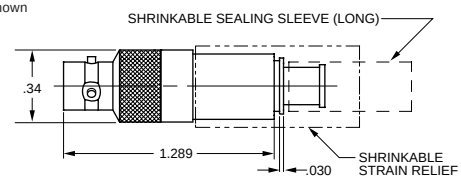
CJ150-29 Shown



CABLE JACK
WRENCH CRIMP

3-lug	CJ150-1
4-lug	CJ150FL-1
Threaded	CJ3150-1

CJ150AC-207 Shown



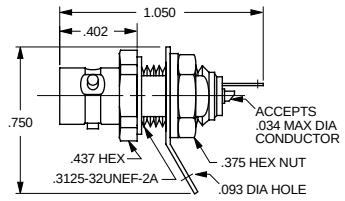
CABLE JACK
TOOL CRIMP

3-lug	CJ150AC-1
4-lug	CJ150ACFL-1
Threaded	CJ3150AC-1

1- *Refers to Cable Group Table see pages 91-133. "D" mounting holes see page 54*

Subminiature bulkhead jacks 150/3150 Series TRS/TTM

BJ157 Shown

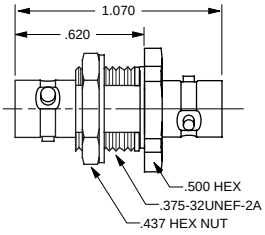


Bulkhead Jack
Front mount, Solder pot

3-lug	**BJ157**
4-lug	**BJ157FL**
Threaded	**BJ3157**

(Hermetically sealed version available, pg.13) Mounting Hole: D6.187

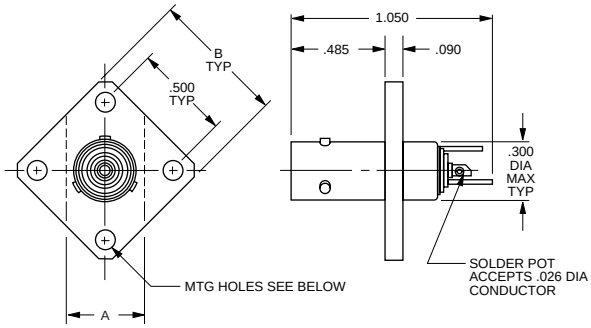
BJ158 Shown



Feed-Through Jack

3-lug	**BJ158**
4-lug	**BJ158FL**
Threaded	**BJ3158**

Mounting Hole: D5.190/D4.190 (Threaded)



Bulkhead Jacks
Flange mount, Solder pot

3-lug	**BJ157F-**[2]
4-lug	**BJ157FFL-**[2]
Threaded	**BJ3157F-**[2]

Hole Configuration:

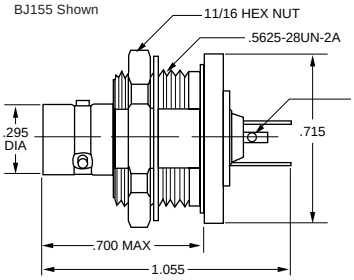
[2] **# of holes/ Type-**Dimension

A Dim = .425
- **2/Clear**- .103" diameter **- 2C(S)**
- **2/Threaded**-.099-56UNF-2B **- 2T(S)**

B Dim = .687
- **4/Clear-** .103" diameter **- 4C(S)**
- **4/Threaded**-.099-56UNF-2B **- 4T(S)**

(S) = *Comes with Stainless Steel Phillips #3-56 Pan Head Screws*
Maximum Panel Thickness .187

BJ155 Shown

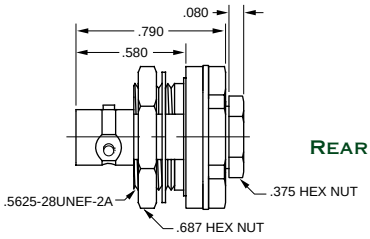


Insulated Bulkhead Jack
Rear Mount, Solder Pot

3-lug	**BJ155**
4-lug	**BJ155FL**
Threaded	**BJ3155**

Mounting Hole: D9.148

BJ154-29 Shown

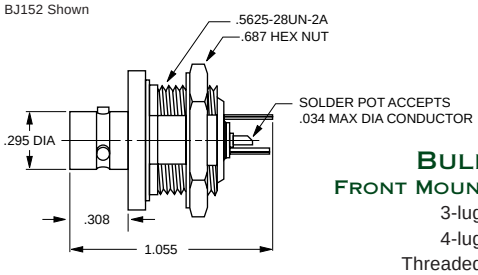


Insulated Bulkhead Jack
Rear Mount, Wrench Crimp

3-lug	**BJ154-**[1]
4-lug	**BJ154FL-**[1]
Threaded	**BJ3154-**[1]

Mounting Hole: D9.116

BJ152 Shown

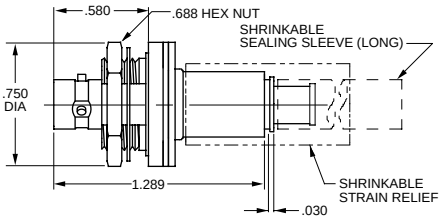


Insulated Bulkhead Jack
Front Mount, Solder Pot

3-lug	**BJ152**
4-lug	**BJ152FL**
Threaded	**BJ3152**

Mounting Hole: D9.208

BJ154AC-207 Shown

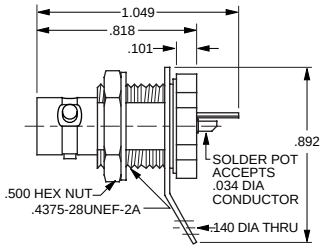


Insulated Bulkhead Jack
Rear mount, Tool Crimp

3-lug	**BJ154AC-**[1]
4-lug	**BJ154ACFL-**[1]
Threaded	**BJ3154AC-**[1]

Mounting Hole: D9.116

BJ150 Shown

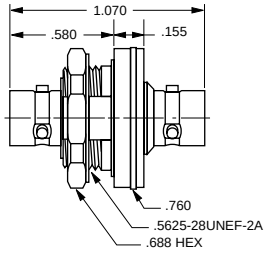


Bulkhead Jack
Rear Mount, Solder Pot

3-lug	**BJ150**
4-lug	**BJ150FL**
Threaded	**BJ3150**

Mounting Hole: D4.250

BJ153 Shown

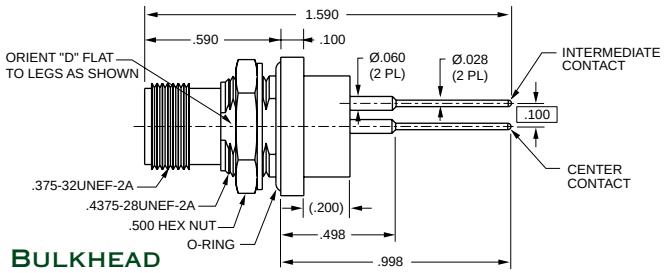


Insulated Feed-Through Jack

3-lug	**BJ153**
4-lug	**BJ153FL**
Threaded	**BJ3153**

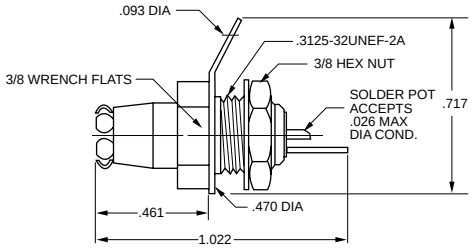
Mounting Hole: D9.116

[1] *- Refers to the cable group table see pages 91-133. "D" Mounting holes see page 54* [2] *- Replace with item from related table (same page).*



BULKHEAD MOUNT JACK
WITH PC TAILS — **305-1222**

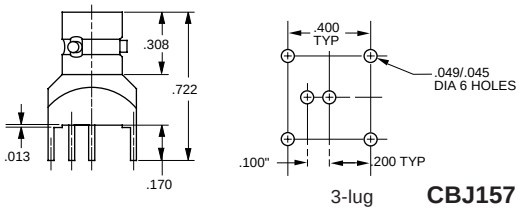
Mounting Hole: D4.125



BULKHEAD PUSH-ON PLUG — **PL151**
FRONT MOUNT, SOLDER POT

Mounting Hole: C1.088

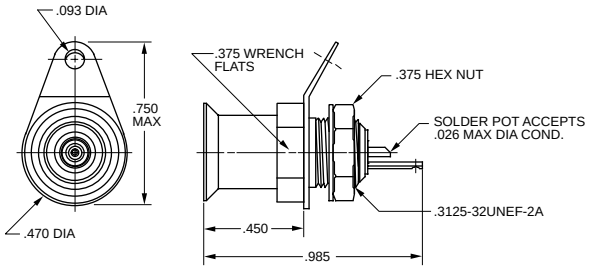
CBJ157 Shown



CIRCUIT BOARD JACK

3-lug	**CBJ157**
4-lug	**CBJ157FL**
Threaded	**CBJ3157**

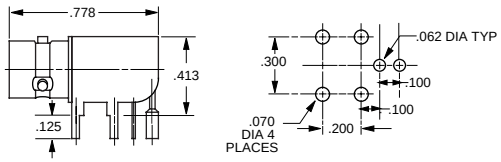
Max Board Thickness .125



BULKHEAD PUSH-ON JACK — **BJ151**
FRONT MOUNT, SOLDER POT

Mounting Hole: C1.088

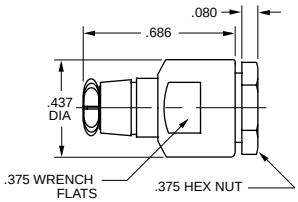
CBJR157 Shown



RIGHT ANGLE CIRCUIT BOARD JACK

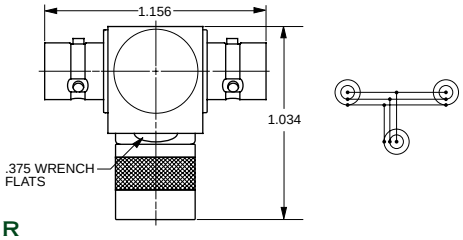
3-lug	**CBJR157**
4-lug	**CBJR157FL**
Threaded	**CBJR3157**

PL153-29 Shown



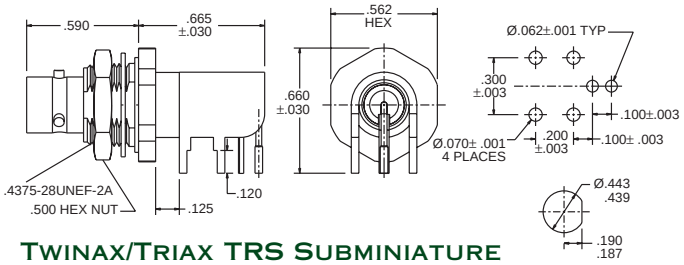
PUSH-ON CABLE PLUG — **PL153-** ⚠1
WRENCH CRIMP

BN153 Shown



"T" ADAPTER

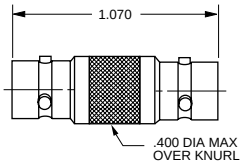
3-lug	**BN153**
4-lug	**BN153FL**
Threaded	**BN3153**



TWINAX/TRIAX TRS SUBMINIATURE
RIGHT ANGLE BULKHEAD REAR MOUNT 3-LUG — **CBBJR159**

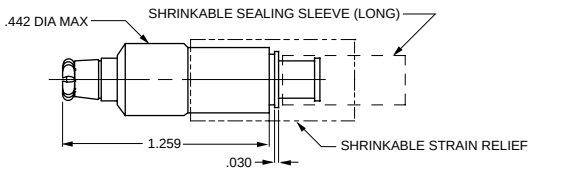
Max Panel Thickness: .125 D-Hole: D4

AD158 Shown



TRS/TTM COUPLING ADAPTER (BARREL CONNECTOR)

3-lug	**AD158**
4-lug	**AD158FL**
Threaded	**AD3158**



PUSH-ON CABLE PLUG — **PL153AC-** ⚠1
TOOL CRIMP

⚠1 - *Refers to Cable Group Table see pages 91-133. "D" mounting holes see page 54*

Twinax/Triax Series Introductions

450 Series

Sub-miniature Twinax 3-lug & 4-lug

3450 Series

Sub-miniature Twinax Threaded

Concentric connectors designed for MIL-STD-1553B airborne digital databus weight reduction applications.

Features

- 3-lug, 4-lug & threaded versions.
- Field installation full crimp design. No soldering required.
- Fully inspectable assembly process (no blind or questionable solder connections)
- Total of ten (10) polarized & keyed combinations.
- Three different keyings for 3-lug versions.
- Two interchangeable pin & socket arrangements.
- Fewer pieces to assemble.
- Meets MIL-C-49142, 48-hour salt spray requirement.
- Standard plating to satisfy MIL-STD-1344, 500-hour salt-spray requirement.
- Weatherproof designs utilize sealing gaskets and heat shrink tubing.
- Fits MIL-C-17/176-00002 & other twinax/triax cables.
- Compatible with Raychem designs but utilizing military crimp tools (intermateable replacement).

80 Series

Standard 2-lug & 3-lug (TRC)

380 Series

Standard Threaded (TRN)

Used in digital data bus, video pair, MIL-STD-1553B (primary/redundant data bus), MIL-STD-1397 (ship-board data bus), baseband circuit and any application for noise-free guarded circuits.

Features

- Standard "C" sized concentric connectors.
- Used with larger twinax/triax cables with outer diameters of .250"-615".
- Does not require mechanical alignment for mating.

30 Series

Miniature 2-Pin Polarized, 2-lug (TWBNC)

330 Series

Miniature 2-Pin Polarized, Threaded (TWTNC)

Used in digital data bus, video pair, MIL-STD 1553B (airborne/ground primary/redundant), baseband circuit and any application for "noise-free guarded" circuits. They are not recommended for new designs. MIL-STD-1553B permits designer discretion for use of concentric designs in lieu of the two-pin connector.

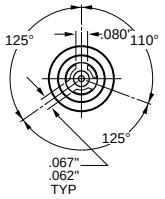
Features

- Same size as BNC/TNC connectors
- Fully enclosed beryllium copper spring fingers
- Stepped Dielectric

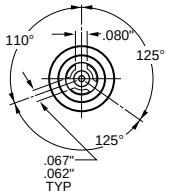
Concentric Twinax 450 Series

3-lug & 4-lug Keyings

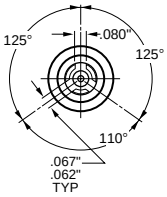
P



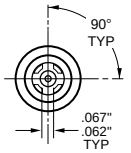
R



W



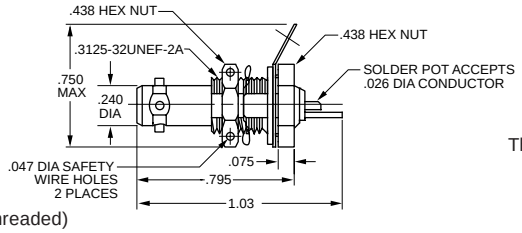
FL



The 450 Series was designed for airborne digital data bus applications utilizing the MIL-STD-1553B data bus. The 450 Series will fit most twinax cables.
Refer to page 20 for photo of intermediate contacts.

Connectors are available in five different coupling configurations which include 3-lug versions with three (3) separate keyings, a 4-lug, and a threaded version with safety wire holes.
Diagrams shown above are for plugs.

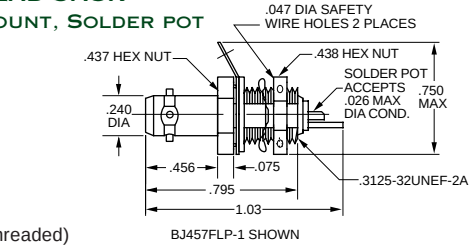
BULKHEAD JACK
REAR MOUNT, SOLDER POT



Mounting Holes:
DD8.130
DD8.125 (Threaded)

COUPLING TYPE	KEY CODE	INTERMEDIATE CONTACT PIN	SOCKET
3-lug	P	BJ450PP	BJ450PS
3-lug	R	BJ450RP	BJ450RS
3-lug	W	BJ450WP	BJ450WS
4-lug	FL	BJ450FLP	BJ450FLS
Threaded	-	BJ3450P	BJ3450S

BULKHEAD JACK
FRONT MOUNT, SOLDER POT

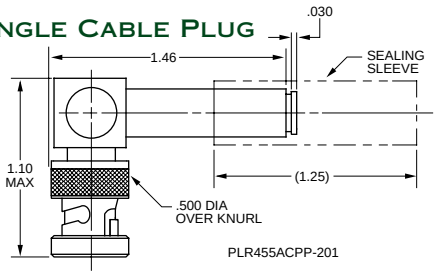


BJ457FLP-1 SHOWN

Mounting Holes:
DD8.250
DD8.125 (Threaded)

COUPLING TYPE	KEY CODE	INTERMEDIATE CONTACT PIN	SOCKET
3-lug	P	BJ457PP	BJ457PS
3-lug	R	BJ457RP	BJ457RS
3-lug	W	BJ457WP	BJ457WS
4-lug	FL	BJ457FLP	BJ457FLS
Threaded	-	BJ3457P	BJ3457S

RIGHT ANGLE CABLE PLUG
ALL CRIMP



PLR455ACPP-201

COUPLING TYPE	KEY CODE	INTERMEDIATE CONTACT PIN	SOCKET
3-lug	P	PLR455ACPP-△1	PLR455ACPS-△1
3-lug	R	PLR455ACRP-△1	PLR455ACRS-△1
3-lug	W	PLR455ACWP-△1	PLR455ACWS-△1
4-lug	FL	PLR455ACFLP-△1	PLR455ACFLS-△1
Threaded	-	PLR3455ACP-△1	PLR3455ACS-△1

RFI JACK CAPS & BULKHEAD JACK TERMINATIONS
FOR USE WITH 450 SERIES PLUGS
REAR MOUNT

COUPLING TYPE	RFI CAPS	TERMINATIONS INTERMEDIATE CONTACT PIN	SOCKET
3-lug	RFI457-△3	TBJ451P-△3-R	TBJ451S-△3-R
3-lug	RFI457-△3	TBJ451P-△3-R	TBJ451S-△3-R
3-lug	RFI457-△3	TBJ451P-△3-R	TBJ451S-△3-R
4-lug	RFI457FL-△3	TBJ451FLP-△3-R	TBJ451FLS-△3-R
Threaded	RFI3457-△3	TBJ3451P-△3-R	TBJ3451S-△3-R

△1 - *Refers to Cable Group Table see pages 91-133. "D" mounting holes see page 54* △3 - *For Chain options, see page 45.*

Concentric twinax 450 series

450 Series

Intermediate Contact Assemblies

Pin/Socket **PS450AC-**1

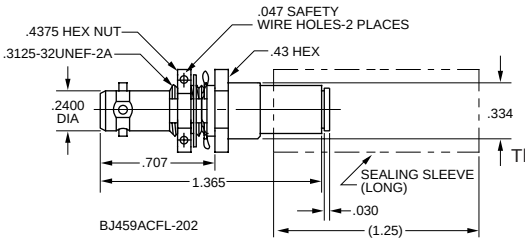
Socket/Pin **SP450AC-**1

The 450 Series includes cable jacks and plugs with interchangeable contact assemblies. The contact and body assemblies may be ordered separately (see the facing page). Cable connectors accept cables with a maximum outer diameter of .180" and conductors to .025".

Contact the factory for exact specifications. For Trompeter connectors which meet outgassing requirements, contact our technical support staff for more information. Compatible with Raychem DK-621 Series.

Refer to page 19 for Keyings.

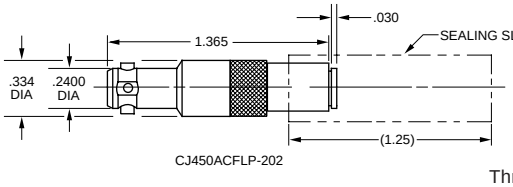
Bulkhead Cable Jack
Rear mount, All Crimp



Mounting Holes: DD8.156, DD8.125 (Threaded)

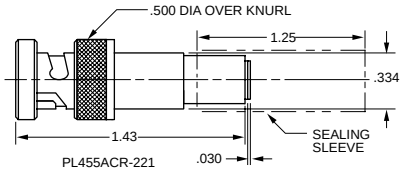
Coupling Type	Key Code	Body Assembly only	Assembly Intermediate Contact Pin	Socket
3-lug	P	BJ459ACP-1	BJ459ACPP-1	BJ459ACPS-1
3-lug	R	BJ459ACR-1	BJ459ACRP-1	BJ459ACRS-1
3-lug	W	BJ459ACW-1	BJ459ACWP-1	BJ459ACWS-1
4-lug	FL	BJ459ACFL-1	BJ459ACFLP-1	BJ459ACFLS-1
Threaded	-	BJ3459AC-1	BJ3459ACP-1	BJ3459ACS-1

Cable Jack
All Crimp



Coupling Type	Key Code	Body Assembly only	Assembly Intermediate Contact Pin	Socket
3-lug	P	CJ450ACP-1	CJ450ACPP-1	CJ450ACPS-1
3-lug	R	CJ450ACR-1	CJ450ACRP-1	CJ450ACRS-1
3-lug	W	CJ450ACW-1	CJ450ACWP-1	CJ450ACWS-1
4-lug	FL	CJ450ACFL-1	CJ450ACFLP-1	CJ450ACFLS-1
Threaded	-	CJ3450AC-1	CJ3450ACP-1	CJ3450ACS-1

Cable Plug
All Crimp



Coupling Type	Key Code	Body Assembly only	Assembly Intermediate Contact Pin	Socket
3-lug	P	PL455ACP-1	PL455ACPP-1	PL455ACPS-1
3-lug	R	PL455ACR-1	PL455ACRP-1	PL455ACRS-1
3-lug	W	PL455ACW-1	PL455ACWP-1	PL455ACWS-1
4-lug	FL	PL455ACFL-1	PL455ACFLP-1	PL455ACFLS-1
Threaded	-	PL3455AC-1	PL3455ACP-1	PL3455ACS-1

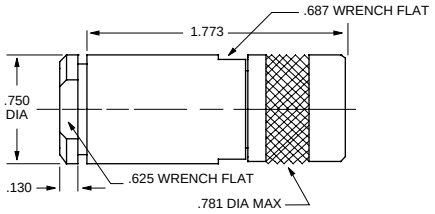
RFI Plug Caps & Terminations
Plugs for use with 450 Series Jacks

Coupling Type	RFI Caps	Terminations Intermediate Contact Pin to mate with Sockets	Sockets to mate with Pins
3-lug	RFI455-3	TNG451P-3 -R	TNG451S-3 -R
3-lug	RFI455-3	TNG451P-3 -R	TNG451S-3 -R
3-lug	RFI455-3	TNG451P-3 -R	TNG451S-3 -R
4-lug	RFI455FL-3	TNG451FLP-3 -R	TNG451FLS-3 -R
Threaded	RFI3455-3	TNG3451P-3 -R	TNG3451S-3 -R

1 - *Refers to Cable Group Table see pages 91-133. "D" mounting holes see page 54* 3 - *Chain options see page 45*

Standard twinax/triax threaded 80/380 series, TRC/TRN

PL80-9 Shown

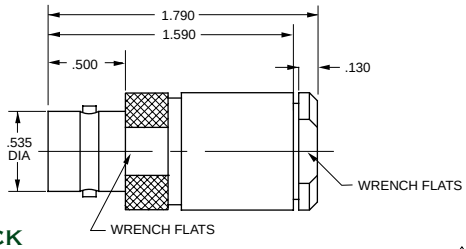


Cable Plug

2-lug	PL80-1
3-lug	PL803-1
Threaded	PL380-1

Larger bodies available to accommodate cable sizes, contact the factory.

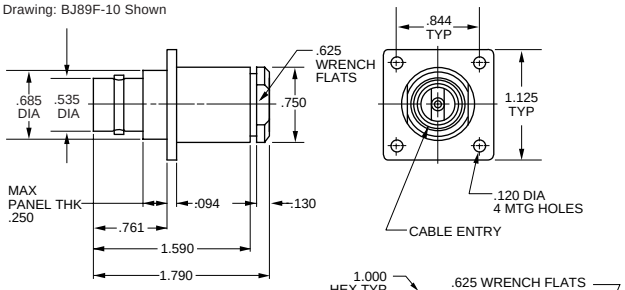
CJ80-7 Shown



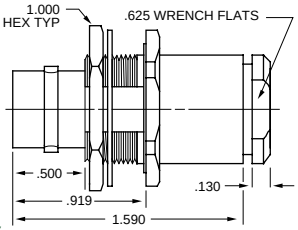
Cable Jack
Wrench Crimp

2-lug	CJ80-1
3-lug	CJ803-1
Threaded	CJ380-1

Top Drawing: BJ89F-10 Shown



Bottom Drawing: BJ89-10 Shown



Bulkhead Cable Jacks
Wrench Crimp, Flange Mount

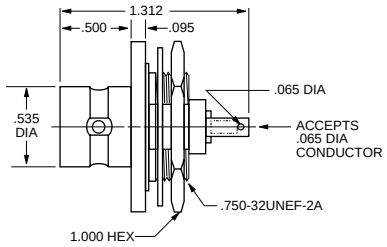
2-lug	BJ89F-1
3-lug	BJ893F-1
Threaded	BJ389F-1

Wrench Crimp, D Hole Mount

2-lug	BJ89-1
3-lug	BJ893-1
Threaded	BJ389-1

Mounting Holes: DD6.250 / D11.250 - Cable Groups: -14A, -16, -61, -62

BJ80 Shown

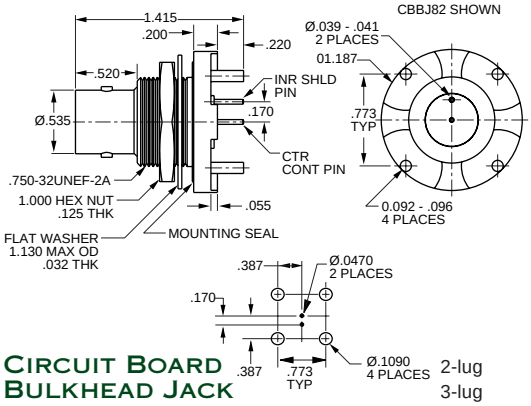


Bulkhead Jack
Solder Pot

2-lug	BJ80
3-lug	BJ803
Threaded	BJ380

Mounting Hole: D1.156

CBBJ82 SHOWN

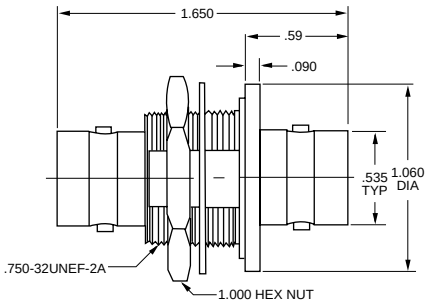


Circuit Board Bulkhead Jack

2-lug	CBBJ82
3-lug	CBBJ823
Threaded	CBBJ382

Maximum Panel Thickness: .190 Mounting Hole: C6.250

BJ83 Shown

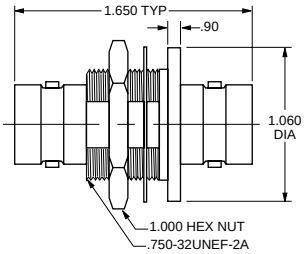


Insulated Feed-Thru Jack

2-lug	BJ83
3-lug	BJ833
Threaded	BJ383

Mounting Hole: D1.350

BJ88 Shown

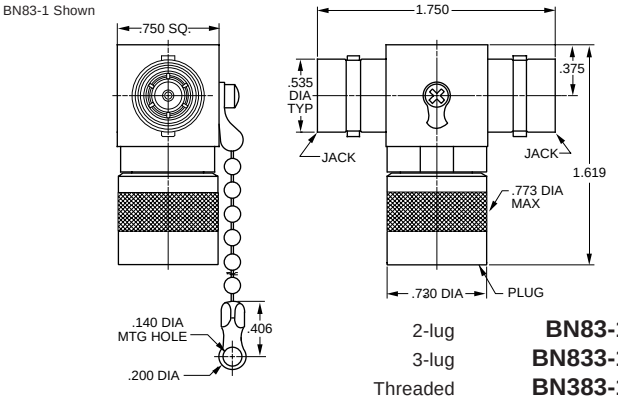


Feed-Thru Jack

2-lug	BJ88
3-lug	BJ883
Threaded	BJ388

Mounting Hole: D1.343

BN83-1 Shown



TRC "T" Adapter

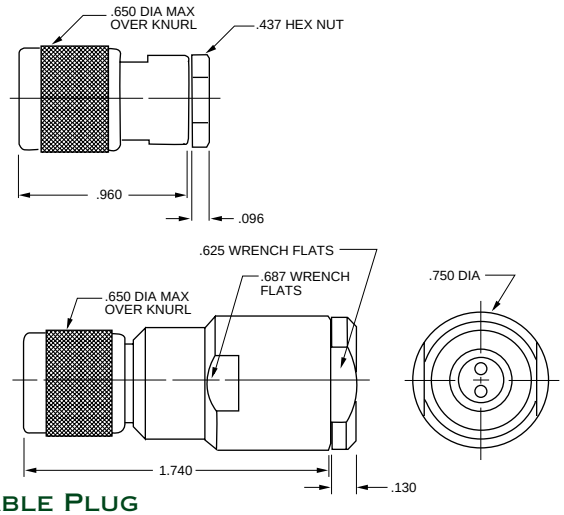
2-lug	BN83-1
3-lug	BN833-1
Threaded	BN383-1

For other chain options see page 45

1 - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

Two-Pin Polarized 30/330 Series TWBNC/TWTNC

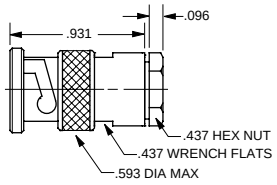
Mil-C-3655 Interface



Cable Plug
TWTNC Positive Aligning
Two-Pin Polarized

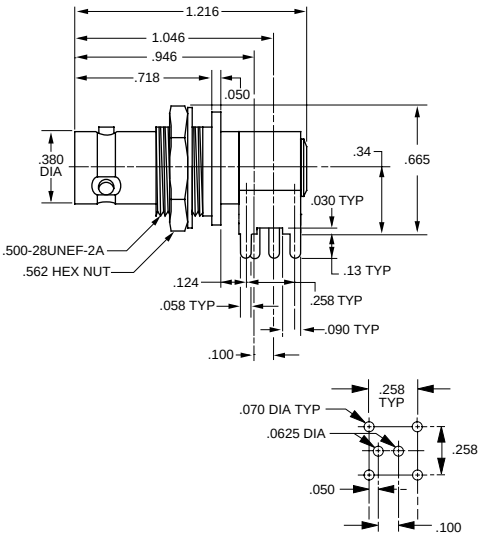
PLPA330

PL30 Shown



Cable Plug
Wrench Crimp, Two-Pin Polarized

2-lug **PL30-**[1]
Threaded **PL330-**[1]

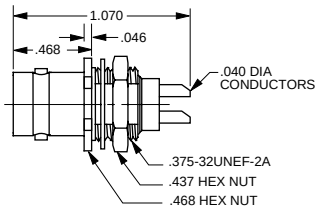


Circuit Board Bulkhead Jack
Right Angle-Two-Pin
Polarized Twinax (TWBNC)

CBBJR39A

Mounting Hole: D3.125

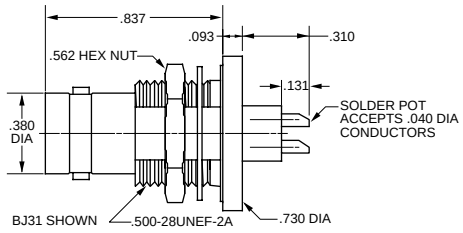
BJ30 Shown



Bulkhead Jack
Front Mount, Solder Pot
Two-Pin Polarized

2-lug **BJ30**
Threaded **BJ330**
Mounting Hole: D5.130

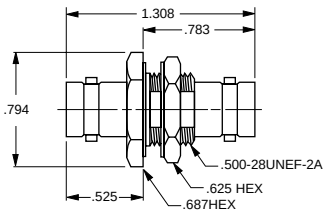
BJ31 Shown



Bulkhead Jack
Rear Mount, Solder Pot
Two-Pin Polarized

2-lug **BJ31**
Threaded **BJ331**
Mounting Hole: D3.280

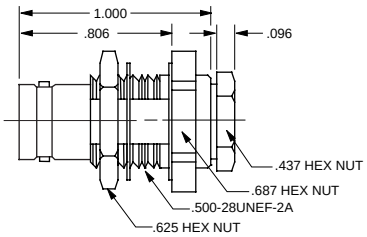
BJ38 Shown



Feed-Through Jack
Two-Pin Polarized

2-lug **BJ38**
Threaded **BJ338**
Mounting Hole: D3.160

BJ39 Shown



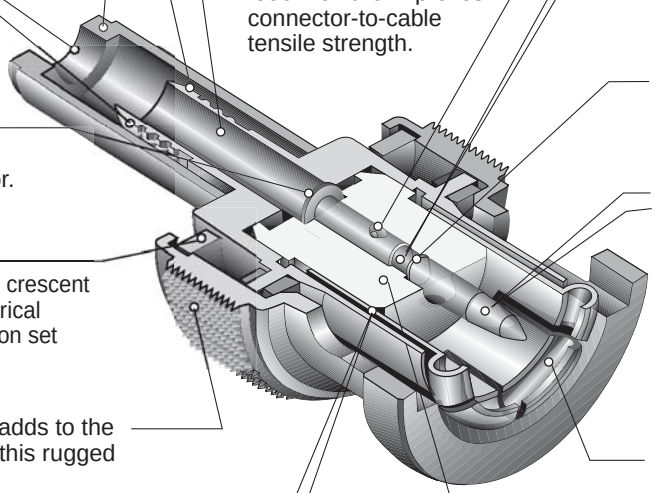
Bulkhead Cable Jack
Rear Mount, Wrench Crimp
Two-Pin Polarized

2-lug **BJ39-**[1]
Threaded **BJ339-**[1]
Mounting Hole: D3.218

[1] - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54.* ***Note:*** *Only* ***30/330 Series*** *have two-pin polarizations.*

Trompeter's BNC Coax Tool Crimp Connector

18 reasons why our BNC connectors outperform the competition every time!



Tested and Approved to **Level 3 Type 2 NEBS** for DS3 in the telco Central Office

Stepped crimp sleeve grips the outer jacket which increases connector-to-cable reliability.

Tapered ferrule facilitates connector insertion under braid.

Exterior ferrule surface provides for superior cable retention without braid breakage.

.300" ferrule improves connector-to-cable tensile strength.

Generous capture cone design ensures easy insertion of center conductor.

Spring loaded coupling ring using a beryllium copper crescent washer assures positive electrical mating and avoids compression set issues over time.

Nickel, non-tarnish finish adds to the endurance and reliability of this rugged connector.

Fully enclosed metal outer conductor This feature is an integral part of a rugged construction, important for handling the stress of cable weight over time. Spring fingers are plated with nickel for superior wear properties over repeated matings.

Unique plating flow hole ensures uniform interior plating.

Captive center contact provides positive tactile feedback for error-free assembly. *Also* prevents movement when cable is flexed.

Unique locking design for high contact retention.

50 millionths gold plating improves durability over thousands of cycles and provides superior electrical conductivity for exceptional signal clarity.

Phosphor bronze spring fingers for high mating cycle life and repeatability.

Machined solid PTFE insulator for superior RF electrical performance.

BNC Coax Wrench Crimp Connector

WRENCH CRIMP FEATURES

- 3-piece construction
- Captive center contact pin in cone assembly
- Spring-loaded coupling ring using a beryllium-copper crescent washer
- Freely rotating captured insert inside the clamp-nut assembly
- Stepped captured insert inside the clamp-nut assembly
- 360° metal-to-metal, sandwich braid capture of the outer-braid-to-cone assembly. (No insulation between the clamping surfaces)
- Machined barb on the end of the cone assembly

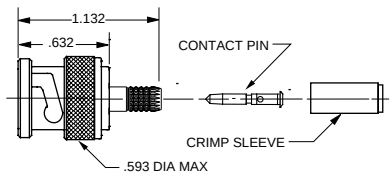
WRENCH CRIMP BENEFITS

- Faster, easier assembly
- Prevents pistoning of the center contact when cable is flexed. Does not rely on cable for positioning.
- Pre-loading the ring assures positive full mating. Reduces intermittences and rocking of mated connector. Assures mating in rugged applications.
- Permits braid and jacket clamping without rotary movement. Prevents breaking the center conductor. Prevents twisting/tearing the braid. Increases connector-to-cable tensile pull-strength.
- Grips the cable's outer jacket (25% of cable strength). Increases connector-to-cable tensile pull-strength.
- Provides a true metal-to-metal continuous shield which minimizes EMI/RFI, PTFE; jacket cold-flow problems. Increases connector-to-cable tensile pull-strength.
- Grabs the inside of the cable braid for easier assembly. Enhances the strength of the braid and jacket clamp.

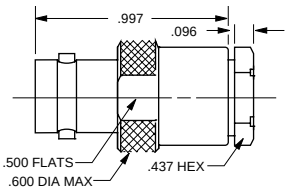
Hermetically Sealed Coax Connectors Available, Contact the Factory.

Miniature coax 20/220 series, BNC plugs & jacks

UPL220 Shown

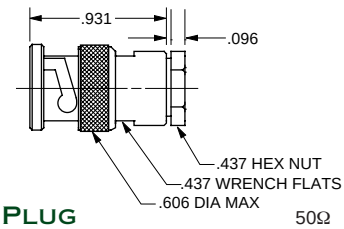


Cable Plug — Tool Crimp — 50Ω **PL220-**[1] / 75Ω **UPL220-**[1]



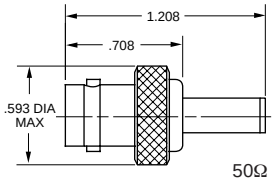
Cable Jack — Wrench Crimp — 50Ω **CJ20-**[1] / 75Ω **UCJ20-**[1]

PL20-1 Shown



Cable Plug — Wrench Crimp — 50Ω **PL20-**[1] / 75Ω **UPL20-**[1]

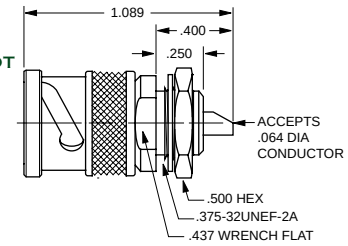
CJ220-001 Shown

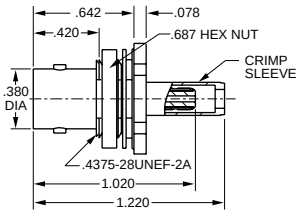


Cable Jack — Tool Crimp — 50Ω **CJ220-**[1] / 75Ω **UCJ220-**[1]

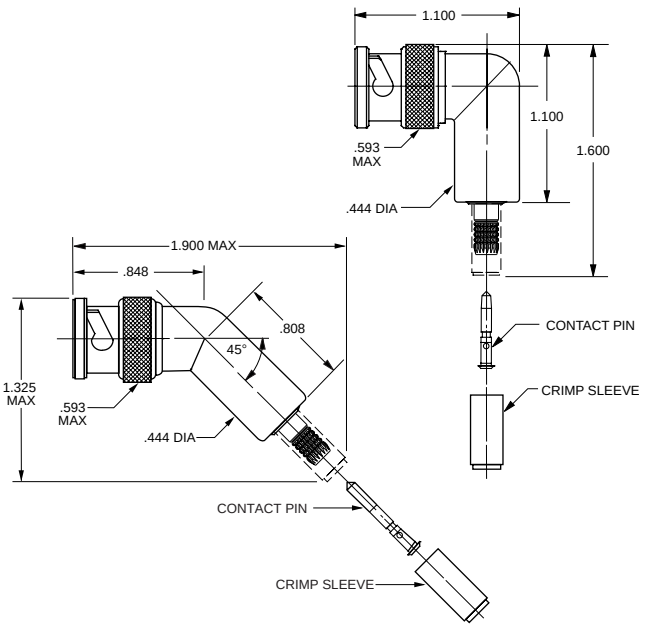
PL21-1 Shown

Bulkhead Plug
Front Mount, Solder Pot
50Ω **PL21**
75Ω **UPL21**
w/ Solder Lug
50Ω **PL21SL**
75Ω **UPL21SL**
Mounting Hole: C2.085



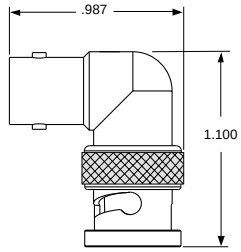


Bulkhead Cable Jack
Rear Mount, Tool Crimp
Mounting Hole: D3.100
50Ω **BJ220-**[1]
75Ω **UBJ220-**[1]



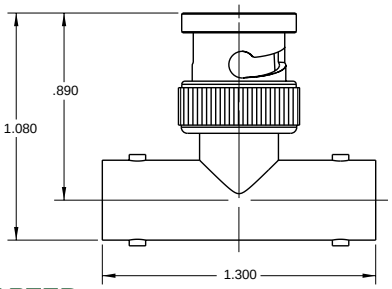
Cable Plug — 90° Right Angle, Full Crimp — 75Ω **UPLR220-**[1]

Cable Plug — 45° Angle, Full Crimp — 75Ω **UPLFF220-**[1]

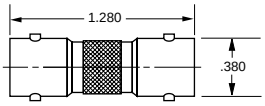


BNC Adapter
Right Angle
75Ω BNC **UADRMF220**

BN23 Shown



BNC "T" Adapter — 50Ω **BN23** / 75Ω **UBN23**

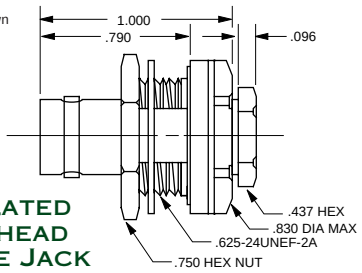


BNC Coupling Adapter (Barrel connector) — 50Ω **AD28** / 75Ω **UAD28**

[1] - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

Miniature coax 20/220 series, BNC bulkhead jacks

BJ26-1 Shown



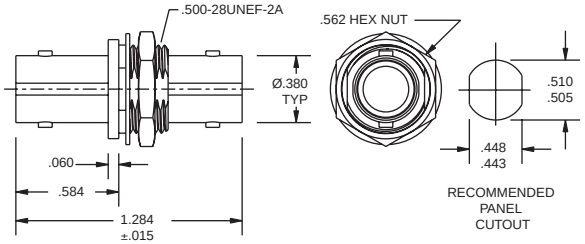
Insulated Bulkhead Cable Jack

Wrench Crimp, Rear mount

Mounting Hole: D2.187

GF-Ground filter version page 38

50Ω	**BJ26-** ⚠1
75Ω	**UBJ26-** ⚠1



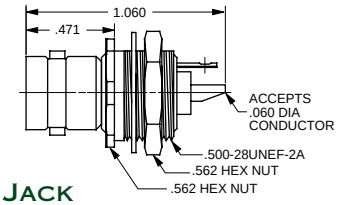
Non-Insulated Bulkhead Jack

Feed-through

Mounting Hole: DD3.156

50Ω	**BJ224**
75Ω	**UBJ224**

BJ27 Shown

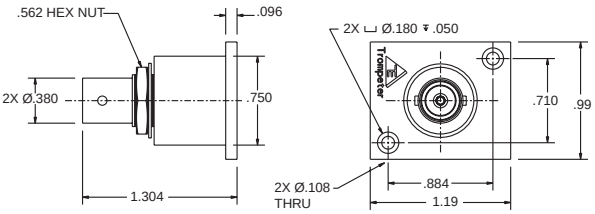


Insulated Bulkhead Jack

Front Mount , Solder pot

Mounting Hole: D3.147

50Ω	**BJ27**
75Ω	**UBJ27**



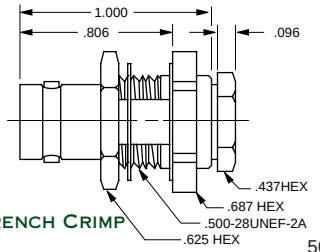
Insulated Bulkhead Jack

Recessed Insulated Adapter (RIA)

Feed-through

75Ω	**UBJ224-RIA**

BJ29-1 Shown

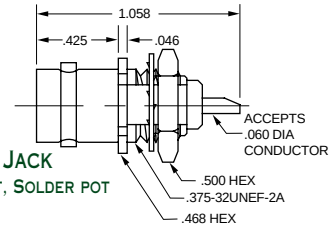


Bulkhead Cable Jack

Rear Mount, Wrench Crimp

Mounting Holes: D3.218 (D2.218-Cable Groups 6, 6E,51,52)

50Ω	**BJ29-** ⚠1
75Ω	**UBJ29-** ⚠1



Bulkhead Jack

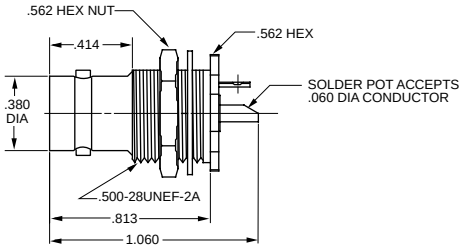
Front Mount, Solder pot

w/ Solder Lug

Mounting Hole: D5.125

50Ω	**BJ20**
75Ω	**UBJ20**
50Ω	**BJ20SL**
75Ω	**UBJ20SL**

BJ23 Shown



Bulkhead Jack Non-Insulated

50Ω **BJ23**

75Ω **UBJ23**

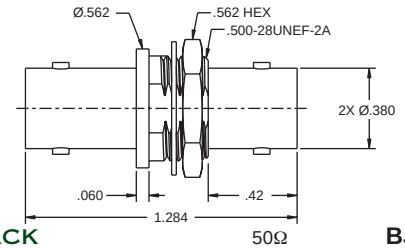
Mounting Hole: D3.147

Insulated Bulkhead Cable Jack

Rear mount, solder pot

Mounting Hole: D3.147

50Ω	**BJ21**
75Ω	**UBJ21**

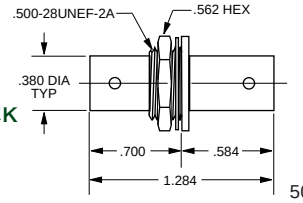


Insulated Bulkhead Jack

Feed-through

Mounting Hole: DD3.156

50Ω	**BJ228**
75Ω	**UBJ228**



Bulkhead Jack

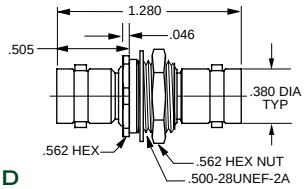
Feed-Through

Non-Insulated

Mounting Hole: DD3.100, (Hermetically sealed version available, call factory).

50Ω	**BJ24**
75Ω	**UBJ24**

BJ28 Shown



Insulated Bulkhead Jack

Feed-through

Mounting Hole: D3.156 (Hermetically sealed version available, call factory).

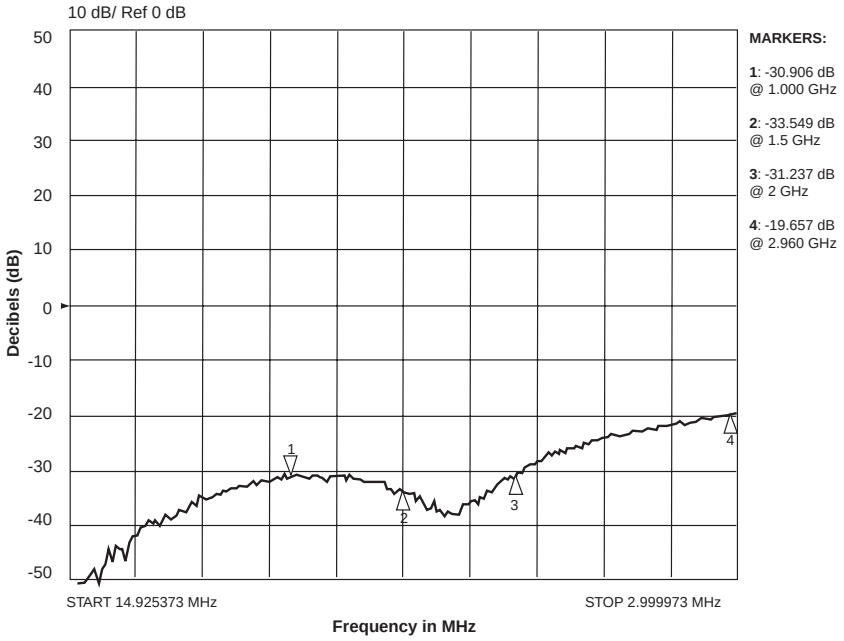
GF-Ground Filter version available page 38

50Ω	**BJ28**
75Ω	**UBJ28**

⚠1 - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

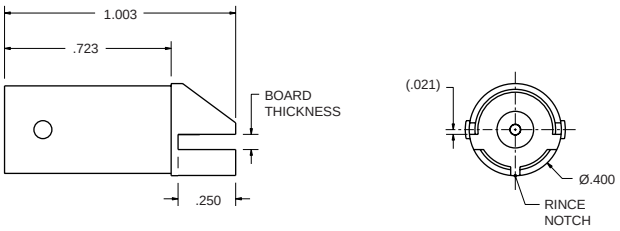
Edge Mount Circuit Board Jacks

Trompeter manufacturers a wide selection of circuit board jacks.



CIRCUIT BOARD EDGE MOUNT COAX "BNC" STYLE RECEPTACLE 75Ω

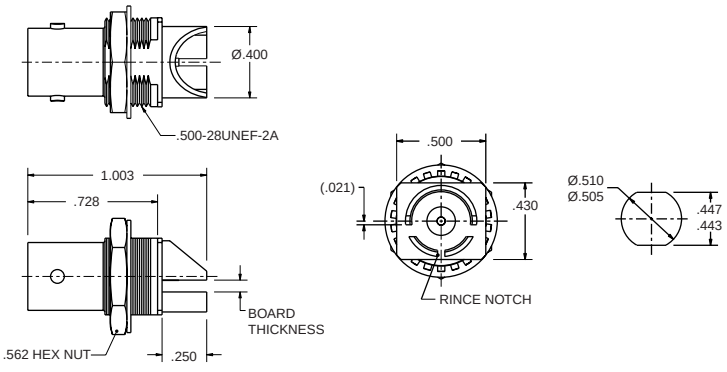
Part Number	Board Thickness
UCBJE20-1	.060 - .064
UCBJE20-2	.028 - .033



CIRCUIT BOARD BULKHEAD EDGE MOUNT COAX "BNC" STYLE RECEPTACLE 75Ω

Max Panel Thickness: .179

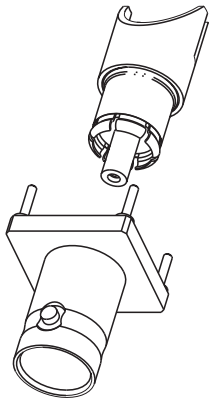
Part Number	Board Thickness
UCBBJE20-1	.060 - .064
UCBBJE20-2	.028 - .033
UCBBJE20-3	.084

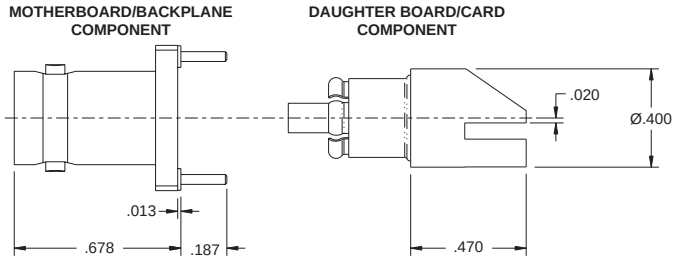


Separable Circuit Board Jacks

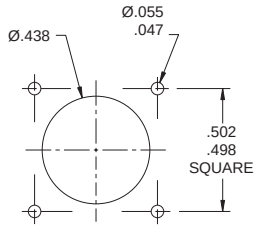
Trompeter manufacturers a wide selection of circuit board jacks.

TABLE 1	
PART NO.	DAUGHTER BOARD THICKNESS
UCBJSE20-1	.060 - .064
UCBJSE20-2	.028 - .033
UCBJSE20-3	.091 - .095
UCBJSE20-4	.045 - .049

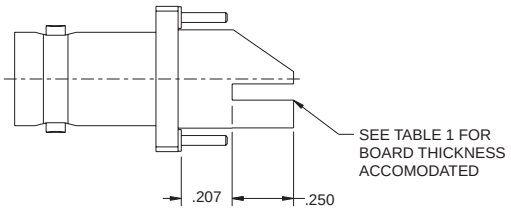




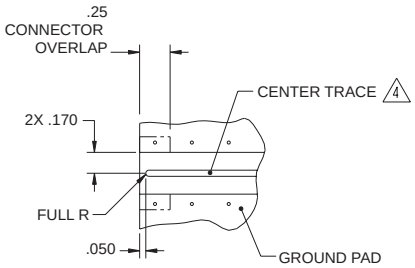
UCBJSE20-1 SHOWN



MOTHERBOARD COMPONENT MOUNTING DETAIL



MATED CONDITION



RECOMMENDED PCB LAYOUT

4 WIDTH OF CENTER TRACE TO BE DETERMINED BY PCB DESIGNER BASED ON PCB THICKNESS AND DIELECTRIC CONSTAT OF PCB MATERIAL. RECOMMENDATION ASSUMES THE USE OF COPPER BACKED CO-PLANNER MICROSTRIP DESIGN.

CIRCUIT BOARD JACK 75Ω SEPARABLE MOTHERBOARD TO DAUGHTERBOARD BNC JACK

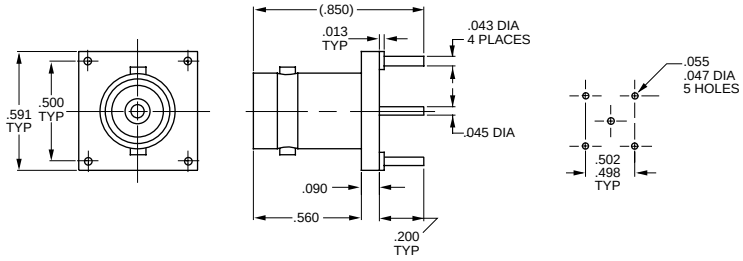
Part Number
UCBJSE20-(See Table 1)

Coax 20/220 series circuit board jacks

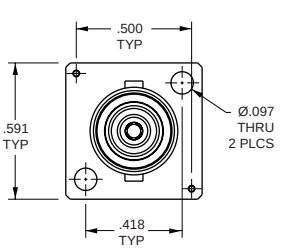
Circuit Board Jacks...

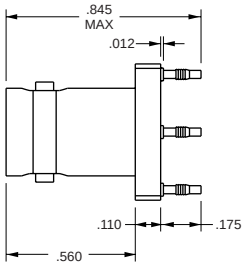
Trompeter manufacturers a wide selection of circuit board jacks, Shown below are the most commonly requested designs.

For custom designs, contact the factory or fill out the *Custom Products Request Form* on page 135 and fax it to us.



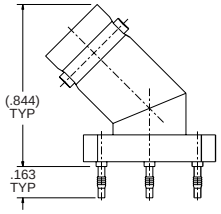
Circuit Board Jack
Straight, 4-leg 75Ω **UCBJ20F**

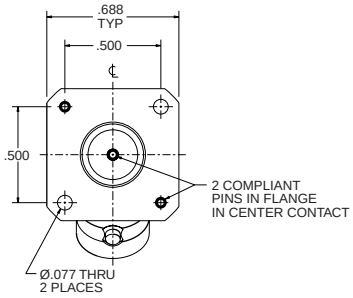




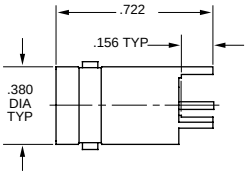
Coax BNC Surface Mount Compliant Tail & Mount Legs
Straight 75Ω **105-1829**

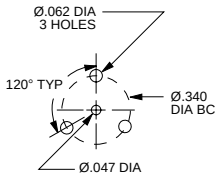
Leg Length to Accommodate
.090 - .130 Board



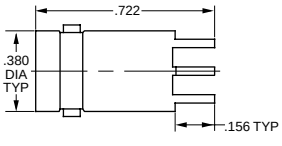


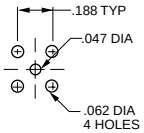
Coax BNC Surface Mount
45 Degree with Compliant Tail Contact & mount Legs 75Ω **105-2033**





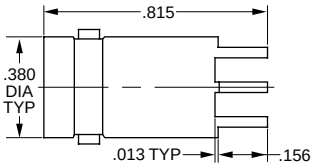
Circuit Board Jack
Straight, 3-leg 50Ω **CBJ20**

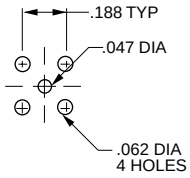




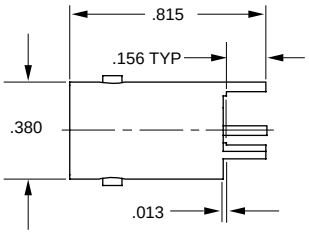
Circuit Board Jack
Straight, 4-leg 50Ω **CBJ22**

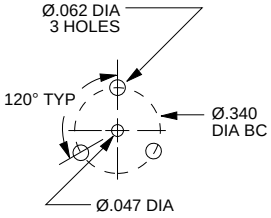
Coax 20/220 series circuit board jacks



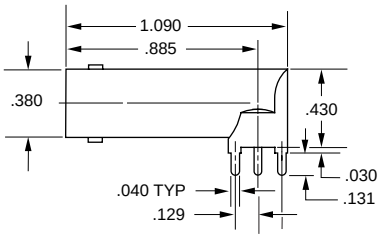


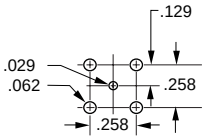
Circuit Board Jack
Straight, 4-leg — 75Ω — **UCBJ224**



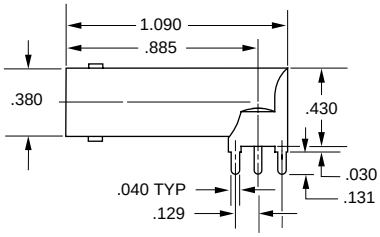


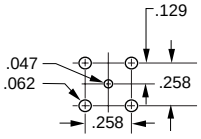
Circuit Board Jack
Straight, 3-leg — 75Ω — **UCBJ223**





Right Angle Coax BNC
Circuit Board Jack — 75Ω — **UCBJR220**

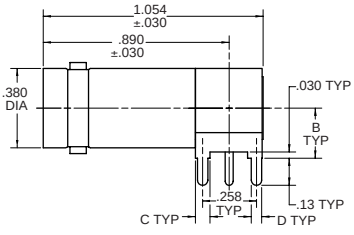


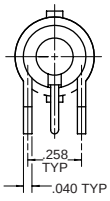


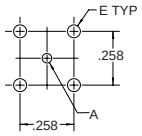
Right Angle Coax BNC
Circuit Board Jack — 50Ω — **CBJR220**

MODEL NO.	LTR CODE	OHM	A DIM	B DIM	C DIM	D DIM	E DIM
CBJR20	-	50	.046	.24	.090	.050	.0625
UCBJR20	-	75	.029	.24	.090	.050	.0625

MODEL NO.	LTR CODE	OHM	A DIM	B DIM	C DIM	D DIM	E DIM
CBJR20A	A	50	.046	.34	.090	.058	.070
UCBJR20A	A	75	.029	.34	.090	.058	.070





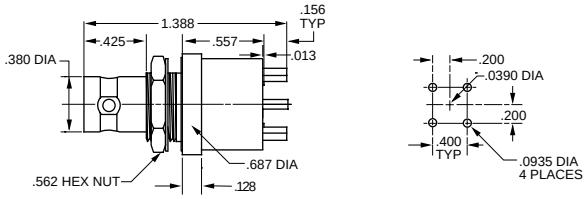


Circuit Board Jack
Right Angle, Tall Version

50Ω — **CBJR20A**
75Ω — **UCBJR20A**

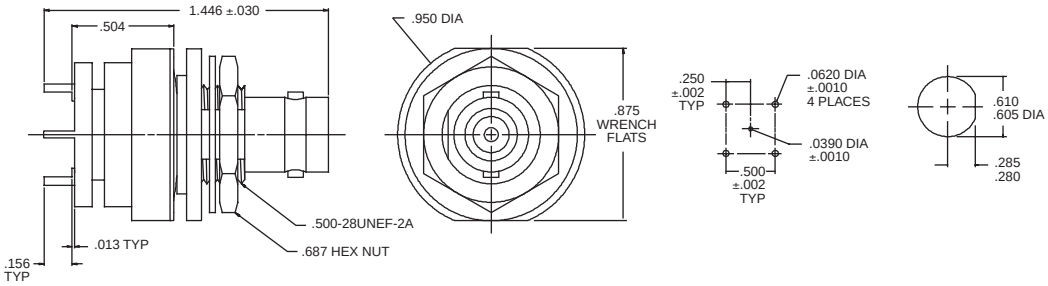
Coax 20/220 series circuit board jacks

Non-insulated Circuit Board Bulkhead Jack



Straight, 4-leg — 75Ω — **UCBBJ29**

Mounting Hole: D3.109

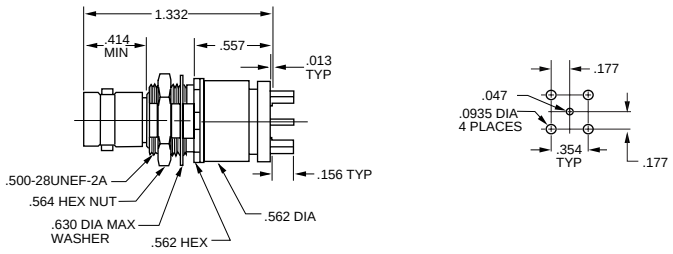


Insulated circuit board Bulkhead Jack Coaxial BNC Ground Filter Insulated 4-Post

Straight — 50Ω — **CBBJ26GF**

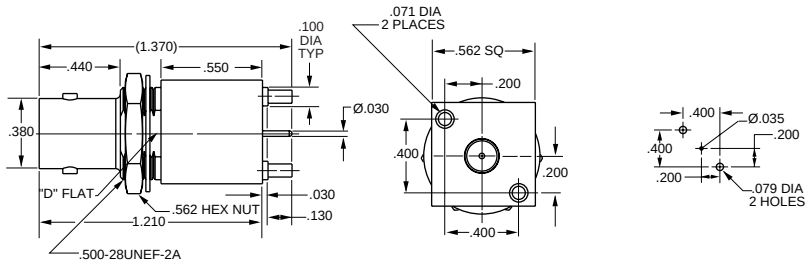
Mounting Hole: .093 — 75Ω — **UCBBJ26GF**

Insulated circuit board Bulkhead Jack



Straight — 50Ω — **CBBJ26**

Mounting Hole: D3.156

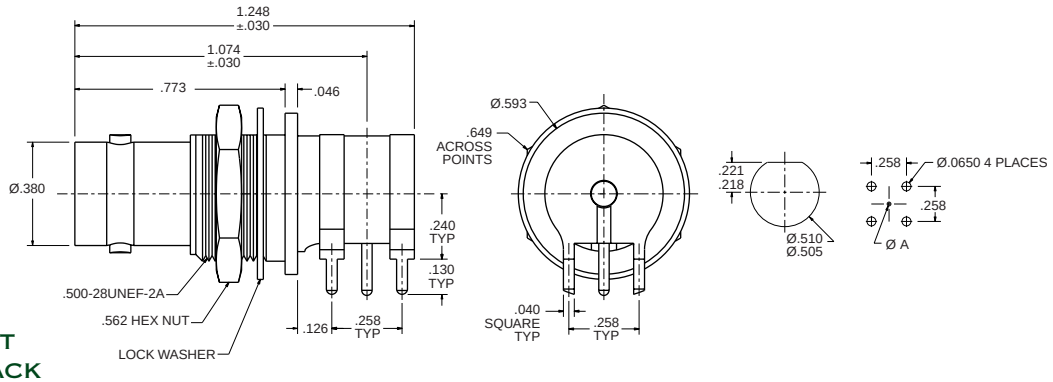


Circuit Board Bulkhead Jack

Straight — 75Ω — **UCBBJ23**

Mounting Hole: D3.060

MODEL NO.	LTR CODE	OHM	Ø A
CBBJR229	-	50	.046
UCBBJR229	-	75	.029

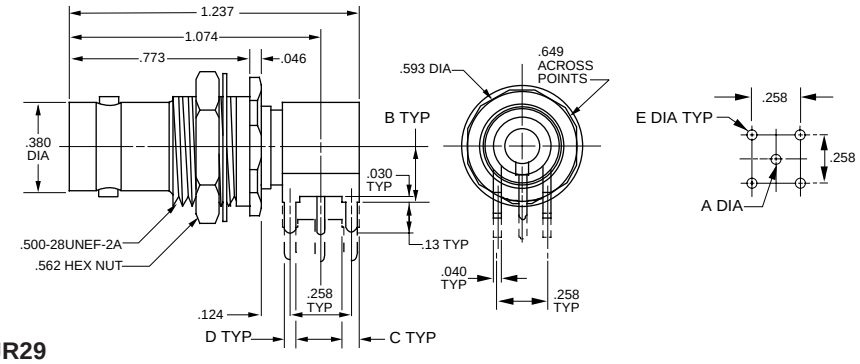


RIGHT ANGLE CIRCUIT BOARD BULKHEAD JACK

ONE PIECE BODY 50Ω **CBBJR229**
75Ω **UCBBJR229**

Maximum Panel Thickness: .179 D-Hole: D3

MODEL NO.	LTR CODE	OHM	A DIM	B DIM	C DIM	D DIM	E DIM
CBBJR29	-	50	.046	.24	.090	.050	.0625
UCBBJR29	-	75	.029	.24	.090	.050	.0625
CBBJR29A	A	50	.046	.34	.090	.058	.070
UCBBJR29A	A	75	.029	.34	.090	.058	.070



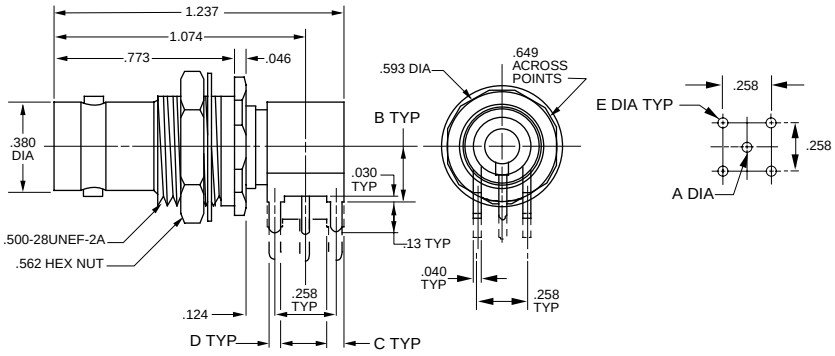
RIGHT ANGLE CIRCUIT BOARD BULKHEAD JACK

NON-INSULATED 50Ω **CBBJR29**
NON-INSULATED 75Ω **UCBBJR29**

*** Add "A" for tall versions**
Example: CBBJR29A

Mounting Holes: D3.156 (Insulated), D3.179 (Non-Insulated)

MODEL NO.	LTR CODE	OHM	A DIM	B DIM	C DIM	D DIM	E DIM
CBBJR26	-	50	.046	.24	.090	.050	.0625
UCBBJR26	-	75	.029	.24	.090	.050	.0625
CBBJR26A	A	50	.046	.34	.090	.058	.070
UCBBJR26A	A	75	.029	.34	.090	.058	.070



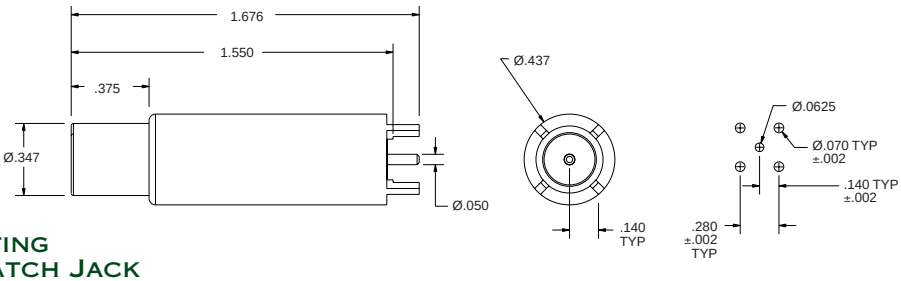
RIGHT ANGLE CIRCUIT BOARD BULKHEAD JACK

INSULATED 50Ω **CBBJR26**
INSULATED 75Ω **UCBBJR26**

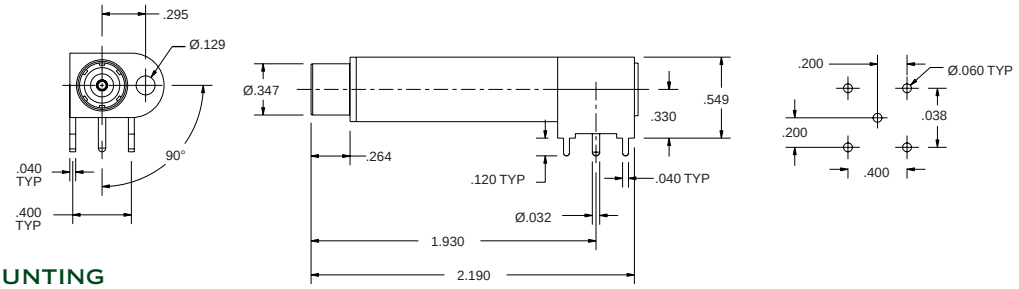
*** Add "A" for tall versions**
Example: CBBJR26A

Mounting Holes: D3.156 (Insulated), D3.179 (Non-Insulated)

Mini-WECO Coax circuit board jacks

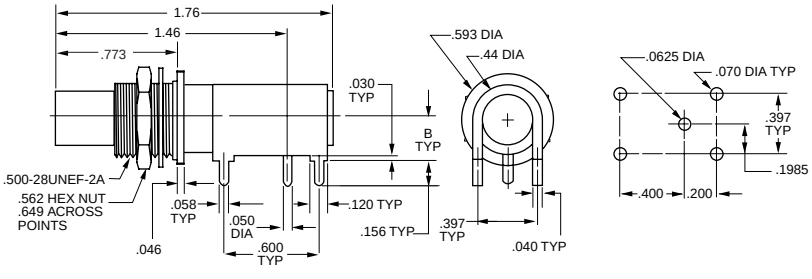


Circuit Board Mounting
Mini-WECo Coaxial Patch Jack
75Ω (.296 Size) **CBJ12**



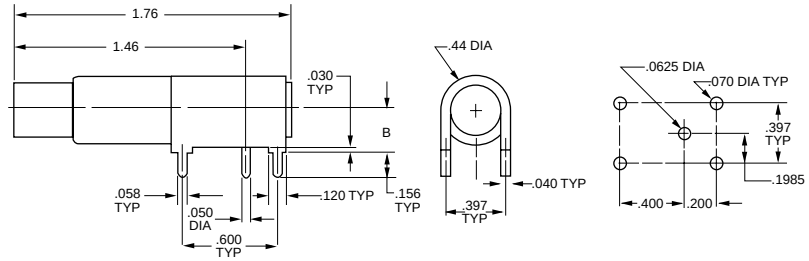
Circuit Board Mounting
Mini-WECo Coaxial Patch Jack
Right Angle
75Ω (.296 Size) **105-1880**

MODEL NO.	LTR CODE	B DIM
CBBJR12	-	.24
CBBJR12A	A	.34



Circuit Board Bulkhead Mounting
Mini-WECo Patch Jack
75Ω Right Angle **CBBJR12** B = .24
Long Leg Version **CBBJR12A** B = .34
Mounting Hole: D3.250

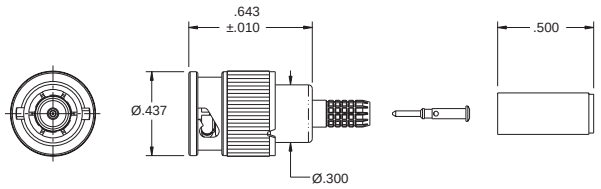
MODEL NO.	LTR CODE	B DIM
CBJR12	-	.24
CBJR12A	A	.34



Circuit Board Mounting
Mini-WECo Patch Jack
75Ω Right Angle **CBJR12** B = .24
Long Leg Version **CBJR12A** B = .34

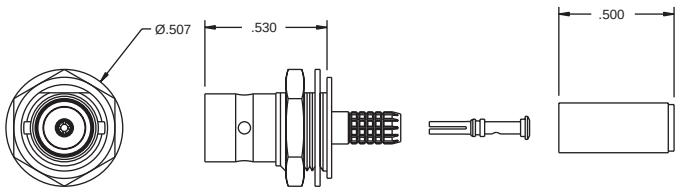
Miniature coax 250 series, mini-BNC plugs & jacks

The mini-BNC 250 RF connector series from Trompeter was designed specifically for DS3 telco coaxial central office applications to allow higher interconnect density while preserving the positive characteristics of the Trompeter full size BNC. In fact, the 250 series provides for higher density of interconnects in a given area.



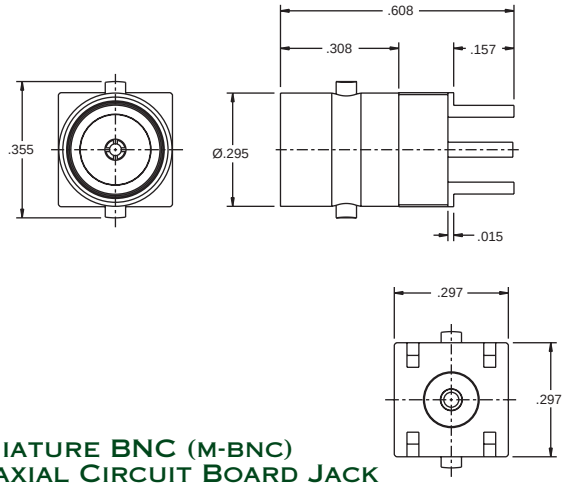
Miniature BNC (m-BNC) Coaxial Plug

Straight 75Ω **UPL250-**[1]



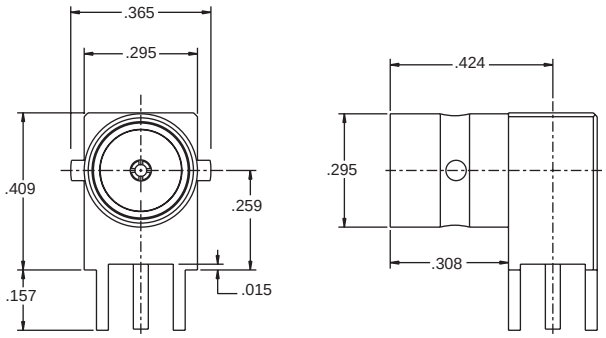
Miniature BNC (m-BNC) Coaxial Bulkhead Jack

Straight 75Ω **UBJ250-**[1]



Miniature BNC (m-BNC) Coaxial Circuit Board Jack

Straight 75Ω **UCBJ250**



Miniature BNC (m-BNC) Coaxial Circuit Board Jack

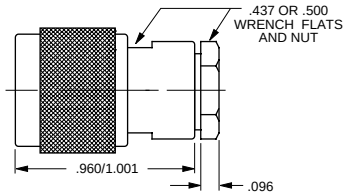
Right Angle 75Ω **UCBRJ250**

Part Number	Description	Plating	Bulkhead Mount	PCB OA Thickness
UPL250-026	Straight plug M-BNC series	ni	n/a	
UPL250-025	Straight plug M-BNC series	ni	n/a	
UPL250-014	Straight plug M-BNC series	ni	n/a	
UPL250-009	Straight plug M-BNC series	ni	n/a	
UPLR250-026	Right angle plug M-BNC series	ni	n/a	
UPLR250-025	Right angle plug M-BNC series	ni	n/a	
UBJ250-026	Bulkhead cable jack	ni	yes	
UBJ250-025	Bulkhead cable jack	ni	yes	
UCBJ250-G	Straight PCB-mounted jack	au	no	
UCBJ250-N	Straight PCB-mounted jack	ni	no	
UCBBJ250-G	Straight PCB-mounted jack	au	yes	
UCBBJ250-N	Straight PCB-mounted jack	ni	yes	
UCBJR250-G	Right angle PCB-mounted jack	au	no	
UCBJR250-N	Right angle PCB-mounted jack	ni	no	
UCBBJR250-G	Right angle PCB-mounted jack	au	yes	
UCBBJR250-N	Right angle PCB-mounted jack	ni	yes	
UCBJE250-1	PCB-edge mounted SMT jack	au	no	0.032
UCBJE250-2	PCB-edge mounted SMT jack	au	no	0.064
UCBBJE250-1	PCB-edge mounted SMT jack	au	yes	0.032
UCBBJE250-2	PCB-edge mounted SMT jack	au	yes	0.064
UAD258	M-BNC jack to M-BNC jack	ni	yes	
	adapter, Barrel adapter			

[1] - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

Miniature coax threaded 40/240 series, TNC

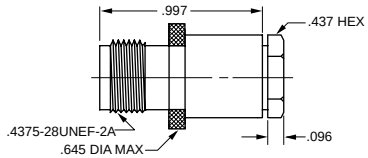
PL40-1 Shown



Cable Plug — Wrench Crimp

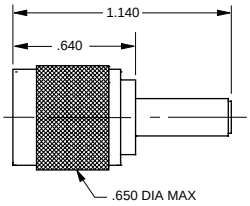
50Ω	**PL40-** ⚠1
75Ω	**UPL40-** ⚠1

CJ40-1 Shown



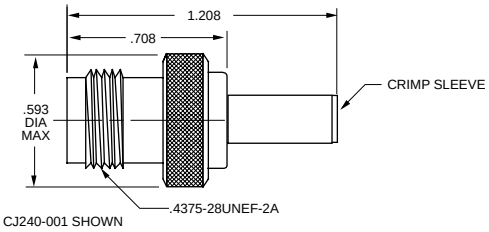
Cable Jack — Wrench Crimp

50Ω	**CJ40-** ⚠1
75Ω	**UCJ40-** ⚠1



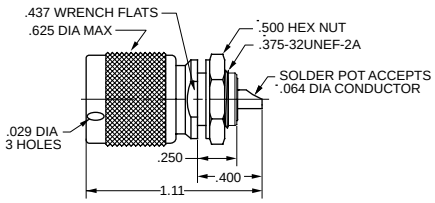
Cable Plug — Tool Crimp

50Ω	**PL240-** ⚠1
75Ω	**UPL240-** ⚠1



Cable Jack — Tool Crimp

50Ω	**CJ240-** ⚠1
75Ω	**UCJ240-** ⚠1



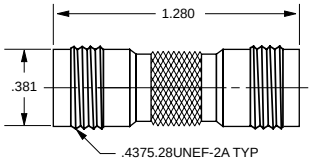
Bulkhead Plug — Front mount, Solder pot

50Ω	**PL41**
75Ω	**UPL41**

w/ Solder Lug

50Ω	**PL41SL**
75Ω	**UPL41SL**

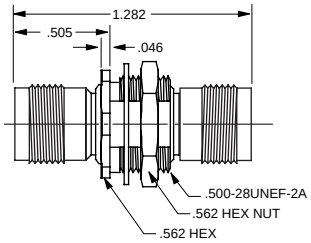
Mounting Hole: C2.093



TNC Coupling Adapter (Barrel connector)

50Ω	**AD48**
75Ω	**UAD48**

BJ48 Shown



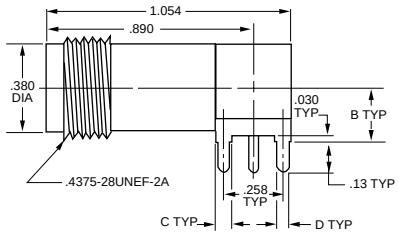
Insulated Bulkhead Jack — Feed-through

50Ω	**BJ48**
75Ω	**UBJ48**

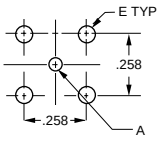
Mounting Hole: D3.156

GF-Ground filter version page 38

MODEL NO.	LTR CODE	OHM	A DIM	B DIM	C DIM	D DIM	E DIM
CBJR40	-	50	.046	.24	.070	.050	.0625
UCBJR40	-	75	.029	.24	.070	.050	.0625
CBJR40A	A	50	.046	.34	.090	.058	.070
UCBJR40A	A	75	.029	.34	.090	.058	.070



Right Angle Circuit Board Mounting TNC Receptacle



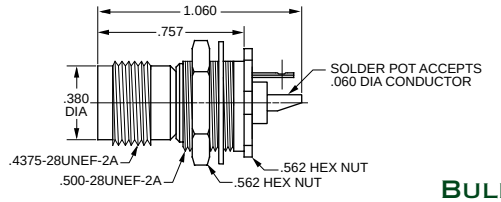
50Ω **CBJR40**

75Ω **UCBJR40**

Add "A" for tall versions (see chart)

⚠1 - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

BJ41 Shown

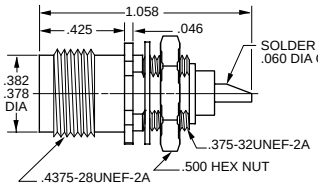


INSULATED BULKHEAD JACK
REAR MOUNT, SOLDER POT

50Ω **BJ41**
75Ω **UBJ41**

Mounting Hole: D3.147

BJ40 Shown



BULKHEAD JACK
SOLDER POT

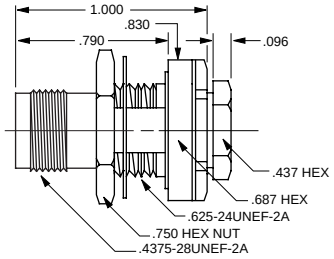
50Ω **BJ40**
75Ω **UBJ40**

w/ SOLDER LUG

50Ω **BJ40SL**
75Ω **UBJ40SL**

Mounting Hole: D5.125

BJ46-1 Shown



INSULATED BULKHEAD JACK
REAR MOUNT, WRENCH CRIMP

50Ω **BJ46-**[1]
75Ω **UBJ46-**[1]

Mounting Hole: D2.187

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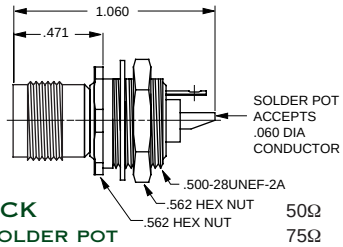
BJ47 Shown

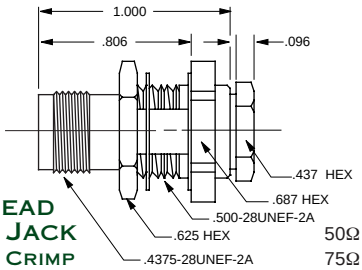


INSULATED BULKHEAD JACK
FRONT MOUNT, SOLDER POT

50Ω **BJ47**
75Ω **UBJ47**

Mounting Hole: D3.147

BJ49-1 Shown

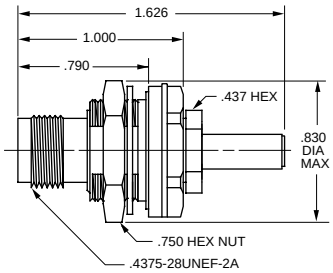


BULKHEAD CABLE JACK
WRENCH CRIMP

50Ω **BJ49-**[1]
75Ω **UBJ49-**[1]

Mounting Hole: D3.218 / D2.218 (Cable Groups 6, 6E,51,52)

BJ246-001 Shown

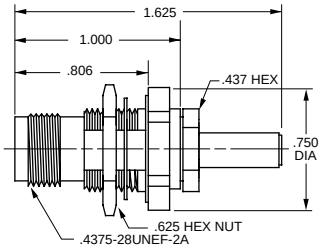


INSULATED BULKHEAD JACK
REAR MOUNT, TOOL CRIMP

50Ω **BJ246-**[1]
75Ω **UBJ246-**[1]

Mounting Hole: D2.187

GF-Ground filter version pg 38



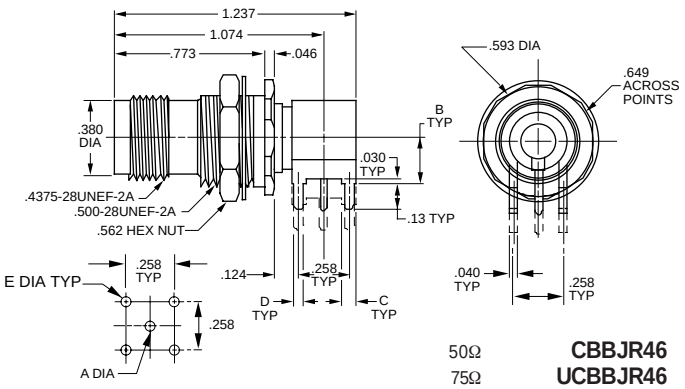
BULKHEAD CABLE JACK
TOOL CRIMP

50Ω **BJ249-**[1]

Mounting Hole: D3.218
D2.218 (Cable Groups 6,6E,51,52)

CBBJR46 Shown

MODEL NO.	LTR CODE	OHM	A DIM	B DIM	C DIM	D DIM	E DIM
CBBJR46	-	50	.046	.24	.090	.050	.0625
UCBBJR46	-	75	.029	.24	.090	.050	.0625
CBBJR46A	A	50	.046	.34	.090	.058	.070
UCBBJR46A	A	75	.029	.34	.090	.058	.070



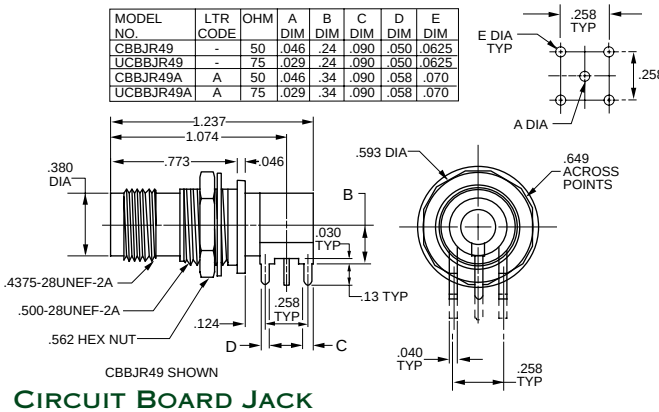
INSULATED CIRCUIT BOARD JACK
RIGHT ANGLE

"A" refers to tall versions

50Ω **CBBJR46**
75Ω **UCBBJR46**
50Ω **CBBJR46A**
75Ω **UCBBJR46A**

Mounting Hole: D3.156

MODEL NO.	LTR CODE	OHM	A DIM	B DIM	C DIM	D DIM	E DIM
CBBJR49	-	50	.046	.24	.090	.050	.0625
UCBBJR49	-	75	.029	.24	.090	.050	.0625
CBBJR49A	A	50	.046	.34	.090	.058	.070
UCBBJR49A	A	75	.029	.34	.090	.058	.070



CBBJR49 SHOWN

CIRCUIT BOARD JACK
BULKHEAD MOUNT
RIGHT ANGLE

Add "A" for tall versions

50Ω **CBBJR49**
75Ω **UCBBJR49**

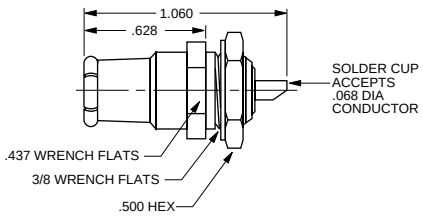
Mounting Hole: D3.230

[1] - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

Push-on coax 120 series

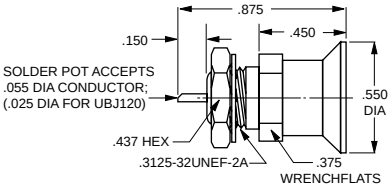
These BNC/TNC push-on jacks and plugs are designed for (U)PL123 blind mate rack and panel applications. The male plugs mate (U)PL122 with any BNC/TNC jack and are ideally suited for test/cable applications.

PL121 Shown



Panel Plug	50Ω	**PL121**
Front Mount, Solder Pot	75Ω	**UPL121**
w/ solder lug	50Ω	**PL121SL**
	75Ω	**UPL121SL**

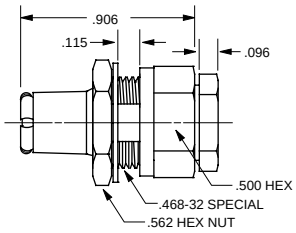
Mounting Hole: C2.093



Bulkhead Jack	50Ω	**BJ120**
Front Mount, Solder Lug	75Ω	**UBJ120**
w/ solder lug	50Ω	**BJ120SL**
	75Ω	**UBJ120SL**

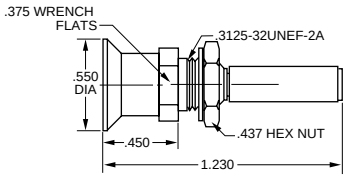
Mounting Hole: C1.120

PL122 Shown



Panel Plug	50Ω	**PL122-** ⚠1
Rear Mount, Cable Entry	75Ω	**UPL122-** ⚠1

Mounting Hole: DD5.187

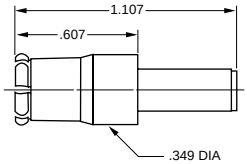


Bulkhead Cable Jack	50Ω	**BJ120C-** ⚠1
Front Mount, Tool Crimp	75Ω	**UBJ120C-** ⚠1

Limited Cable Groups

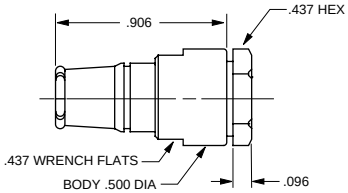
Mounting Hole: C1.120

PL223-001 Shown



Cable Plug	50Ω	**PL223-** ⚠1
Tool Crimp	75Ω	**UPL223-** ⚠1

PL123-2 Shown

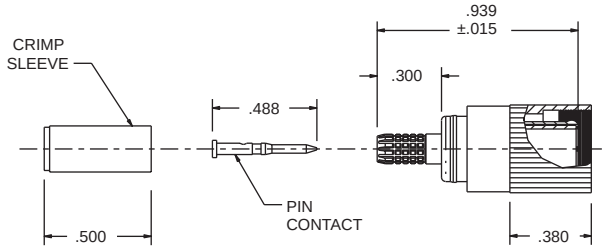


Cable Plug	50Ω	**PL123-** ⚠1
Wrench Crimp	75Ω	**UPL123-** ⚠1

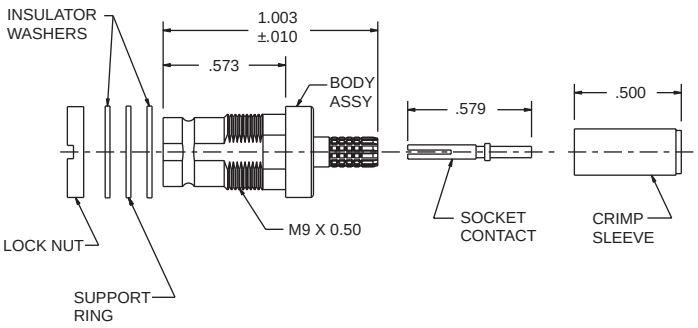
⚠1 - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

Trompeter's 110 series connectors are 30% smaller than the standard BNC currently used for the Coax Central Office termination. With this space savings, 72 interconnects can be placed in the same 1 rack unit panels as 52 BNCs. The 110 series of connectors is available in the following: cable plug, cable jack, a U-Link for connecting two jacks, a right angle circuit board jack, and BNC to DIN adapters.

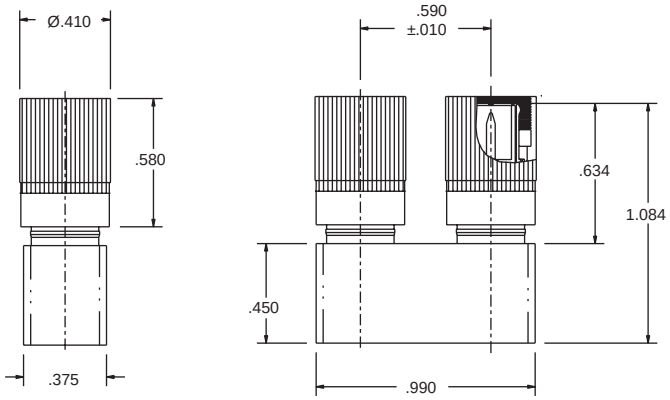
Trompeter's 110 series works with all the cables currently in use in the central office environment and like all Trompeter connectors, can be made to accommodate any coax cable changes.



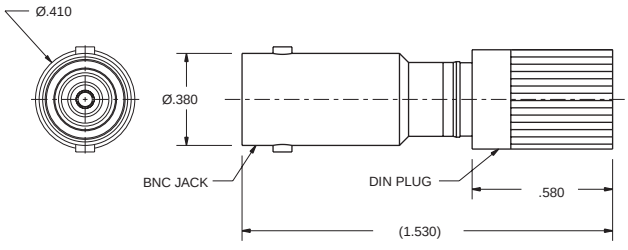
RF Coaxial 75 ohm DIN
Threaded Full Crimp Cable Plug — **UPL110-△1**



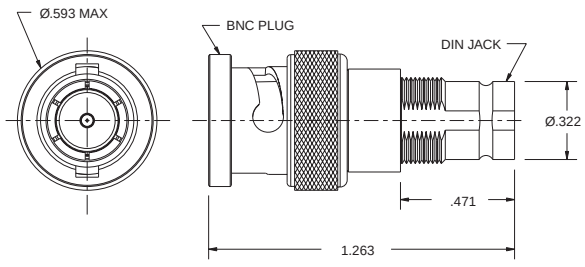
RF Coaxial 75 ohm DIN
Jack Threaded Connector
MEETS REQ OF IEC 169-13 — **UBJ110-△1**



Dual Coaxial DIN Connector "U-Link" 75 ohm With Two Plugs
Based on 169-13 Specification — **105-1496**



Adapter 75 ohm BNC Jack to 75 ohm DIN Plug
UADF20M110



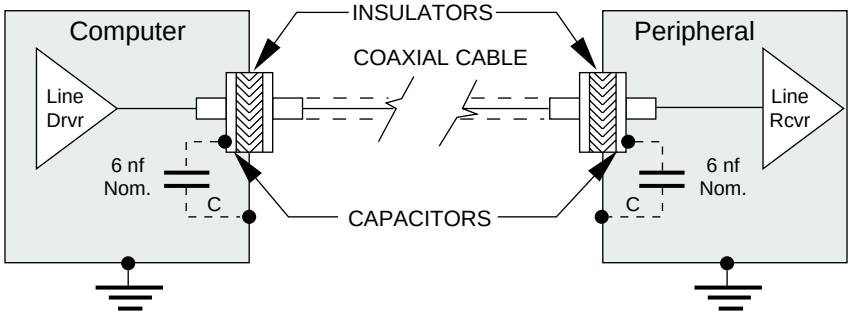
Adapter 75 ohm BNC Plug to 75 ohm DIN Jack
UADM20F110

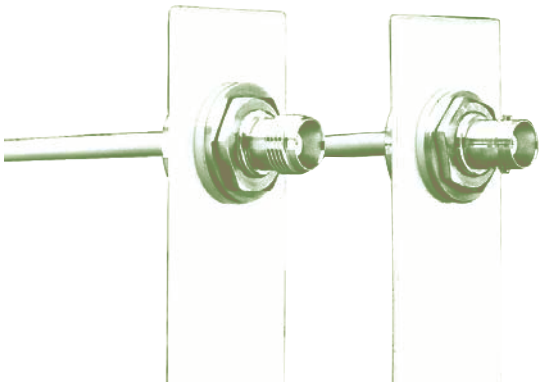
△1 - *Refers to Cable Group Table - See pages 91-133.*

Coaxial ground filter bulkhead jacks

Coaxial Ground Filter Bulkhead Jacks

*Designated in catalog pages by "**GF**".*





These connectors reduce radiated electrical noise to meet the EMI/RFI requirements of F.C.C. Regulation on RFI Interference-Part 15, Subpart J, as a result of Docket 20780, which limits allowable computer and peripheral equipment emissions to a range of 20 to 1000 MHz. Radiated interference from HF components and electrical pulse harmonics are avoided by using a built-in capacitor which acts as a high pass filter to attenuate spurious HF signals while bypassing ground loop, directing contact current flow harmlessly to ground.

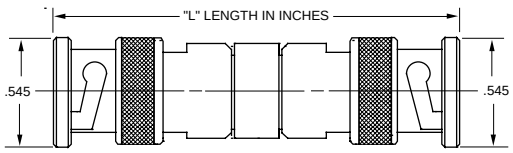
Ground Filter Specifications

RF Insertion Loss: ..... 0.1 dB max. to 1 GHz
Dissipation Factor: ..... 5% max. @ 1 KHz & 25°C
Voltage Rating: ..... 200 VDC @ sea level & 25°C
Capacitance: ..... 4nF min., 10nF max. @ 1 KHz & 25°C
Insulation Resistance: ..... 1 Gigohm min.@ 200 VDC & 25*C
Dielectric Withstanding
Voltage: ..... 500 VDC @ sea level & 25°C for 1 minute
Filter RF Attenuation: 1MHz- 1dB, 3MHZ- 2dB
10MHz- 8dB, 30MHz- 16dB, 100/300/1000MHz- 30dB

Connector Type	Mounting Hole	Ohm	Part Number
BNC, Wrench Crimp	D8.094	50Ω/75Ω	(U)BJ26GF- [1]
BNC, Tool Crimp	D8.094	50Ω	BJ226GF- [1]
BNC, Feed-through	D8.094	50Ω/75Ω	(U)BJ28GF
BNC, Circuit Board	D8.093	50Ω/75Ω	(U)CBBJ26GF
TNC, Wrench Crimp	D8.094	50Ω/75Ω	(U)BJ46GF- [1]
TNC, Tool Crimp	D8.094	50Ω	BJ246GF- [1]
TNC, Feed-through	D8.094	50Ω/75Ω	(U)BJ48GF
TNC, Circuit Board	D8.093	50Ω/75Ω	(U)CBBJ46GF

Designate 75Ω version by prefix "U"

BNC Attenuator

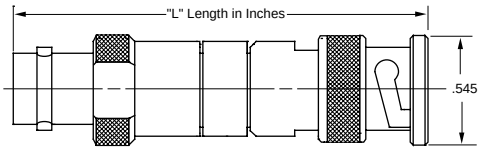


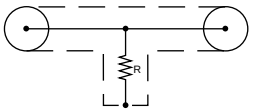
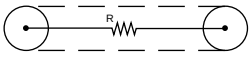
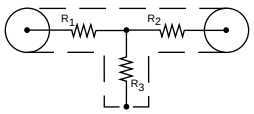
Replace Ω with impedance and dB with dB required.
Example: TNA-75-20-BNC

Connector Type	L	Part Number
50Ω plug & jack	3.24"	TNA-Ω-dB-BNC
75Ω plug & jack	3.24"	UTNA-Ω-dB-BNC
50Ω plugs	3.17"	TNA-Ω-dB-BNC/M
75Ω plugs	3.17"	UTNA-Ω-dB-BNC/M
50Ω jacks	3.30"	TNA-Ω-dB-BNC/F
75Ω jacks	3.30"	UTNA-Ω-dB-BNC/F

Video frequency 10 MHz max. attenuation 20 dB max.

BNC Pads

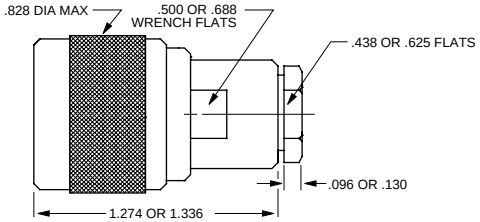


Schematic	Impedance	L	Part Number
	50Ω	2.16"	TNA2-R
	75Ω	2.16"	UTNA2-R
	50Ω	2.16"	TNA3-R
	75Ω	2.16"	UTNA3-R
	50Ω	3.23"	TNA4-R
	75Ω	3.23"	UTNA4-R

[1] - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

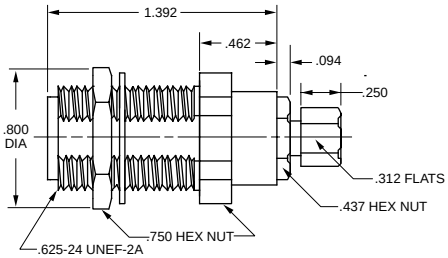
Trompeter's 90 Series incorporates many of the features of our BNC lines including 3-piece wrench crimp configuration, gold plated captive center contacts, beryllium copper female contacts, and PTFE dielectrics. The 90 Series will also accommodate nonflammable plenum coax cables.

PL95-1 and -6 Shown

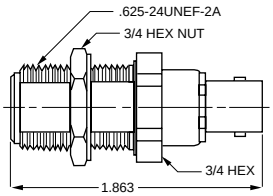


CABLE PLUG 50Ω **PL95-** ⚠1
WRENCH CRIMP 75Ω **UPL95-** ⚠1
Large body versions are available, contact the factory.
Size depends on cable group.

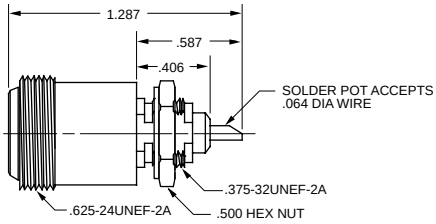
BJ95-141 Shown



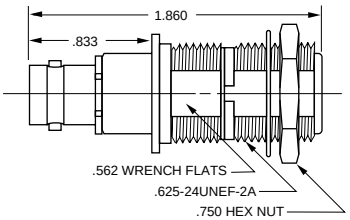
BULKHEAD CABLE JACK 50Ω **BJ95-** ⚠1
WRENCH CRIMP 75Ω **UBJ95-** ⚠1
Mounting Holes: DD4.310 (Standard body)
DD1.310 (Cable Groups -6A/6B/6E, -48, -50)



ADAPTER 50Ω **AD95**
N TO BNC 75Ω **UAD95**
Mounting Hole: DD4.310

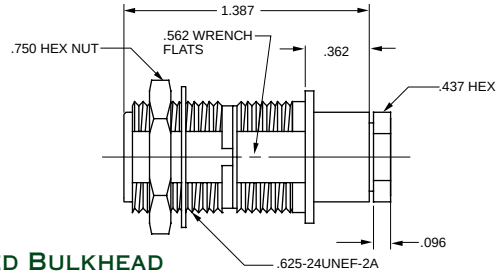


BULKHEAD JACK 50Ω **J95**
SOLDER POT 75Ω **UJ95**
Mounting Hole: D5.310

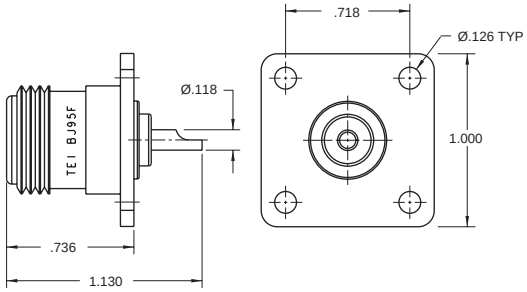


INSULATED ADAPTER 50Ω **ADI95**
N TO BNC 75Ω **UADI95**
Mounting Hole: DD4.203

BJ96-1 Shown

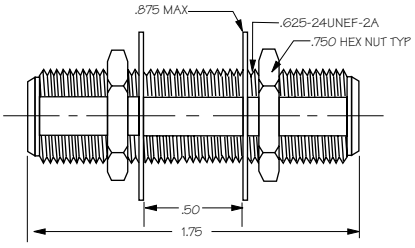


INSULATED BULKHEAD CABLE JACK 50Ω **BJ96-** ⚠1
WRENCH CRIMP 75Ω **UBJ96-** ⚠1
Mounting Hole: DD4.203



FLANGE MOUNT BULKHEAD JACK 50Ω **BJ95F**
N, SOLDER POT 75Ω **UJ95F** (Not Shown)

BJ98-2 Shown

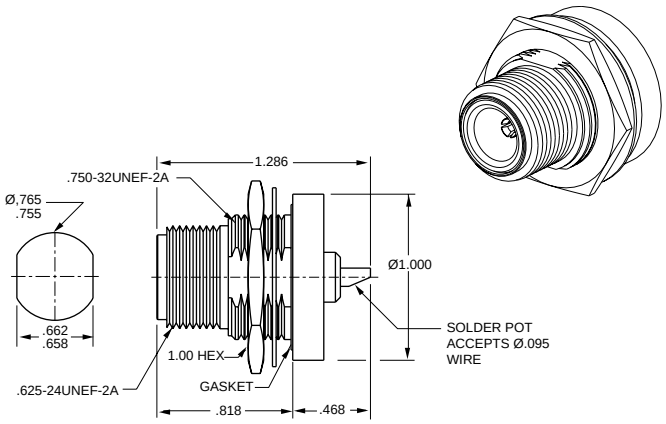


FEED-THRU JACK 50Ω **BJ98-2**
75Ω **UBJ98-2**
Mounting Hole: DD4.50
For panels up to 2.25" thick. For thicker panels call the factory.

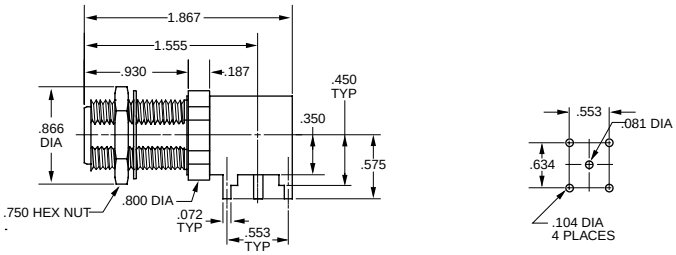
⚠1 - *Refers to Cable Group Table, see pages 91-133. "D" mounting holes are on page 54*

Coax "N" connectors, 90 series
coax "F" connectors 130 series

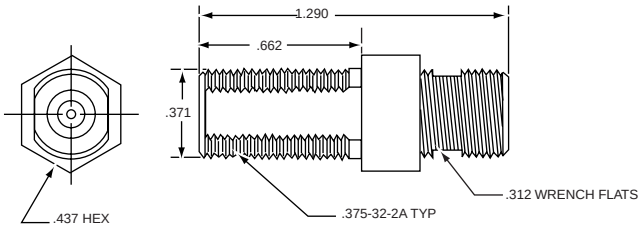
Trompeter's "N" Connector Series is utilized for interconnection on antenna towers, lightning protection boxes, power distribution and ancillary systems. Trompeter offers a complete line of remarkable new 50Ω "N" connectors for current industry standard flexible and corrugated cables.



"N" Type Bulkhead Jack 50Ω **BJ92**
Panel Thk: .250 MAX

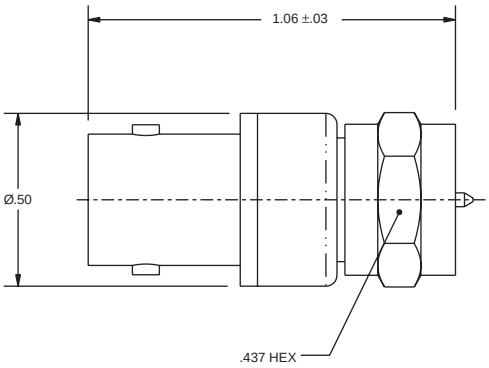


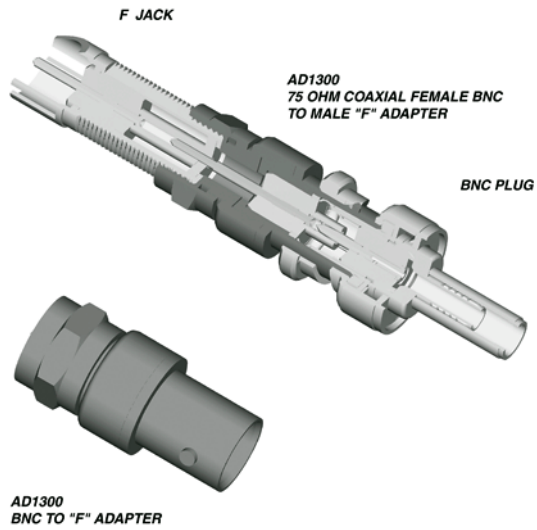
Right Angle Circuit Board Jack
Type "N" Coaxial Bulkhead
Mount Receptacle 50Ω **CBBJR99**
DD4.310



F ADAPTER **AD131**

Between Series Coaxial Female
BNC to Male "F" Adapter 75Ω **AD1300**

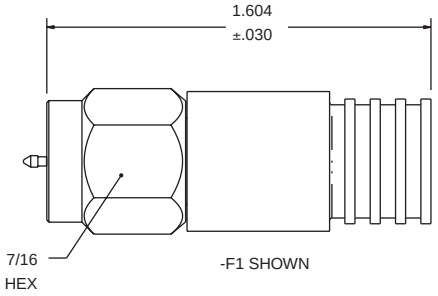




The connector solution for CATV appliances! Whether you are dealing with a set-top box or a cable modem, convert your problem F connector jack to a BNC at the jack or socket and enable Carrier Class performance. Face it, the single largest technical problem with the HFC delivery network used by cable TV service providers is the F connector. The F was selected back when CATV was a one way residential only entertainment delivery system for television.

What better way to bring your system performance up to Carrier Class than to convert from the F connector to the Telco standard connector, the Trompeter BNC series? Now it's simply using the Trompeter AD1300 between series adapter (drawing above), which converts your F jack into a BNC jack at the device.

Cable group table, See pages 91-133.

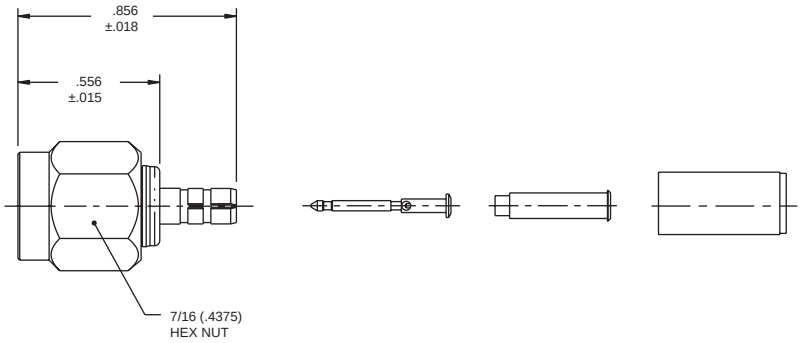


PART NO	A DIM	CABLES ACCOMMODATED
PL130C-F1	.360	COMMSCOPE 6 SERIES QUAD (P/N 5740) (P/N F6SSVV)
PL130C-F2	.324	BELDEN 6 SERIES (P/N 82120) (P/N 9114)
PL130C-F3	.360	COMMSCOPE 59 SERIES (P/N S 59 HEC)

75 Ohm Male Type "F" Coaxial Cable Plug

(Patent #5860833)

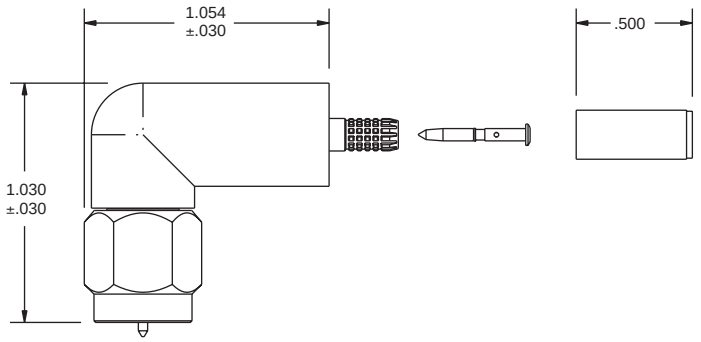
PL130C-(see dash number from chart on right)



75 Ohm "F" Type Tool Crimp Plug

PL130SC-(see dash number from chart on right)

DASH NO	CABLES ACCOMMODATED	A HEX
-001	RG-178, -196	.178
-002	HEWLETT PACKARD 8120 - 1107	.197
-003	RG-174, 316	.178
-004	RG-179, 187	.178
-005	NORTHERN ELECTRIC DBL - SHLD RG-187	.197
-006	GC875GPI, GRUMMAN DBL - SHLD RG-188	.197
-007	275-3991, MICRODOT	.178
-008	RG-195, -180 421-111, ESSEX	.178
-009	8218, BELDEN YR23023 BELDEN 21-597, ESSEX	.178
-011	RG-58, RG-141, RG-303, TCC-50-2	.213
-013	RG-59	.255
-013A	TCC-75-2	.255
-013B	RG-62	.255
-014	8212, BELDEN	.255
-015	730A, LUCENT	.290
-015A	RG-71	.290
-016	724, LUCENT 8281, BELDEN	.324
-017	RG-6	.344
-018	9268, BELDEN	.255
-019	8279, BELDEN	.255
-020	9248, BELDEN	.290
-021	88240, BELDEN	.213
-022	88241, 88269, BELDEN	.255
-023	89108, BELDEN	.255
-024	89120, BELDEN	.290
-025	734A, LUCENT	.255
-026	735A, LUCENT	.178
-027	KS19224L2, LUCENT	.178

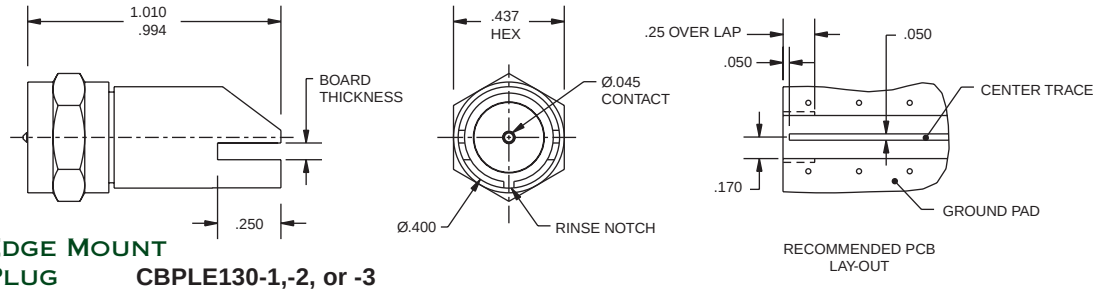


75 Ohm Right Angle "F" style Full Crimp Cable Plug

PLR130SC-(see dash number from chart on right)

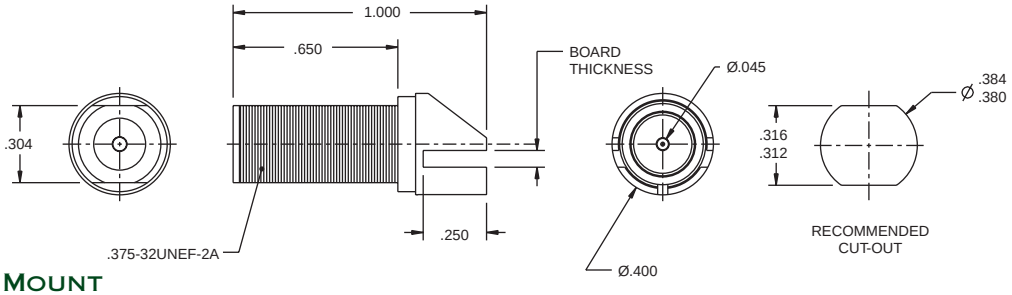
COAX "F" CONNECTORS 130 SERIES

PART NO	BOARD THICKNESS
CBPLE130-1	.060 - .064
CBPLE130-2	.028 - .033
CBPLE130-3	.090 - .094

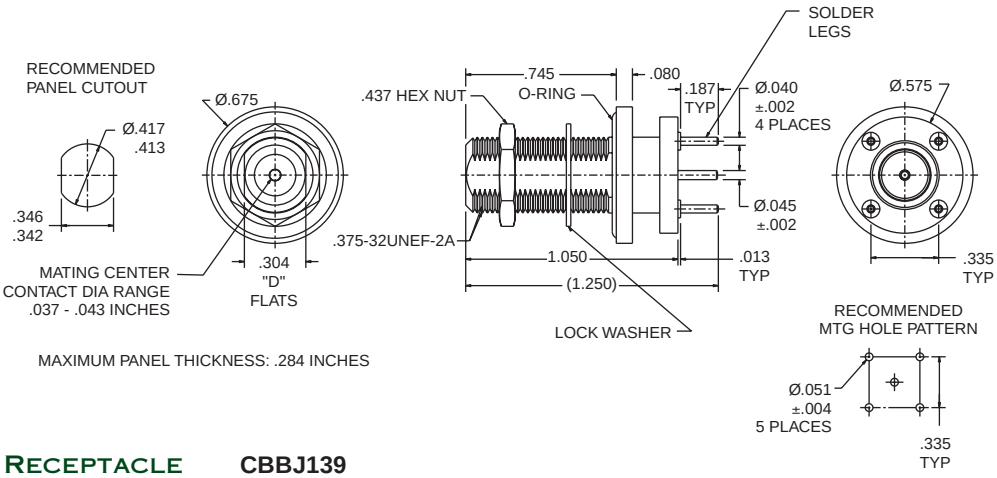


CIRCUIT BOARD EDGE MOUNT
"F" STYLE MALE PLUG **CBPLE130-1,-2, or -3**

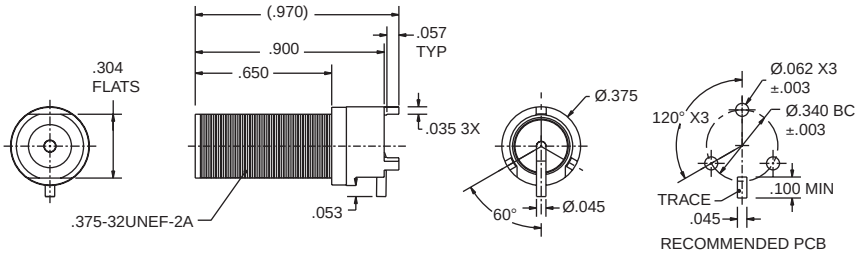
PART NO	BOARD THICKNESS
CBJE130-1	.060 - .064
CBJE130-2	.028 - .033
CBJE130-3	.090 - .094



CIRCUIT BOARD EDGE MOUNT
"F" STYLE FEMALE JACK **CBJE130-1, -2, or -3**

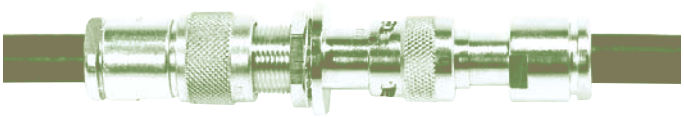


"F" SERIES, BULKHEAD,
CIRCUIT BOARD MOUNT RECEPTACLE **CBBJ139**



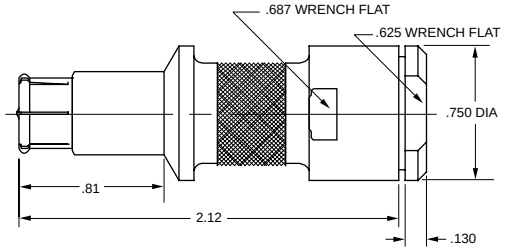
MATING CENTER CONTACT RANGE Ø.024 - .042

"F" SERIES 3-POST CIRCUIT BOARD MOUNT RECEPTACLE WITH SPECIAL RIGHT ANGLE CONTACT **105-2137**

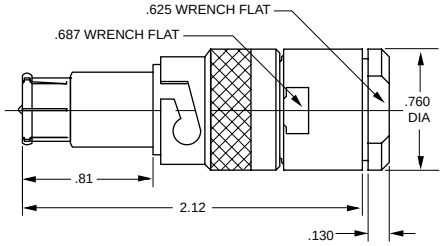


"N" Plug Patch Jack Patch Plug

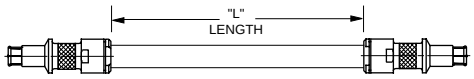
Trompeter's 50Ω low VSWR (1.11:1) patching system has been developed for use at frequencies up to 3GHz and at power levels up to 500 watts. J94 jack accepts a "N" male plug in back and the PL93 or PL94 in the front of the panels shown, or a custom panel of your own design. Patch plugs incorporate a push-fit design that snap into position in the jack and are available with, or without a bayonet locking feature. Normal jack spacing is 3" center-to-center. For a minimum bend radius when patching adjacent jacks, use Trompeter standard patch cords made with RG8 cable with a minimum length of 14". Otherwise the minimum length is 18". Panels loaded at no additional cost.



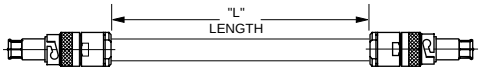
PATCH PLUG **PL93-** △1
50Ω-WITHOUT LOCKING SLEEVE



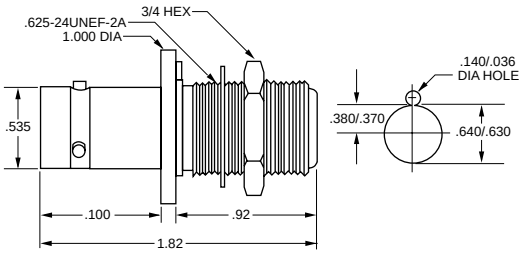
PATCH PLUG **PL94-** △1
50Ω-WITH LOCKING SLEEVE



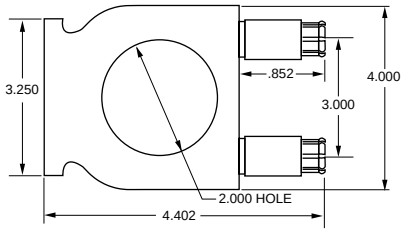
PATCH CORDS
50Ω-PATCH PLUG
WITHOUT LOCKING SLEEVE **PCH-L-50**



PATCH CORDS
50Ω-PATCH PLUG
WITH LOCKING SLEEVE **PCHY-L-50**



PATCH JACK TO "N" JACK **J94**
50Ω THREADED .625-24UNEF-2A
Mounting Hole: CC1.312



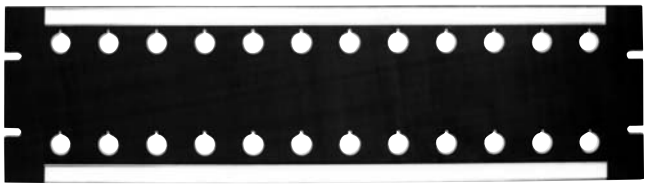
LOOPING PLUG **LPH-50**
50Ω-GREEN HANDLE

PANELS FOR J94

# of Holes	Notching	Panel Type	Height	Part#
12	Open	Common Ground	A = 1.75"	**JSH-12**
12	Closed	Insulated	A = 1.75"	**JSHI-12**
24	Open	Common Ground	B = 5.25"	**JSH-24**
24	Closed	Insulated	B = 5.25"	**JSHI-24**

A

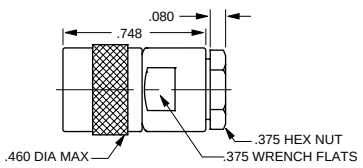
B



"L"-replace with length in inches. △1 *- Refers to cable group table, see pages 91-133. "D" mounting hole, page 54. For standard panels see pages 51-54.*

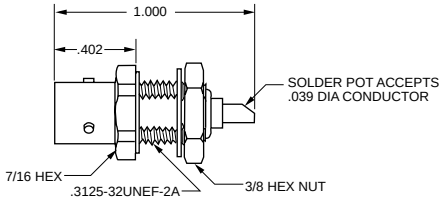
50Ω Sub-miniature coax
50/350 series, TPS/TCM jacks & plugs

PL50-1 Shown



Cable Plug — Wrench Crimp

50Ω	3-lug	PL50-1
50Ω	4-lug	PL50FL-1
50Ω	Threaded	PL350-1

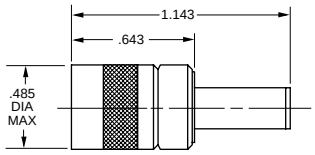


Bulkhead Jack — Front mount, Solder pot

50Ω	3-lug	BJ50
50Ω	4-lug	BJ50FL
50Ω	Threaded	BJ350

Mounting Hole: D6.218

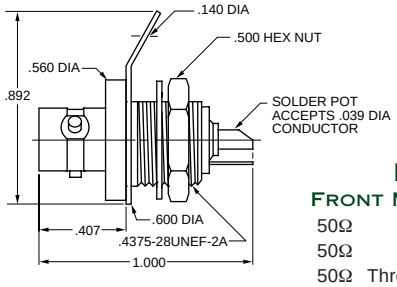
PL50C-001 Shown



Cable Plug — Tool Crimp

75Ω	3-lug	UPL50C-1
50Ω	3-lug	PL50C-1
50Ω	4-lug	PL50CFL-1
50Ω	Threaded	PL350C-1

BJ57 Shown

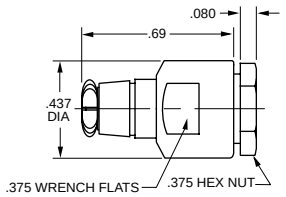


Insulated Bulkhead Jack — Front Mount, Solder Pot

50Ω	3-lug	BJ57
50Ω	4-lug	BJ57FL
50Ω	Threaded	BJ357

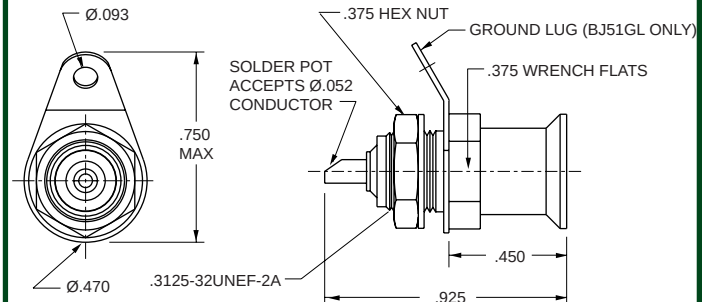
Mounting Hole: D4.187

PL53-1 Shown



Push-on Plug — Wrench Crimp, TPS/ TCM

50Ω	3-lug	PL53-1

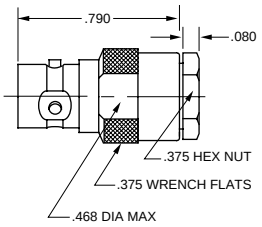


TPS Push-on — Solder Pot Panel Jack

Max Panel Thk: .088

50Ω		BJ51
50Ω	Ground Lug	BJ51GL

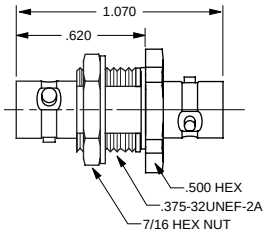
CJ50-1 Shown



Cable Jack — Wrench Crimp

50Ω	3-lug	CJ50-1
50Ω	4-lug	CJ50FL-1
50Ω	Threaded	CJ350-1

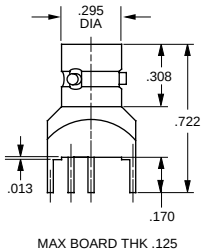
BJ58 Shown

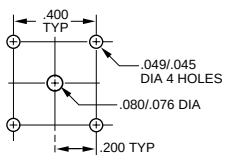


Feed-thru Jack

50Ω	3-lug	BJ58
50Ω	4-lug	BJ58FL
50Ω	Threaded	BJ358

Mounting Hole: D5.190 / D4.190 (Threaded)

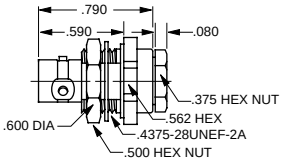




Circuit Board Jack

50Ω	3-lug	CBJ50
50Ω	4-lug	CBJ50FL
50Ω	Threaded	CBJ350

BJ59-1 Shown



Bulkhead Jack — Wrench Crimp

50Ω	3-lug	BJ59-1
50Ω	4-lug	BJ59FL-1
50Ω	Threaded	BJ359-1

Mounting Hole: D4.187

1 - *Refers to cable group table, see pages 91-133. "D" mounting holes are on page 54*

Coax Terminations and RFI (Dust Caps)

Trompeter provides termination and RFI cap for all our connectors. Resistors are normally 1/4 watt for subminiature connectors and 1/2 watt for miniature and standard size connectors (1% tolerances for all).

Ordering Instructions

For Terminations Example: PL75 Termination for TRB jacks with 78Ω resistance and no chain.

Order part number: TNG1-1-78-D3

- Part number from list
- (3) Chain options
- R-Resistance
- D Ring option (see below)

For RFI Caps Example: Patch plug cap for a J74 twinax/triax jack with no chain.

Order part number: RFI70-1-D3

- Part number from list
- (3) Chain options
- D Ring option (see below)

Chain Options:

Length	Chain Type	Chain Numbers:
N/A	No Chain	-1
2.5"	Brass Chain	-2
2.5"	Nylon Chain	-3
3.0"	Brass Chain	-4
3.0"	Nylon Chain	-5
6.0"	Brass Chain	-6
6.0"	Nylon Chain	-7
4.0"	Brass Chain	-8
4.0"	Nylon Chain	-9
10.0"	Brass Chain	-10
10.0"	Nylon Chain	-11
Stainless-steel rope		
2.5"	Jacketed Stainless-steel rope	-12
3.0"	Jacketed Stainless-steel rope	-13
6.0"	Jacketed Stainless-steel rope	-14

Stainless Steel Rope with Mounting Rings

We now ***provide*** stainless steel rope with "D" rings. To order mounting ring for jacks with the "D" mounting hole numbers listed on the right, add the "D" ring number to the part number.

For Example: RFI20-12-D2

D Ring Options

Inside Diameter	D-Ring#	Inside Diameter	D-Ring#
.755"	**-D1**	.281"	**-D7**
.630"-.635"	**-D2**	.610"	**-D8**
.505"-.510"	**-D3**	.567"	**-D9**
.439"-.443"	**-D4**	.192"	**-D10**
.380"-.384"	**-D5**	1.005"	**-D11**
.317"	**-D6**	.330"	**-DD8**

Coax Terminations & RFI Caps

Parts to be capped	Description	Terminator	RFI (Dust Caps)
BJ20/CJ20 Series	BNC, Jack	**(U)TNASP1-(3)-R** (Push on)	**RFI25-(3)**
BJ20/CJ20 Series	BNC, Jack	**(U)TNAS1-(3)-R** (Short)	**RFI25-(3)**
BJ20/CJ20 Series	BNC, Jack	**(U)TNA1-(3)-R**	**RFI25-(3)**
BJ20/CJ20	BNC, Jack	**(U)TNAP1-(3)-R**	**RFI25-(3)**
BJ40/CJ40 Series	TNC, Jack	**(U)TNH1-(3)-R**	**RFI45-(3)**
BJ50/CJ50 Series	TPS, Jack	**TNB1-(3)-R** (Push on)	**RFI55-(3)**
BJ50FL/CJ50FL Series	TPS, Jack	**TNBP1-(3)-R** (Push on)	**RFI55FL-(3)**
BJ50/BJ350	TPS/TCM, Jack	**TNBP1-(3)-R (Push on)**	**RFI355-(3)**
BJ95	N, Jack	**(U)TNN1-(3)-R**	**RFI95-(3)**
BJ130	F, Jack	**TNF1-(3)-R**	**RFI130-(3)**
J3	RCA, Patch Jack	**TP-(3)-R**	**RFI20-(3)**
J3W	WECo Patch Jack	**TPW-(3)-R**	**RFI20-(3)**
J8	Mini-WECo Coax Patch Jack	**TPM-(3)-R**	**RFI50-(3)**
J11	Mini-WECo Patch Jack	**TPMW-(3)-R**	**RFI150-(3)**
J94 (90 Series)	Patch Jack	**TNP1-(3)-R**	**RFI94-(3)**
J94 (90 Series)	Patch Jack	**TPP-(3)-50** (Push-on)	**RFI94-(3)**
PL20 Series	BNC, Plug	**(U)TNAF1-(3)-R**	**RFI21-(3)**
PL50	TPS, Plug		**RFI57-(3)**
PL50FL	TPS, Plug		**RFI57FL-(3)**
PL220 Series	BNC, Plug	**(U)TNAF1-(3)-R**	**RFI21-(3)**
PL40 Series	TNC, Plug	**(U)TNHF1-(3)-R**	**RFI41-(3)**
PL95	N, Plug	**(U)TNNBJ1-(3)-R** (Bulkhead Mount)	**RFI97-(3)/ RFIS97-(3)**Safety wire

***Notes: (3)** See Chain options. **"U"** Designates 75 ohm version available. **"R"** Resistance. If you cannot find the RFI cap or termination you need call the factory.*

Twinax/Triax Terminators and RFI (Dust Caps)

Trompeter provides Terminations and RFI caps versions of many of our twinax/triax connectors. Resistors are normally 1/8 watt for subminiature connectors and 1/2 watt for miniature and standard size connectors with 1% tolerances for all.

PARTS TO BE CAPPED	DESCRIPTION	TERMINATOR	RFI (DUST CAP)
BJ30/CJ30 Series	TWBNC Jack	**TNGT1-(3)-R**	**RFI25-(3)**
BJ70/CJ70 Series	TRB, Jack	**TNG1-(3)-R**	**RFI75-(3)**
BJ70FL/CJ70FL	TRB, Jack	**TNGFL1-(3)-R**	**RFI75FL-(3)**
BJ70TL/CJ70TL	TRB, Jack	**TNGTL1-(3)-R**	**RFI75TL-(3)**
BJ80/CJ80	TRC, Jack	**TNGL1-(3)-R**	**RFI85-(3)**
BJ150/CJ150	TRS, Jack	**TNGM1-(3)-R**	**RFI155-(3)**
BJ150FL/CJ150FL	TRS, Jack	**TNGMFL1-(3)-R**	**RFI155FL-(3)**
BJ375/CJ375	TRT, Jack	**TNT1-(3)-R**	**RFI375-(3)**
BJ375/CJ375	TRT, Jack	**TNTS1-(3)-R (Safety Holes)**	**RFI375-(3)**
BJ380/CJ380	TRN, Jack	**TNTL1-(3)-R**	**RFI385-(3)**
BJ803/CJ803	TRC, 3-lug Jack	**TNG3L1-(3)**	**RFI853-(3)**
BJ3150/CJ3150	TTM, Jack	**TNTM1-(3)-R**	**RFI3155-(3)**
J72	Twinax Patch Jack	**TPT-(3)-R**	**RFI70-(3)**
J72L	Twinax Patch Jack	**TPTL-(3)-R**	**RFI70-(3)**
J152	Twinax Submin. Patch Jack	**TPTWM-(3)-R**	**RFI150-(3)**
PL30	TWBNC, Plug	**TNGBJT1-(3)-R**	**RFI21-(3)**
PL74	TRB, Plug	**TNGBJTL1-(3)-R**	**RFI77TL-(3)**
PL75	TRB, Plug	**TNGBJ1-(3)-R**	**RFI77-(3)**
PL75FL	TRB, Plug	**TNGBJFL1-(3)-R**	**RFI77FL-(3)**
PL80	TRC, Plug	**TNGLF1-(3)-R**	**RFI80-(3)**
PL803	TRC, Plug	**TNGLF3L1-(3)-R**	**RFI80(3)**
PL380	TRN	**TNTLF1-(3)-R**	**RFI80(3)**
PL150	Submin. Patch Plug	**TJTWM-(3)-R**	**-**
PL155	TRS, Plug	**TNGBJM1-(3)-R (Bulkhead Mount)**	**RFI157-(3)**
PL155	TRS, Plug	**TNGMF1-(3)-R**	**RFI157-(3)**
PL155FL	TRS, Plug	**TNGBJMFL1-(3) (Bulkhead Mount)**	**RFI157FL-(3)**
PL155FL	TRS, Plug	**TNGMFFL1-(3)-R**	**RFI157FL-(3)**
PL3155	TTM, Plug	**TNTBJM1-(3)-R (Bulkhead Mount)**	**RFI3157-(3)**
PL3155	TTM, Plug	**TNTMF1-(3)-R**	**RFI3157-(3)**
PL350	TCM, Plug		**RFI357-(3)**
PL375	TRT, Plug	**TNTBJ1-(3)-R (Bulkhead Mount)**	**RFI377-(3)**
PL375	TRT, Plug	**TNTF1-(3)-R**	**RFI377-(3)**
PL380	TRN, Plug	**TNTLF1-(3)-R**	**RFI380-(3)**
PL803	TRC, 3-lug, Plug	**TNGLF3L1-(3)-R**	**RFI803-(3)**
For 450/3450 Series:	Concentric Twinax	**See pages 19-20**	**See pages 19-20**

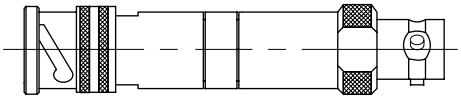
Notes: **(3)** = Chain options page 45
"R" = Resistance

For Chain Options and Ordering Instructions, see page 45.

Custom Adapters Ordering Format

Adapters indexed with a designated number are ***standard adapters***, refer to page 50 for identifications.

Adapters index with a "•" are ***custom adapters*** and may be ordered using the example below. For adapters not referenced contact the factory.



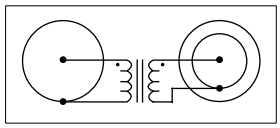
Schematic
Conn #1 | Conn #2
ADBJ20 - E1 - PL75

ORDERING EXAMPLE:

Conn #1	**BJ20**	BNC JACK
Schematic	**E1**	CIRCUIT CODE
Conn # 2	**PL75**	TRB PLUG

Adapter Circuitry Schematics

Concentric Twinax/Triax to Concentric Twinax/Triax	2-Pin Twinax to 2-Pin Twinax	Coax 2-Pin Twinax	Coax to Concentric Twinax/Triax	2-Pin Twinax to Concentric Twinax/Triax	Coax to Coax
A1	C1	D1	E1	G1	K1
A2	C2	D2	E2	G2	K2
A3	C3	D3	E3	G3	K3
A4	C4	D4	E4	G4	
A5	C5	D5	E5		
A6	C6	D6			
A7	C7	D7			
A8		D8			
	● BLUE CENTER COND	● BLUE CENTER COND		● BLUE CENTER COND	



IMPEDANCE MATCHING SCHEMATIC

Impedance Matching Adapter

Trompeter has developed a line of *Impedance Matching Adapters* that provides the designer a quick, elegant and affordable solution for connecting mismatched data transfer devices.

Why impedance matching? Impedance Matching exists in order to improve the performance of electronic circuits. A transmission line is properly terminated when the load impedance is equal to the source impedance. This prevents reflections and transfers the maximum signal to the output. Data transfer rates are increasing and frequency is an important component in determining the impedance of a transmission medium. When devices are not properly matched, the higher frequencies create greater signal attenuation.

Trompeter incorporates embedded transformer technology into our rugged in-line adapter package. The transformers are step-up/down and DC isolated so you do not have to contend with your signal floating on a DC level. These *Impedance Matching Adapters* are available in BNC, TNC, TRB and TRT, male and female interfaces. The input/output configurations are interchangeable, i.e. TRB to BNC, with bulkhead mounting options.

For more information on how this product can benefit your design, please refer to the technical paper: *'Signal Transmission in High Frequency/High Density Applications'* (see pages 81-82 in this catalog). For specific information and part numbers please contact the factory.

ADAPTER TABLE: COAX TO COAX

Coax to Coax Adapters

Adapter Table Notes:

Adapters indexed with a number are ***Standard Adapters***, see page 50 for the part number designation.

Adapters indexed with "•" are ***Custom Adapters***, see page 47 for ordering format. Contact factory for assistance.

I - Insulated
B - Bulkhead Mount
U - 75 Ohm Available
F - Female
M - Male

						TPS						BNC							PUSH-ON				TNC						F			LVSWR		N				RCA	Mini-WECo			WECo			50 Ohm Min.	TCM	
						BJ59	CJ50	CJ50FL	PL50	PL50FL	PL53	BJ20	BJ26	BJ29	CJ20	PL20	PL21	BJ120	PL121	PL122	PL123	BJ40	BJ46	BJ49	CJ40	PL40	PL41	BJ130	BJ139	PL130	PL93	PL94	BJ95	BJ96	J95	PL95	PL195	J3	J12	PL1	PL11	PL1W	PL1WC	J3W	PL2W	PL3	BJ350	CJ350
												U	U	U	U	U	U	U	U	U	U	U	U	U	U	U						U	U	U	U	U											
						F	F	F	M	M	M	F	F	F	F	M	M	F	M	M	M	F	F	F	F	M	M	F	F	M	M	M	F	F	F	M	M	F	F	M	M	M	F	M	M	F	F
						B							B	B				B		B			B						B				B	B											B		
													I										I											I														
TPS		BJ50	F			17																															•							48		
		BJ59	F	B		17	17					•				•					•	•			•			•							•											
		BJ59FL	F	B				42				•				•					•	•			•			•							•											
		CJ50	F			17			•			•										•						•							•				51					48		
		CJ50FL	F									•										•						•							•											
		PL50	M				•		•			•				•					•	•			•			•					•		•	•										
		PL50FL	M									•				•					•	•			•			•							•	•										
TCM		BJ350	F																																		•									
		BJ359	F	B								•				•					•	•			•			•							•										24	24
		CJ350	F									•										•						•							•										24	
		PL350	M									•				•					•	•			•			•							•	•										
		PL350S	M									•										•						•							•											
BNC	U	BJ20	F			•	•	•	•	•	•	1	14	•	1	•				7	•	13	27	•	13	•				8	•	•	5	6		•	56	56	4	50	45		57		49		•
	U	BJ26	F	B	I							14	14	14	14	•		•			•	27	27		27	•		•							•											
	U	BJ29	F	B								•	14	30	30	•		•			•	•			•			•							•											
	U	CJ20	F									1	14	30	1			•		7	•	13	27		13			•		8			5	6	•		56	52	4	50	45		57		49		
	U	PL20	M			•			•	•	•	•	•	•	•	•		•			•	•	•	•		•	10					•	•	•	•			•							
TNC	U	BJ49	F	B								•				•		•			•	•	16			•		•							•											
	U	BJ40	F			•	•	•	•	•	•	13	27	•	13	•				11	•	2	16	•	2	•					•	•	•	•		•	62		46		47		63				•
	U	BJ46	F	B	I							27	27		27	•		•			•	16	16	16	16	•		•							•											
	U	CJ40	F									13	27		13			•		11		2	16		2			•							•		62		46		47		63				
	U	PL40	M			•			•	•	•	•	•	•		•		•		•	•	•	•	•		•						•	•	•	•										
PUSH-ON	U	PL122	M	B								7			7	•		•			•	11			11	•		•							4											
	U	PL123	M			•			•	•	•	•	•	•	•	•		•		•	•	•	•	•		•						•	•	•	•										
F		BJ130	F										•	•	•	10				•	•		•	•	•	•		9	43				•	•	•	•						61				
		BJ139	F	B		•	•	•	•	•	•												•	•	•	•		43	43																•
LVSWR		PL93	M									•										•																									
		PL94	M									•										•																									
N	U	BJ95	F	B					•			5			5	•					•	•			•		•							20		20	•										
	U	BJ96	F	B	I							6			6	•					•	•			•		•									•	•										
	U	J95	F			•	•	•	•	•	•		•	•	•	•				4	•		•	•	•	•				•	•	•	20	•		•										•
	U	PL95	M						•	•	•	•				•					•	•			•		•			•	•	•	•		•	•		•								
RCA		J3	F				•					56			56							62			62			60							64										•	
		PL1	M									4			4							46			46																						
		PL11	M									50			50																																
WECo		J3W	F									57			57							63			63			61							65								•				
		J3WC	F									57			57							63			63			61							65											
		J3WE	F									57			57							63			63			61							65											
		J9W	F																																											
Mini-WECo		J12	F	B			51								52	•						11																				•	•				
		PL2W	M																																			•			•					
		PL1W	M									45			45							47			47													•			•					
50 Ohm Min.		J8D	F						66																																				58	58
		PL3C	M				48					49			49																																

For adapters not listed, call the factory. Trompeter also carries Impedance Matching Adapters, see page 47.

"D" mounting holes are on page 54

Coax/Twinax/Triax Adapters

I - Insulated
B - Bulkhead Mount
U - 75 Ohm Available
F - Female
M - Male

					TPS		TCM	BNC								PUSH ON		TNC							N				TRS							TTM				TRB			TRC/TRN			
					BJ50	PL50	BJ350	BJ20	BJ26	BJ29	CJ20	PL20	PL21	PL122	PL123	BJ40	BJ49	CJ40	PL40	PL41	BJ46	BJ95	BJ96	J95	PL95	BJ157	BJ157FL	BJ159	BJ159FL	CJ150	CJ150FL	PL155	BJ3157	BJ3159	CJ3150	PL3155	BJ74	BJ74FL	BJ74TL	CJ80	CJ380	PL80	PL380
								U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U																			
					F	M	F	F	F	F	F	M	M	M	M	F	F	F	M	M	F	F	F	M	F	F	F	F	F	F	M	F	F	F	M	F	F	F	F	F	M	M
									B	B				B			B				B	B					B	B					B			B	B	B				
									I												I	I														I	I	I				
TRS	BJ154	F	B	I				•	•	•	•			•	•	•	•	•		•																							
	BJ154FL	F	B	I				•	•	•	•			•	•	•	•	•		•																							
	BJ157	F																							32		22		32														
	BJ157FL	F																								59		23		59													
	BJ159	F	B					•	•	•	•			•	•	•	•	•		•					22		22		22														
	BJ159FL	F	B					•	•	•	•			•	•	•	•	•		•								23		23													
	CJ150	F						•	•	•	•			•	•	•	•	•		•					32		22		32														
	CJ150FL	F						•	•	•	•			•	•	•	•	•		•						59				59													
	PL150	M						•	•	•	•					•	•	•		•								23														
	PL153	M						•	•	•	•			•	•	•	•	•		•																							
	PL155	M						•	•	•	•			•	•	•	•	•		•																							
	PL155FL	M						•	•	•	•			•	•	•	•	•		•																							
TTM	BJ3154	F	B	I				•	•	•	•			•	•	•	•	•		•													68	68	68								
	BJ3159	F	B					•	•	•	•			•	•	•	•	•		•													31	31	31								
	CJ3150	F						•	•	•	•			•	•	•	•	•		•													33	31	33								
	PL3155	M						•	•	•	•			•	•	•	•	•		•															•								
TRB	BJ74	F	B	I				•				•			•	•			•					•	•	•							•				18						
	BJ74TL	F	B	I				•				•			•	•			•					•	•	•							•						39				
	BJ74FL	F	B	I				•				•			•	•			•					•	•	•							•					40					
	BJ77	F				•			•	•	•	•			•	•	•	•	•		•	•	•	•				•	•	•	•	•		•	•	•	18	•	•	•	•		
	BJ77TL	F							•	•	•	•			•	•	•	•	•		•	•	•	•				•	•	•	•	•		•	•	•		•	39	•	•		
	BJ77FL	F							•	•	•	•			•	•	•	•	•		•	•	•	•				•	•	•	•	•		•	•	•	•	40	•	•			
	BJ79	F	B					•		•	•	•			•	•	•		•					•	•	•				•			•										
	BJ79TL	F	B					•				•			•	•	•		•					•	•	•							•				18						
	BJ79FL	F	B					•				•			•	•	•		•					•	•	•							•										
	BJ79TLRG	F	B					•				•			•				•																								
	CJ70	F						•								•								•												18			•	•	•	•
	CJ70TL	F						•								•								•														39	•	•	•	•
	CJ70FL	F						•								•								•													40		•	•	•	•
	PL71	M						•				•			•	•			•					•																			
	PL73	M						•	•	•		•			•	•	•		•		•	•	•	•	•																		
	PL74	M						•	•	•		•			•	•	•		•		•	•	•	•	•	•	•						•				•	•	•	•	•	•	•
	PL75	M			•			•	•	•		•			•	•	•		•		•	•	•	•	•	•	•		•				•				•	•	•	•	•	•	•
	PL75FL	M						•	•	•		•			•	•	•		•		•	•	•	•	•	•	•						•				•	•	•	•	•	•	•
TRT	PL375	M						•	•	•	•	•			•	•	•		•		•	•	•	•	•	•	•						•				•	•	•	•	•	•	•
	BJ374	F	B	I				•				•			•	•			•					•	•	•							•										
	BJ377	F							•	•	•	•			•	•	•	•	•		•	•	•	•	•			•	•	•	•			•	•	•	•	•	•	•			
	BJ379	F	B					•				•			•	•			•					•	•	•							•					•	•				
	BJ379RG	F	B					•																																			
	CJ370	F						•								•								•													•	•	•				
TWBNC	BJ30	F									•	•						•	•																								
	BJ39	F	B																																		•	•	•				
	CJ30	F																																		•	•	•				
	PL30	M						•	•	•	•	•		•	•	•	•	•		•																•	•	•				
TWTNC	BJ330	F									•	•						•	•																								
	BJ339	F	B																																		•	•	•				
	PL330	M						•	•	•	•	•		•	•	•	•	•		•																•	•	•				
TRC/ TRN	BJ89	F	B		•			•					•			•				•				•																19			
	BJ89F	F	B		•			•					•			•				•				•																			
	BJ893	F	B					•					•			•				•				•																	41		
	BJ893F	F	B					•					•			•				•				•																			
	CJ80	F						•				•	•			•				•		•		•																		•	•
	CJ380	F						•					•			•				•		•		•																		•	•
	CJ803	F						•					•			•				•		•		•																			
	PL80	M						•					•			•				•		•		•																		•	•
	PL380	M						•					•			•				•		•		•																		•	•
	PL803	M						•					•			•				•		•		•																			
	BJ389	F	B				•	•					•			•				•		•		•																	38		
	BJ389F	F	B					•					•			•				•				•																			
PATCH	J72D	F	B								•																																
	J150	F	B																											53	54		55		55							
	PL150	M								•	•	•	•				•	•	•				•	•																		

Notes: "•" = Custom Adapters, see page 47. Standard Adapters are designated with a number, see page 50. Circuitry, see page 47.

Adapters Continued on next page...

ADAPTER TABLE: COAX/TWINAX/TRIAX & IDENTIFICATIONS

Coax/Twinax/Triax Adapters Continued...

I - Insulated
B - Bulkhead Mount
U - 75 Ohm Available
F - Female
M - Male

					TRB											TRT					TWBNC				TWTNC			
					BJ77	BJ77FL	BJ77TL	BJ79	CJ70	CJ70FL	CJ70TL	PL74	PL75	PL75FL	BJ374	BJ377	BJ379	CJ370	PL375	BJ30	BJ39	CJ30	PL30	BJ330	BJ339	CJ330	PL330
					F	F	F	F	F	F	F	M	M	M	F	F	F	F	M	F	F	F	M	F	F	F	M
								B							B		B				B				B		
															I												
TRS	BJ154	F	B	I	•	•		•								•											
	BJ154FL	F	B	I	•	•		•								•											
	BJ157	F						•				•	•	•	•		•		•								
	BJ157FL	F						•				•	•	•	•		•		•								
	BJ159	F	B		•	•		•								•											
	BJ159FL	F	B		•	•		•								•											
	CJ150	F			•	•		•					•			•											
	CJ150FL	F			•	•		•								•											
	PL150	M			•	•		•					•			•											
	PL153	M			•	•		•								•											
	PL155	M			•	•		•					•			•											
	PL155FL	M			•	•		•								•											
TTM	BJ3154	F	B	I	•	•		•								•											
	BJ3159	F	B		•	•		•								•											
	CJ3150	F			•	•		•								•											
	PL3155	M			•	•		•								•											
TRB	BJ74	F	B	I	18	•		•	18	18			•	•	•		•			•		•	•	•		•	•	•
	BJ74TL	B	B	I	•	•		39				39	•	•	•		•			•		•	•	•		•	•	•
	BJ74FL	F	B	I	•	40		•	•		40		•	•	•		•			•		•	•	•		•	•	•
	BJ77	F			3				34	3	•	•	•	•	•		•	•	•	•								
	BJ77TL	F					29		•	•	•	29	•	•	•	•	•	•	•									
	BJ77FL	F				28			•	•	28	•	•	•	•		•	•	•									
	BJ79	F	B		34	•		•	34	34			•	•	•		•			•		•	•	•		•	•	•
	BJ79TL	F	B		•	•		35				35	•	•	•		•			•		•	•	•		•	•	•
	BJ79FL	F	B		•	36		•			36		•	•	•		•			•		•	•	•		•	•	•
	BJ79TLRG	F	B																									
	CJ70	F			3	•		•	34	3							•					•	•	•		•	•	•
	CJ70TL	F			•	•		29				29					•					•	•	•		•	•	•
	CJ70FL	F			•	28		•			28						•					•	•	•		•	•	•
	PL71	M			•	•		•									•											
	PL73	M																				•	•	•		•	•	•
	PL74	M			•	•		•	•				•	•	•	•	•	•		•		•	•	•		•	•	•
	PL75	M			•	•		•	•				•	•	•	•	•	•		•		•	•	•		•	•	•
	PL75FL	M			•	•		•	•				•	•	•	•	•	•		•		•	•	•		•	•	•
TRT	PL375	M			•	•		•	•				•	•	•		•	•		•		•	•	•		•	•	•
	BJ374	F	B	I	•	•		•					•	•	•	25	25	25	25	•		•	•	•		•	•	•
	BJ377	F						•	•	•	•		•	•	•	25	12	26	12	•								
	BJ379	F	B		•	•		•					•	•	•	25	26	26	26	•		•	•	•		•	•	•
	BJ379RG	F	B																									
	CJ370	F			•	•		•								25	12	26	12			•	•	•		•	•	•
TWBNC	BJ30	F																			15	•	•			•	•	•
	BJ39	F	B					•	•	•	•	•	•	•	•	•		•	•	•	15	15	15		•	•		•
	CJ30	F						•	•	•	•	•	•	•	•	•		•	•	•	•	15			•	•		•
	PL30	M						•	•	•	•	•	•	•	•	•		•	•	•	•				•	•		•
TWTNC	BJ330	F																				•	•	•	•	37	•	•
	BJ339	F	B					•	•	•	•	•	•	•	•	•		•	•	•	•				37	37	37	
	PL330	M						•	•	•	•	•	•	•	•	•		•	•	•	•				•			
TRC/ TRN	BJ89	F	B		•			•		•	•	•	•	•	•				•	•								
	BJ89F	F	B		•			•		•	•	•	•	•	•				•	•								
	BJ893	F	B							•	•	•	•	•	•				•	•								
	BJ893F	F	B							•	•	•	•	•	•				•	•								
	CJ80	F			•	•		•		•	•	•	•	•	•		•		•	•								
	CJ380	F								•	•	•	•	•	•				•	•								
	CJ803	F								•	•	•	•	•	•				•	•								
	PL80	M								•	•	•	•	•	•				•	•								
	PL380	M								•	•	•	•	•	•				•	•								
	PL803	M								•	•	•	•	•	•				•	•								
	BJ389	F	B							•	•	•	•	•	•				•	•								
	BJ389F	F	B							•	•	•	•	•	•				•	•								
PATCH	J72D	F	B		67				67											•								
	J150	F	B																									
	PL150	M																										

Adapters indexed with a designated number are standard adapters, use the table below to determine the part number. Adapters indexed with a "•" are custom adapters, see page 47.

Trompeter also carries *Impedance Matching Adapters*, see page 47.

STANDARD ADAPTERS IDENTIFICATION NUMBERS:

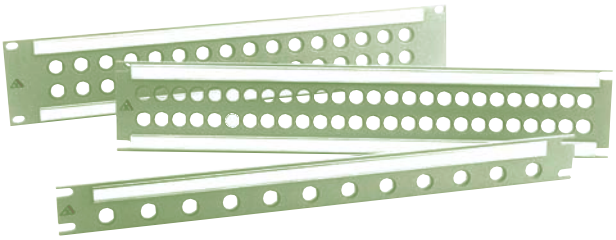
ID#	Part Number	ID#	Part Number
1	(U)AD28	41	BJ883
2	(U)AD48	42	BJ58FL
3	AD78 **(Note 2)**	43	BJ138
4	AD1	44	AD192
5	(U)AD95	45	AD1W
6	(U)ADI95	46	ADH1
7	ADI22	47	ADH1W
8	AD130	48	ADM1 **(Note 8)**
9	AD131	49	ADM2 **(Note 8)**
10	AD133	50	ADMW12 **(Note 9)**
11	(U)AD142	51	J11 **(Note 9)**
12	AD378	52	J11B **(Note 9)**
13	(U)AD2848	53	J152 **(Note 11)**
14	(U)BJ28	54	J152FL **(Note 12)**
15	BJ38 **(Note 3)**	55	J3152 **(Note 13)**
16	(U)BJ48	56	J3
17	BJ58	57	J3W
18	BJ73 **(Note 2)**	58	**(Note 10)**
19	BJ88	59	AD158FL
20	(U)BJ98	60	J3F
22	BJ158 **(Note 4)**	61	J3WF
23	BJ158FL **(Note 5)**	62	J5
24	BJ358	63	J5W
25	BJ373	64	(U)J9
26	BJ378	65	(U)J9W
27	**(Note 1)**	66	J8
28	AD78FL	67	J72
29	AD78TL	68	BJ3153
30	BJ24		
31	BJ3158 **(Note 6)**		
32	AD158		
33	AD3158		
34	BJ78		
35	BJ78TL		
36	BJ78FL		
37	BJ338		
38	BJ388 **(Note 7)**		
39	BJ73TL		
40	BJ73FL		

(U) = 75 ohm version available **(Note)** = See below

STANDARD ADAPTER NOTES:

Note:

1	Bulkhead Mounted BNC Side	**(U)BJ4828**
	Bulkhead Mounted TNC Side	**(U)BJ2848**
2	Polarization Table (Call Factory)	
3	Insulated Version	**BJ33**
4	Insulated Version	**BJ153**
5	Insulated Version	**BJ153FL**
7	Insulated Version	**BJ383**
8	50 Ohm Version Only	
9	75 Ohm Version Only	
	J308 50 Ohm TCM Jack Threaded	
10	Panel Mount **J8D**	
	J311 75 Ohm TCM Jack to **J8D**	
11	Threaded Panel Mount	**J152**
12	Threaded Panel Mount	**J152FLFT**
13	Threaded Panel Mount	**J3152FT**



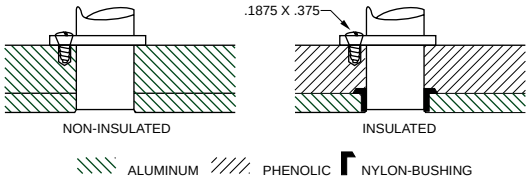
Trompeter Patch Products

Trompeter offers a wide selection of patching products for military databus, Telemetry, Telecom, Broadcast, CATV, and testing. We offer these products for Twinax, Triax, and Coax cabling and in sizes to meet your space restrictions and environmental requirements.

Standard 19" Panels

In popular sizes and configurations

Available in insulated black phenolic, and insulated or non-insulated aluminum. Aluminum panels are painted standard gray and come with either a phenolic back bar (insulated type), or an iridited aluminum back bar (non-insulated type). Aluminum panels can be painted to suit, or color matched (*special order*). Phenolic panels are available in black only.



Panels available in heights of **1.75 inches (1 RU)** or **3.5 inches (2 RU)**.

Custom Panels & Marking

Custom panels can be configured to meet your specifications, including special wiring, colors, engraving, or silk-screening (custom marking). Patch jack locations can also be marked on the rear of the panel for easy location of jacks. Please contact your local representative, or fax us your requirements.

Hole Plugs

FOR JACKS AND PANELS

Hole Plugs for:	Hole Diameter	Part Number
Miniature patch panel (J8)	.250"	**HP250**
Miniature patch jack (J314MW, J11)	.304"	**HP304**
Standard patch jack (J314W)	.375"	**HP375**
Standard patch panel (JS, JSI)	.437"	**HP437**
Standard patch panel	.500"	**HP500**

HP304 HP375 HP437

Front Loading Modular Panels are on page 56.

Ordering Loaded Panels

Panels can be ordered pre-loaded with any compatible jacks ***without*** additional labor charge by using the following part number format (provided the mechanical restrictions are recognized).

EXAMPLE: Standard 48-hole, Non-insulated Panel (JS-48), loaded with twenty four (24) Standard 75Ω Patch Jacks (J214W)

JS(I)(B)(X)-48W / J214W

Panel part number
- JS: Aluminum panel (Gray)
- JSI: Insulated panel (Gray)
- JSIB: Insulated panel (Black)
- JSIX: Miniature Insulated panel (Black)

Number of holes

Jack part number

Panel Specifications

Notching:

Metal panels	(EIA-310-C)	Open
Phenolic	(EIA-310-C)	Closed

Materials:

JS Series, Common ground panels	
Panel	6061-T6 grade aluminum
Backbar	6061-T6 grade aluminum
JSI Series, Insulated panels	
Panel	6061-T6 grade aluminum
Backbar	XXX non-hydroscopic phenolic
Jack insulation	Nylon sleeves

Finishes:

Standard Finish	FED-STD-595-26307, Light Gray
Customer Supplied	FED-STD-595# or paint chip
Chemical Film Finish	MIL-C-5541, Class 1a (Gold tone)
	MIL-C-5541, Class 3, (Clear)

Identification:

Designation Strip	Passivated steel
Standard patch panels	DS1 .580" x 16.6"
Standard patch panels	DS2 .870" x 16.6"
High density patch panels	DS4 .240" x 16.6"
Card	Opaque vinyl
Window	Clear vinyl

Modification Kit

19" panels can be modified for use in 23" racks.
Call factory and ask for part # 700-0408.

CABLE DISTRIBUTION PANELS

Distribution Panels

Ordering Loaded Distribution Panels

EXAMPLE:

***JS - 52 D3SF7 / (U)BJ28**

Panel type -Table A, Col 2
Mounting hole -Table B, Col. 1
Jack Type -Table B, Col. 3/4 ("U" designates 75Ω)

***JS**- Non-Insulated Panel ..... (Open notch)
***JSI**- Insulated panel ..... (Closed notch)

The **19" panels** listed in **Table A** below accommodate the bulkhead jacks designated by a **"•"** in **Panel Columns A- M** of **Table B** to the right. For panel specifications: See page 54

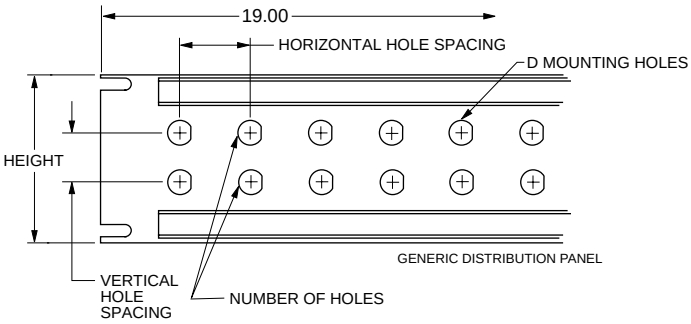


TABLE A: PANELS

PANEL COL.	COLUMN 2 PANEL TYPE	# OF HOLES	PANEL HEIGHT	HOLE SPACING HOR.	VERT.
A	**JS(I)-5**	5	1.75"	2.500"	--
B	**JS(I)-8**	8	1.75"	2.070"	--
C	**JS(I)-10**	10	1.75"	1.656"	--
D	**JS(I)-12**	12	1.75"	1.430"	--
E	**JS(I)-14**	14	1.75"	1.210"	--
F	**JS(I)-16**	16	1.75"	1.000"	--
G	**JS(I)-20**	20	1.75"	0.830"	--
H	**JS(I)-24S**	24	1.75"	0.723"	--
I	**JS(I)-24W**	24	3.50"	1.430"	1.000"
J	**JS(I)-32**	32	3.50"	1.000"	1.000"
K	**JS(I)-40**	40	3.50"	0.875"	0.875"
L	**JS(I)-40W**	40	3.50"	0.875"	1.000"
M	**JS(I)-52**	52	3.50"	0.675"	1.000"
O	**JS(I)-24**	24	5.20"	1.450"	2.250"

Note: *Panels are 19" Insulated or Non-Insulated Standard Gray Aluminum. See chart on the right for loaded panel ordering.*

TABLE B: JACK/PANEL COMPATIBILITY

Column 1 Mtg Hole	75 Ω	Column 3 Jacks: 2/3/4 Lug	Column 4 Threaded	Panel Columns A	B	C	D	E	F	G	H	I	J	K	L	M
DD4	U	AD 95		•	•	•	•	•	•	•	•	•	•	•	•	
DD4	U	ADI 95		•	•	•	•	•	•	•	•	•	•	•	•	
D 5SF 5	U	BJ 20		•	•	•	•	•	•	•	•	•	•	•	•	•
D 3SF 6	U	BJ 21		•	•	•	•	•	•	•	•	•	•	•	•	•
D 2SF 3	U	BJ 26		•	•	•	•	•	•	•	•	•	•	•	•	
D 8SF 12	U	BJ 26GF		•	•	•	•	•	•	•	•	•	•	•	•	
D 3SF 7	U	BJ 27		•	•	•	•	•	•	•	•	•	•	•	•	•
D 3SF 7	U	BJ 28/BJ 24		•	•	•	•	•	•	•	•	•	•	•	•	•
D 8SF 11	U	BJ 28GF		•	•	•	•				•	•	•			
D 2SF 3	U	BJ 29-6 Large body		•	•	•	•	•	•	•	•	•	•	•	•	
D 3		UBJ 29		•	•	•	•	•	•	•	•	•	•	•	•	
D 5SF 5		BJ 30	BJ330	•	•	•	•	•	•	•	•	•	•	•	•	•
D 3		BJ 31	BJ331	•	•	•	•	•	•	•	•	•	•	•	•	
D 3		BJ 32	BJ332	•	•	•	•	•	•	•	•	•	•	•	•	
D 3SF 8		BJ 38	BJ388	•	•	•	•				•	•	•			
D 3		BJ 39	BJ339	•	•	•	•	•	•	•	•	•	•	•	•	
D 5SF 5	U	BJ 40		•	•	•	•	•	•	•	•	•	•	•	•	•
D 3SF 6	U	BJ 41		•	•	•	•	•	•	•	•	•	•	•	•	•
D 2SF 3	U	BJ 46		•	•	•	•	•	•	•	•	•	•	•	•	
D 8SF 12	U	BJ 46GF		•	•	•	•	•	•	•	•	•	•	•	•	
D 3SF 7	U	BJ 47		•	•	•	•	•	•	•	•	•	•	•	•	•
D 3SF 7	U	BJ 48		•	•	•	•	•	•	•	•	•	•	•	•	•
D 8SF 11	U	BJ 48GF		•	•	•	•				•	•	•			
D 2SF 3	U	BJ 49-6 Large body		•	•	•	•	•	•	•	•	•	•	•	•	
D 3		UBJ 49		•	•	•	•	•	•	•	•	•	•	•	•	
D 6		BJ 50/FL	BJ350	•	•	•	•		•	•	•	•	•	•	•	•
D 4SF 2		BJ 57/FL	BJ357	•	•	•	•	•	•	•	•	•	•	•	•	•
D 5SF 9		BJ 58/FL		•	•	•	•	•	•	•	•	•	•	•	•	•
D 4SF 4		BJ 59/FL	BJ359	•	•	•	•	•	•	•	•	•	•	•	•	•
D 2SF 8		BJ 72/TL/FL	BJ372	•	•	•	•				•	•	•			
D 2SF 8		BJ 73/TL/FL	BJ373	•	•	•	•				•	•	•			
D 2SF24		BJ 74/TL/FL	BJ374	•	•	•	•	•	•	•	•	•	•	•	•	
D 2SF24		BJ 74C/TL/FL	BJ374C	•	•	•	•	•	•	•	•	•	•	•	•	
D 2SF24		BJ 75/TL/FL	BJ375	•	•	•	•	•	•	•	•	•	•	•	•	
D 4SF25		BJ 77/TL/FL	BJ377	•	•	•	•	•	•	•	•	•	•	•	•	•
D 3SF13		BJ 78/TL/FL	BJ378	•	•	•	•	•	•	•	•	•	•	•	•	
D 3SF15		BJ 79/TL/FL	BJ379	•	•	•	•	•	•	•	•	•	•	•	•	
D 3SF15		BJ 79C/TL/FL	BJ379C	•	•	•	•	•	•	•	•	•	•	•	•	
D 1SF 1		BJ 80, BJ803	BJ380								•					
D 1		BJ 83, BJ833	BJ383								•					
D 1		BJ 88, BJ883	BJ388								•					
D11		BJ 89	BJ389	•	•	•										
DD6		BJ 89, BJ893	BJ389	•	•	•	•	•				•	•	•		
DD1	U	BJ 95 Large Body		•	•	•	•	•	•	•	•	•	•	•	•	
DD4	U	BJ 95		•	•	•	•	•	•	•	•	•	•	•	•	
DD4	U	BJ 96		•	•	•	•	•	•	•	•	•	•	•	•	
DD4	U	BJ 98		•	•	•	•	•	•	•	•	•	•	•	•	
D 2SF 3		BJ 101		•	•	•	•	•	•	•	•	•	•	•	•	
D 2SF 3		BJ 102		•	•	•	•	•	•	•	•	•	•	•	•	
DD2SF14		BJ 130		•	•	•	•	•	•	•	•		•	•	•	•
DD2SF30		BJ 138		•	•	•	•	•	•	•	•	•	•	•	•	•
DD2SF30		BJ 139		•	•	•	•	•	•	•	•	•	•	•	•	•
D 4		BJ 150/FL	BJ3150	•	•	•	•	•	•	•	•	•	•	•	•	•
D 9		BJ 152/FL	BJ3152	•	•	•	•	•	•	•	•	•	•	•	•	
D 9SF 12		BJ 153/FL	BJ3153	•	•	•										•
D 9SF 12		BJ 154/FL	BJ3154	•	•	•										•
D 9SF 12		BJ 154AC/FL	BJ3154AC	•	•	•										•
D 6		BJ 157/FL	BJ3157	•	•	•	•		•	•	•	•	•	•	•	•
D 5SF 9		BJ 158/FL		•	•	•	•	•	•	•	•	•	•	•	•	•
D 4SF 4		BJ 159/FL	BJ3159	•	•	•	•	•	•	•	•	•	•	•	•	•
D 4SF 4		BJ 159AC/FL	BJ3159AC	•	•	•	•	•	•	•	•	•	•	•	•	•
D 2SF 3	U	BJ 226		•	•	•	•	•	•	•	•	•	•	•	•	
D 8SF 12	U	BJ 226GF		•	•	•	•	•	•	•	•	•	•	•	•	
D 3	U	BJ 229		•	•	•	•	•	•	•	•	•	•	•	•	
D 2SF 3	U	BJ 246		•	•	•	•	•	•	•	•	•	•	•	•	
D 8SF 12	U	BJ 246GF		•	•	•	•	•	•	•	•	•	•	•	•	
D 3		BJ 249		•	•	•	•	•	•	•	•	•	•	•	•	
D 4SF 9		-	BJ358	•	•	•	•	•	•	•	•	•	•	•	•	•
DD8		BJ 450	BJ3450	•	•	•	•	•	•	•	•	•	•	•	•	•
DD8		BJ 457	BJ3457	•	•	•	•	•	•	•	•	•	•	•	•	•
DD8SF31		BJ 459	BJ3459	•	•	•	•	•	•	•	•	•	•	•	•	•
D11		BJ 893 Large body		•	•	•										
D 3SF 7	U	BJ2848	Rear mount	•	•	•	•	•	•	•	•	•	•	•	•	•
D 4SF 9		-	BJ3158	•	•	•	•	•	•	•	•	•	•	•	•	•
D 3SF 7	U	BJ4828	Rear mount	•	•	•	•	•	•	•	•	•	•	•	•	•
D 9SF12		CBJ155/FL / BJ155	BJ3155	•	•	•										•
D 5SF10	U	J 95		•	•	•	•	•	•	•	•	•	•	•	•	•
D 4SF25		J 152FLFT		•	•	•	•	•	•	•	•	•	•	•	•	•
D 4SF25		J152FT	J3152FT	•	•	•	•	•	•	•	•	•	•	•	•	•
DD5SF6		PL 122		•	•	•	•	•	•	•	•	•	•	•	•	•
DD8SF31		TBJ 451/FL		•	•	•	•	•	•	•	•	•	•	•	•	•

"D" hole specifications are on page 54

Standard

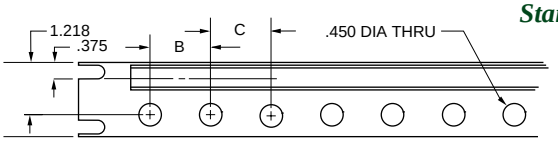


FIG A

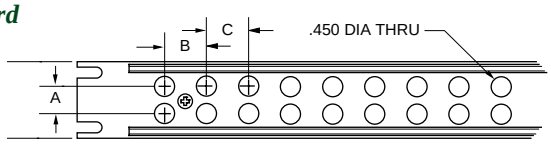


FIG B

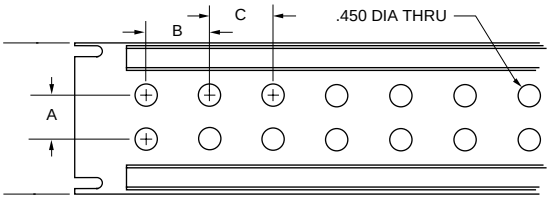


FIG C

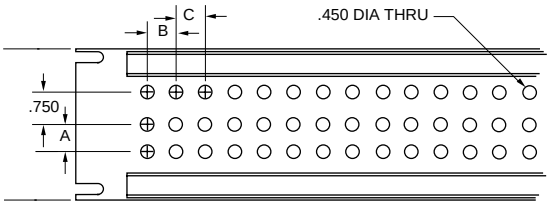


FIG D

Miniature

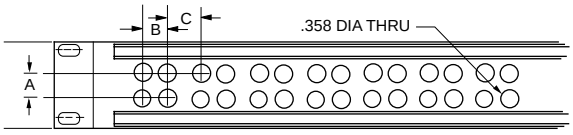


FIG E

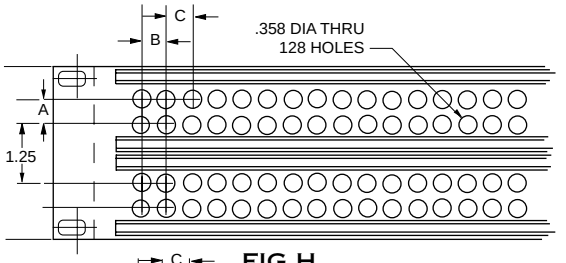


FIG H

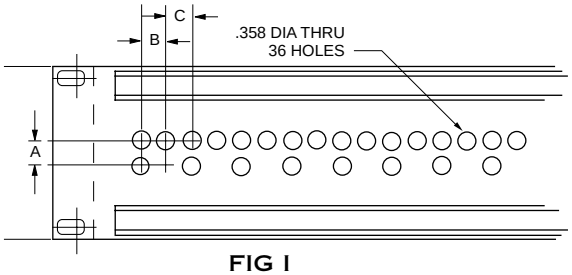


FIG I

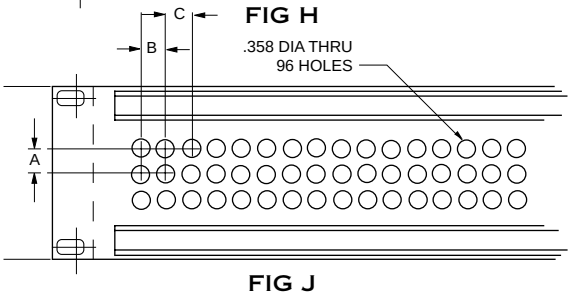


FIG J

19" MINIATURE PATCH PANELS FOR: 50Ω J8 SERIES, J8D, AND 75Ω MINI-WECO JACKS

# of Patch Locations	Panel Height	Hole Spacing A	B	C	Fig	Non-Insulated Part Number	Insulated Part Number	Jack Type
32	1.75"	N/A	.500	.500	A	JS-32	JSI-32	J8 Series
56	1.75"	.500	.500	.625	E		JSIX-56S	Mini-WECo
56	1.75"	.500	.500	.625	E		JSIX-56SF	Mini-WECo
64	1.75"	.500	.500	.500	E		JSIX-64S	Mini-WECo
64	1.75"	.500	.500	.500	E		JSIX-64SF	Mini-WECo
64	1.75"	N/A	.500	.500	A	JS-64	JSI-64S	J8 Series
64	3.50"	.500	.500	.500	E	JS-64L	JSI-64L	J8 Series
64	3.50"	.500	.500	.500	E		JSIX-64L	Mini-WECo
96	3.50"	.500	.500	.500	J	JS-96A	JSI-96A	J8 Series
96	3.50"		Not Shown			JS-96B	JSI-96B	J8 Series
128	3.50"	.500	.500	.500	H		JSIX-128	Mini-WECo

Miniature 75ΩCoax Patch Panels ... for high density, low VSWR, 75Ω coaxial applications (microwave, sub-carrier telephone systems, etc.). Trompeter's J12 jack/ PL11C plug combination has a VSWR of 1:04:1 in the 60-80 MHz range. ***Miniature 50ΩCoax Patch Panels...*** for high density 50Ω patching. 19" panels tapped .312-32-2A to accept J8 and J8D jacks. .50" center-to-center vertical and horizontal hole spacing (unless otherwise noted), insulated and non-insulated panels have stiffener bars.

Note: *For Front Loading Modular Panels, see pages 56. "D" mounting hole specifications, see page 54.*
Many other panel configurations are available, contact the factory.

Standard 19" panels/ D hole specifications

Standard Patch Panels

See page 53 for panel figure diagrams.

Standard 19" Panels... Insulated, Non-Insulated

# of Holes	Panel Height	Hole Spacing A	Hole Spacing B	Hole Spacing C	(Foot Note)	Fig	Non-insulated Part #	Insulated Part #	Insulated Phenolic Part #
12	1.75"	-	1.43"	1.43"	1	A	JS-12	JSI-12	
14	1.75"	-	1.21"	1.21"	1	A	JS-14	JSI-14	
16	1.75"	-	1.00"	1.00"	1	A	JS-16	JSI-16	
20	1.75"	-	.830"	.830"	1	A	JS-20	JSI-20	
24	1.75"	-	.625"	.750"	1	A	JS-24S	JSI-24S	
26	1.75"	-	.625"	.625"	1	A	JS-26	JSI-26	
28	1.75"	-	.625"	.625"	1	A	JS-28	JSI-28	
32	1.75"	.625"	1.00"	1.00"	2	B	JS-32S	JSI-32S	JSIB-32S
40	1.75"	.625"	.830"	.830"	2	B	JS-40S	JSI-40S	JSIB-40S
48	1.75"	.625"	.625"	.750"	2	B	JS-48S	JSI-48S	JSIB-48S
52	1.75"	.625"	.625"	.625"	2	B	JS-52S	JSI-52S	JSIB-52S
24	3.50"	.625	1.43"	1.43"	2	C	JS-24L	JSI-24L	
24	3.50"	1.00"	1.43"	1.43"	1	C	JS-24W	JSI-24W	
28	3.50"	.625"	1.21"	1.21"	2	C	JS-28A	JSI-28A	
28	3.50"	1.00"	1.21"	1.21"		C	JS-28W	JSI-28W	
32	3.50"	.625"	1.00"	1.00"	2	C	JS-32A	JSI-32A	JSIB-32A
36	3.50	.625"	.625"	.750"	2	I	JS-36	JSI-36	
36	3.50"	.625"	.830"	.830"	2	C	JS-36A	JSI-36A	
40	3.50"	.625"	.830"	.830"	2	C	JS-40	JSI-40	JSIB-40
40	3.50"	1.00"	.830"	.830"	1	C	JS-40W	JSI-40W	JSIB-40W
48	3.50"	.625"	.625"	.750"	2	C	JS-48	JSI-48	JSIB-48
48	3.50"	.625"	.625"	.625"	2	C	JS-48A	JSI-48A	JSIB-48A
52	3.50"	1.00"	.625"	.625"		C	JS-52W	JSI-52W	JSIB-52W
52	3.50"	.625"	.625"	.625"	2	C	JS-52	JSI-52	JSIB-52
56	3.50"	.625"	.625"	.625"	2	C	JS-56	JSI-56	JSIB-56
72	3.50"	.625"	.680"	.680"	3	D	JSS-72	JSIS-72	

1 Will not accept dual jacks (e.g. J14, J214, J314, J74) **2** Will not accept jacks requiring hole spacing(A) larger than .625" **3** Will accept 3 barrel jack only

Note: JSIB (Fig. B and C) panels have .459 dia typ.

"D" Hole Specifications

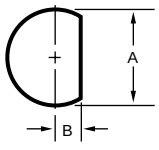
Throughout the catalog you will find "D" holes called out for bulkhead jacks. The "D" hole is the cutout pattern designated for the proper fit of bulkhead jacks into distribution panels.

"D" Hole Type Maximum panel thickness **Example:** D3.148

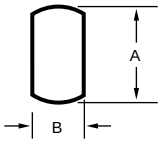
"D" Hole Type	A	B	Double "D" Hole	A	B
D1	.755"	.343"	**DD1**	.630"	.532"
D2	.630"	.281"	**DD2**	.380"	.312"
D3	.505"	.218"	**DD3**	.505"	.443"
D4	.439"	.187"	**DD4**	.630"	.562"
D5	.380"	.156"	**DD5**	.475"	.436"
D6	.317"	.128"	**DD6**	.755"	.690"
D7	.281"	.125"	**DD7**	1.140"	1.060"
D8	.605"	.280"	**DD8**	.330"	.274"
D9	.567"	.257"			
D10	.192"	.079"			
D11	1.005"	.470"			

Many other panel hole configurations available, contact the factory.

"D" Holes

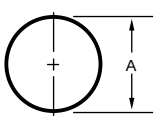


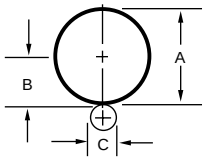
Double "D" Holes



Circular Hole	A
C1	.317"-321"
C2	.380"-.385"
C3	.442"-.447"
C4	.474"-.480"
C5	.505"-.510"
C6	.755"-.760"

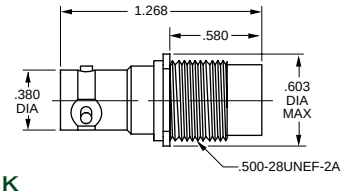
Double Circular Hole	
CC1	
A	.630"
B	.370"
C	.136"-.140"



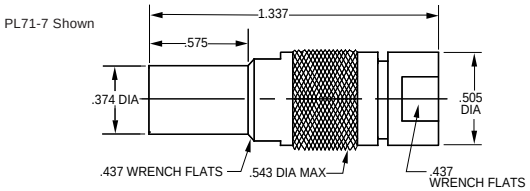


Circular Holes

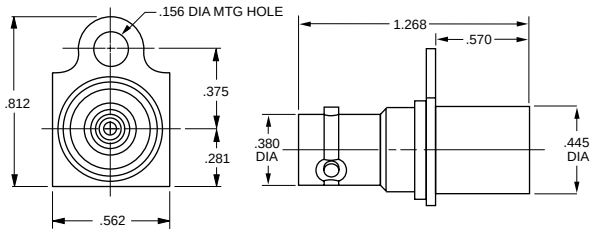
Standard twinax/triax patching & cable assemblies



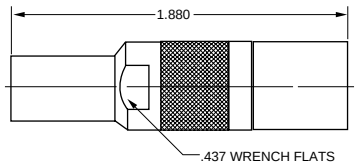
Patch Jack — **J70**



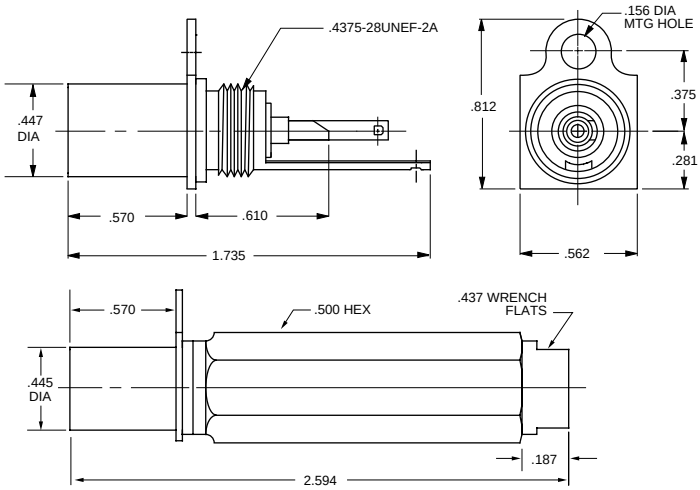
Patch Plug — **PL71-** ⚠1



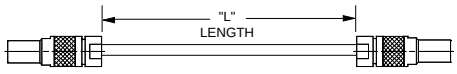
Patch Jack — **J72**
TRB 3-lug



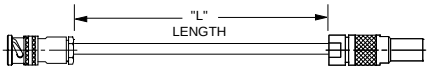
Termination — **TPT-1-R**
RFI Cap — **RFI 70-1**
For patch jack, no chain
For other chain options see page 45.



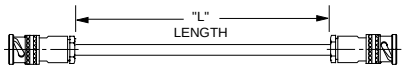
Patch Jack — Without hood — **J72D**
Shielded — With hood — **J72S-** ⚠1



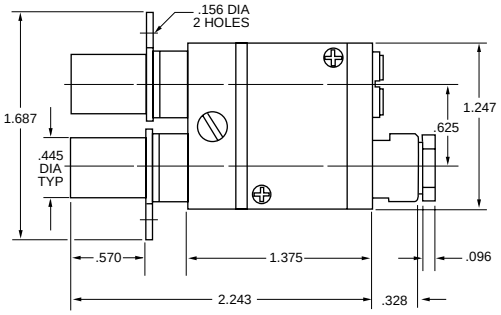
Patch Cord — Twinax **PTW-L-Z** / Triax **PTR-L-Z**
Patch plug to patch plug



Cable Assembly — Twinax **PTWX-L-Z** / Triax **PTRX-L-Z**
TRB 3-lug plug to patch plug

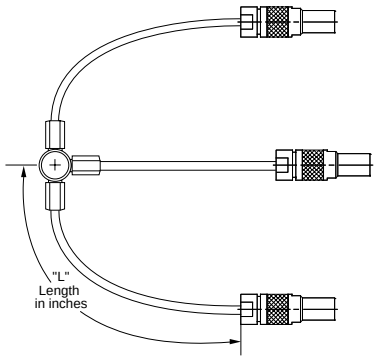


Cable Assembly — Twinax **PTWY-L-Z** / Triax **PTRY-L-Z**
TRB 3-lug plugs
Bend relief available, call factory.



Patch Jack
Single Entry With 20 dB isolated monitoring jack

Entry	Part #
TRB 3-lug	**J72SM - 1**
TRT threaded	**J72SM - 2**
Cable (shown)	**J72SM -** ⚠1

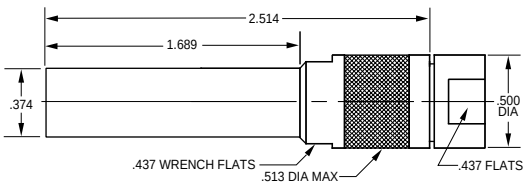


Parallel Patch Cord — Twinax **PTWS-L-Z** / Triax **PTRS-L-R**

⚠1 *- Refers to Cable Group Table, see pages 91-133. Panels are on page 51-54*

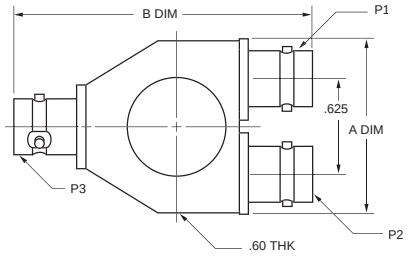
Standard twinax/triax patching

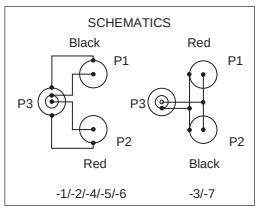
PL71L-9 Shown



Twinax Patch Plug — PL71L-△1

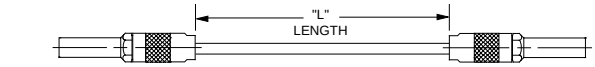
DASH NO.	CONNECTOR TYPE P1 & P2	P3	A DIM	B DIM
-1	BJ20	BJ77	1.166	1.988
-2	PL21	BJ77	1.185	2.177
-3	PL21	BJ77	1.185	2.256
-4	BJ20	BJ377	1.166	1.988
-5	BJ20	PL3155	1.166	2.385
-6	BJ20	PL375	1.166	2.666
-7	UPL21	BJ77	1.186	2.256



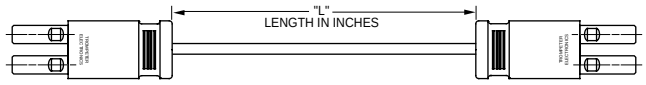


Fixed Paralleling Jacks — 305-0138-(see chart)

2 BNC jacks to 1 TRB jack
2 BNC plugs to 1 TRB jack
2 BNC plugs to 1 TRB jack

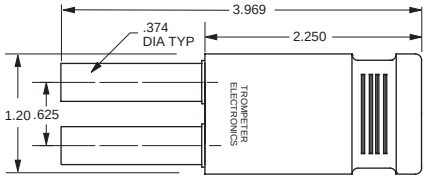


Twinax Patch Cord — Twinax PTWL-L-Z
Triax — Triax PTRL-L-Z

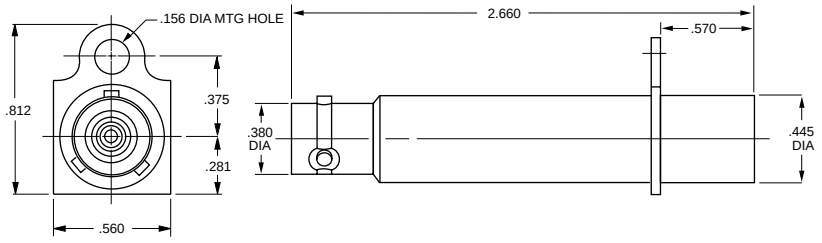


Twinax Dual Patch Cord — DPLTWLS-L-Z

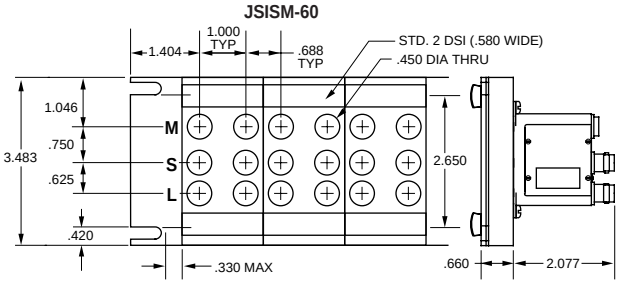
LPTWL-78 Shown

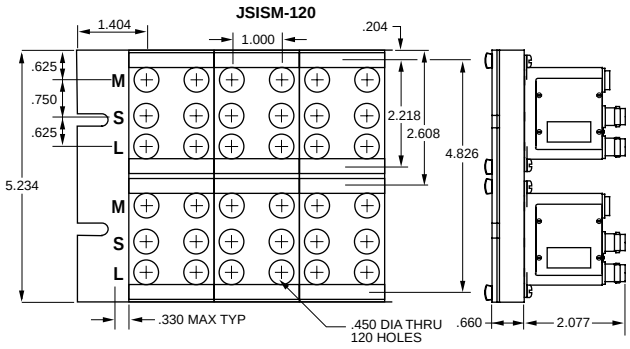


Twinax Looping Plug — LPTWL-Z
Triax — LPTRL-Z



Twinax Patch Jack — J72L
TRB 3-lug





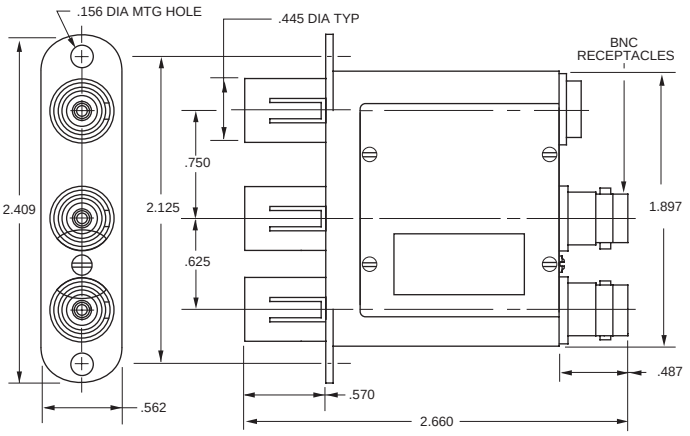
Front-loading Modular Panels
For use with J74MST-R Patch Jacks (pg. 57)

Panel Dimensions	Modules/ Panels	Jacks/ Module	Jacks/ Panel	Part Number
19" X 3.483	10	2	20	**JSISM-60**
19" X 2.34"	10	4	40	**JSISM-120**

R-Resistance (1/2 W1%), Z- Denotes Cable Impedance. △1- Refers to Cable Group Table, see pages 91-133. Standard and Sub-miniature Panels, see pages 51-54

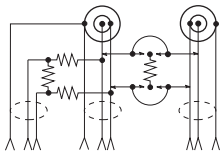
J74 Series

Trompeter's superior J74 Series of twinax/triax patch jacks provide a normal-thru signal path without the use of looping plugs or patch cords. Same body size as our J24 Series coax dual patch jacks. *It offers a self-wiping, self-normalizing switch with gold plated beryllium copper contacts, which provides positive electrical contact with 30,000 minimum mating cycles.* All metallic parts are machined, formed, or die-casted to extremely close tolerances which provide better intermateability improving EMI/RFI suppression and reduced signal loss. The TRB/TRT patch jack bodies are made of top-quality brass with a bright nickel-plated, non-tarnish finish, which resists tarnishing and the associated reduction of conductivity. Dielectrics are made of machined PTFE for superior dielectric properties and heat resistance. When you want performance and long-life, these patch jacks are what you need.



J74MST-R SCHEMATIC
Monitor-Terminated

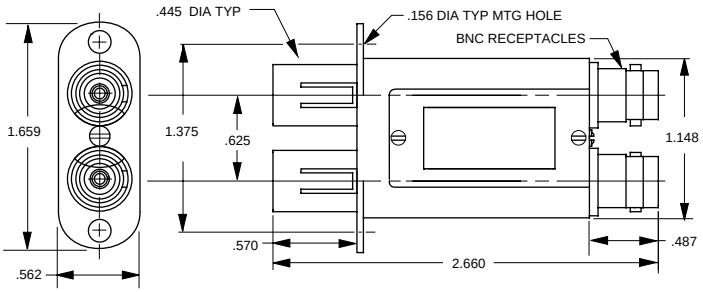
Plugging into the source side provides a resistive load to the monitored side. Separate 20 dB isolator jack and TRB input jacks for monitoring of the normal-thru signal.

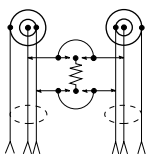


MONITOR-TERMINATED PATCH JACK — J74MST-R

PATENT DESIGN

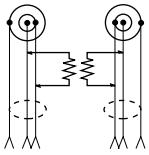
(Use With Front Loading Modular Panels, see page 56)





J74T-R
Self-Terminating

Provides a resistive load to the unused side of the jack. Insertion of a patch plug into the source side automatically terminates the load side. Plugging into the load side automatically terminates the source side.



J74-2T-R
Normally-Terminated

Provides a resistive load.

NORMAL-THRU PATCH JACK — J74T-R

SELF-TERMINATING

PATENT DESIGN

Provides a resistive load to the unused side of the jack. Insertion of a patch plug into the source side automatically terminates the load side. Plugging into the load side automatically terminates the source side.

DUAL PATCH JACK — J74-2T-R

NORMALLY-TERMINATED

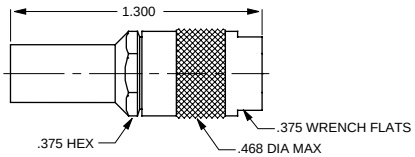
PATENT DESIGN

Provides a resistive load.

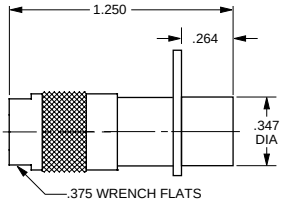
***R**-Resistance (1/2 W 1%). For standard panels see pages 51-54*

Subminiature twinax/triax patching

PL150-29 Shown

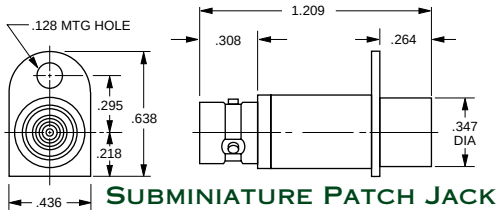


Subminiature Patch Plug — PL150- ⚠1



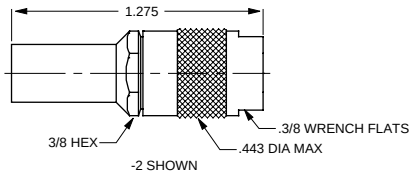
Subminiature Patch Jack

Cable Entry Mount *on JSIX panels (pages 51-54)* — **J150- ⚠1**



Subminiature Patch Jack

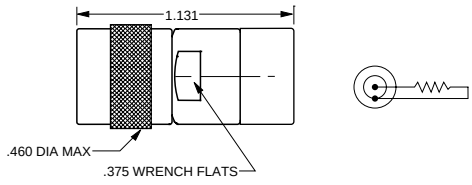
(Shown) TRS 3-lug — **J152**
TRS 4-lug — **J152FL**
TCM Threaded — **J3152**



RFI Cap — RFI 150-1

For subminiature patch jack, No chain

For other chain options see page 45.

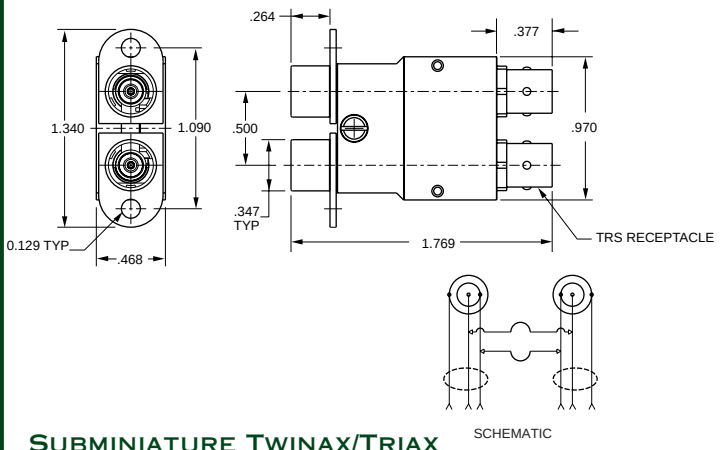


Termination — TNGM1-1-R

For TRS* 3-lug jack, No chain

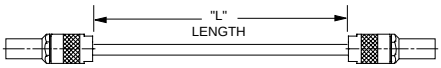
For other chain options see page 45.

*4-lug/threaded versions available



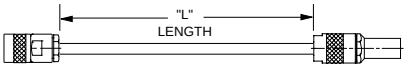
Subminiature Twinax/Triax Patch Jack

Smallest twinax/triax patch jack in the world! — **J158**



Patch Cord

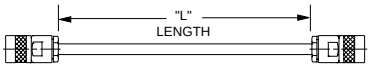
Subminiature patch plug	Triax 50Ω, 75Ω	**PTRM-L-Z**
to subminiature patch plug	Twinax 78Ω, 124Ω	**PTWM-L-Z**



Cable Assembly

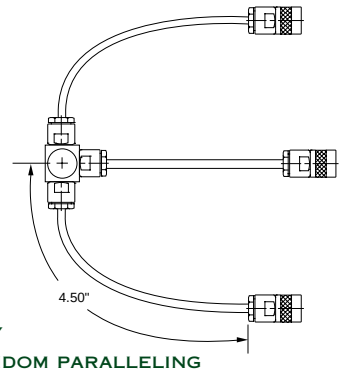
	Triax 50Ω, 75Ω	**PTRMX-L-Z**
Subminiature patch plug to	Twinax 78Ω, 124Ω	**PTWMX-L-Z**

TRS 3-lug plug, 4-lug/threaded versions available



Cable Assembly

	Triax 50Ω, 75Ω	**PTRMY-L-Z**
TRS* 3-lug plug to	Twinax 78Ω, 124Ω	**PTWMY-L-Z**
TRS* 3-lug plug	*4-lug/threaded versions available	



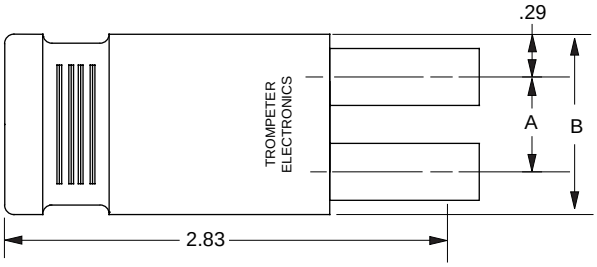
Cable Assembly — TNM3-Z

Metal junction, Random paralleling

Twinax 78Ω, 124Ω, Triax 50Ω & 75Ω

TRS* 3-lug plugs *4-lug/threaded versions available

⚠1 - *Refers to cable group table, see pages 91-133. For **JSIX** subminiature insulated panels see page 51-54. Other Terminations and RFI Caps, See pages 45-46.*



Standard Twinax/Triax Looping Plugs

Handle: A=.625" B=1.20"	Impedance	Twinax
PLAIN	78Ω	LPTW-78
TEST POINT MONITOR	78Ω	LPTW2TP-78
TRB MONITOR	78Ω	LPTWA-78
PLAIN	124Ω	LPTW-124
TEST POINT MONITOR	124Ω	LPTW2TP-124
TRB MONITOR	124Ω	LPTWA-124

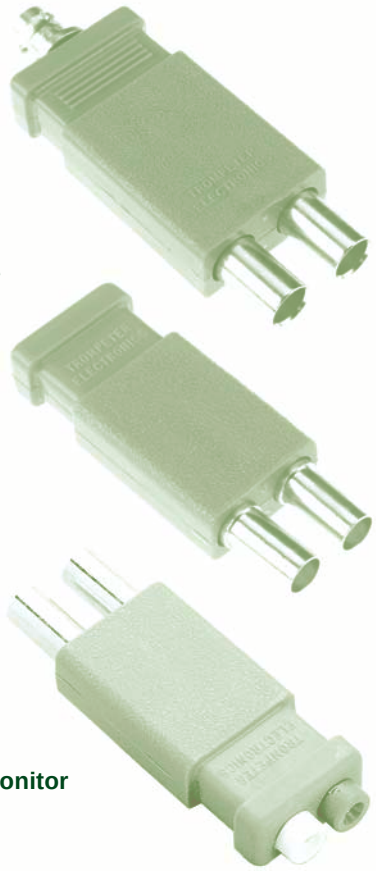
Handle: A=1.00" B=1.57"	Impedance	Twinax
PLAIN	78Ω	LPLTW-78
TEST POINT MONITOR	78Ω	LPLTW2TP-78
TRB MONITOR	78Ω	LPLTWA-78
PLAIN	124Ω	LPLTW-124
TEST POINT MONITOR	124Ω	LPLTW2TP-124
TRB MONITOR	124Ω	LPLTWA-124

Handle: A=.625" B=1.20"	Impedance	Triax
PLAIN	50Ω	LPTR-50
TRB MONITOR	50Ω	LPTRA-50
PLAIN	75Ω	LPTR-75
TRB MONITOR	75Ω	LPTRA-75

Handle: A=1.00" B=1.57"	Impedance	Triax
PLAIN	50Ω	LPLTR-50
TRB MONITOR	50Ω	LPLTRA-50
PLAIN	75Ω	LPLTR-75
TRB MONITOR	75Ω	LPLTRA-75

LOOPING PLUG HANDLE EXAMPLES:

TRS/TRB Monitor



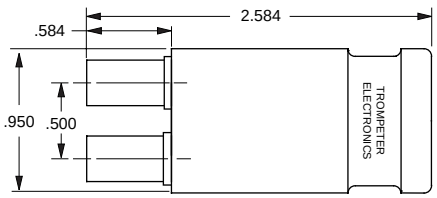
Plain Handle

Test Point Monitor

Subminiature Looping Plugs

Handle	Impedance	Twinax
BLUE	78Ω	LPTWM-78
BLUE TRS JACKS	78Ω	LPTWMA-78
BLUE TEST POINT	78Ω	LPTWM2TP-78
BLUE	124Ω	LPTWM-124
BLUE TRS JACKS	124Ω	LPTWMA-124
BLUE TEST POINT	124Ω	LPTWM2TP-124

Handle	Impedance	Triax
YELLOW	50Ω	LPTRM-50
YELLOW	75Ω	LPTRM-75



LPTWM-Z SHOWN
Z = IMPEDANCE

High Frequency Video Patching

The J314MW is a low profile jack designed for HDTV digital applications where space allocation is critical (see Application Notes). Smaller and with a lower profile than the standard WECo jacks, the J314MW allows for 128 ports in the same rack space as 48 standard jacks, a density improvement of 30% more patching. This miniature high frequency dual coaxial "normal-thru" digital patch jack establishes a benchmark for superior mechanical design, wideband performance, dependability and reliability at a highly competitive price.

Designed with a short signal path to better control matched impedance, the robust 75 ohm design offers extended band width of 1MHz to 3GHz with return loss performance of 23dB @ 2.2GHz (the highest frequency required for uncompressed 1080i). This performance is fully 8dB better than the SMPTE292M requirement. The J314MW achieves full uncompressed signal processing capability through 3GHz at performance levels of -20dB in the normal-through condition and -15dB in the patch through mode.

The Trompeter jack is designed lighter and uses fewer moving parts than other designs. The J314MW weighs 36 grams compared to similar competitive products weighing 81 grams on average - a weight savings of 56%! The design provides self-wiping action upon plug insertion, a proven approach for circular plug applications, eliminating the need for heavy and complex dust control plungers and multiple actuators common to other designs.

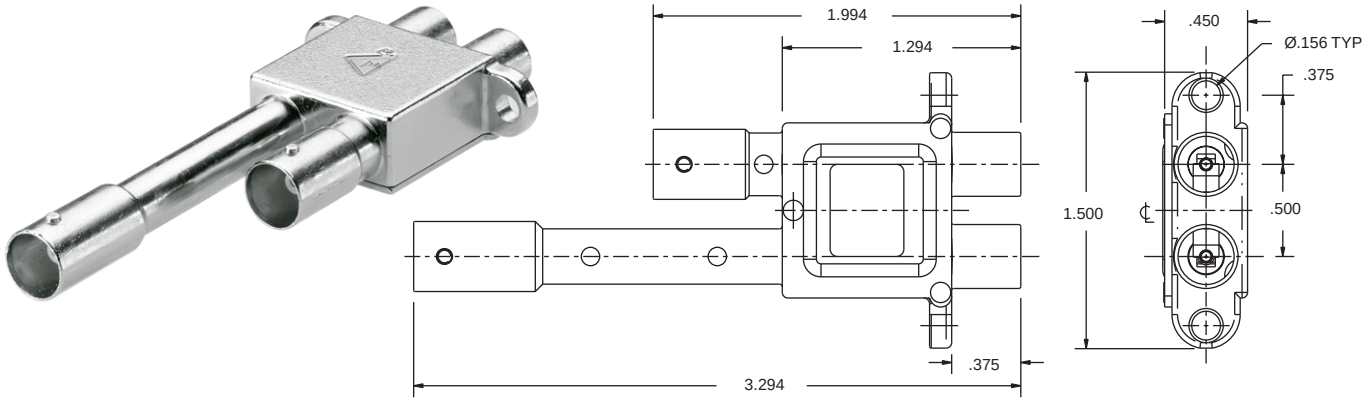
Precision construction, use of the finest materials, true impedance matched components and outstanding RF performance combined with Trompeter's tradition of superior reliability makes this product a benchmark for outstanding value.

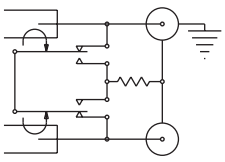
Application Notes:

This mini-WECo patch jack is ideal for mobile video news vans, high density in-station patching, remote site trucks, uplink/downlink stations, and cable headends when higher frequency, high density applications for HDTV video signals are or will be used. Trompeter's new J314MW high frequency miniature dual coaxial "normal-thru" digital patch jack establishes a benchmark for superior mechanical design, wideband performance, dependability and reliability.

Offering a short signal path to better control matched impedance, its robust 75 ohm design also offers extended bandwidth of 1Mhz to 3GHz with return loss performance @2.25GHz (the highest frequency required for uncompressed 1080i) that is fully 8dB better than the SMPTE292M requirement.

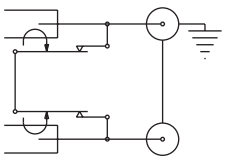
Smaller and with a lower profile than the standard WECo jacks, the J314MW allows for as many as 32 jacks in a one rack unit high panel.





J314MWT (Self-terminating)
Inserting a plug into the source side automatically terminates the load side. Insertion into the load side automatically terminates the source side. Either provides a resistive load to the unused side.

J314MWT

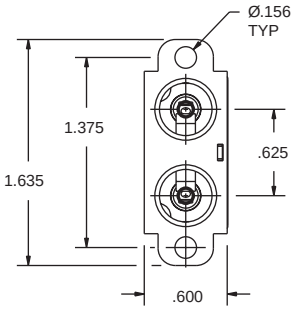


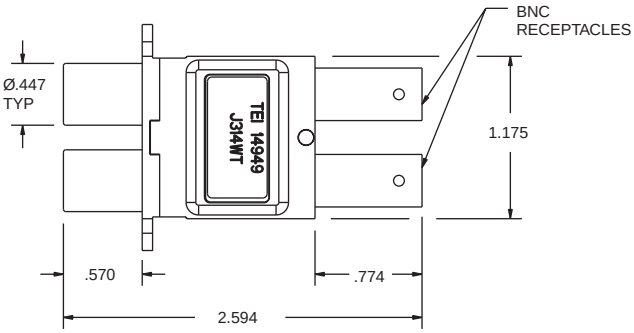
J314MW (Non-terminated)
Inserting a plug into either side breaks the normal-through. Normal-thru is BNC to BNC.

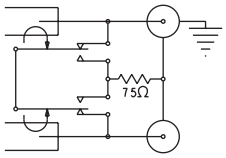
J314MW

HDTV-Ready High Frequency 75 Ohm Dual Coaxial Normal-Thru Mini-WECo Patch Jack

Un-Terminated	**J314MW**
Terminated	**J314MWT**

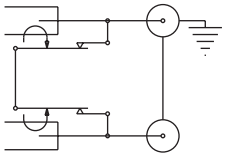






J314WT

J314WT (Self-terminating)
Inserting a plug into the source side automatically terminates the load side. Insertion into the load side automatically terminates the source side. Either provides a resistive load to the unused side.



J314W

J314W (Non-terminated)
Inserting a plug into either side breaks the normal-through. Normal-thru is BNC to BNC.

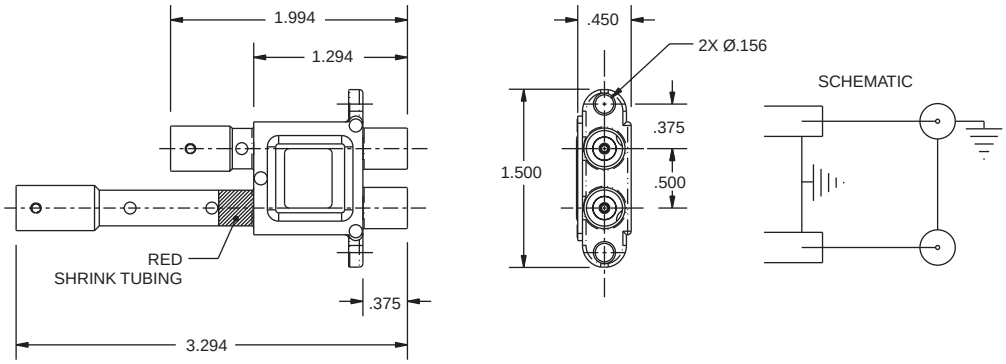
HDTV-READY HIGH FREQUENCY 75 OHM WECO PATCH JACK, NORMAL-THRU, DUAL COAXIAL

Un-Terminated	**J314W**
Terminated	**J314WT**

High Frequency Video Patching

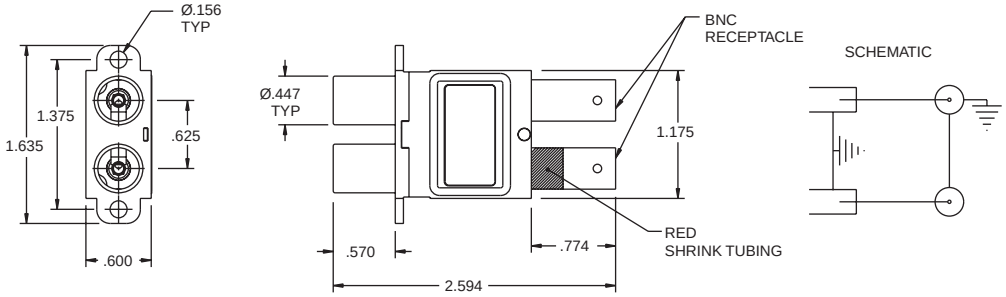
The J315MW is superior quality, high bandwidth, dual video patch jack. This low profile, high performance component is designed for HDTV digital applications where space allocation is critical, such as in video truck application. It is ideal for situations where self-normalling is not practical, usually due to environmental considerations such as high ambient airborne particles or high vibration.

When used in conjunction with the LPMWHF looping plug, a "normal-thru" circuit is achieved, which will pass the full 1.485 Gbps of uncompressed data (2.25GHz of frequency) needed for HDTV, with return loss performance which exceeds SMPTE292M requirements. This high performance is maintained when patching from one location to another, using the PCMWB-L patch cord (call factory).



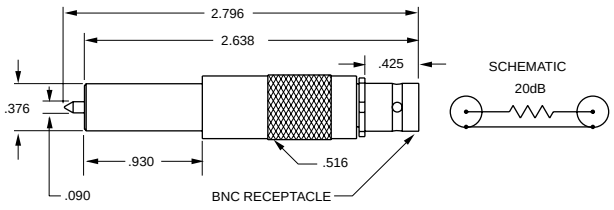
HDTV Ready High Frequency 75 Ohm Dual Coaxial Mini-WECo Patch Jack with BNC Receptacles

Un-Terminated **J315MW**



HDTV Ready High Frequency 75 Ohm Dual Coaxial WECo Patch Jack with BNC Receptacles

Un-Terminated **J315W**

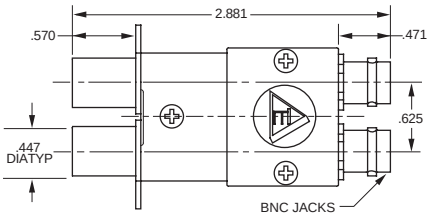


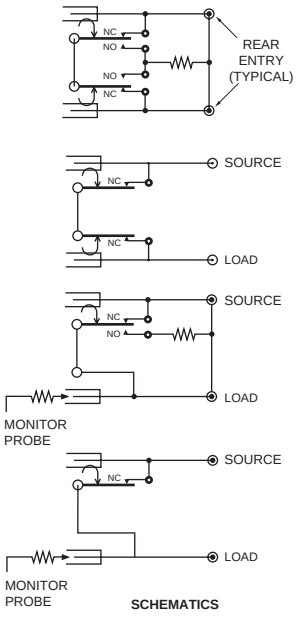
Coaxial Video Monitor Probe

BNC Jack **MP20W**

Monitors J314, J214 and J14 Series without interruption of normal-thru signal.

Patch Jacks J15, J14, J24, and J314 can be mounted vertically or horizontally on 5/8" centers. Mounting tabs are normally "back-to-back" as shown. For side-by-side tabs for horizontal mounting, add the letter "L" for left-hand tabs or "R" for right hand tabs (not available on J24, J214, and J314).





SCHEMATICS

TERMINATED:
PROVIDES A RESISTIVE LOAD TO THE UNUSED SIDE. INSERTING A PLUG INTO THE THE SOURCE SIDE AUTOMATICALLY TERMINATES THE LOAD SIDE. INSERTION INTO THE LOAD SIDE AUTOMATICALLY TERMINATES THE SOURCE SIDE.

UN-TERMINATED:
INSERTING A PLUG INTO EITHER SIDE BREAKS THE NORMAL-THRU.

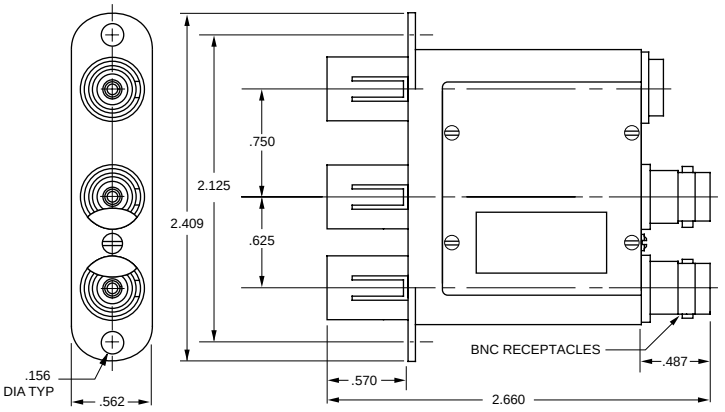
MONITOR-TERMINATED:
INSERTING A PLUG INTO THE SOURCE SIDE PROVIDES A RESISTIVE LOAD TO THE LOAD SIDE. INSERTION INTO THE LOAD SIDE MONITORS THE NORMAL-THRU SIGNAL ONLY.

MONITOR:
INSERTING A PLUG INTO THE SOURCE SIDE BREAKS THE NORMAL-THRU. INSERTION INTO THE LOAD SIDE MONITORS THE NORMAL-THRU SIGNAL ONLY.

J14 SERIES

50Ω RCA STANDARD

Rear Entry	Configuration	Center-pin	Part#
BNC	Unterminated	.070"	**J14**
BNC	Terminated	.070"	**J14T-R**
BNC	Monitor	.070"	**J14M**
BNC	Monitor-Terminated	.070"	**J14MT-R**
TNC	Unterminated	.070"	**J14H**
TNC	Terminated	.070"	**J14HT-R**
TNC	Monitor	.070"	**J14MH**
TNC	Monitor-Terminated	.070"	**J14MHT-R**
Cable Crimp	Unterminated	.070"	**J14C-** ⚠1
Cable Crimp	Terminated	.070"	**J14CT-R-** ⚠1
Cable Crimp	Monitor	.070"	**J14MC-** ⚠1
Cable Crimp	Monitor-Terminated	.070"	**J14MCT-R-** ⚠1

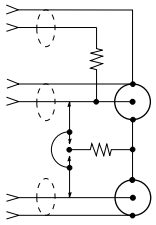


HIGH FREQUENCY NORMAL-THRU WITH MONITOR

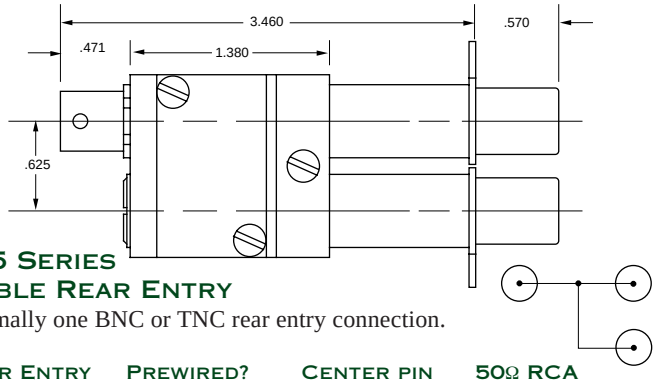
DUAL COAX PATCH JACK

To be used with grey aluminum insulated panel..JSIS-72 (see page 54)

J24WMSTHF-75



SCHEMATIC



J15 SERIES CABLE REAR ENTRY

Normally one BNC or TNC rear entry connection.

Rear Entry		Prewired?	Center Pin	50Ω RCA
BNC	Single	Y	.070"	**J15B**
BNC	Single	N	.070"	**J15BA**
BNC	Dual	Y	.070"	**J15BB**
BNC	Dual	N	.070"	**J15BBA**
TNC	Single	Y	.070"	**J15H**
TNC	Single	N	.070"	**J15HA**
TNC	Dual	Y	.070"	**J15HH**
TNC	Dual	N	.070"	**J15HHA**
Cable	Single	N	.070"	**J15-** ⚠1

Rear Entry		Prewired?	Center Pin	75Ω WE
BNC	Single	Y	.090"	**J15WB**
BNC	Single	N	.090"	**J15WBA**
BNC	Dual	Y	.090"	**J15WBB**
BNC	Dual	N	.090"	**J15WBBA**
TNC	Single	Y	.090"	**J15WH**
TNC	Single	N	.090"	**J15WHA**
TNC	Dual	Y	.090"	**J15WHH**
TNC	Dual	N	.090"	**J15WHHA**
Cable	Single	N	.090"	**J15W-** ⚠1

Standard Panels see pages 42-45. ⚠1 *- Refers to the cable group table, see pages 91-133. R-Resistance (1/2 W1%)*

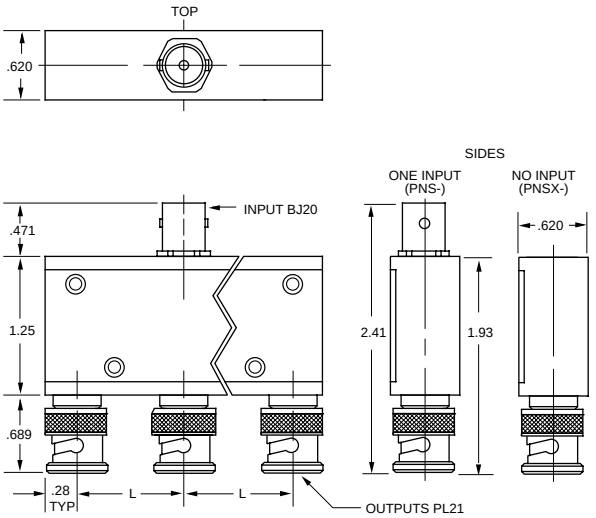
Coax patching accessories

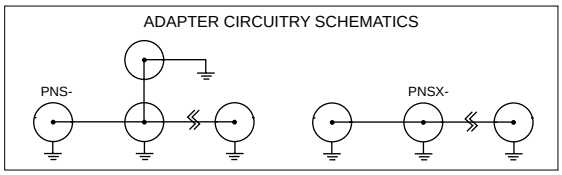
Adapters

Fixed Paralleling

50Ω BNCs

Call factory for 75Ω versions

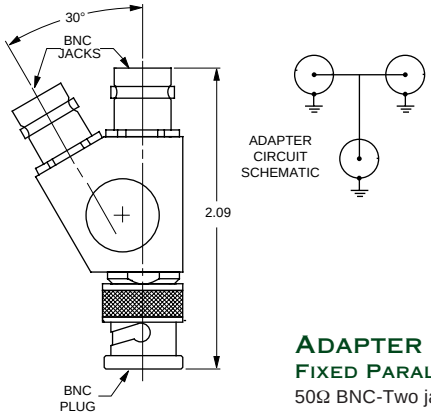




△2 = NUMBER OF CONNECTORS

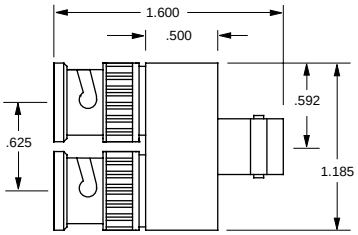
"L"	One Input	No Input
0.625"	PNS-B-△2	PNSX-B-△2
0.750"	PNS-C-△2	PNSX-C-△2
0.830"	PNS-D-△2	PNSX-D-△2
0.875"	PNS-E-△2	PNSX-E-△2
1.000"	PNS-F-△2	PNSX-F-△2
1.125"	PNS-G-△2	PNSX-G-△2
1.210"	PNS-H-△2	PNSX-H-△2
1.250"	PNS-J-△2	PNSX-J-△2
1.430"	PNS-K-△2	PNSX-K-△2
.0734"	PNS-L-△2	PNSX-L-△2

"L" Length in inches
Also available with push-on connectors, call factory.



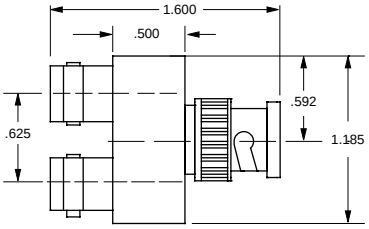
Adapter
Fixed Paralleling

50Ω BNC-Two jacks, One plug **PN2C**



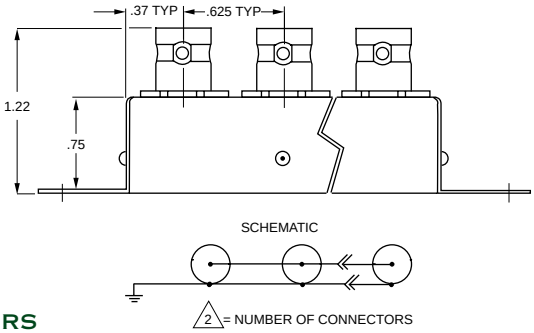
Adapter
Fixed Paralleling

50Ω BNC-One jack, Two plugs **PN2**



Adapter
Fixed Paralleling

50Ω BNC-Two jacks, one plug **PN2A**



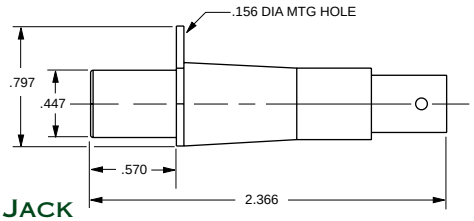
△2 = NUMBER OF CONNECTORS

Adapters
Multiple Parallel Network

50Ω MPN-△2 /BNC
50Ω MPN-△2 /TNC

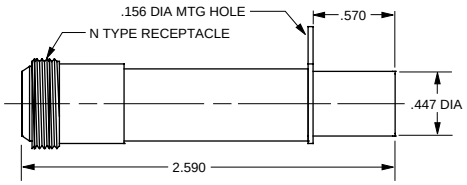
Contact the Factory for more information

J3W Shown



PATCH JACK
BNC REAR INTERFACE

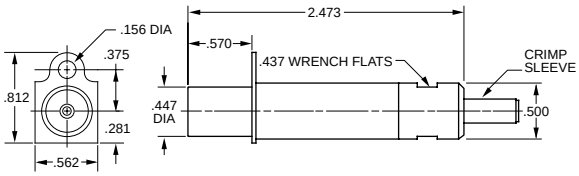
50Ω RCA Center pin-.070" **J3**
75Ω WE Center pin-.090" **J3W**



PATCH JACK
"N"

50Ω "N", RCA Center pin -.070" **J9**
75Ω "N",WE Center pin -.090" **UJ9W**

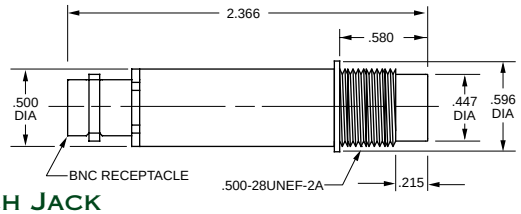
Minimum vertical/horizontal centers .875"



PATCH JACK
CRIMP

50Ω RCA Center pin-.070" **J3C-** ⚠1
75Ω WE Center pin-.090" **J3CW-** ⚠1

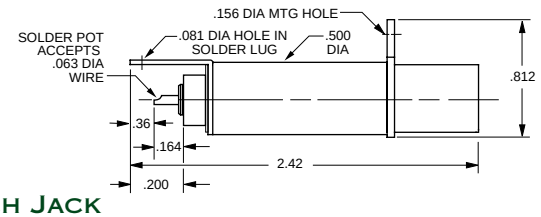
Microswitch not available.



PATCH JACK
BNC

50Ω RCA Center pin-.070" **J10**
75Ω WE Center pin-.090" **J10W**

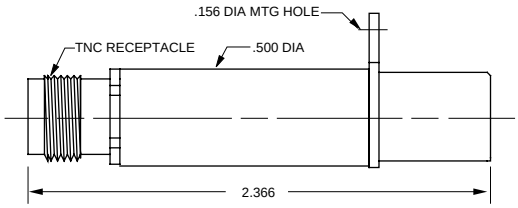
Requires special threaded panel .5-.28 UNEF-2A. Contact Factory when ordering panels.



PATCH JACK
SOLDER POT

50Ω RCA Center pin-.070" **J3D**
75Ω WE Center pin-.090" **J3WD**

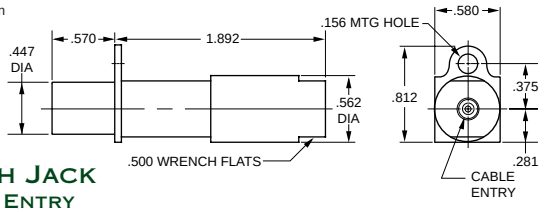
(WECo 468 type)



PATCH JACK
TNC

50Ω RCA Center pin-.070" **J5**
75Ω WE Center pin-.090" **J5W**

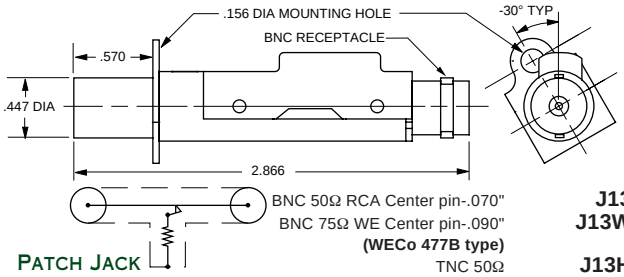
J3E-1 Shown



PATCH JACK
CABLE ENTRY

50Ω RCA Center pin-.070" **J3E-** ⚠1
75Ω WE Center pin-.090" **J3WE-** ⚠1

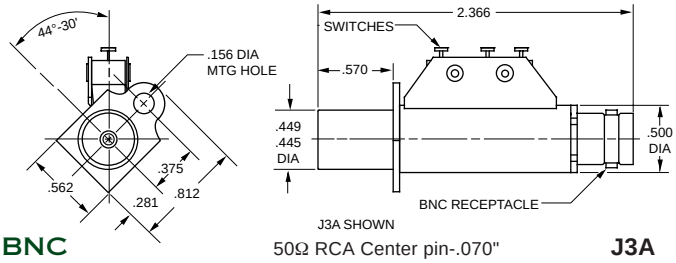
(WECo 447 type) Microswitch not available



BNC 50Ω RCA Center pin-.070" **J13-R**
BNC 75Ω WE Center pin-.090" **J13W-R**
(WECo 477B type)

PATCH JACK
SELF-TERMINATING

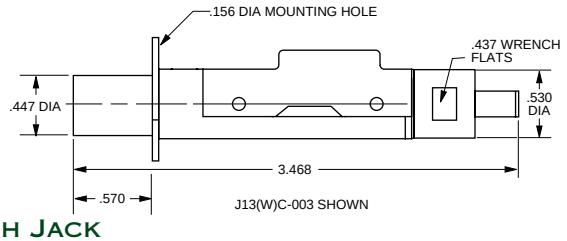
TNC 50Ω **J13H-R**
TNC 75Ω **J13WH-R**



BNC PATCH JACK

50Ω RCA Center pin-.070" **J3A**
75Ω WE Center pin-.090" **J3WA**

External SPDT Microswitch (125-250 VAC, 5 amps/28 VDC, 1amp res, 3 amp. ind)



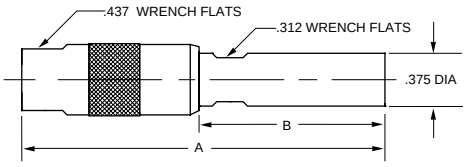
PATCH JACK
SELF-TERMINATING

50Ω RCA Center pin-070" **J13C-R-** ⚠1
75Ω WE Center pin-.090" **J13WC-R-** ⚠1

Cable crimp: Circuit is terminated when plug is removed.

⚠1 - *Refers to Cable Group Table, see pages 91-133. Standard Panels are on page 51-54. Consult with the factory for special requirements. R = Resistance*

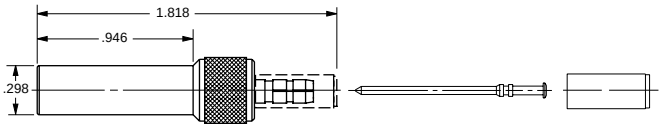
Standard & mini-weco coax patch plugs



Patch Plug

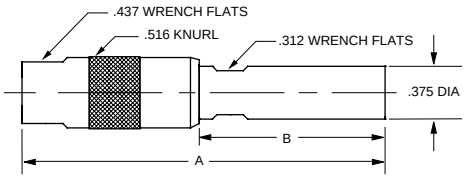
Shield Crimp 50Ω RCA Center pin .070" A=2.73" B=1.50" **PL1C-** 1
75Ω WE Center pin .090" A=2.45" B=1.22" **PL1WC-** 1

(WECo 358 type)



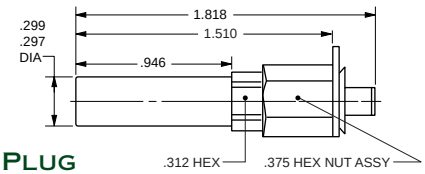
Patch Plug

Standard BNC Strip dimension
Crimp Contact, Crimp Shield
(WECo 440 Type) **PL11SC-** 1



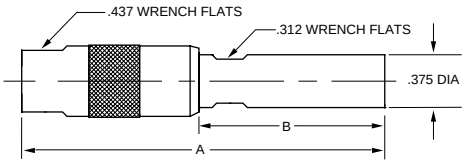
Patch Plug — Cable Entry, Field Serviceable

For RG58 **50Ω RCA Center pin .070"** A=2.80" B=1.568" **PL1**
For RG59 **50Ω RCA Center pin .070"** A=2.737" B=1.505" **PL2**
For RG58 **75Ω WE Center pin .090"** A=2.52" B=1.288" **PL1W**
For RG59 **75Ω WE Center pin .090"** A=2.457" B=1.225" **PL2W**



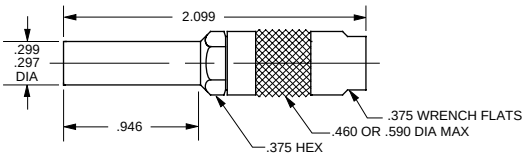
Patch Plug

Standard Crimp Plug
with Locking Tab
(WECo 440 Type) **PL11SCLT-** 1



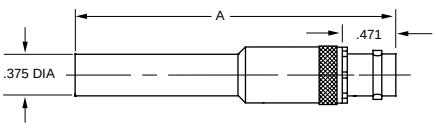
Termination Plug

No chain
50Ω RCA Center pin .070" A=2.81" B=1.58" **TP-1-R**
No chain
75Ω WE Center pin .090" A=2.45" B=1.25" **TPW-1-R**
For other chain options, see page 45. **(WECo 340C type)**



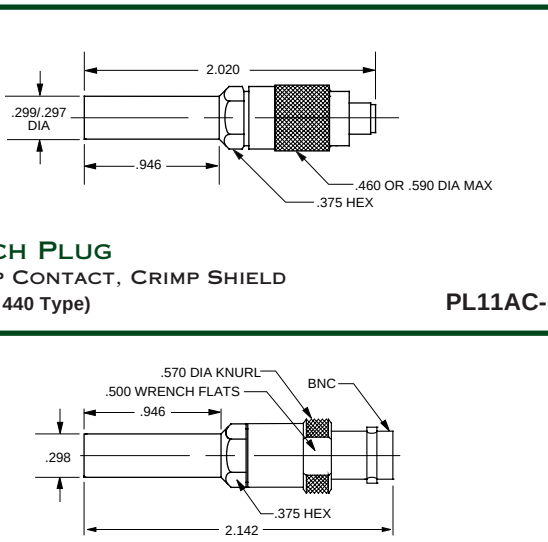
Patch Plug

Solder Contact, Crimp Shield
(WECo 440 Type) **PL11C-** 1



Adapters — Patch Plug to BNC/TNC

50Ω RCA plug Center pin .070" 50Ω BNC A =2.774" **AD1**
50Ω RCA plug Center pin .070" 50Ω TNC A =2.774" **ADH1**
75Ω WE Center pin .090" 75Ω BNC A =2.83" **AD1W**
75Ω WE Center pin .090" 75Ω TNC A =2.83" **ADH1W**
(WECo 358 type)



Patch Plug

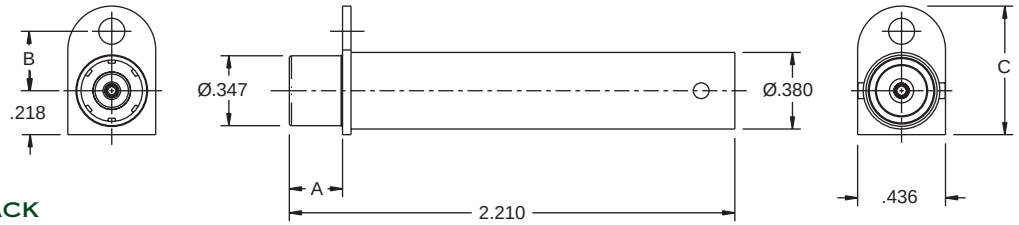
Crimp Contact, Crimp Shield
(WECo 440 Type) **PL11AC-** 1

Adapter

75Ω Minature Patch Plug (Mini-WECo type)
to 75Ω BNC **ADMW12**

1 - *Refers to cable group table, see pages 91-133. R-Resistance*

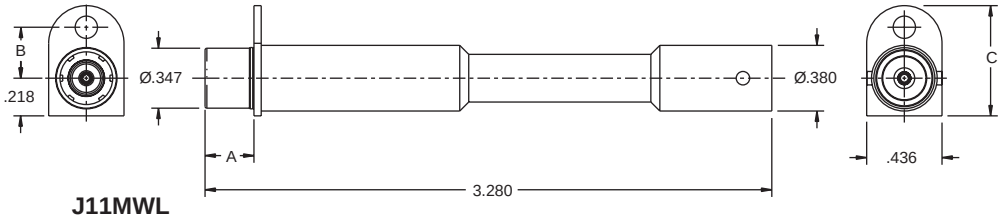
	A	B	C
J11B	.264	.295	.638
J11MW	.375	.375	.728



MINIATURE PATCH JACK
MINI-WECO TYPE
BNC REAR INTERFACE

J11MW

	A	B	C
J11BL	.264	.295	.638
J11MWL	.375	.375	.728

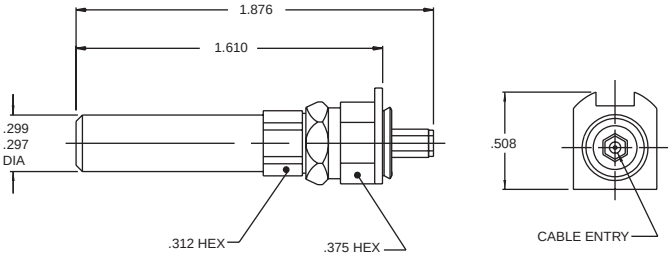


MINIATURE PATCH JACK
MINI-WECO TYPE
BNC REAR INTERFACE

J11MWL

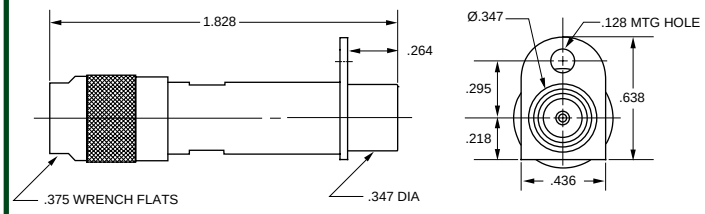
PL1MWLT-(DASH NO)

DASH NO	CABLE ACCOMMODATED	A HEX
-009	8218, BELDEN	.178
	21-597, ESSEX	
	YR23023, BELDEN	
-013A	TCC-75-2, TROMPETER	.255
	8241F, BELDEN	
-014	8212, BELDEN	.255
-025	734A TYPE	.255
-026	735A TYPE	.178
-027	KS19224L2 LUCENT	.178



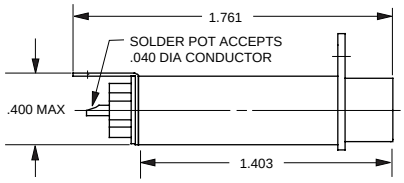
PATCH PLUG
MINI-WECO CRIMP PLUG
WITH LOCKING TAB

PL1MWLT-[1]



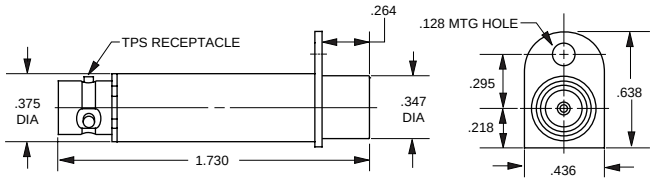
MINIATURE PATCH JACK
CABLE ENTRY, FIELD SERVICEABLE MINI-WECO TYPE
Minimum .64" centers

J12-[1]



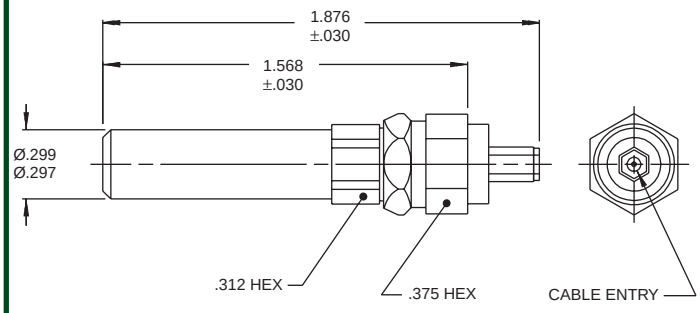
MINIATURE PATCH JACK
SOLDER POT, MINI-WECO TYPE

J11D



MINIATURE PATCH JACK
TPS, MINI WECO TYPE

J11

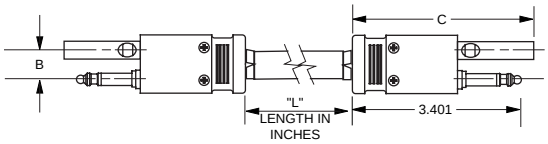


PATCH PLUG
MINI-WECO BNC STRIP DIMENSION
CRIMP CONTACT, CRIMP SHIELD

PL1MW-[1]

[1] - *Refer to Cable Group Table, see pages 91-1313.*

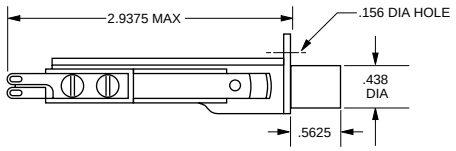
Audio patching, standard coax patching & looping plugs



Audio/Video Patch Cord

Violet, 75Ω WE, .090" Center Pin

AVPCW-L-75	**AVPC-L-50**	B = .625	C = 3.485
AVPCLW-L-75	**AVPCL-L-50**	B = 1.000	C = 3.765

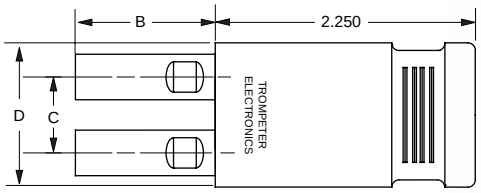


Single Audio Jack

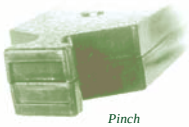
3 Circuit Normaling

JJO-42 Type — **M641/3-2**

Standard Coax Looping Plugs



BNC Monitor



Pinch

Test Point

Plain Handle Shown

Looping Plugs

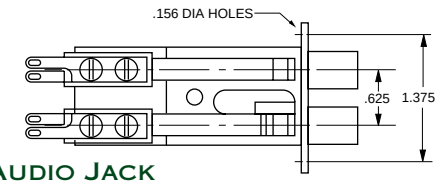
Handle: B=1.51" C=.625" D=1.20"	Center Pin	50Ω RCA
Plain	.070"	**LP-Z**
Pinch	.070"	**LPP-Z**
Test Point Single	.070"	**LPTP-Z**
Test Point Dual	.070"	**LP2TP-Z**
BNC Monitor	.070"	**LPA-Z**

Handle: B=1.51" C=1.00" D=1.57"	Center Pin	50Ω RCA
Plain	.070"	**LPL-Z**
Test Point Single	.070"	**LPLTP-Z**
BNC Monitor	.070"	**LPLA-Z**

Handle : B=1.25" C=.625" D=1.20"	Center Pin	75Ω WE
Plain	.090"	**LPW-Z**
Pinch	.090"	**LPPW-Z**
Test Point Single	.090"	**LPWTP-Z**
Test Point Dual	.090"	**LPW2TP-Z**
BNC Monitor	.090"	**LPWA-Z**

Handle: B=1.25" C=1.00" D=1.57"	Center Pin	75Ω WE
Plain	.090"	**LPLW-Z**
Test Point Single	.090"	**LPLWTP-Z**
BNC Monitor	.090"	**LPLWA-Z**

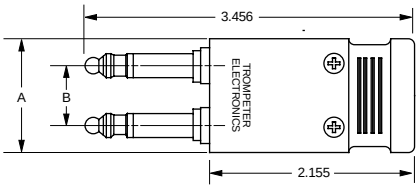
Handles are color coded:
Green = 50Ω Violet = 75Ω White = 93Ω



Dual Audio Jack

3 Circuit Normaling

WECo 482A Type — **MT389**

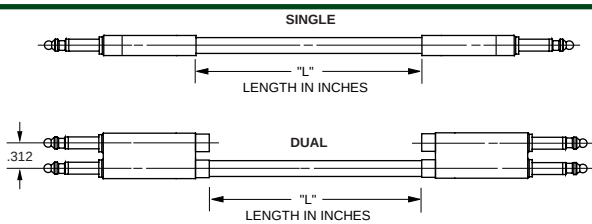


ALP3	A = 1.200	B = .625
ALPL3	A = 1.570	B = 1.000

Looping Plug

Audio (Hair Pin)

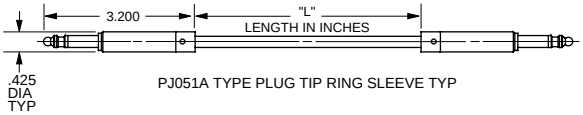
Plain — **ALP3/ALPL3**



Audio Bantam Patch Cords

Single Plug — **APCB-L**

Dual Plug — **APCDB-L**



Audio Patch Cords

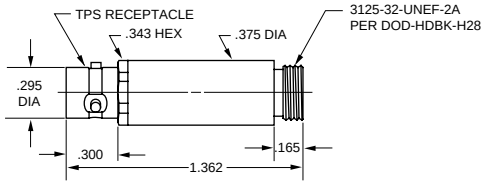
3-Circuit ..... See table below

Audio Patchcords: specify color when ordering: red, black, yellow, green, blue, or purple

Color	12"	18"	24"	36"	48"
	APC3-12	**APC3-18**	**APC3-24**	**APC3-36**	**APC3-48**

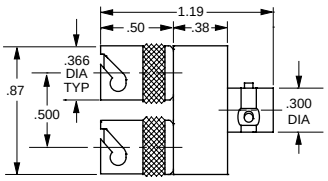
Replace "L" with length in inches. For Audio Jack Fields call factory.

50Ω Miniature coax patching



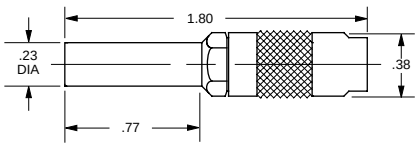
Miniature Patch Jack

TPS Jack	50Ω	3-lug	**J8**
	50Ω	4-lug	**J8FL**
TCM Jack (not shown)	50Ω	Threaded	**J308**



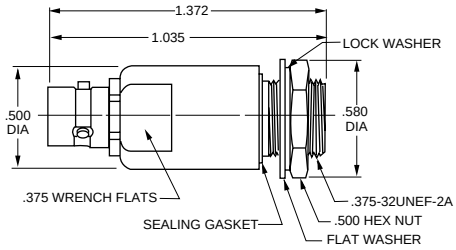
Adapter
Fixed Paralleling

50Ω TPS - One Jack, Two Plugs — **PNM2**



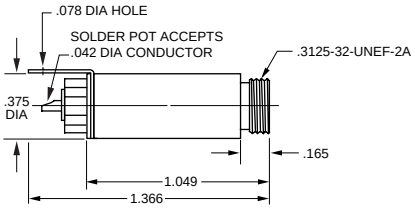
Miniature Patch Plug

50Ω Shield Crimp — **PL3C-**△1



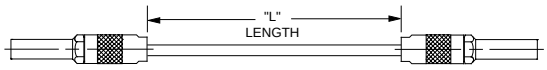
Feed Thru Bulkhead Mount

Miniature Patch Jack — 50Ω — **J8FT**



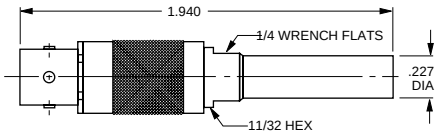
Miniature Patch Jack

Solder Pot — 50Ω — **J8D**



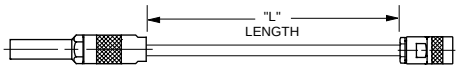
Patch Cord

50Ω Miniature Patch Plugs — **PCM-L-Z**



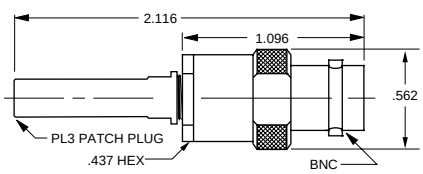
Adapter

50Ω Miniature patch plug to 50Ω TPS jack **ADM1**



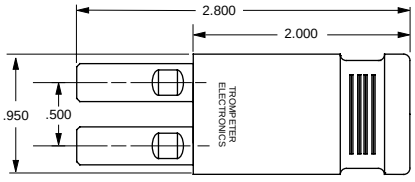
Patch Cord

50Ω Miniature Patch Plug to TPS Plug — **PCMX-L-Z**



Adapter

50Ω Miniature patch plug
to 50Ω BNC Jack — **ADM2**



Miniature Looping Plug

Handle Color: Green = 50Ω,
Violet = 75Ω, White = 93Ω — **LPM-Z**

Call factory for other miniature coax products. Z = denotes impedance of connecting cable in ohms

Custom cable assemblies

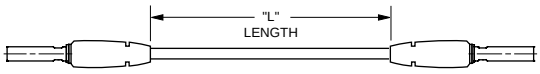
Custom Cable Assembly Lines

Trompeter's coax patch cords and cable assemblies are of the highest quality and can be ordered in any length. **Trompeter normally stocks popular lengths of 6", 12", 18", 24", 36", 48", 60",** and **72"**. Standard coax patch cords and cable assemblies are made with the following cables: **Patch Cords** and **Cable Assemblies** are available in **50Ω RCA Standard** or **75Ω Western Electric (WECo) Standard**. The two standards are ***not*** intermateable. ***"L" denotes the length in inches. "Z" denotes the impedance of the connecting cable.*** Trompeter stocks many other connector types for 24 to 48 hour turnaround of custom cable assemblies including:

D-Subs & Backshells:
Male & Female 9,15,25,37 pin and more.

SMA/SMB/SMCs:
Straight and Right Angles for RG-58, RG-142, RG-174, RG-188, RG-316, and RG-400.

Impedance	Cable Type	Trompeter Cable Part #
50Ω	RG-58	TCC-50-2
75Ω	RG-59	TCC-75-2
93Ω	RG-62	N/A

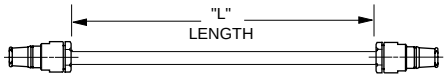


Patch Cords (see p/n below)
Patch Plug to Patch Plug

50Ω RCA plug Center pin.070"	PC-L-Z
75Ω WE Center pin.090"	PCW-L-Z
75Ω Mini-WECo	PCMW-L-Z

Cable Assembly
BNC Plug to BNC Plug

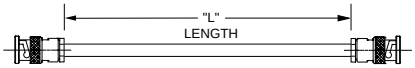
Tool Crimp BNC	50Ω	PCYC-L-Z
	75Ω	UPCYC-L-Z



Cable Assembly
Push-on Plug to Push-on Plug

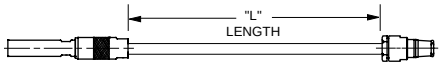
50Ω Push-on	PCP-L-Z
75Ω Push-on	UPCP-L-Z

Wrench Crimp push-on plugs fit both BNC and TNC jacks.



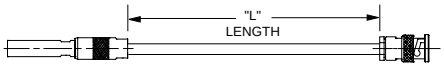
Cable Assembly
BNC Plug to BNC Plug

Wrench Crimp	50Ω BNC	PCY-L-Z
	75Ω BNC	UPCY-L-Z



Cable Assembly
Patch Plug to Push-on Plug

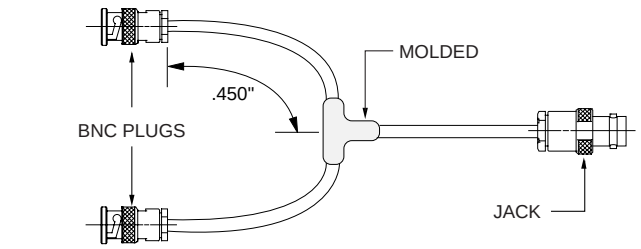
50Ω RCA plug Center pin -.070" to 50Ω Push-on	PCPX-L-Z
50Ω RCA plug Center pin -.070" to 75Ω Push-on	UPCPX-L-Z
75Ω WE Center pin -.090" to 50Ω Push-on	PCPWX-L-Z
75Ω WE Center pin -.090" to 75Ω Push-on	UPCPWX-L-Z

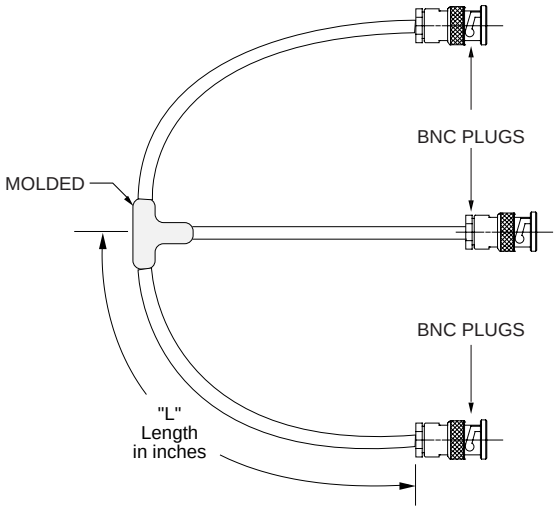


Cable Assembly
Patch Plug to BNC Plug

50Ω RCA plug center pin .070" to 50Ω BNC	PCX-L-Z
50Ω RCA plug center pin .070" to 75Ω BNC	UPCX-L-Z
75Ω WE center pin .090" to 50Ω BNC	PCWX-L-Z
75Ω WE center pin .090" to 75Ω BNC	UPCWX-L-Z

Contact our rapid response Custom Cable Assembly Department for your cable needs.
These paralleling cables can be specified with many other connector, cable, and color combinations.

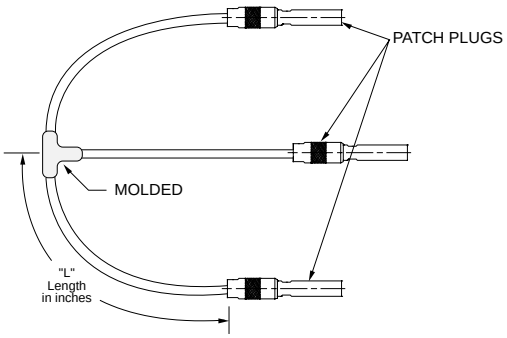


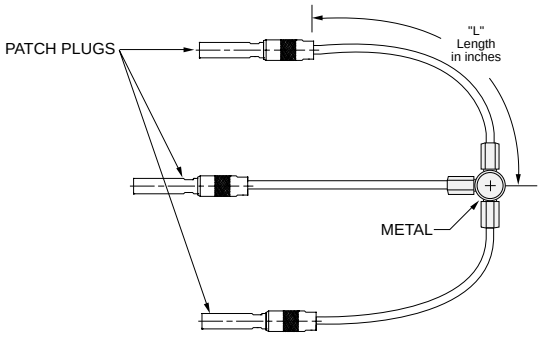


CABLE ASSEMBLIES
RANDOM PARALLELING

JUNCTION	CONNECTORS	PART #
MOLDED	50Ω BNC-Two plugs, one jack	*PN2B-Z
MOLDED	75Ω BNC-Two plugs, one jack	UPN2B-Z
METAL	50Ω BNC-Two plugs, one jack	PN2BE-Z
METAL	75Ω BNC-Two plugs, one jack	**UPN2BE-Z
MOLDED	50Ω BNC-Three plugs, no jack	*PN3-Z
METAL	50Ω BNC-Three plugs, no jack	PN3E-Z
METAL	50Ω BNC-Four plugs, one jack	PN4-Z

* 50Ω or 75Ω Cable only
** 75Ω or 93Ω Cable only





PATCH CORDS
TRIPLE PARALLELING

JUNCTION	STANDARD	MAXIMUM LENGTH	PART#
MOLDED	50Ω RCA CENTER PIN-.070"	14"	PCS-L-Z
METAL	50Ω RCA CENTER PIN-.070"	None	PCSE-L-Z
MOLDED	75Ω WE CENTER PIN-.090"	14"	PCWS-L-75
METAL	75Ω WE CENTER PIN-.090"	None	PCWSE-L-75

Note: *"Z" replace with impedance in ohms. "L" replace with length in inches.*

Custom Cable Assemblies

Trompeter provides all the flexibility and response of a small cable shop, with the quality system and design control of a major connector manufacturer. For over **35 years**, Trompeter has been producing high quality cable assemblies, and currently provides over 500,000 different configurations using a broad range of RF connectors and cable types. We stock a variety of components for camera, RGB, S-Video, Audio, and many other applications.

Capabilities

Trompeter can provide coax, twinax, and triax cable assemblies using any cable attached connector. This includes panel mount, data bus, multi-pin , D-Subs, SMA connectors, and patching products. Special marking (ID sleeves/tags, hot stamping, colored cable jacket, etc.) is available. Trompeter offers 24-48 hour turnaround on many standard products with full capabilities for sustained volume delivery. Deliveries can be adjusted to meet your specific needs.

Photo: Twinax/Triax connectors on ruggedized dual twinax/triax test cable (fire retardent cables).

Quality Assurance... ISO 9001 Registered

Trompeter's assemblies are 100% electrically tested for continuity, shorts, and Hi-Pot. (VSWR, IR, Insertion / Return Loss test capabilities, SPC data available on request).

Request For Quote... Please refer to the following guideline when requesting a quote:

1	2		3		4		5		6
Qty	Conn 1	/	Cable	/	Conn 2	/	Length	/	Special Requirements
12	UPL220	/	735A	/	PL11C	/	60"	/	Bend relief on Conn 1
		/		/		/		/	
		/		/		/		/	

1 **Quantity** ..... **Select quantity**
2 **Conn1** ..... Select connector type from catalog.
3 **Cable** ..... Select cable from pages 91-133.
4 **Conn2** ..... Select connector type from catalog.
5 **Length** ..... In inches
6 Write out any **special** marking, testing, bend relief, packaging, or other **requirements**.

EXAMPLE SHOWN: 60 inch coax cable assembly using AT&T 735A, BNC plug, and Mini-WECo patch plug with bend relief on BNC plug.

Powered Cable Stripper

This powerful, low-cost, portable hand-held (less than 2.25 lbs) cable stripper delivers, production quality performance, and gives you up to 250 strips per charge (7.2 V Ni-cad battery without memory effect). The replaceable, 3-level cutter head, is preset to strip your coax cable for Trompeter's 220 Series, Tool Crimp BNC connectors. The cutter head has adjustable depth cutter blades for precision tuning. Precision ground, tool steel blades (hardened to Rockwell 64) give you up to 15,000 strips! Rapid Charger/ Reconditioner recharges your Ni-Cad in only 1.5 hours!

Powered Cable Stripper Kits... (1 year Warranty)

Includes: 1 Drive, 1 Ni-Cad Battery Pak, 1 Cutter Head, 1 Rapid Charger/Reconditioner, and 1 Carrying Case.

CABLE TYPE	STRIPPER/CUTTER HEAD
FOR RG-59	**BCWS/C26T3D**
FOR 8281	**BCWS/C26T3U**

Cutter Head Guide

Cable Outside Diameter	2-Blade Cut	3-Blade Cut
.070-.110	**C26T2A**	**C26T3A**
.160-.215	**C26T2B**	**C26T3B**
.190-.230	**C26T2C**	**C26T3C**
.235-.270	**C26T2D**	**C26T3D**
.300-.430	**C26T2E**	**C26T3E**
.110-.160	**C26T2I**	**C26T3I**
.271-.305	**C26T2U**	**C26T3U**

Important Note: *The 3-level cutter heads included in the kits are set to the same stripping dimensions as our STC-F (see below) stripping cassette for Trompeter" Tool Crimp" BNC cable connectors.*

Use 2-level cutter heads for Trompeter "Wrench Crimp" BNC cable connectors.

Additional Accessories...

Extra Cutter heads	*See guide above*
DC Driver (only) - Requires cutter head from above	**BWS**
AC Driver (only) - Requires cutter head from above	**AWS**

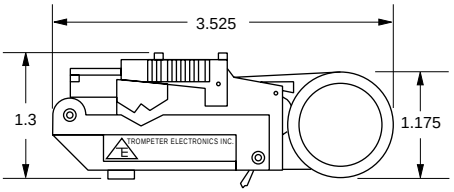
	Europe	UK	N/S America
Rapid Charger/Reconditioner			**BWCC-NSA**
Ni-Cad Battery Pak	**EBP-EU**	**EBP-UK**	**EBP-NSA**
AC Power Converter	**AWC-EU**	**AWC-UK**	**AWC-NSA**
AC Charger Cord	**BWC-EU**	**BWC-UK**	**BWC-NSA**
Auto 12V DC Charger	**DWC**	**DWC**	**DWC**

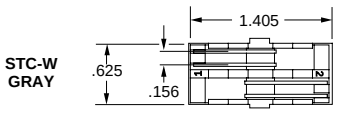
Manual Cable Stripping Tools

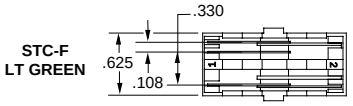
Cable Cutting Tool

Designed to cut Coax cable without compressing dielectric or damaging center conductor.

CUTTING TOOL **700-0024**







Cable Stripping Tool

Tool (only) - Requires blade cassette listed	**ST1**
Cassette (For Tool Crimp BNC Connectors)	**STC-F**
Cassette (For Wrench Crimp BNC Connectors)	**STC-W**

Tools & accessories

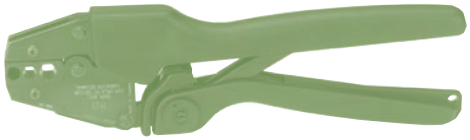
Crimp Tools

8-Point Crimp Tool
75Ω Center Contact Pin (Handle Color)

BNC/TNC plugs (Red)	010-0055
PL11 Patch Plugs (Blue)	010-0070
BNC/PL11 Patch Plugs (Red/Blue)	010-0097
BNC Jack and plug (Blue)	010-0088

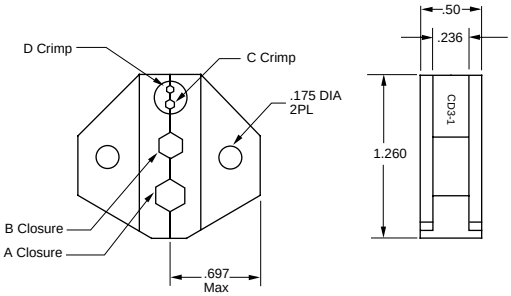
12-Point Crimp Tool
75Ω Center Contact Pin (Handle color)

BNC/TNC (Yellow)	010-0080
BNC/TNC/PL11 Patch Plug (Green/Yellow)	010-0098



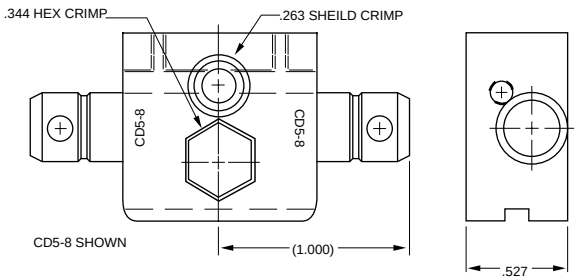
CT4L (Recommended)

Crimp Tool *(Die not included, for crimp dies see below)*
Frame **CT4L** (Black w/ longer ergonomic handle)



Outer Sleeve	A	Embosses	B	Embosses
CD3-1	.213	1A	.178	1B
CD3-2	.324	2A	.255	2B
CD3-3	.344	3A	.290	3B
CD3-5	-	-	.197	5B
CD3-21	.290	290	.255	255
CD3-22	.404	404	.068	-

For crimp dies not listed, call the factory.



Twinax/Triax Crimp Tool for Bushing/Shield

Crimp Tool Only **M22520/5-01**

Crimp Tool With Die **M22520/5-01/CD5-#**

(Daniels HX4 or equivalent)

*For Standard and Miniature Twinax/Triax patching: **70 Series**: TRB/TRT, **150 Series**: TRS/TTM, **450 Series**: 2-lug/3-lug/threaded connectors.*

Connector Series	Cable Type	Cable Group#	Bushing/Shield Crimp Die	Center Contact Crimp Tool Part #	Center Contact Positioner Part #
70C PLR70C PLR155AC	Twinax	201-225	CD5-8 (Daniels Y778)	M22520/1-01 (Daniels AF8 or equivalent)	010-0044 Pin (TP837) 010-0045 Socket (TP838)
	Triax	301-309	CD5-10 (Daniels Y776)		
Small Body 150AC	Twinax	201-206, 208, 209, 217-223	CD5-9 (Daniels Y687)	M22520/2-01 (Daniels AFM8 or equivalent)	010-0041
	Triax	301-304, 309	CD5-11 (Daniels Y777)		
Large Body 150AC	Twinax	207, 210, 211-216, 224-225	CD5-8 (Daniels Y778)	M22520/2-01 (Daniels AFM8 or equivalent)	010-0043
	Triax	305-306, 308	CD5-13 (Daniels Y803)		
	Triax	307	CD5-10 (Daniels Y776)	M22520/1-01	010-0044 Pin (TP837) 010-0045 Socket (TP838)
PL75MC	Twinax	201-225	CD5-14	M22520/2-01 (Daniels AFM8 or equiv)	010-0096
		226	CD5-15	M22520/2-01	010-0096
450AC	Twinax	201-206, 208, 209, 212, 217-223	CD5-9 (Daniels Y687)	M22520/2-01	010-0041
PLR450	Twinax	201-206, 208, 209, 212, 217-223	CD5-120 (Daniels Y789(F))	M22520/2-01 (Daniels AFM8 or equivalent)	010-0041
M39029/90-529 SPC8P- M39029/91-530 SPC8S-	Twinax	201-205, 217, 218, 221,222	CD5-4 (Daniels Y631)	M22520/2-01	Daniels K709
	Triax	301-303	CD5-7 (Daniels Y775)	(Daniels AFM8 or equivalent)	

**** Note:** Dies imprint either cavity (A/B) or hex size onto crimp sleeve. Custom dies are available for special imprints.*

Twinax/Triax Cable Assembly Tester

The Twinax/Triax Cable Assembly Tester is designed to test for opens, shorts, and cross wired connectors. The tester comes complete with terminators and testing instructions. This tool is designed to provide quick verification of TRB cable assemblies in the palm of your hands. The compact hand held unit measures 2 3/4" x 4 1/2" and provides versatility for testing connectors in the field. The unit comes in a soft zipper case which includes a 9v battery and terminators for standard TRB plugs. It can also be used for other connector families with an adapter, or short jumper cable when used with the proper termination.

TWINAX/TRIAX CABLE ASSEMBLY CONNECTOR TEST SET **010-0123**

- 3 Conductors which test for opens, shorts, and cross connects
- Concentric TRB Interface, which tests both Twinax and Triax
- Pass/Open/Short LED indicators
- Easy to follow testing instructions
- Complete with terminators, carrying case, and a 9V battery.

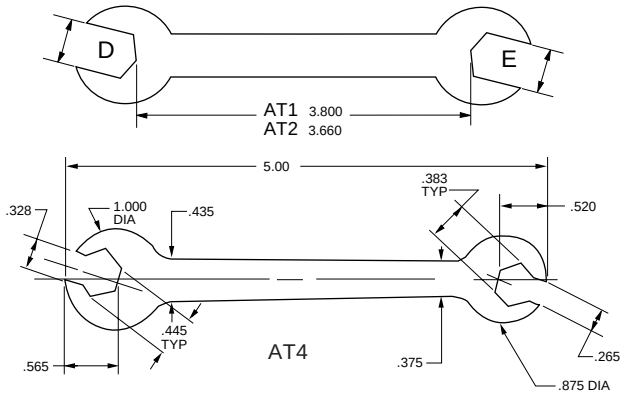
BNC Coax Tester

Designed to test for the proper assembly of BNC plugs with ***coax*** cables. Tests for center contact pin height and continuity (short or open). The new BNC tester is the same size as the twinax/triax tester but exclusively tests only BNC plugs. Mini-WECo continuity test adapter now available (sold separately).

- Compact design
- Pass/Open/Short LED indicators
- One test required for testing remote cable runs
- Easy to follow instructions
- Complete with terminators, case, and 9V battery

COAX CABLE ASSEMBLY CONNECTOR TEST SET
75Ω BNC PLUG **010-0133**

MINI-WECO ADAPTER (CONTINUITY ONLY)
SOLD SEPARATELY **105-1885**



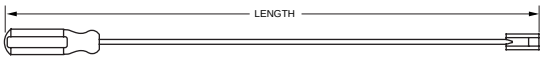
ASSEMBLY TOOLS

WRENCH	CRIMP TYPE	D	E
AT1	BNC/N/TNC	.507	.445
AT2	TPS/TCM	.381	.318
AT4	TPS/TRS/TTM	See Drawing	

Tool Kits

Tool Kit Part Number	Pin Height Indicator	Crimp Tool 8-Point Indentor	Crimp Tool 12-Point Indentor	BNC/Mini-WECo Electrical Guage	Crimp Die	Center Contact Guage
TK4NL-1	UPLCG-1	010-0097	Not Included	Not Included	CD3-19	Not Included
TK4NL-1A	UPLCG-1	010-0097	Not Included	Not Included	CD3-19	Not Included
TK4NL-2	UPLCG-1	Not Included	010-0098	Not Included	CD3-19	Not Included
TK4NL-3	UPLCG-1	010-0097	010-0098	Not Included	CD3-19	Not Included
TK4NL-4	Not Included	010-0097	Not Included	010-0108	CD3-19	Not Included
TK4NL-5	Not Included	Not Included	010-0080	010-0108	CD3-19	010-0101

All Tool Kits Include: Case, *BWS Cable Stripper* with BWS Cutter heads (one *C26T3D* and one *C26T3I*), Cable Cutter (part number *700-0024*), and Ergonomic Crimp Tool w/long handle *CT4L* with Crimp Die *CD3-19* embosses the die cavity size on the crimp sleeve either .178 or .255. Contact the factory for custom tool kits.



CONNECTOR REMOVAL TOOLS

BNC CABLE PLUG	TYPE	LENGTH
RT1XL	STRAIGHT	22.00"
RT1L	STRAIGHT	12.00"
RTR-1L	RIGHT ANGLE	12.00"
RTR-1XL	RIGHT ANGLE	22.00"
RT1S	STRAIGHT	6.00"
RT1SS	STRAIGHT	3.75"
RTC-1L (INSULATED)	STRAIGHT	12.00"
TPS, TCM, TRS, TTM		
RT4L	STRAIGHT	12.00"
RT4S	STRAIGHT	6.00"
RTC-4L (INSULATED)	STRAIGHT	12.00"
TRC, TRN		
RT5XL	STRAIGHT	23.25"
RT5L	STRAIGHT	13.25"
RT5S	STRAIGHT	7.25"

BNC Coax Assembly Training Video

Trompeter has produced a video which outlines the major features of our BNC design, describes the tools for reliable installation, and gives step-by-step assembly instructions. The BNC Assembly Video is available in VHS format or CD at *no cost* to Trompeter Customers.

▲ For additional information or for a free demonstration, contact your local Sales Representative located on the inside back cover of this catalog or you can log on to our web site at http://www.trompeter.com and locate the rep nearest you.

BNC Bulk Packaging

Bulk packaging for UPL220 Series BNC plugs ... Trompeter offers Tool Crimp BNC's bulk packed in convenient vacuum-formed plastic trays. Bulk packaging is perfect for OEM and high-volume, on-site installations.

Includes:

(50) Body Assemblies
(51) Crimp Sleeves
(52) Center Contact Pins
Assembly Instructions

Example: **UPL220-026/T50**
BNC part number
Vacuum Tray part number
For cable groups see pages 91-133
(Not available for cable groups -017)

Trompeter Cable Specs

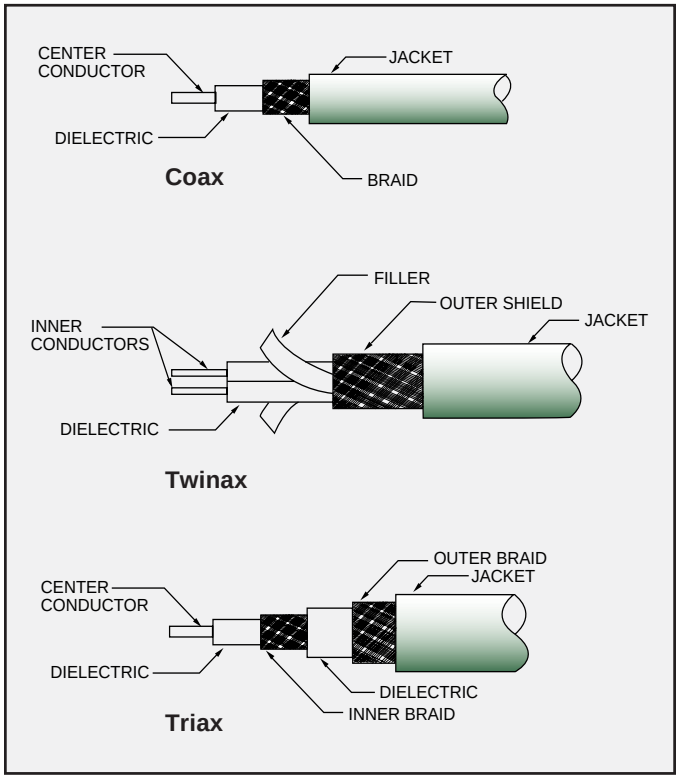
Trompeter cables are manufactured to the listed specifications and offer optimum flexibility, shielding, and performance. Cables with stranded center conductors have greater flexibility and are recommended for short runs at low frequency where constant cable movement might fatigue a single copper-weld center conductor. Trompeter's **M17/176-00002** and **TWAC-78-1F2** are 200°C, Hi-Temp Cables for MIL-STD-1553B data bus applications. Dielectric and fillers made of PTFE (Teflon™) and outer jackets are PFA (Perfluoroalkoxy). All dimensions are in inches. All values without tolerances are *nominal* unless otherwise stated. **TWCH-78-2** has jacket constructed of *flame retardant halogen free polyolefin* with temperature range of -30°C to +80°C.

TWCP = Twinax Plenum Cable

TWCH = Twinax Blue Flame Retardant Halogen Free Polyolefin Cable

TRCH = Triax Yellow Flame Retardant Halogen Free Polyolefin Cable

CABLE ILLUSTRATIONS



COAX CABLE SPECS

	COAX:		
Cable Designation	**TCC-50-2**	**TCC-75-2**	**RG62 A/U**
Impedance (Ohms)	50±2	75±3	93±5
Nominal outer dia.	0.195	0.242	0.242
PVC outer	Green	Violet	Black
Braid outer dia.	0.150 Max	0.191 Max	0.191 Max
Braid AWG#/Mat'l	36/Tinned Cu	34/Bare Cu	34/Bare Cu
Dielectric outer dia.	0.116	0.146	0.146
Dielectric mat'l	Solid PE	Foamed PE	PE
Conductor outer dia.	0.0355	0.031	0.0253
Conductor strands/Mat'l	19/.0071 Tinned Cu	7/.010 Tinned Cu	Solid/CCS
Operating temperature range	-40°C to +90°C	-40°C to 85°C	-40°C to 80°C
Minimum bend radius	1.00	1.00	
Max. Opr. VAC (RMS)	1.4 KV	800 V	750 V
Capacitance pf/ft (Max)	30.8	17.3	14.5
Cond. Loop Res. (Ohms/M ft.)		17.6	
Atten. dB/100 ft:			
1 MHz	0.380	0.335	0.250
10 MHz	1.400	1.070	0.900
50 MHz	3.40	2.40	1.90
100 MHz	4.90	3.40	2.80
200 MHz	7.30	4.85	3.70
400 MHz		9.00	5.20
1 GHz	28.80	12.00	8.50
3 GHz		30.00	
Shielded Coverage	93%	93%	94.3% Min

For high temperature cables, see chart on the next page.

Trompeter cable specifications

Twinax/Triax Cable Specs

	Twinax:		High Temp:				Triax:			
Cable Designation	**TWC-78-1**	**TWC-78-2**	**M17/176-00002**	**TWAC-78-1F2**	**TWC-124-1A**	**TWC-124-2**	**TRC-50-1**	**TRC-50-2**	**TRC-75-1**	**TRC-75-2**
Impedance (Ohms)	78±3	78±3	77±7	77±7	124±4	124±4	50±2	50±2	75±5	75±5
Nominal outer dia.	0.150	0.242	0.129	0.095	0.150	0.245	0.156	0.245	0.189	0.245
Outer braid dia.	0.108	0.195 Max	0.102	0.070	0.105	0.195 Max	0.121	0.210 Max	0.150	0.205
Core outer dia.	0.085	0.154	0.084	0.052	0.085	0.162				
Dielectric outer dia.	0.043	0.076	0.042	0.026	0.043	0.080	0.047	0.116	0.073	0.116
Inner braid outer dia.							0.069 Max	0.146 Max	0.093	0.146 Max
Inner jacket outer dia.							0.101	0.175	0.130	0.175
Conductor outer dia.	.022	0.0370	0.0230 Min.	0.0149	0.0120	0.0220	0.0150	0.0370	0.0120	.0185
Operating temperature Range	-40°C to 80°C	-40°C to 80°C	-55°C to +200°C	-55°C to +200°C	-40°C to +80°C	-40°C to +80°C	-40°C to +75°C	-40°C to +80°C	-40°C to +80°C	-40°C to +80°C
Minimum bend radius (in.)	1.50 Max	1.25	1.50	1.25	1.50	1.25	0.75	1.25	1.00	1.25
Max. Opr. VDC	0.6 KV Max	2.0 KV			0.6 KV	2.0 KV	2.0 KV	6.0 KV	2.0 KV	6.0 KV Max
Max. Opr. VAC (RMS)	0.3 KV Max	1.0 KV	750 KV Max	250	0.3 KV	1.0 KV	1.0 KV	2.0 KV	1.0 KV	2.0 KV Max
Capacitance pf/ft. (Max)	20.30 Max *(2)*	21.20 *(3)*	24.00	23.00	12.40	12.30 *(3)*	29.50	32.00 *(1)*	20.00	20.50 *(1)*
Cond. loop res. (Ohms/M ft.)	179 Max	19.00 Max	48.00	146.00	570.60	56.80 Max				
Atten. dB/100 ft.:										
1 MHz	2.000	0.700	1.400	2.000	3.250	0.540	2.800	0.500	0.900	0.480
3 MHz	3.000	1.100	2.100		4.400	0.920	3.100	0.800	1.300	0.880
4 MHz	3.500	1.400	2.400		4.800	1.060	3.300	0.900	1.500	1.010
5 MHz	4.000	1.550	2.800		5.200	1.180	3.400	1.100	1.700	1.100
7 MHz	4.500	1.800	3.500		5.600	1.400	3.700	1.300	1.900	1.300
10 MHz	5.300	2.200	4.50 Max	6.500	5.900	1.650	4.100	1.500	2.400	1.500
20 MHz	7.50	3.10			8.30	2.30	5.50	2.30	3.60	2.30
30 MHz	9.20	3.90			10.20	2.80	7.00	2.90	4.50	2.90
40 MHz	10.60	4.50			11.80	3.20	7.50	3.40	5.40	3.30
50 MHz	11.90	5.10			13.20	3.60	9.10	3.90	6.10	3.60
100 MHz	16.80	7.50			18.70	5.10	14.00	5.80	9.70	5.20
200 MHz	23.70	10.50			26.40	7.20	22.00	8.80	16.50	7.60
500 MHz	37.50	16.00			41.70	11.40	40.00	15.30	28.50	10.80
700 MHz	44.30	18.60			49.40	13.50	50.00	18.00	36.00	14.70
1 GHz	53.00	22.50			59.00	16.20	63.00	23.00	45.00	17.60
Shielded coverage	93%	93%	93.3%	90% Min.	93%	93%	93% Min.	93%	93% Min.	93%
Twist per ft.	8.00	4.00	11-14	16.00	8.00	4.00				

Twinax/Triax: Plenum/Halogen Free Cable Specs

	Twinax:						Triax:
Cable Designation	**TWCP-78-1**	**TWCP-78-2**	**TWCH-78-2**	**TWCP-124-2**	**TWCP-124-3**	**TWCP-124-5**	**TRCH-50-2**
Description	Plenum	Plenum	Halogen Free	Plenum	Plenum	Plenum	Halogen Free
Impedance (Ohms)	78±3	78±3	78±3	124±4	124±4	124±5	50±2
Nominal outer dia.	0.150	0.242	0.242	0.245	0.205	0.325	0.245
Outer braid dia.	0.102	0.165	0.195	0.183	0.183	0.295	0.210
Core outer dia.			0.154	0.163			
Dielectric outer dia.	0.041	0.072	.076	0.080	0.062	0.134	0.116
Inner braid outer dia.						0.043	0.146
Inner jacket outer dia.							0.175
Conductor outer dia.	0.021	0.037	0.037	0.024	0.024	0.048	0.037
Operating temperature range	+125°C	+125°C	-30°C to +80°C	+125°C	-10°C to +75°C	-10°C to +125°C	-30°C to +80°C
Minimum bend radius (in/ft.)	1.50	2.50	1.25	2.5	2.0	3.25	1.25
Max. Opr. VDC			2KV		2500	2500	6 KV
Max. Opr. VAC (RMS)			1KV	1KV	1800	1800	2 KV
Capacitance pf/ft. (Max)	19.6 (3)	18.6(3)	21.2(3)	11.5	12.0(3)	11.0(3)	
Cond. loop res. (Ohms/M ft.)			19.0	47.0	28.4	6.5(3)	10.5
Atten. dB/100 ft.:							
1 MHz	2.00	.60	0.70	.50	0.60	.30	0.50
3 MHz	3.00	1.00	1.10	.85	0.90	.47	0.80
4 MHz	3.50	1.20	1.40		1.10	.64	0.90
5 MHz	4.00	1.40	1.55	1.10	1.20	.69	1.10
7 MHz	4.50	1.60	1.80	1.30	1.40	.79	1.30
10 MHz	5.30	2.00	2.20	1.60	1.60	.94	1.50
20 MHz	7.50	2.80	3.10	2.30	2.20	1.20	2.30
30 MHz	9.20	3.50	3.90		2.80	1.50	2.90
40 MHz	10.60	4.10	4.50		3.20	1.70	3.40
50 MHz	11.90	4.60	5.10	3.70	3.60	2.00	3.90
100 MHz	16.80	6.90	7.50	5.30	5.20	3.00	5.80
200 MHz	23.70	9.90	10.50		7.20	4.50	8.80
500 MHz	37.50	15.40	16.00		11.40	7.00	15.30
700 MHz	44.30	18.30	18.60		13.50	8.40	18.00
1 GHz	53.00	21.80	22.50		16.20	11.00	23.00
Shielded coverage	97%	95%	93%	93%	93%	93%	93%
Twist per ft.	8.0	4.0	4.0	4.0	6.0	6.0	

Notes:

(1) = Center Conductor to Inner Braid

(2) = Conductor to Shield

(3) = Conductor to Conductor

Twinax/Triax Wrench/Tool Crimp Connectors

Select your connector and read across to find available cable group numbers.

BR = Column denotes Bend Relief Springs (Wrench Crimp), "**Y**" = Available, "**N**" = Not Available

TWINAX/TRIAX WRENCH CRIMP CONNECTORS

Wrench Crimp Cable Groups

Connector	7	7A	8	9	10	11	12	13	13A	14	14A	15	16	17	23	24	24A	25	25A	26	27	28	29	30	32	33	35	38	39	40	42	43	45	46	47	49	54	55	56	57	58	59	60	61	62	64	BR
BJ39				•														•			•		•			•								•	•												N
BJ74(FL/TL)	•														•	•		•		•	•		•		•	•							•	•											•	Y
BJ179(FL/TL)	•			•											•	•		•		•	•		•		•	•							•	•											•	Y
BJ89/BJ89F	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•							•	•		•										N
BJ154(FL)				•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•		•		•	•																			N
BJ159(FL)				•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•		•		•	•																			N
BJ374	•														•	•		•		•	•		•		•	•																			•	Y
BJ379				•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•		•		•	•																			•	Y
BJ389(F)	•			•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•		•		•	•																				N
BJ893(F)	•			•	•	•	•	•	•	•	•	•	•	•	•	•		•		•	•		•		•	•																				N
BJ3154															•	•		•		•	•		•		•	•																				N
BJ3159															•	•		•		•	•		•		•	•																				N
CJ70(FL/TL)	•			•	•	•	•	•	•	•	•	•			•	•		•		•	•		•		•	•							•	•											•	Y
CJ80	•			•	•	•	•	•	•	•	•	•	•		•	•		•		•	•		•		•	•							•	•											•	N
CJ150(FL)															•	•		•		•	•		•		•	•							•	•												N
CJ370	•			•	•	•	•	•	•	•	•	•	•		•	•		•		•	•		•		•	•							•	•											•	Y
CJ380	•			•	•	•	•	•	•	•	•	•	•		•	•		•		•	•		•		•	•							•	•												N
CJ803	•			•	•	•	•	•	•	•	•	•	•		•	•		•		•	•		•		•	•							•	•												N
CJ3150															•	•		•		•	•		•		•	•																				N
J72S	•			•											•	•		•		•	•		•		•	•																					
J72SM	•														•	•		•		•	•		•		•	•																				N
J150				•																			•										•		•										N
PL30			•		•	•	•																																						N
PL71			•		•	•	•																																						Y
PL71L			•		•	•	•																																						
PL73			•		•	•	•																																						Y
PL74			•		•	•	•																																						Y
PL75(FL)			•		•	•	•																																						Y
PL80			•		•	•	•																																						N
PL101																																													N
PL151																																													N
PL153																																													N
PL155																																													N
PL155FL																																													
PL375			•		•	•	•																																						Y
PL380			•		•	•	•																																						N
PL803			•		•	•	•																																						N
PL3155																																													N

TWINAX/TRIAX TOOL CRIMP CONNECTORS

Tool Crimp Cable Groups

Connector	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	301	302	303	305	306	307	308	309
BJ154AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ154ACFL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ159AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ159ACFL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
CJ150AC(FL)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ3154AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ3159AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
CJ3150AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
CJ70C(TL)(FL)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
CJ370C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ74C(TL)(FL)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ374C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ379C(TL)(FL)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
BJ379C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL73C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL74C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL75C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL75CFL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL153AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL155AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL155ACFL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL375C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PLR375C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL3155AC	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PLR74C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PLR75CFL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PLR75C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PLR155ACFL	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PLR3155AC(FL)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
SPC8P	•	•	•	•	•	•																				•	•						
SPC8S	•	•	•	•	•	•																				•	•						
BJ459AC/GROUP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
CJ450AC/GROUP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PL455AC/GROUP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•
PLR455AC/GROUP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•

Bend Relief Boots/Springs, see page 68.

Trompeter general material/finish specifications

TFS-1: Finish Specifications

TFS-1A
.0001- .0003 max thk Bright Nickel per QQ-N-290, Class1, Form SB (over)
.000080-.000150 thk Bright Copper per MIL-C-14550 (over)
.0005 max Electroless Nickel per AMS-2404C, Class 1 (On Aluminum Only)

TFS-1B
.000020 - .000030 thk Bright Gold[2] per MIL-G-45204, Type II, Grade C, Class[3] (over)
.000050-.000180 thk Bright Nickel[3] per QQ-N-290, Class1 (over)
.000080-.000150 thk Bright Copper[3] per MIL-C-14550

TFS-1C[3]
.0003 Watts Nickel per QQ-N-290, Form SB, Class 1 (over)
.000010 Nickel per QQ-N-290, Class 1

TFS-1D
.0001min - .000120 max thk Electroless Nickel per AMS 2404C (over)
.000080 min - .000150 max thk Bright Copper per MIL-C-14550

TFS-1E
.0002 min -.0003 max thk Bright Electro Tin per MIL-T-10727, Type 1 and solder test per Para. 4.6.3.1

TFS-1E2
.0002 min - .0003 max thk Bright Electro Tin per MIL-T-10727, Type 1, and SolderTest per Para.4.6.3.1
(over) **.000080 min - .000150 max thk Bright copper** per MIL-C-14550

TFS-1F[3]
.000020 min - .000030 max thk Bright Gold per MIL-G-45204, Type II, Grade C, Class 00
(over) **.000080 min- .000150 max thk Bright Copper** per MIL-C-14550
(over) **.000050 Nickel Strike** per QQ-N-290, Class 1

TFS-1G
.000020 min - .000030 max thk Bright Gold per MIL-G-45024, Type II, Grade C, Class 00

TFS-1H
.0002 min - .0003 max thk Cadmium plate per QQ-P-416, Type II, (supplementary chromate treatment, golden iridescent), Class 3

TFS-1M[4]
.000200 min - .000300 max thk Silver per QQ-S-365, Type II (Semi-bright) Grade A (Chromate post treatment)
(over) **.000080 min - .000150 max thk Bright Copper** per MIL-C-14550

TFS-1N[5]
.0003 - .0005 thk Cadmium plate per QQ-P-416, Class 2, Type II, Olive Drab (over) **.0005 -.000550 thk Electroless Nickel plate** per AMS 2404C

TFS-1P[3]
1 .00010 min - .00012 max. thk Bright Gold per Mil-G-45204, Type II, Grade C, Class 2
2 .000050 min - .000070 max. thk Bright Gold per Mil-G-45204, Type II, Grade C, Class 1
3 .000020 min - .000030 max. thk Bright Gold per Mil-G-45204, Type II, Grade C, Class 00
(over) **.00010 min - .000150 max. thk Bright Copper** per Mil-C-14550

TFS-1R1
.00010 min-.00012 max thk Bright Gold per MIL-G-45204, Type II, Grade C, Class 2
(over) **.000010 min-.000015 max thk Bright Gold Strike** per MIL-G-45204, Type 1, Grade A,
(over) **.00010 min- .00015 max thk Bright Copper** per MIL-C-14550, Class 4

TFS-1T[5]
.000050 -.000100 Bright Tin per MIL-T-10727, Type I (Electro Deposited)
(over) **.000150-.00020 Sulfamate Nickel** per MIL-P-27418 (over) **.00010-.00150 Copper** per MIL-C-14550, Class 4

TFS-1U[5]
.00020-.00030 thk Sulfamate Nickel per MIL-P-27418 (over) **.000080-.000150 max thk Copper** per MIL-C-14550

TFS-1V[3]
.000200-.000300 max thk Silver per QQ-S-365, Type I (Matte), Grade A (over)
.000050-.000180 max thk Sulfamate Nickel per MIL-P-27418, (over)
.000080 min-.000150 max thk Bright Copper per MIL-C-14550

TFS-1W
.00020 min- .00030 max thk Cadmium Plate per QQ-P-416, Type II Olive Drab, Class (over)
.00020 min- .00030 max thk Sulfamate Nickel per MIL-P-27418 (over)
.000080 min- .000150 max thk Copper per MIL-C-14550

TFS-1X
.0002-.0003 thk Nickel per QQ-N-290, Class 1, Form SB Grade G (over)
.000080 min-.000150 max Bright Cooper per MIL-C-14550

TFS = Trompeter Finish Specifications

Trompeter Finish Specification -1 (TFS-1) Notes:

(2) Bright Gold plate on all connector center contacts, pins, sockets, shall be .000050 min - .000070 max thk, Class 1
(3) Thickness is in accordance with MIL-G-45204B, Para 6.3 "Strikes and Underplating"
(4) Copper Alloy articles on which a nickel undercoat is not used shall not be used for continuous service at temperatures above 149°C (300°F) QQ-S-365, Para. 3.3.5.
(5) For use on Brass and Beryllium Copper body (shell) and accessory components when 500 hour salt spray test is specified. (For test conditions, refer to MIL-C-38999, Para. 3.16 and 4.7.12.2, [Method 1001.1 of MIL-STD-1344])
(6) Plating thickness variations, critical and noncritical areas must be plated to within specified lower limits, except where surfaces cannot be contacted by A .75 inch dia ball, noncritical areas total plating thickness may exceed the specified upper limits by .000150 maximum.

Materials	Alloy or Type	FED/MIL Spec.	Usage
ABS	Moldings Type 2	MIL-STD-1803 L-P-1883B	Looping plug handles, lock pins
Acetal	Dupont Delrin	L-P-392	Insulators, cases, bushings
Aluminum	2024-T351	QQ-A255/6	Backbars, cases
	6061-T6	QQ-A200/8	Stiffener bars
	6061-T6	QQ-A250/11	Patch panels
	6061-T6511	QQ-A200/8	Backbars, cases
Beryllium Copper	17200 (Bar) 17300 (Flat)	ASTM-B-194 ASTM-B-196 &197	Contact & crescent springs Contact sockets, fingersprings,washers
Brass	C26000	ASTM-B-36	Ground lugs, washers
	C36000	ASTM-B-16	Connector bodies, coupling sleeves, clamp nuts, hex mtg. nuts, ctr. contact pins, cases
Dupont Acetal Resin #500TL	Homopolymer General Purpose w/ 1.5% Teflon Micropower		Moldings
Fluorinated Ethylene Propylene	(FEP)	ASTM-D-2116	Insulators
Hyflon	MFA Grade 640		Alternate material dielectric
Loctite	495 (Zinc Iridite per ASTM-B633)	QQ-2-325 Type 2 Class 2 Finish	
Nylon	6/6 or 6/12	L-P-410A	Insulating bushings
Perfluoroalkoxy	(PFA)	ASTM-D-3307	Cable jackets
Phenolic	XXX	L-P-513 PBE	Patch panels, backbars
Phosphor Bronze	Alloy 544	ASTM-B-139	Contact springs, lockwashers
Polytetrafluoro-ethylene	(PTFE)	ASTM-D-1710	Dielectrics, insulators
Polyvinylidene Flouride		MIL-I-23053/8	Sealing Sleeves
Rubber	Silicone	ZZ-R-765	Gaskets, O-rings, sealing members
Solder	Sn60, 62, 63, or 96	QQ-S-571	
Steel	C1010-1018	QQ-S-636	MPN cases
	Music Wire	ASTM-A228 SAE J178	Tension springs
Steel CRS	Type 17-4PH	AMS-5643 Tubing	
Corrosion Resistant Steel	303	QQ-S-763	Connector bodies, coupling sleeves, hex mtg. nuts
	302	QQ-S-766	Designation strips
	301	ASTM-484, A582	
Thermo-plastic Polyester	Glass Filled	MIL-M-24519	Heat resistant molded insulators
Vinyl	Clear Rigid-Self ext. Opaque Rigid-Self ext.	ASTM-D-635 ASTM-D-635	Designation strip window Designation strip marking strip
Zinc	Alloy #3	ASTM-B-240/B-86	Selected non-functional parts

	Connectors					*Patching*		
	BNC	**TNC**	**70 Series**	**150 Series**	**450 Series**	**WE Standard**	**WE Miniature**	**RCA Standard**
Frequency Range	0-4 GHz	0-11 GHz	0-500 MHz	0-500 MHz	0-2 MHz	0-1 GHz	0-1 GHz	0-200 MHz
VSWR	1.30 Max.		Not Rated -			1.04 @ 75 MHz 1.12 @ 100 MHz 1.18 @ 500 MHz	1.06 Max. - -	1.05 @ 50 MHz 1.09 @ 100 MHz 1.33 @ 500 MHz
Voltage Rating	500 VRMS @ Sea Level	500 VRMS @ Sea Level	400 VRMS @ Sea Level	250 VRMS @ Sea Level	150 VRMS @ Sea Level	500 VRMS @ Sea Level	250 VRMS @ Sea Level	500 VRMS @ Sea Level
	125 VRMS @ 70,000 ft.	125 VRMS @ 70,000 ft.	100 VRMS @ 70,000 ft.	62.5 VRMS @ 70,000 ft.	Not Rated	Not Rated		
Temperature Range	-65°C to 165°C			-65°C to 200°C	-65°C to 165°C	-65°C to165°C		

Signal transmission in high frequency/high density applications

One way to characterize the electronics market is to break it into two segments, components and interconnects. Within the interconnect segment, some signals require ground shielding, stripline and coax, for example, and some do not. Ground-shielded signals are needed:

- to protect the interior signal wire from signal degradation or loss utilizing a specific dielectric material most adjacent to the signal wire;
- to geometrically contain or ground the electromagnetic field associated with electromagnetic wave propagation; and/or
- to shield the signal from external noise or radiation, either via leakage or induction, including the fields created by adjacent wired energy, which is called crosstalk.

Within the shielded interconnects segment, there are hard wired interconnects and disconnectable interconnects. It is the latter type that is the topic of discussion here, where technology drivers and performance issues will be presented.

Technology Drivers

The customer-driven need for more function and content, as evidence in the next-generation Pentium microprocessors and more widespread use of the World Wide Web, is driving corresponding requirements for system bandwidth, signal density and signal clarity.

Because bandwidth has become such an important issue, fiber or light-based signal transmission is now a viable technology, replacing copper-based electronic signals in many instances. However, because the end termination manifolds of light energy still must be a manageable junction of discreet clean/fast signals, the need for disconnectable copper interconnects has actually increased.

In addition, using digital technology to achieve some of these transmission objectives requires an even greater degree of fault-free interconnect performance. What was once a slight rise in background static on an analog signal at low frequency becomes the loss of an entire stream of binary information in high frequency digital technology.

As wires have progressed from point-to-point continuity paths to transmission lines, so connectors have had to accommodate the performance nuances of higher frequency and density. More information is being moved more rapidly on smaller waveforms, and the resulting demand on connection is proportional.

Electrical Performance Issues

The most effective connectors are those that, once inserted in a transmission line, disappear. That is, they behave as if there were no connector pair present and the cable and the transmission characteristics of the line predominate. In order to achieve this state, the losses at the connector junction should be equal to or less than the losses in the transmission line.

Frequency and Wavelength

Since wavelength and frequency are inversely related by the constant "c" (speed of light in a vacuum), at higher frequencies, the wavelengths become smaller. For example, in free space, the wavelength at 1MHz is approximately 300m or 980'; at 300MHz, it is 1m or 39"; and at 1GHz, it is 30cm or 1.2". This reduced wavelength begins to approach typical electrical component length, and at higher frequencies, it becomes significant.

By experience, the effect of a connector is usually of minimal significance until its length approaches approximately 5 percent of wave length being passed. In a physical transmission system, waves do not travel the speed of light due to the drag of the dielectric and conductor losses. For example, for typical connector and copper cable construction, the velocity of propagation is approximately 67 percent of "c", which corresponds to an effective reduction in wavelength from approximately 39" at 300MHz to approximately 26". Five percent of this length is approximately 1.3", which is about the length of a typical RF connector pair.

Attenuation. Attenuation is the total amount measured in decibels by which power received is less than power transmitted after a device has been inserted, with corrections for frequency. Also called insertion loss, attenuation applies to an entire connector/cable system. It is the sum of the following four components:

1. copper loss, or resistance, in the conductors;
2. dielectric losses, as a result of the dielectric having high but not infinite resistance, therefore dissipating some energy;
3. reflection losses, due to some of the signal being reflected at various discontinuity; and
4. radiation losses, where the line acts like an antenna and radiates electromagnetic energy at high frequency.

For connector characterization within microwave systems frequencies (in the few hundred megahertz and well into the gigahertz range) the reflection copper losses are the most significant. Other losses present are primarily a result of the cable assembly or design.

Figure 1.
Frequency's Effect on Return Loss

Condition	Measured Impedance (avg.)	Return Loss 1-20 MHz	Return Loss 20-300 MHz	Return Loss 0.300-1 GHz
1. (75/50)	60.7Ω	>30 dB	23.7 dB	7.1 dB
2. (75/~75)	68.4Ω	>30 dB	24.5 dB	12.4 dB
3. (75/75)	73.7Ω	>30 dB	25.4 dB	21.5 dB

SIGNAL TRANSMISSION IN HIGH FREQUENCY/HIGH DENSITY APPLICATIONS

Impedance

An inherent characteristic for transmission lines is impedance, which is measured in ohms. Impedance is the ratio of voltage to current in a traveling wave. For a "loss-less" cable, it can be defined in terms of the ratio of inductance to capacitance. In a coaxial construction, it can be alternatively defined as a function of geometry and material properties of the dielectric material between the concentric conductors. This equation can be stated as :

$$Z_0 = \frac{138}{\sqrt{\varepsilon}} (\text{Log}_{10}\ D/d)$$

Z_0 = character impedance
ε = dielectric constant of the insulation material
D = inside diameter of the outer conductor
d = outside diameter of the inner conductor

Physically, impedance can be thought of as the value of resistance that, when connected between the center conductor and shield at the end of the cable, makes the cable appear infinitely long. The most efficient transmission of electrical power, hence maximum signal transfer, occurs when the distributed component impedance matches that of the system.

Impedance mismatch creates a reflected wave of energy, which can be measured and stated in different forms. By defining a reflection coefficient (ρ), which is the reflected voltage divided by incident voltage, the measure of reflection losses can be stated as:

Reflection Loss
$(dB) = 10\ \text{Log}_{10}\ (1 / 1-\rho^2)$ dB
or
Voltage Standing Wave Ratio
$(VSWR) = (1+\rho) / (1-\rho)$

Return loss is the decibel loss due to reflection, and VSWR is a unitless ratio relating incident voltage to reflected voltage. These commonly used terms that quantify the loss associated with reflection are two scales for the same characteristic. They can be equated as follows:

$$\text{Return Loss (dB)} = 20\ \text{Log}_{10}\ \{(VSWR + 1) / (VSWR -1)\}$$

Reflection losses are a function of frequency - increasing with increasing frequency - and impedance mismatch. It is helpful to note that VSWR is the ratio of the maximum standing wave voltage to the minimum standing wave voltage. VSWR, therefore, is infinite for total reflection (i.e. 0 minimum voltage) and is 1.0 for perfect transmission (no reflection). The closer to unity, the better the impedance match and the more efficient the transmission system.

Three Examples

Figure 1 *(on page 81)* shows comparison return loss data from 1 MHz through 2 GHz for the following three scenarios:

1. 75Ω system (includes cable and test set); 50Ω BNC connector;
2. 75Ω system; approximate 75Ω BNC connector; and
3. 75Ω system; "true" 75Ω BNC connector.

From this, it is clear that the return loss degrades as a function of the frequency and also as a function of the extent of the impedance mismatch between the connector and cable. At higher frequencies the impedance match becomes more critical.

Other factors influence the reflection loss as well. These include: the homogeneity of a composite dielectric material; the even dispersion of air within and around a dielectric; and the "smoothing" of the mechanical transmissions between the impedance mismatches within the connector. This includes the tandem increase or decrease in sizing of the diameters for the inner and outer conductor, as well as the effect of chamfers/breaks at sharp transitions.

Other Considerations

Aside from the electrical and electromagnetic performance issues, connectors that disconnect should be capable of toughness, durability and robust in-field use with high counts of repeat mating cycles without failure or interruption. Other nonelectrical performance measures of importance are insertion force and retention force, particularly after repeated matings.

Conclusion

Market Trends, Technical Considerations and Practical Examples for Shielded Disconnectable Interconnects

Market needs are impacting electrical and electromagnetic demands on connector performance. A basic understanding of the physics involved in electrical circuit design and transition lines is necessary to appreciate the impact of losses associated with the connector. This understanding includes resistance, capacitance, inductance, efficiency, reflection losses associated with impedance mismatch, and dielectric losses associated with the materials used for connector dielectrics.

Impedance mismatch between the source, cable and connector is less significant at lower than at higher frequencies. However, as system content and speed increases, the permissible fault tolerances goes down dramatically. In other words, one impact of high technology is greater dependance on tighter tolerance quality and part-to-part repeatability. These discoveries have caused shifts in sourcing, as buying companies mature in their appreciation for robust design engineering and fabrication excellence. The connector industry is not immune from this development. ■

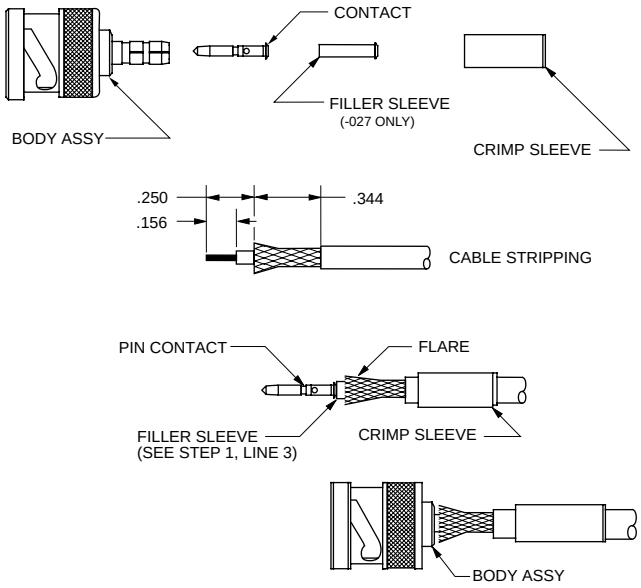
BNC Coax Tool Crimp Assembly Illustration

Step 1

1. Place crimp sleeve onto cable with the step located away from the cut end as shown.
2. Strip cable as shown and flare braid.
3. On connectors with cable group number -027 only, slide filler sleeve fully under braid.
4. Crimp contact pin in position shown.

Step 2

1. Push cable assembly into the body until the contact pin snaps into place.
2. Slide crimp sleeve forward over braid, up against the body assembly and crimp in place.



BNC Coax Wrench Crimp Assembly Illustration

Step 1

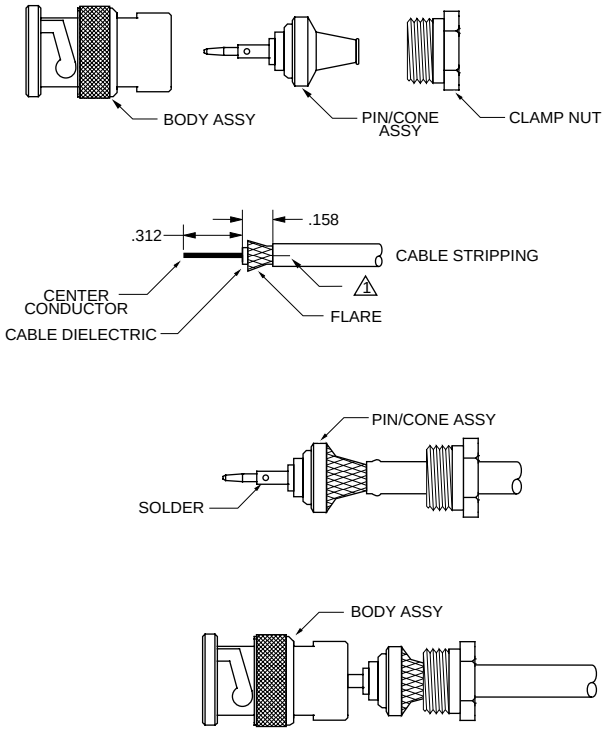
1. Place clamp nut onto cable.
2. Strip cable as shown and flare braid to allow free entry of cone (Lateral slits 180° apart may be required for very inflexible jacket materials).
3. Lightly tin center conductor (optional).

Step 2

1. Push edge of cone between cable dielectric and braid (or between foil and braid, if foil is present, and cone I.D. will accept it). Continue to push cable into cone until cable dielectric bottoms against cone dielectric. Center conductor should be visible in pin inspection hole.
2. Solder center conductor into pin.

Step 3

1. Bring clamp nut up onto tapered portion of cable.
2. Assemble body and engage with clamp nut.
3. Wrench tighten to 25-30 inch-pounds torque.



Notes: *For Ilustration purposes only. Not intended to replace actual installation instructions.*

Electronic systems wiring & cable

After buying the most expensive "end" equipment, many systems engineers have difficulty in determining the best methods of cabling and interconnecting for the routing of signals with minimal loss, degradation and noise pickup. Simple solutions such as selecting the correct cable, eliminating common mode grounds or physically separating long runs of parallel cables will help make the difference between a good or bad system. It must be emphasized that these good practices must be implemented at the time of initial design and are almost impossible to implement after the system is built. This "interface" engineering will be discussed in following sections titled **"Signal Degradation"** and **"Noise".**

The systems engineer should study his system parameters and noise environment before selecting his cabling and connector components. Consideration must be given to:

- Signal frequencies
- Voltage and power levels
- Tolerable losses and degradation
- Reflected signals due to discontinuity
- Noise from direct contact common mode and ground loop returns, or radiated stray magnetic and capacitive fields.

Circuit wiring and cabling are susceptible to the pickup of noise, and all low voltage signal and data wiring should be shielded irrespective of the frequency to be transmitted. Coax cable (primarily designed to carry RF) is excellent for digital data transmission. It is relatively inexpensive (RG58, RG122, etc.) and many complete series of coax connectors are readily available.

High speed and broadband digital data must use RF (radio frequency) coax transmission cable since the fast rise time narrow pulse has harmonics reaching into the RF region. For higher frequencies, coax cable **must** be used for point-to-point wiring since it has the transmission characteristics, flexibility and economy necessary for most systems.

Impedance Standards of Coax Cables

The most efficient impedance to use when transmitting a signal (considering only the voltages, currents and powers to be transmitted) is 75 ohm. The ***telephone industry***, followed by the ***TV industry***, uses 75 ohm almost exclusively for the transmission of voice, video, and data.

The ***military services*** were faced with a differing need for low radiation angle ***omnidirectional antennas*** during the period 1920 through 1940 for broadcasting ship to ship, airport tower to low flying aircraft, and base station to ground troops. The only antenna that would fill that need was the ***vertical ground plane antenna*** (in its many forms) with transmissions at 50 ohm. The military standardized on 50 ohm impedance and spent vast sums of money developing cables and connectors for all of their coax systems. The current general connector standard is MIL–C–39012 (primarily for 50 ohm usage).

The 93 ohm cable was developed to address the need for a ***low-capacitance instrumentation*** coax cable. By removing some of the coax dielectric and substituting air in the RG59 cable, the distributed capacitance was lowered, thereby creating a lower voltage loss transmission medium (RG62 cable).

More sophisticated cables and connectors of twinax, triax and quadrax are now available. These newer components improve external noise rejection and containment of classified signals.

Signal Degradation

Signal degradation in any transmission medium usually consists of voltage amplitude reductions, wave shape changes, phase or delay changes, or power losses where power is transmitted. In most systems the interconnecting cable is the longest transmission path and its selection, manufacture, testing and installation should be carefully considered. Cable should not be randomly selected and installed.

When selecting cable from specifications, always consider the length of the cable run, heat exposure, frequency and power to be transmitted vs. the acceptable losses inherent in the cable, the external noise fields and frequencies to be anticipated or encountered. Also consider the availability of connectors to terminate the cable. Too small a cable will always be cause for excessive losses. Fast rise time digital pulses will have the leading edge distorted due to the high resistance "skin" effect of small coax cables. When selecting a cable for a long run, observe the insertion loss to assure that your signal gets to its destination without too much loss.

When in doubt select a larger cable! Incomplete copper coverage in the outer braid over the dielectric will cause transmission line losses and affect the cable's susceptibility to signal leakage or noise pickup. A copper braid coverage 90% is preferred. Skimping on the quality of the copper braid will affect the cable's loop resistance and its "line" and "transfer" impedance. As a good rule of thumb, if the dielectric is visible through the braid (without bending the cable) then the cable should not be used.

Unseen manufacturing faults produce signal path impedance changes or discontinuity which can only be detected by "frequency sweeping" the cable. TV broadcasters have encountered as high as 60 dB losses in short runs due to periodicity and other manufacturing faults that are only detectable by swept frequency testing techniques. RG59, RG62, and other coax cables use copper weld wire for the center conductor. Copperweld is a high resistance steel wire with a copper cladding on the outside and was originally intended to give strength to TV cables when suspended from poles or pulled through ducts. However this steel wire will increase the cable attenuation on a long run (particularly at the lower frequencies) due to the high resistance of the copper clad steel. RG59 and RG62 have approximately 44 ohms per 1000 loop feet as compared to 17 ohms when using pure copper for the same size center conductor. It is also difficult to effectively crimp a center contact pin on the hard steel copperweld wire.

Many cable defects are not readily visible and may not show up without proper testing. The reputation of the manufacturer, the type, quantity and quality of material used is more important than cost savings in selecting coax cable.

Be careful that cable does not support heavy equipment or is subject to prolonged exposure to heat in system installations. Do not bend cable beyond the manufacturer's recommended bend radius in order to avoid producing cable discontinuity. Try to space high signal level or power circuits separate from low signal level cables when routing cables.

Signal cables are usually manufactured with polyethylene which is adequate for normal use. Teflon™ dielectric and sheathed cables should be used where high heat or chemical action will attack poly cables (such as in aircraft or industrial plants). The National Fire Underwriters now requires non-fire supporting cable to be used for all open wiring in public buildings (***plenum wiring***). Fire insurance rates can be greatly reduced in computer, nuclear accelerator and other large installations if TFE or FEP cables are used.

All transmission cable manufacturers should provide the electronic characteristics of their cables (including power handling and attenuation per foot versus frequency) to aid the system design engineer in doing a proper job. For instance, RG58C has the following characteristics if built to military specifications:

Attenuation in dB per 100 foot length
(Ambient temperature 100°F in free space at sea level)

Frequency MHz	50	100	200	400	1K	3K	5K
Attenuation	3.3	4.9	7.4	12	24	54	83
Power (Watts)	450	300	200	135	80	40	20

Note how quickly the cable becomes unusable at the higher frequencies. Lowering the dielectric constant of the dielectric with Teflon™ or foamed Teflon™ and silver plating the inner and outer conductors to increase the skin effect conductivity will greatly improve the high frequency usage. The increase in performance justifies the additional cost. Keep in mind that for a 10 dB loss, only 3/10ths of the transmitted voltage will show up at the receiving end, and only 1/10th of the generated power will be available. (Assuming a reasonably good impedance match.) If the operating temperature is higher than the rated temperature or if the cable is used at high altitudes, the attenuation and power handling capacity should be derated.

Low-priced cable should be carefully considered. Any reduction in the amount of copper in the conductors or in the quality of materials used throughout will effect performance. Many manufacturers provide better performance in their smaller cables by using materials better than minimum Mil Specs require. Cable performance will also degrade with time and can be adversely affected by the environment where it is installed (sun, ozone, salt, sulphur products, etc.). A cable's shielding effectiveness versus the signal frequency to be transmitted should also be considered where noise pickup can be a problem. It is usually financially and physically impossible to undo any damage or replace cables once they are installed and terminated.

All RG59 cables are **not** the same. By adding the word “Type” a manufacturer may bypass minimum spec requirements to reduce pricing. Some manufacturers build a "better than Mil Spec" cable and supply a superior product. They **also** must use the word “Type” since they **exceed** or **deviate** enough from the electrical and mechanical specifications. (This also applies to connectors). Be cautious of "low bid" surplus dealers, distributors, or packaging houses. Inventoried cable may deteriorate with time. The design engineer and installation technician must be aware of the many hidden and unknown cable properties that may be detrimental to the system's performance. Buyers accepting low bids may burden engineers and technicians with future problems due to hidden deficiencies.

Coax Cable Connectors

Any connector must be able to interconnect with very low DC series resistance (less than 10 milliohms). The impedance of a connector is usually of no consequence below approximately 300 MHz. The connector does not contribute to circuit performance until the signal length approaches 1/20th of a wavelength. 50 ohm connectors can be attached to 75 ohm ***video cables*** with little detrimental effect. **However, the effect of a connector on a signal is cumulative**. Coax connectors should be impedance matched to the system impedance for frequencies above 300 MHz.

The generation of ***intermodulation*** and nonlinear distortion caused by the presence of ferromagnetic material in the conductor has become a more prominent factor in the selection of cables and connectors.

Heat treated beryllium-copper should be used for critical contact springs to maintain contact resilience. Many manufacturers use ordinary brass which soon loses its contact pressure and the connector becomes noisy or fails.

The systems engineer can no longer afford to take connectors for granted. He must be aware of cable characteristics such as attenuation, phase displacement, and transfer impedance. The systems engineer must also understand the inherent characteristics of the many connector families available and the strengths and weaknesses of individual manufacturers' connector designs. He must be willing to expend the time and effort to specify the quality component his system demands.

The many types and series of coax connectors presently available can cause confusion for users. Many of the lesser known series were designed to address specific problems or were developed by commercial companies for their own proprietary product line. The connector series listed below have gained universal acceptance due to their simplicity and performance. They are produced and stocked by the majority of coax connector manufacturers.

Nominal Cable Size O.D.	Connector Size	Quick Disconnect	Threaded
.060 to .425	Standard	C	N
.060 to .425	Miniature	BNC	TNC
.060 to .225	Subminiature	TPS	TCM

Much can be written to discuss the advantages of one series of connectors over another. Selection is normally based on cost or performance depending upon the system parameters required.

Connector attachment : Crimping or Soldering

Crimping is normally used where the speed of attachment is important or where it is virtually impossible to solder due to lack of power (as on the top of a telephone pole or in a cable vault). A special crimp tool quickly and simply installs the connector to the cable. Repair requires a new connector for replacement. Soldering, on the other hand, does not require any special tool. A soldered connection will not corrode provided adequate heat is correctly applied to avoid a “cold solder joint.” Some soldered coax connectors may be used over without special tools or replacement parts. This is advantageous on shipboard or in field locations where replacement parts or tools are not always available.

Noise

Electrical noise is by definition, any unwanted interfering voltage, developed within or externally to a system, which reduces the performance of that system. "Noise" has always been a problem and in the past was usually reduced by brute-force filtering which reduced or stopped "noise" **after** it had entered the system. This method was quite expensive, but reasonably effective since signal information voltages were low in frequency and systems were few and not too large or complex.

Present day ***communication*** and ***data systems*** are continually becoming larger, more numerous and use higher information rates and frequencies in an atmosphere of expanded electrical and electronic equipment usage. The net result is ever increasing levels of interference and noise which creates an electronic traffic jam of major proportions. This applies equally to ***low level analog*** and ***digital pulse systems***. Filtering is practically useless (or in some cases, completely unusable) since it produces excessive deterioration of the desired pulse waveforms or inaccuracies and distortion of analog signal voltages. Noise reduction is best accomplished by simply stopping "noise" **before** it enters the system.

The following describes how external noise is introduced into systems by the equipment interconnecting wiring, and the improvements that can be realized by installing noise-rejecting type cables and applying good equipment isolation and grounding techniques. Most electronic equipment does not produce random noise and usually performs the singular task it is designed to do. Unwanted noise is picked up by the interconnecting wiring through the direct contact action of ground loops and common mode returns, or by inductive and capacitive pickup of nearby radiated fields. A desired signal in one circuit can be noise to another. Interference can be produced by local circuits within the system or from equipment completely removed and external to the system. Conversely, cables can radiate the signal they are carrying into adjacent circuits (crosstalk), generating interference to other data systems or causing security compromises in classified military communications. This problem can be further compounded by poor cable-to-equipment impedance matching which produces signal reflections and high standing wave ratios. Poorly selected and installed cabling can act as both transmitting and receiving antenna or as undesired primary and secondary windings of coupling transformers, placing interference into the system.

Systems are often designed, fabricated, and installed using the simplest multi-wire cable or grounded coax between equipment, racks, and buildings, not realizing that they will probably encounter and pick up all manner of interference. Nearby electrical equipment such as high power radar, broadcast stations, power distribution mains, fluorescent lighting, arcing motors, teletype and communications circuits are but a few of the noise makers. The lower the system signal voltage level, the greater is the susceptibility to this outside interference.

A system design might work fine on paper or when initially assembled and tested. But it may not perform as anticipated when installed at its final location on ship or shore. You may realize that the completed system has picked up much noise and hum, or is itself radiating interference so heavily that the equipment is unusable. Costly additional effort, parts, and time expended to locate and attempts to eliminate the causes of the noise pickup may meet with little success. Cable-to-equipment interface engineering should be applied at the start of system planning and design to avoid this unnecessary waste. This applies to all systems for low or high frequency signals, for applications in ***TV, telemetry, timing, ordnance, environmental testing, computer, telephone, test instrumentation***, or ***normal communications.*** Each system must be considered individually, since the signal frequencies and amplitudes within the system and the anticipated external interference will dictate what type of cabling and connection techniques are to be used.

Examples of Good Cable Engineering

Low-level environmental systems predominantly use “guarded” balanced and shielded lines to transmit the calibrated transducer test voltage to an isolated charge amplifier.

TV video is distributed over 124-ohm “shielded twisted pair” (twinax), instead of coax, in high noise areas to cancel low frequency magnetic field cross-talk and hum.

Digital applications in the ***computer*** and ***instrumentation*** fields require good high-frequency design engineering when transmitting nanosecond rise time pulses. A 10 nanosecond rise time pulse is equivalent to 100 megahertz RF. Using good coax cabling techniques helps to avoid pulse reflection, false noise triggering or data inaccuracy.

Special care is required to keep noise from entering ***information systems*** (particularly ***aircraft***). ***Low level communication circuit*** cabling should be space separated and have effective shielding from adjacent parallel power circuits to avoid induced hum.

Unprotected circuits (such as ***ordnance*** and ***timing***) can receive false pulsing if exposed to external radiated RF interfering fields.

High megawatt pulsed radar will introduce both its carrier and pulsed radio frequency waveform into nearby sensitive low-level unprotected cable runs which act as receiving antennas.

Sometimes the transmitted pulses have amplitudes of hundreds of thousands of volts (as used in ***atomic energy testing*** or ***linear accelerators***) thereby producing large magnetic and capacitive interference fields. These play havoc with local cable-connected instrumentation and electronic equipment.

In the case of ***nuclear attack***, a tremendous electromagnetic pulse (EMP), transmitted for many miles from ground zero, will induce extremely high voltages in all unguarded and unprotected cable and equipment. It is estimated that a vertical electrical field intensity of 50K volts per meter will be present 62.5 miles from a 10–megaton near-ground explosion. Solid-state transistors and diodes, integrated circuits, front end RF coils, sensitive relays and reeds are typical of the sophisticated elements used today for both military and commercial systems that may fail even though far removed from the fireball area.

The lack of money, time and qualified personnel will not permit complicated and costly post-completion interference cleanup of poorly engineered systems. The use of good coax, twinax, triax, in isolated or guarded circuitry, will do much to suppress outgoing EMI and RFI, reduce incoming noise pickup, and help protect both your system and the adjacent system from mutual interference. Careful cable to equipment interface planning must be exercised to produce workable compatible systems. Design engineers are not free to treat cable installation as casually as they may have in the past.

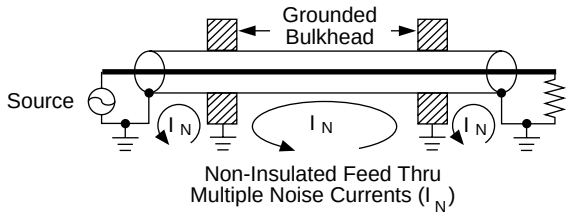
Coax Cable

Shielded cable should be used to protect against magnetic and capacitive stray fields in all cases of potential interference (low or high frequency). Grounded coax cable is excellent for use from 20 KHz to 5 GHz for most systems. But even coax, if subjected to very strong interference, will not completely protect the desired signal. Coax cable is a two conductor cable. The outer conductor of a coax cable is not a true shield in that it is also the signal return. A true shield is insulated from the signal carrying conductors and protects the enclosed coaxial conductors. However, the outer conductor of a coax cable is an electrostatic shield and thus protects against capacitive interference. When two conductors at different voltages are placed near one another, a charge difference exists between them. Since a charge difference exists between the two conductors, a capacitive effect also exists between them. Such capacitive effects can give rise to interference signals in both conductors.

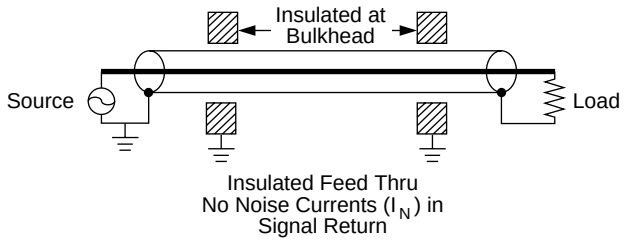
To prevent wires which carry low-level signals from being influenced by capacitive effects, you need to surround the low-level signal wire with an electrostatic shield. This type of shielding is effective because external electric fields cannot penetrate an enclosure surrounded by an electrical conductor. Coax cable should be used when low-level signal wire is likely to come in contact with another signal carrying wire. This is especially true when the voltage difference between the signal carrying wire and the source of interference is large. Any external voltage injected in this braid will act as noise to the desired signal in the coax. The sophistication of cable and equipment isolation techniques used is dependent upon the frequency of the interfering noise and how it enters the cable system. Any additional measures taken to reduce incoming noise will also reduce outgoing radiation and cross-talk.

Ground Loops and Common Mode Returns

Coax cable consists of an inner and an outer conductor insulated from each other. Each conductor carries a desired signal current (source to load or return). The outer conductor is usually grounded at the source, load, bulkheads and other intermediate points. “Ground loop” or “common mode” currents caused by potential differences of external noise sources are also simultaneously carried on the outer conductors and noise is introduced into the system, greatly reducing the “signal-to-noise ratio.”



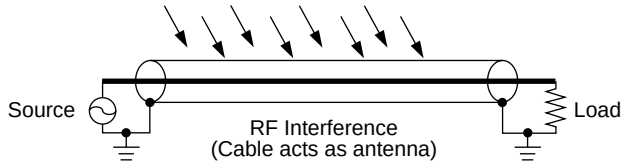
Low frequency signals (20 KHz to 6 MHz) are particularly susceptible to both ground loop and common mode interference. Coax cable is recommended in this case with the complete coax chain having a **minimum**-number of outer conductor ground contacts. Reducing the number of ground connections reduces the number of possible ground loops. Major equipment, relays, switches, connectors, patch panels, etc., should be **isolated from ground** with the ultimate design having only one system ground connection at the source.

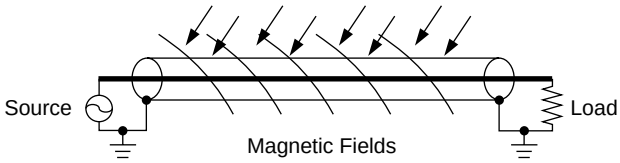


Radiated Fields

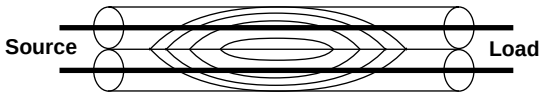
Where strong radiated noise fields exist, such as ***high powered radar, broadcast stations, power lines, fluorescent lighting, office*** and ***industrial machinery***, ***multiple cable runs***, etc., the cable conductors act as receiving antennas or secondary windings of transformers and pick up externally generated noise. At higher frequencies, a part of the energy associated with the fluctuating current of charge in a conductor is radiated away from the conductor in the form of electromagnetic radiation. Electromagnetic shields make use of the fact that the electromagnetic radiation must simultaneously contain electric and magnetic fields in order to propagate independently through space. Therefore, a shield designed to eliminate electrostatic fields can be used to neutralize the electric field component of an electromagnetic wave. Consequently the outer conductor of a coax cable connected to a ground through a low-impedance path will be an effective shield against electromagnetic interference.

In high-level RF environments, it is desirable to minimize the RF potentials existing between points on a coax shield. The shield should be grounded at both ends of the cable and at intermediate points along the cable. This multi-point grounding of the shield maintains the RF shielding effectiveness of the cable. If coax cable is used in a radiated interference area, the outer conductor should be grounded as often as possible and wherever feasible in order to remove the radiated interference as soon as possible. If your application requires that you address **both** ground loops and radiated interference, you may need to use either twinax or triax cable.





A particularly bad source of noise pickup is the induced currents (cross-talk) encountered in large multiple cable installations.

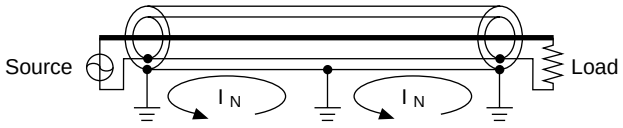


Cross Talk

Two improved types of cables are used for additional protection against these radiated sources:

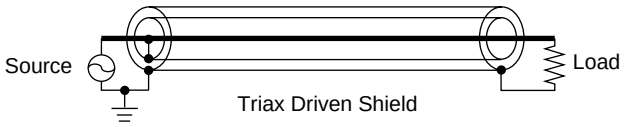
Triax Cable

Triax cable is coax cable with an additional outer copper braid (insulated from the signal carrying conductors) that acts as a true shield and protects the enclosed coax conductors. This braid or shield is grounded and passes both ground loop and capacitive field noise currents away from the signal carrying coax, thereby greatly improving the "signal to noise" ratio over standard coax cable.



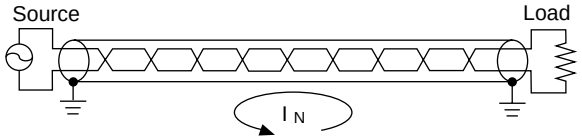
Triax Cables Provide Additional
Shield, Insulated from Signal Carrying Coax

Triax cable is also used in "Driven Shield" applications where the inner conductor and ***the first braid*** are driven in parallel at the transmitting end and work against the outer braid which is insulated above ground. The inner braid is left floating at the receiving end, providing a "Faraday" shield between the inner conductor and outer braid. In this way the cable's **distributed capacitance** is greatly reduced, thereby reducing cable losses and loading. This application is most effective in ***high frequency transducer data systems*** where the distributed capacity in coax cable limits the data accuracy. The two outer braids of the triax cable can be used as a low-impedance (approximately 12 ohms) transmission line to carry high-current pulses to ***low impedance laser lamps*** or ***exploding bridge wire*** (EBW) ***ordnance systems***. Triax cable and connectors completely **insulated** from the ground are available for these applications.



Twinax Cable

Twinax cable is a two-conductor twisted balanced wire line with a specific impedance and a shielding braid around both wires. The twisting of the two balanced-signal-carrying wires cancels any random induced noise voltage pickup, giving protection against any low frequency magnetic noise passing through the copper braid. **Trompeter's twinax cable design** also lowers cable losses by adding two (2) dielectric fillers under the braid which separates the braid away from the signal pair, thereby lowering the leakage capacitance to ground. Additionally, the coverage is improved to 90% by using more copper wire in the braid and weaving it tighter. Like triax cable, Trompeter's twinax cable provides protection against ground loops and capacitive fields. Twinax cable usefulness, however, is limited to approximately 15 MHz since it has rather high transmission losses above this frequency. Twinax cable and concentric connectors are available for ***low frequency, digital*** and ***video distribution systems***.



Twinax Cable Provides A Shield, Insulated from
The Twisted Pair Signal Carrying Conductors

Bonding & Grounding

Good bonding and grounding are absolutely essential if noise pickup reduction is to be accomplished. Equipment isolation, cabling, bonding, and grounding are all part of the noise pickup and EMI/RFI problem. The method of equipment interconnecting and grounding is a function of the signal frequency and no one simple answer can be provided. The following common conditions require detailed consideration:

• **"Earth" grounds:** require extensive grids, ground rods, and chemical preparation to obtain an extremely low resistance and impedance system ground return.

• **Ground isolation:** In many instances in low-frequency data systems where equipment is widely separated, equipment ground "planes" should be isolated from earth grounds to avoid "noisy" ground loops caused by power and other equipment in the immediate area.

• **Parallel cabling:** Space isolate cabling of similar functions (i.e., RF from RF, video from video, and cables carrying vastly different voltage levels) so that they do not have mutual capacitive or inductive coupling.

• **Termination impedance:** Properly terminate all pulse and high-frequency cables in their characteristic impedance so that the cable reactive components are cancelled out and the voltage standing waves are reduced to a minimum.

• **Cable selection:** The higher the frequency, the faster the pulse rise time, or the longer the cable run; the bigger the cable required to reduce dielectric losses and lessen the distortion of pulse shapes.

• **Grounding location:** If "system" ground and "earth" ground must be connected, it should be done at minimal locations (preferably one) using extremely low-impedance bonding paths and materials. Otherwise, RF and high-frequency bonding should be made frequently to provide the shortest RF path to ground and to prevent the ground return from acting as an additional length of antenna.

Systems Usage

Most engineers are quite familiar with the longtime use of 75 ohm coax cable in ***baseband telephone transmission*** installations and its universal use for ***broadcast*** and ***cable TV.*** Coax and twinax cables are being used for ***local dedicated installations*** with the rapid growth of ***commercial computer data distribution***. The non-dedicated commercial coax data bus systems (***Ethernet***) tie many terminals to one high bit-rate trunk cable. ***Military aircraft systems*** call for 78 ohm twinax data bus distribution for main functions of ***guidance*** and ***control, navigation, communications,*** etc., per **MIL–STD–1553B** (TRS and TRB series connectors). **MIL–STD–1397** specifies 50 ohm triax in ***naval ship digital data bus*** applications which use the TRB and TRC series connectors listed in **MIL–C–49142**.

Interference is becoming a major problem with the proliferation of ***digital computer*** installations, ***data transmission*** systems, and ***local area networks*** (both baseband and broadband). The main interference encountered is caused by the high harmonic content of the digital pulses that fall in the RF region and radiate into free space or cross-talk to other victim cables.

Choice of Cable Type and Installation:

- **Grounded Coax:** Can pass the high information rates, but is subject to ground loops as well as magnetic and radiated noise pickup.
- **Ungrounded Coax:** Can pass the high information rates, but is subject to magnetic and radiated noise pickup. Substantially lowers the ground loop interference.
- **Triax Cable:** Can pass the high information rates, but is subject to magnetic noise pickup. Substantially lowers the ground loop interference and removes the radiated noise.
- **Twinax Cable:** Passes only medium information rates, but hinders the pickup of magnetic interference due to the "twist" of the signal pair. (Equipment usually operated with balanced inputs and outputs.)
- **Ungrounded versions of Twinax and Triax:** Provide even more ground loop isolation.

The choice of materials to be used in these cables is of major importance. For ***commercial installations in public buildings***, the National Electrical Code, Underwriters Lab and local ordinance requirements must be complied with. ***Fire wicking cables*** routed horizontally through fire walls and vertically floor-to-floor are required to be metal ducted (a very expensive and inflexible mode of construction). ***Approved cables made of FEP*** can be routed horizontally and vertically, without ducting, in air plenums with a great reduction in size and cost and with much **greater flexibility for future modifications**. Increasing insurance premiums will almost dictate that **flame retardant nontoxic materials** be used in all future public building cable installations to reduce potential loss of life and property. The same applies to ***military aircraft cables*** which must also be able to withstand exposure to fuel and cleaning solvents. Connectors are available for these special cables.

Trompeter Electronics, Inc. has developed coax connectors that are isolated above ground, but have a 6 nanofarad bypass capacitor, shunting the outer braid to ground for high harmonic attenuation. In many instances, interference can be so severe that twinax (balanced-shielded) or triax (shielded coax) cables must be used along with the proper connectors to provide good isolation, bonding and grounding.

As previously discussed, high bit-rate signals require high-frequency transmission cables (coax, twinax, triax and even quadrax) to minimize amplitude and frequency distortion and to prevent noise pickup from external interference.

The ***design engineer*** must select the optimum cable and connectors for maximum reduction of interference due to radiated RF and magnetically coupled or direct contact ground loop noise. This can reduce the number of noise suppression filters and amplifiers required.

A repeated word of caution is offered for those contemplating "digital" use. Low-voltage digital lines should not be placed in the near proximity of high-voltage and high current cables. Nor should a single multifunction connector be used due to the strong probability of cross-talk coupled interference. Physical separation of the cables is the first and best solution, with shielding and isolation above ground being the second consideration. ■

Cable group table notes / bend relief boots/springs

Cable Group Table Notes

If your cable group is not listed, contact the factory for assistance...

Trompeter provides cable connectors with configurations designed to provide tough, durable terminations on specific cables. Cable connector part numbers reference a specific cable group number for a specific cable type, model, and/or manufacturer. This *ensures* that the connector fits your cable and provides the toughest termination available in the industry.

If you know the part number and manufacturer of your cable, you can locate the cable's assigned cable group number using the cable group table in the following pages.

▲ If you have a Trompeter connector, you can determine the cable group number by the last hyphenated suffix, (usually 1 to 3 digits).

Example: UPL220-026 = cable group number -026

Note: All dimensions in the proceeding Cable Group Table are in thousandths of an inch.

▲ If you cannot satisfy your connector requirements with the standard cable group number, or have a special requirement, contact your local Trompeter representative listed on the back inside cover of this catalog, or you can visit our website at www.trompeter.com to find the sales rep nearest you. Contact the factory for more information.

Note: Cables of the same type and specification may vary from manufacturer to manufacturer. Always verify the cable group number for your connector type and manufacturer.

The symbol -△1 after the part numbers listed in this catalog indicates that you should refer to the cable group table in the proceeding pages.

Wrench style = **Wrench Crimp**
Crimp style = **Tool Crimp**

Bend Relief Boots/Springs

Minimizes the cable damage when exceeding the cable's minimum bend radius. Bend relief boots are made of tough 105°PVC. Bend relief springs are *plastic coated tempered steel wire* which are assembled as an integral part of the clamp-nut assembly. Available for specific Trompeter connectors, patch cords, and cable assemblies. For bend relief "BR" spring connectors, refer to page 79. Boots may be assembled to the cable connector using **3M ScotchGrip™ No.1099** plastic adhesive or equivalent. Call the factory for availability.

For Plugs: (PL20, PL40) Wrench Crimp Connectors (Cable Groups -1,-2, &-5 only)	Black	**ACA-△1 -0**
For Plugs: (PL220 & PL240) Tool Crimp Connectors (Cable Groups -011 & -013 only)	Clear	**ACC-△1**

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
3M	SCI 041	COAX	-44	*	74	12	75
ACD CABLE	4-27046-3265	TWINAX	*	_	194	24	_
ACOME	MC7539	COAX	-22	-009	151	20	_
AEROSPACE	4114	COAX	SEE COMMENTS	TOO LARGE	345	64	_
AEROSPACE INDUSTRIES INC	90149	COAX	*	*	194	30	_
AEROSPACE WIRE	4080	COAX	*	_	348	102	50
ALCATEL	0960 WL	COAX	_	-004	93	11	75
ALCATEL	ASNE 0690 WL	COAX	_	-004	93	11	75
ALCATEL	CDE 003	TWINAX	*	-204	140	24	77
ALPHA	7632	TWINAX	*	_	169	30	600V
ALPHA	8620	COAX	-41	-020	270	41	75
ALPHA	9059	COAX	-2	-013	242	26	75
ALPHA	9102	COAX	*	-023	212	32	75
ALPHA	9108	TWINAX	-55	*	210	38	78
ALPHA	9109	TWINAX	_	-213	252	37	100
ALPHA	9158	COAX	-21	*	165	35	53
ALPHA	9159	COAX	*	*	188	23	75
ALPHA	9174	COAX	-5	-003	100	21	50
ALPHA	9316	COAX	-5	-003	98	21	50
ALPHA	9807	COAX	-51	-016	304	32	75
ALPHA	9817	TWINAX	-8	_	327	38	100
ALPHA	9830	COAX	-2	-013	242	25	75
ALPHA	9840	COAX	-2	-013	240	25	80
ALPHA	9847	COAX	_	-053	405	64	75
ALPHA	9850	TRIAX	-13	TOO LARGE	314	32	75
ALPHA	9858	COAX	-1	-011	193	36	50
ALPHA	2827/2	TWINAX	-29	-207	120	37	600V
ALPHA	2834/2	TWINAX	-45	_	137	32	600V
ALPHA	2837/2	TWINAX	*	*	156	38	600V
ALPHA	9058C	COAX	-1	-011	194	38	50
ALPHA	9179B	COAX	-5	-004	101	12	75
ALPHA	9180B	COAX	-4	*	140	38	95
ALPHA	9187A	COAX	-36	-004	105	10	75
ALPHA	9196A	COAX	-44	-1	70	11	50
ALPHA	9804C	COAX	-41	-020	275	40	75
ALPHA	9814C	TWINAX	*	-213	244	38	75
ALPHA	9818C	TWINAX	-8	_	330	37	100
ALPHA	9825C	COAX	-6A	_	400	64	75
ALPHA	9851C	COAX	*	_	405	86	50
ALPHA	9861C	COAX	-1	-011	192	38	_
ALPHA	9871F	COAX	*	-011	182	37	50
ALPHA WIRE	2821/2	TWINAX	-27	_	138	24	600V
AMDAHL	215-9000-000	COAX	-5A	-001	75	12	_
AMPEX	616-569	COAX	-36	*	110	15	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
AMPHENOL	82-5588	TWINAX	-8	_	330	39	_
AMPHENOL CNDA	21-1060	COAX	-6	-016	_	_	_
AMPHENOL CNDA	621-446-795	COAX	-6	_	_	_	_
ANDREW	FSJ2-50B	COAX	*	_	_	_	50
ANDREW	HJ4-50	COAX	*	_	_	_	50
ANDREW	HJ5-50	COAX	*	_	_	_	50
ANDREW	LDF2-50-A	COAX	*	_	_	_	50
ANDREW	LDF4-50-A	COAX	*	TOO LARGE	630	189	50
ANDREW	LDF5-50-A	COAX	*	_	_	_	50
ANIXTER	9L759586	COAX	_	*	280	42	_
ANIXTER COLUMBIA	55	COAX	*	*	143	12	_
ANTENNA SPECIALISTS	18-73-2	COAX	-52	_	246	52	50
ARGOSY	8DV75	COAX	-21	*	170	24	75
ARINC	629	TWINAX	-8	TOO LARGE	313	36	_
ASTROLAB	32001	COAX	-5	*	115	20	_
ASTROLABS	32081	COAX	-5	-003	100	20	50
ASTRONAUTICS	169450	TRIAX	-7	_	210	23	_
AT&T (LUCENT)	733	COAX	_	-027	_	_	75
AT&T (LUCENT)	1735A	COAX	_	-026	128	16	75
AT&T (LUCENT)	2734A	COAX	_	*	225	32	75
AT&T (LUCENT)	2735A	COAX	-22	-026	140	15	75
AT&T (LUCENT)	734D	COAX	-63	-025	236	31	75
AT&T (LUCENT)	735A	COAX	*	-026	125	16	75
AT&T (LUCENT)	NSI 4609 805 13019	COAX	-37	*	166	16	_
AT&T(LUCENT)	724	COAX	-6	-016	304	33	_
AT&T(LUCENT)	728	COAX	-6	-016	304	33	75
AT&T(LUCENT)	731	COAX	-2	-015	248	23	75
AT&T(LUCENT)	730A	COAX	-2B	-015	255	25	
AT&T(LUCENT)	734A	COAX	-63	-025	236	31	75
AT&T(LUCENT)	KS-19224L2	COAX	-31	*	116	11	_
AT&T(W.E.CO)	16PEVL	TWINAX	-12	_	460	51	_
AT&T(W.E.CO)	754E	TWINAX	-10	_	420	40	_
AT&T(W.E.CO)	760A	TWINAX	-11	TOO LARGE	308	25	_
AT&T(W.E.CO)	761A	TWINAX	-30		215	21	_
AT&T/NSI	4609 805 13019	COAX	_	*	_	_	_
ATLAS	1405-59-U95	COAX	-2	-014	242	32	75
AVAYA	1725B	COAX	*	-054	325	50	75
AXON	A3331B	TRIAX	_	*	215	20	_
AXON	CC6297	TWINAX	-55	_	205	24	124
AXON	P502805C	TWINAX	*	-201	126	24	_
AXON	P502810	TWINAX	-47	-201	135	_	77
AXON	P506133	TRIAX	*	_	213	25	75
AXON	P506425	TWINAX	-55	_	202	25	120
AXON	P507991A	TWINAX	*	-204	134	24	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
AXON	P512806	TWINAX	*	-217	150	24	_
AXON	P512807	TWINAX	*	-217	152	24	_
AXON	P813856	TRIAX	_	*	192	24	_
AXON	S9702211	TRIAX	*	*	197	24	_
AXON	SRX 50 C	TRIAX	*	_	_	_	_
AXON	SSTHE2-H1	TWINAX	_	-222	151	25	_
AXON	UKT2407-SPC-HSTP-2	TWIAX	*	-223	114	24	50
BEDEA	TRIAX 11	TRIAX	*	TOO LARGE	438	55	75
BELDEN	8208	TWINAX	-25	_	257	47	300V
BELDEN	8212	COAX	-2	-014	242	32	75
BELDEN	8213	COAX	-6A	-053	405	64	75
BELDEN	8214	COAX	*	TOO LARGE	403	108	50
BELDEN	8215	COAX	-6E	-017	332	28	75
BELDEN	8216	COAX	-5	-003	103	20	50
BELDEN	8218	COAX	-22	-009	150	17	75
BELDEN	8219	COAX	-1	-011	195	37	52
BELDEN	8221	COAX	-2	-013	242	25	80
BELDEN	8227	TWINAX	-8	_	330	39	_
BELDEN	8232	TRIAX	-13A	TOO LARGE	312	32	75
BELDEN	8233	TRIAX	-14	_	475	64	75
BELDEN	8237	COAX	-6A	_	405	85	50
BELDEN	8238	COAX	-6A	_	405	48	75
BELDEN	8240	COAX	-1	-021	195	32	51.5
BELDEN	8241	COAX	-2	-013	242	25	75
BELDEN	8259	COAX	-1	-011	195	40	50
BELDEN	8261	COAX	-6A	_	405	49	75
BELDEN	8262	COAX	-1	-011	192	38	50
BELDEN	8263	COAX	-2	-013	242	23	75
BELDEN	8267	COAX	-6A	_	405	86	50
BELDEN	8268	COAX	-6B	TOO LARGE	425	89	50
BELDEN	8279	COAX	-2A	-022	220	25	75
BELDEN	8281	COAX	-6	-016	307	30	75
BELDEN	8422	TWINAX	-9	_	231	25	1000V
BELDEN	8441	TWP	30	_	210	25	300V
BELDEN	8450	TWINAX	-27	_	121	25	200V
BELDEN	8451	TWINAX	-23	-210	140	31	300V
BELDEN	8998	COAX	*	*	198	32	_
BELDEN	9011	COAX	-6A	-053	405	64	75
BELDEN	9054	COAX	-2	-014	242	32	75
BELDEN	9060	COAX	-41	*	284	40	75
BELDEN	9064	COAX	-6A	_	400	64	75
BELDEN	9066	COAX	-41	-020	275	41	75
BELDEN	9068	COAX	-22	-009	146	16	75
BELDEN	9100	COAX	-2	-014	237	32	75

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BELDEN	9104	COAX	-34	*	243	32	75
BELDEN	9108	COAX	*	-014	237	32	75
BELDEN	9110	COAX	-2	-014	242	32	75
BELDEN	9112	COAX	-2		242	32	_
BELDEN	9114	COAX	-41	-020	270	40	75
BELDEN	9116	COAX	-41	-020	278	38	75
BELDEN	9141	COAX	-6	-016	304	33	75
BELDEN	9146	COAX	4	_	_	_	_
BELDEN	9165	COAX	-2	-013A	242	30	75
BELDEN	9167	COAX	-2	-014	243	32	75
BELDEN	9168	COAX	-41	-020	275	40	75
BELDEN	9169	COAX	-2B	-015	249	25	93
BELDEN	9170	COAX	-4	*	140	22	75
BELDEN	9171	COAX	-2	-013A	242	30	75
BELDEN	9182	TWINAX	*	TOO LARGE	350	31	150
BELDEN	9192	TRIAX	*	_	_	_	75
BELDEN	9201	COAX	-1	-021	193	33	52
BELDEN	9203	COAX	-1	-021	195	35	50
BELDEN	9204	COAX	_	-013	241	25	75
BELDEN	9207	TWINAX	-8	_	330	39	100
BELDEN	9209	COAX	-63	-019	226	22	75
BELDEN	9212	COAX	-6A	_	405	48	75
BELDEN	9221	COAX	-5	-004	102	12	75
BELDEN	9222	TRIAX	-7	-306	239	40	50
BELDEN	9223	COAX	-1	*	195	30	50
BELDEN	9228	COAX	-2	-013	242	25	93
BELDEN	9231	COAX	-6	-016	304	32	75
BELDEN	9232	TRIAX	*	TOO LARGE	_	_	75
BELDEN	9239	COAX	-5	-003	104	19	50
BELDEN	9240	COAX	-2	-014	241	32	75
BELDEN	9243	COAX	-2	-014	242	32	_
BELDEN	9244	COAX	-2	-013	242	25	73
BELDEN	9248	COAX	-41	-020	270	36	75
BELDEN	9250	TWINAX	-10	_	420	46	95
BELDEN	9251	COAX	-6A	_	405	85	52
BELDEN	9252	COAX	*	-010	160	30	50
BELDEN	9254	COAX	-22	-009	142	19	75
BELDEN	9258	COAX	*	_	247	55	50
BELDEN	9259	COAX	-2A	-023	234	30	75
BELDEN	9265	COAX	-2	-014	242	31	75
BELDEN	9266	COAX	-2	-013A	245	31	_
BELDEN	9267	TRIAX	*	*	360	32	75
BELDEN	9268	COAX	*	-018	260	25	93
BELDEN	9271	TWINAX	*	_	243	20	124

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BELDEN	9272	TWINAX	-9	-213	242	37	78
BELDEN	9273	COAX	-3	-012	216	35	50
BELDEN	9274	COAX	-2	-014	242	32	75
BELDEN	9275	COAX	-2	-14	242	32	75
BELDEN	9284	COAX	-41	-020	275	40	_
BELDEN	9290	COAX	*	*	288	37	75
BELDEN	9291	COAX	-2	-013	242	25	80
BELDEN	9292	COAX	-6A	-053	405	64	75
BELDEN	9310	COAX	*	-011	194	35	50
BELDEN	9311	COAX	-1	-011	193	37	52
BELDEN	9386	COAX	-41	-020	275	40	_
BELDEN	9448	COAX	-2	-013	242	25	_
BELDEN	9463	TWINAX	-9	-213	240	37	78
BELDEN	9555	COAX	-2	-013	242	23	75
BELDEN	9587	COAX	-41	-020	275	40	75
BELDEN	9589	COAX	-2	_	242	32	_
BELDEN	9659	COAX	-2	-013A	242	30	75
BELDEN	9764	COAX	-6A	_	405	64	75
BELDEN	9815	TWINAX	-8	_	330	37	100
BELDEN	9841	TWINAX	-9	-215	256	25	120
BELDEN	9850	COAX	-6B	_	425	48	75
BELDEN	9857	COAX	-6A	_	405	25	125
BELDEN	9859	TWINAX	*	-213	243	38	78
BELDEN	9860	TWINAX	-46	_	440	51	124
BELDEN	9861	COAX	-6E	_	332	57	50
BELDEN	9880	COAX	-48	_	405	86	50
BELDEN	9888	TRIAX	*	_	480	108	50
BELDEN	9907	COAX	-1	-011	185	37	50
BELDEN	9913	COAX	*	-050 (90C)	411	108	50
BELDEN	9914	COAX	*	TOO LARGE	405	100	50
BELDEN	9999	TWINAX	_	_	185	30	78
BELDEN	9999	TWINAX	-33	_	187	30	78
BELDEN	44319	COAX	*	*	298	42	75
BELDEN	46899	COAX	-1	*	199	24	75
BELDEN	81553	TWINAX	-47	-201	129	24	77
BELDEN	82108	COAX	*	*	212	32	75
BELDEN	82120	COAX	-34	-024	244	40	75
BELDEN	82121	COAX	-52	-024	240	40	75
BELDEN	82240	COAX	*	*	159	32	53.5
BELDEN	82241	COAX	*	*	193	23	75
BELDEN	82248	COAX	*	*	227	41	75
BELDEN	82259	COAX	*	*	193	30	75
BELDEN	82269	COAX	*	*	197	25	93
BELDEN	82641	TWINAX	*	_	106	24	48

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BELDEN	82907	COAX	-21	*	163	36	50
BELDEN	83241	COAX	*	-011	187	37	50
BELDEN	83242	COAX	-1	-012	193	39	50
BELDEN	83264	COAX	-5	-004	100	12	75
BELDEN	83265	COAX	-5A	-011	71	10	50
BELDEN	83266	COAX	-22	-008	141	12	95
BELDEN	83267	COAX	-36	-004	110	12	75
BELDEN	83269	COAX	-5	-003	100	18	50
BELDEN	83284	COAX	-5	-003	100	21	50
BELDEN	83303	COAX	-44	_	75	19	600V
BELDEN	83310	TWINAX	-29	-207	120	31	
BELDEN	83317	TWINAX	*	-223	112	19	600V
BELDEN	83318	TWINAX	-29	-204	132	25	600V
BELDEN	83319	TWINAX	*	-221	139	32	NC
BELDEN	84142	COAX	-1	-021	195	37	50
BELDEN	84303	COAX	-21	-011	170	37	50
BELDEN	86262	COAX	-2A	-022	220	25	93
BELDEN	87108	COAX	-2A	-023	_	_	_
BELDEN	87120	COAX	-52	-024	256	40	75
BELDEN	88232	TRIAX	*	*	247	32	75
BELDEN	88240	COAX	*	*	159	32	53.5
BELDEN	88241	COAX	*	*	193	23	75
BELDEN	88281	COAX	-41	*	270	31	75
BELDEN	89108	COAX	-2A	-023	218	32	75
BELDEN	89120	COAX	-52	*	235	41	75
BELDEN	89120	COAX		*	234	41	75
BELDEN	89162	COAX	-2A	-019	_	_	75
BELDEN	89182	TWINAX	-54		307	31	150
BELDEN	89207	TWINAX	*	TOO LARGE	267	39	100
BELDEN	89248	COAX	-52	*	222	40	75
BELDEN	89259	COAX	*	*	192	31	75
BELDEN	89269	COAX	-2A	-022	222	25	93
BELDEN	89272	TWINAX	-55	*	220	39	78
BELDEN	89292	COAX	*	-052	348	64	75
BELDEN	89555	COAX	-53	-019	230	23	75
BELDEN	89880	COAX	-50	_	375	86	50
BELDEN	89907	COAX	-21 (20/90)	*	160	37	50
BELDEN	89913	COAX	*	TOO LARGE	364	108	50
BELDEN	89999	TWINAX	*	_	178	30	78
BELDEN	92289	COAX	*	*	204	25	_
BELDEN	513945	COAX	_	-052	405	64	75
BELDEN	533945	COAX	-41	-020	266	41	75
BELDEN	543945	COAX	-2A	-023	232	32	75
BELDEN	549945	COAX	_	-023	232	32	75

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BELDEN	551945	COAX	_	-023	232	30	75
BELDEN	568937	COAX	-36	-027	123	16	75
BELDEN	573945	COAX	-22	-009	146	18	75
BELDEN	613948	COAX	_	-025	348	64	75
BELDEN	633938	COAX	_	*	233	40	75
BELDEN	633948	COAX	*	*	228	40	75
BELDEN	633948	COAX	_	*	228	40	75
BELDEN	643948	COAX	*	*	193	38	75
BELDEN	643948	COAX	_	*	193	32	75
BELDEN	649948	COAX	_	*	199	32	75
BELDEN	673948	COAX	*	*	146	18	75
BELDEN	1151A	COAX	-2	-013A	247	32	75
BELDEN	1152A	COAX	-41	*	280	40	75
BELDEN	1153A	COAX	*	_	387	64	75
BELDEN	1162A	TWINAX	-8	_	330	37	100
BELDEN	1163A	COAX	-6	-016	_	_	100
BELDEN	1164B	COAX	-22	-009	145	19	75
BELDEN	1167A	COAX	-22	-009	152	20	75
BELDEN	1167B	COAX	-22	-009	146	19	75
BELDEN	1168A	COAX	-141		141	37	_
BELDEN	1186A	COAX	*	*	265	32	75
BELDEN	1187A	COAX	*	*	267	32	75
BELDEN	1189A	COAX	*	*	298	40	75
BELDEN	1223A	COAX	-41	-020	275	40	75
BELDEN	1263A	COAX	*	-009	160	21	75
BELDEN	1406B	COAX	-22	-009	146	19	75
BELDEN	1407B	COAX	-22	-009	146	19	75
BELDEN	1417B	COAX	_	-009	150	18	75
BELDEN	1418B	COAX	-22	-009	150	15	75
BELDEN	1426A	COAX	-2	-014	242	32	75
BELDEN	1505A	COAX	-2	-025	234	32	75
BELDEN	1505F	COAX	-2	_	242	34	75
BELDEN	1506A	COAX	*	*	201	32	75
BELDEN	1520A	COAX	-5	-004	102	12	75
BELDEN	1521A	COAX	_	-004	560	12	75
BELDEN	1522A	COAX	-36	-004	107	12	75
BELDEN	1523A	COAX	-6A	-053	400	64	75
BELDEN	1525A	COAX	-6A	TOO LARGE	404	64	75
BELDEN	1530A	COAX	-41	-020	270	40	75
BELDEN	1547A	COAX	-41	-020	275	40	75
BELDEN	1617A	COAX	-6B	TOO LARGE	407	64	75
BELDEN	1671A	COAX	-86	-003	87	20	50
BELDEN	1671J	COAX	-31	_	127	20	50
BELDEN	1672A	COAX	-86	-004	87	11	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BELDEN	1672J	COAX	-31	-027	127	11	75
BELDEN	1673A	COAX	_	_	138	36	50
BELDEN	1673J	COAX	*	*	178	37	50
BELDEN	1694A	COAX	-41	-020	282	40	75
BELDEN	1695A	COAX	*	*	235	40	75
BELDEN	1696A	TWINAX	*	-215	240	31	110
BELDEN	1800A	TWINAX	*	-212	184	24	110
BELDEN	1800B	TWINAX	*	-212	180	24	110
BELDEN	1800F	TWINAX	-30	_	216	24	110
BELDEN	1807A	COAX	-5	-004	110	12	75
BELDEN	1808A	COAX	-5	-004	110	12	75
BELDEN	1809A	COAX	-63	-025	234	32	75
BELDEN	1824A	COAX	*	*	200	30	75
BELDEN	1825A	COAX	*	*	200	30	75
BELDEN	1826A	COAX	*	*	200	30	75
BELDEN	1828A	COAX	-41	-020	270	40	75
BELDEN	1829A	COAX	-41	-020	270	40	75
BELDEN	1855A	COAX	*	*	159	22	75
BELDEN	1856A	TRIAX	*	TOO LARGE	363	31	75
BELDEN	1857A	TRIAX	*	TOO LARGE	360	31	75
BELDEN	1858A	TRIAX	*	TOO LARGE	520	64	75
BELDEN	1859A	TRIAX	*	TOO LARGE	420	63	_
BELDEN	1865A	COAX	-22	-09	152	20	75
BELDEN	1880A	TWINAX	*	-212	184	24	_
BELDEN	3072F	TWINAX	*	*	320	46	78
BELDEN	3092A	COAX	-51	*	298	40	75
BELDEN	4-27046-3265	TWINAX	*	_	200	23	_
BELDEN	5339b5	COAX	_	-020	266	40	75
BELDEN	5339Q5	COAX	_	-016	298	40	75
BELDEN	5399B5	COAX	_	-020	270	40	75
BELDEN	5439Q5	COAX	_	*	265	32	75
BELDEN	5539Y5	COAX	_	-022	232	25	93
BELDEN	6139B8	COAX	_	-052	348	64	75
BELDEN	6339Q8	COAX	_	-024	248	40	75
BELDEN	6439C8	COAX	_	*	199	32	75
BELDEN	6439Q8	COAX	_	-023	230	32	75
BELDEN	6539Y8	COAX	_	*	204	25	93
BELDEN	734A1P	COAX	_	*	213	32	75
BELDEN	734D()	COAX	_	-025	_	_	75
BELDEN	734D()T	COAX	_	-025	_	_	75
BELDEN	734D1	COAX	_	-025	235	32	75
BELDEN	735A()	COAX	*	-026	_	_	75
BELDEN	735A()T	COAX	*	-026	_	_	75
BELDEN	735A1	COAX	*	-026	129	16	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BELDEN	7700A	COAX	-5	-004	107	12	75
BELDEN	7710A	COAX	-41	-020	275	40	75
BELDEN	7712A	COAX		*	283	40	75
BELDEN	7713A	COAX	-41	-020	275	40	75
BELDEN	7731A	COAX	-6A	-053	405	64	75
BELDEN	7732A	COAX	*	_	356	64	75
BELDEN	7733A	COAX	*	TOO LARGE	355	108	50
BELDEN	7788A	COAX	-4	-009	159	23	75
BELDEN	7794A	COAX		-023	235	32	75
BELDEN	7805A	COAX	-5	-003	105	18	50
BELDEN	7806A	COAX	-1	-011	195	37	50
BELDEN	7807A	COAX	-1	_	195	44	50
BELDEN	7808A	COAX	*	*	240	56	50
BELDEN	7809A	COAX	*	*	300	70	50
BELDEN	7810A	COAX	*	TOO LARGE	405	108	50
BELDEN	7810R	COAX	*	_	405	108	50
BELDEN	7855A	COAX	_	_	320	51	75
BELDEN	8232A	TRIAX	-13A	TOO LARGE	315	32	75
BELDEN	8233A	TRIAX	-14	_	475	48	75
BELDEN	8241A	COAX	-2	-013	242	25	75
BELDEN	8241B	COAX	-2	-013	242	23	75
BELDEN	8241F	COAX	-2	-013A	242	30	75
BELDEN	8281B	COAX	-6	-016	307	30	75
BELDEN	8281F	COAX	-51	-016	300	33	75
BELDEN	9062A	COAX	-2	-013	242	25	93
BELDEN	9104P	COAX	_	*	203	32	75
BELDEN	9116P	COAX	*	*	235	40	75
BELDEN	9209A	COAX	-2A	-019	220	22	75
BELDEN	9269_	COAX	-2	-013	242	25	93
BELDEN	97300 2802	TWINAX	*	-050	94	12	_
BELDEN	9913F	COAX	*	-050	408	108	50
BELDEN	9931F	COAX	*	_	405	108	50
BELDEN	H 121B	COAX	_	*	196	32	75
BELDEN	M9100	COAX	-2	-014	240	32	_
BELDEN	M9815	TWINAX	-8	_	_	_	_
BELDEN	PD7163	COAX		-004	100	10	75
BELDEN	SS895	COAX	-36	-027	123	16	75
BELDEN	YM23969	COAX	-34	*	244	33	_
BELDEN	YQ10474	TWINAX	-25	_	268	32	_
BELDEN	YQ28763	TWINAX	-55	_	200	_	_
BELDEN	YQ40343	COAX	-5	-004	95	12	75
BELDEN	YQ41416	TRIAX	-10	TOO LARGE	410	63	75
BELDEN	YQ42857	COAX	*	*	199	35	75
BELDEN	YQ44343	COAX	_	-009	142	19	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BELDEN	YR-14910	TWINAX	-29	-202	150	24	78
BELDEN	YR-15161	TWINAX	-29	_	_	_	_
BELDEN	YR16411	TWINAX	-9	_	247	23	_
BELDEN	YR-19218	TWINAX	-29	-203	150	12	124
BELDEN	YR23023	COAX	*	-009	160	20	75
BELDEN	YR23930	COAX	-2	-014	242	32	75
BELDEN	YR27110	COAX	-22	-009	162	21	75
BELDEN	YR27543	TWINAX	-27	*	117	12	_
BELDEN	YR27772	TWINAX	*	_	213	26	_
BELDEN	YR28296	TWINAX	_	-203	162	12	_
BELDEN	YR28314	COAX	*	-009	162	19	75
BELDEN	YR28365	COAX	-2	-013	245	25	100
BELDEN	YR28764	TWINAX	*	*	383	37	_
BELDEN	YR39546	TRIAX	*	*	370	29	75
BELDEN	YR39667	COAX	-22	-009	152	20	75
BELDEN	YR40974	COAX	-36	-007	113	12	75
BELDEN	YR41007	COAX	-63	-025	235	32	75
BELDEN	YR41039	COAX	-22	-009	155	20	75
BELDEN	YR41679	COAX	_	-014	242	32	75
BELDEN	YR-44149	COAX	*	*	140	15	_
BELDEN	YR45056	COAX	*	-026	131	17	75
BELDEN	YR45301	COAX	*	-026	131	17	75
BELDEN	YR46359	COAX	_	-023	235	34	75
BELDEN	YR46400	COAX	-2A	-014	242	33	75
BELDEN	YR46844	COAX	_	-009	155	20	75
BELL LABS	G243630-1	COAX	-4	-008	155	10	_
BELL LABS	G243630-2	COAX	-4	-008	155	10	_
BERKSHIRE	RG174/U DS	COAX	-31	*	125	21	50
BERK-TEK	640070	COAX	*	TOO LARGE	353	64	_
BERK-TEK	BTDC-59D-TT	COAX	-2	_	242	23	_
BERK-TEK	BTDC-59-TT	COAX	-2	-022	_	_	75
BERK-TEK	BTX-0113-100175	TRIAX	-43	_	175	11	_
BERK-TEK	E73133	COAX	*	-011	185	37	_
BERT-TEK	640019	COAX	-50	TOO LARGE	375	86	50
BICC	2003	COAX	*	-018	260	23	75
BLACKBOX	ETN59A	COAX	-2	-013	242	25	75
BOEING	380-10045	TRIAX	-60	-305	189	12	_
BOEING	443-50120-1	TRIAX	*	_	187	13	75
BOEING	5720-3280-002	TWINAX	_	-201	113	24	_
BOEING	D3-7619-9/1144	TRIAX	*	_	_	_	_
BOEING	S280W502	TWINAX	-64	-204	140	24	_
BOEING	STD0098-16-2SJ	TWINAX	*	TOO LARGE	188	54	_
BOSCH	SCC3902002-20B	TWINAX	_	-204	138	27	75
BRAND REX	H816	TWINAX	*	TOO LARGE	360	40	_

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
BRAND REX	T-12824	TRIAX	*	TOO LARGE	480	50	75
BRAND REX	T-13138	TRIAX	*	TOO LARGE	461	84	_
BRAND REX	T-13913	TWINAX	*	_	240	39	_
BRAND REX	T-14384	TWINAX	*	TOO LARGE	_	_	_
BRAND REX	T-14670	TWINAX	*	-215	237	30	_
BRAND REX	T-14922	TRIAX	*	_	230	29	_
BRAND REX	T-15075	TWINAX	*	TOO LARGE	370	40	_
BRAND REX	T18-11222-24-2/G-0	TWINAX	-27	-223	112	23	_
BRAND-REX	A-779	COAX	-5	-004	90	10	_
BRAND-REX	B-749	COAX	-44	105-1940 (220)	80	12	_
BRAND-REX	G719	TWINAX	*	_	225	31	_
BRAND-REX	LS2SWU-1(M24643/33-01UN)	TWINAX	*	_	255	50	75
BRAND-REX	M17/183-00001	COAX	-1	-011	195	35	50
BRAND-REX	T- 378	COAX	-6	-016	312	31	_
BRAND-REX	T-10970	TWINAX	_	_	154	25	77
BRAND-REX	T10971	TWINAX	*	_	155	25	_
BRAND-REX	T-10971	TWINAX	-24	-221	161	24	_
BRAND-REX	T-13294	TWINAX	*	TOO LARGE	285	40	_
BRAND-REX	T-13295	TRIAX	*	_	291	38	_
BRAND-REX	T-14018	TRIAX	-25A	_	250	30	_
BRAND-REX	T-2948	TRIAX	-26	_	165	12	_
BRAND-REX	T-385	COAX	-44	*	80	12	_
BRENDGEN	GX02273D	COAX	*	-027	130	9	75
BRITISH STANDARDS	BS 2316	TRIAX	-13A	TOO LARGE	335	24	72
BRITISH TELECOM	BT2001	COAX	*	*	181	24	75
BRITISH TELECOM	BT3002	COAX	*	*	145	12	75
BRITISH TELECOM	BT2003	COAX	*	-018	260	23	75
BRYANT BROADCAST	BDS01	COAX	-21	*	177	24	75
C&M WIRE AND CABLE	13637	COAX	-1	-021	199	36	50
C&M WIRE AND CABLE	P-14983	COAX	-5	-004	113	16	50
CALMONT	4141	TWINAX	-24	-211	168	12	_
CANARE	5C2VS	COAX	-6	-016	292	31	_
CANARE	L-3C2VS	COAX	-3	-019	217	21	75
CANARE	L-3CFB	COAX	-3	-022	217	26	75
CANARE	L-4CFB	COAX	-2	-014	240	32	75
CANARE	L-5CFB	COAX	-6	*	303	41	75
CANARE	L-7CFB	COAX	-6A	_	402	59	75
CANARE	LV-61S	COAX	-2	-013	240	24	75
CANARE	LV-77S	COAX	-6	-016	303	31	75
CANARE	V3-1.5C	COAX	-5	-004	102	11	75
CANARE	V3-3C	COAX	-21	*	173	21	75
CANARE	V3-3CFB	COAX	-21	*	173	26	75
CANARE	V3-4CFB	COAX	*	*	197	31	75
CANARE	V3-5C	COAX	-52	*	237	31	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
CANARE	V3-5CFB	COAX	_	-024	256	41	75
CANARE	V4-1.5C	COAX	-5	-004	102	11	75
CANARE	V4-3C	COAX	-21	*	173	21	75
CANARE	V4-3CFB	COAX	-21	*	173	26	75
CANARE	V4-4CFB	COAX	*	*	197	31	75
CANARE	V4-5C	COAX	-52	*	237	31	75
CANARE	V4-5CFB	COAX	_	-024	256	41	75
CANARE	V5-1.5C	COAX	-5	-004	102	11	75
CANARE	V5-3C	COAX	-21	*	173	21	75
CANARE	V5-3CFB	COAX	-21	*	173	26	75
CANARE	V5-4CFB	COAX	*	*	197	31	75
CANARE	V5-5C	COAX	-52	*	237	31	75
CANARE	V5-5CFB	COAX	_	-024	256	41	75
CANFORD	36-332 VCM RED	COAX	_	*	145	20	75
CANFORD	PSF 1/3	COAX	-2B	-015	250	24	75
CANFORD VIDEO	BBC PSF1/2M	COAX	_	-016	295	32	75
CANFORD VIDEO	BBC PSF1/3M	COAX	-2B	-015	252	24	75
CAROL	C5770	COAX	-2	-022	238	26	_
CAROL	C5779	COAX	*	-011	190	40	50
CAROL	C8000	TWINAX	-8	_	326	36	_
CASCO	2C227NPCSN	TWINAX	-45	_	_	_	_
CCI	2592A	COAX	-2	-013	242	25	73
CDT	CT100	COAX	-34	-024	253	39	75
CDT	CT100(RBS)	COAX	-6E	*	315	39	75
CHAMPLAIN	11-02789	TWINAX	*	-221	160	30	_
CHAMPLAIN	51-04496	TWINAX	-47	_	_	_	_
CHAMPLAIN	81-00440	TWINAX	-27	*	118	19	_
CHAMPLAIN	81-00544	120	*		136	21	TWINAX
CHAMPLAIN	NDBC-TFE-22-2SJ-75	TWINAX	-45	*	160	31	75
CHRYSLER TECHNOLOGIES	JW000043	TWINAX	_	*	168	25	77
CLARK	CV7559	COAX	-2	-014	242	32	75
CLARK WIRE	RG6-SD	COAX	-41	-020	275	41	75
CLARK WIRE & CABLE	CV752-PLEN	COAX	*	*	278	32	_
CLARK WIRE & CABLE	CV75SM	COAX	*	-009	157	18	_
CLARK WIRE & CABLE	TV559	TRIAX	*	_	360	30	75
CLARK WIRE & CABLE	TV7559	TRIAX	*	*	360	31	_
CLARK WIRE & CABLE	CV7559	COAX	_	-014	242	32	75
COAXCO	1102	TRIAX	*	_	145	19	_
COAXCO	1258	COAX	-44	*	84	13	_
COAXCO	0592-18	TRIAX	-23	*	138	21	_
COAXCO	33-1010-00-02	TRIAX	-23	*	144	24	75
COAXCO	33-1102-00-02	TRIAX	-23	_	142	21	_
COAXCO	33-1102-00-99	TRIAX	-23	*	144	21	_
COLEMAN	99901	COAX	_	-051	348	64	75

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
COLEMAN	821003	COAX	_	-051	348	64	75
COLEMAN	821005	COAX	_	-051	348	64	75
COLEMAN	921019	COAX	_	-020	268	40	75
COLEMAN	988423	COAX	-3	-012	212	35	50
COLEMAN CABLE	92005	COAX	-2	-013	242	25	75
COLEMAN/CCI	92004-XX-08	COAX	-2	-013	240	25	75
COLEMAN	99969	COAX	*	*	200	32	75
COMM/SCOPE	5905	COAX	-6A	-051	405	48	75
COMMSCOPE	85	COAX	_	_	362	106	50
COMMSCOPE	216	COAX	_	_	362	106	50
COMMSCOPE	222	COAX	-4	-009	155	24	75
COMMSCOPE	232	COAX	-4	-009	155	24	75
COMMSCOPE	242	COAX	-6A		415	64	75
COMMSCOPE	322	COAX	*	-009	160	20	_
COMMSCOPE	332	COAX	-4	-009	155	24	75
COMMSCOPE	355	COAX	_	_	382	64	75
COMMSCOPE	356	COAX	-6A	_	415	64	75
COMMSCOPE	357	COAX		-024	260	40	75
COMMSCOPE	358	COAX	-41	-020	280	40	75
COMMSCOPE	401	COAX	-22	-009	155	20	75
COMMSCOPE	2035	COAX	*	-026	127	16	75
COMMSCOPE	2446	TWINAX	*	TOO LARGE	435	51	_
COMMSCOPE	3104	COAX	-1	-011	188	37	50
COMMSCOPE	3130	COAX	-1	-021	201	32	50
COMMSCOPE	3135	COAX	-1	-021	199	35	50
COMMSCOPE	3136	COAX	-1	-011	199	37	50
COMMSCOPE	3139	COAX	-1	-021	202	31	50
COMMSCOPE	3140	COAX	-1	-021	195	33	50
COMMSCOPE	3141	COAX	-41	-020	272	40	75
COMMSCOPE	3222	COAX	*	TOO LARGE	412	106	50
COMMSCOPE	3226	COAX	*	TOO LARGE	412	106	50
COMMSCOPE	3227	COAX	*	_	412	106	50
COMMSCOPE	3228	COAX	*	_	412	106	50
COMMSCOPE	3229	COAX	*	_	412	106	50
COMMSCOPE	3246	COAX	-6B	_	418	86	50
COMMSCOPE	3247	COAX	-6B	_	418	86	50
COMMSCOPE	3249	COAX	-6B	_	413	86	50
COMMSCOPE	3250	COAX	-48	TOO LARGE	413	86	50
COMMSCOPE	5060	COAX	-6	*	308	40	75
COMMSCOPE	5061	COAX	-41	*	264	40	75
COMMSCOPE	5065	COAX	_	-009	160	20	92
COMMSCOPE	5535	COAX	*	-026	128	17	75
COMMSCOPE	5540	COAX	*	*	269	32	75
COMMSCOPE	5550	COAX	-2	-013	242	25	75

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
COMMSCOPE	5551	COAX	-2	-015	250	25	75
COMMSCOPE	5553	COAX	-2	-014	250	32	75
COMMSCOPE	5554	COAX	-2	-014	250	32	75
COMMSCOPE	5555	COAX	-2	-015	250	25	80
COMMSCOPE	5559	COAX	-2	-013	242	25	75
COMMSCOPE	5560	COAX	-2	-015	250	25	73
COMMSCOPE	5563	COAX	-2	-013	250	23	75
COMMSCOPE	5565	COAX	-2	-014	242	32	75
COMMSCOPE	5567	COAX	-2	-014	250	32	75
COMMSCOPE	5569	COAX	-2	-014	250	32	75
COMMSCOPE	5571	COAX	-2	-014	248	32	75
COMMSCOPE	5572	COAX	-2	-014	248	32	75
COMMSCOPE	5573	COAX	-2	-014	246	32	75
COMMSCOPE	5574	COAX	-2	-014	248	32	75
COMMSCOPE	5575	COAX	-2	-014	246	32	75
COMMSCOPE	5585	COAX	-2	-014	242	32	75
COMMSCOPE	5586	COAX	-2	-014	247	32	75
COMMSCOPE	5589	COAX	-2A	-022	235	25	75
COMMSCOPE	5700	COAX	-41	-020	280	40	75
COMMSCOPE	5701	COAX	-41	-020	280	40	75
COMMSCOPE	5702	COAX	-41	-020	280	40	75
COMMSCOPE	5713	COAX	*	*	290	40	75
COMMSCOPE	5714	COAX	-41	-020	280	40	75
COMMSCOPE	5715	COAX	-41	-020	280	40	75
COMMSCOPE	5720	COAX	-41	-020	280	40	75
COMMSCOPE	5721	COAX	-41	-020	272	40	75
COMMSCOPE	5723	COAX	-41	-020	272	40	75
COMMSCOPE	5725	COAX	-41	-020	276	40	75
COMMSCOPE	5727	COAX	-41	-020	280	40	75
COMMSCOPE	5728	COAX	-41	-020	280	40	75
COMMSCOPE	5729	COAX	-41	-020	280	40	75
COMMSCOPE	5730	COAX	-41	-020	280	40	75
COMMSCOPE	5731	COAX	-41	-020	272	40	75
COMMSCOPE	5737	COAX	-41	-020	280	40	75
COMMSCOPE	5738	COAX	-41	-020	272	40	75
COMMSCOPE	5740	COAX	-6	*	308	40	75
COMMSCOPE	5742	COAX	-6	*	308	40	75
COMMSCOPE	5750	COAX	-6	*	308	40	75
COMMSCOPE	5765	COAX	-41	-020	280	40	75
COMMSCOPE	5781	COAX	-6	*	306	40	75
COMMSCOPE	5782	COAX	-6	*	308	40	75
COMMSCOPE	5786	COAX	-41	-020	280	40	75
COMMSCOPE	5787	COAX	-41	-020	272	40	75
COMMSCOPE	5788	COAX	-41	-020	280	40	75

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
COMMSCOPE	5789	COAX	-41	-020	272	40	75
COMMSCOPE	5790	COAX	-41	-020	272	40	75
COMMSCOPE	5901	COAX	-6A	-053	405	64	75
COMMSCOPE	5902	COAX	-6A	_	415	64	75
COMMSCOPE	5903	COAX	-6A	-053	405	64	75
COMMSCOPE	5904	COAX	-6A	-053	405	64	75
COMMSCOPE	5906	COAX	-6A	-053	405	64	75
COMMSCOPE	5908	COAX	-6A	-051	405	48	75
COMMSCOPE	5909	COAX	-6A	-051	405	48	75
COMMSCOPE	5910	COAX	-6A	-052	395	64	75
COMMSCOPE	5912	COAX	-6A	-052	395	64	75
COMMSCOPE	5913	COAX	-6A	-053	405	64	75
COMMSCOPE	5914	COAX	-6A	-053	405	64	75
COMMSCOPE	5914	COAX	-6A	_	415	64	75
COMMSCOPE	5915	COAX	-6A	-053	405	64	75
COMMSCOPE	5916	COAX	-6A	-053	405	64	75
COMMSCOPE	5917	COAX	-6A	-053	405	64	75
COMMSCOPE	5918	COAX	-6A	_	412	64	75
COMMSCOPE	5920	COAX	-6A	-053	405	64	75
COMMSCOPE	5920	COAX	-6A	_	415	64	75
COMMSCOPE	5940	COAX	-6A	-053	405	64	75
COMMSCOPE	5950	COAX	-6A	-053	415	64	75
COMMSCOPE	5950	COAX	-6A	-053	405	64	75
COMMSCOPE	5951	COAX	-6A	_	405	64	75
COMMSCOPE	5952	COAX	-6A	_	415	64	75
COMMSCOPE	5953	COAX	-6A	_	415	64	75
COMMSCOPE	6200	COAX	-2	-015	242	25	92
COMMSCOPE	6201	COAX	-2	-013	242	25	93
COMMSCOPE	6205	COAX	*	-018	260	25	93
COMMSCOPE	6605	COAX	*	-018	267	25	93
COMMSCOPE	6608	COAX	-2	-015A	249	25	93
COMMSCOPE	6609	COAX	-2	-015A	249	25	93
COMMSCOPE	6611	COAX	-2	-015A	242	25	93
COMMSCOPE	6612	COAX	-2	-015A	242	25	93
COMMSCOPE	6615	COAX	-2	-015A	249	25	93
COMMSCOPE	7500	COAX	-6	-016	304	32	75
COMMSCOPE	7501	COAX	-6	-016	304	32	75
COMMSCOPE	7503	COAX	-6	-016	304	32	75
COMMSCOPE	7505	COAX	-6	-016	305	32	75
COMMSCOPE	7506	COAX	-6	-016	304	33	75
COMMSCOPE	7510	COAX	-6	-016	304	31	75
COMMSCOPE	7530	COAX	_	-054	318	51	75
COMMSCOPE	7536	COAX	-4	-009	150	23	75
COMMSCOPE	7537	COAX	-4	-009	154	23	75

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
COMMSCOPE	7538	COAX	-37	-009	159	22	75
COMMSCOPE	7551	COAX	-41	-020	272	40	75
COMMSCOPE	7573	COAX	-2A	-022	220	27	75
COMMSCOPE	7713	COAX	*	TOO LARGE	405	96	50
COMMSCOPE	7713	COAX	-6A	_	413	86	50
COMMSCOPE	7714	COAX	-6B	TOO LARGE	425	89	75
COMMSCOPE	7714	COAX	-6B	_	432	88	50
COMMSCOPE	7715	COAX	-6B	_	432	88	50
COMMSCOPE	7723	COAX	-3	-012	212	36	50
COMMSCOPE	7725	COAX	*	-023	220	36	50
COMMSCOPE	7726	COAX	-3	-012	220	36	50
COMMSCOPE	7810	TRIAX	*	TOO LARGE	325	32	75
COMMSCOPE	7811	TRIAX	_	_	360	32	75
COMMSCOPE	7815	TRIAX	_	_	480	_	50
COMMSCOPE	7820	TRIAX	_	_	475	64	75
COMMSCOPE	7825	TRIAX	_	_	520	71	75
COMMSCOPE	7826	TRIAX	*	TOO LARGE	519	68	_
COMMSCOPE	7901	TWINAX	*	TOO LARGE	334	38	100
COMMSCOPE	9012	TWINAX	-9	_	241	37	78
COMMSCOPE	57603	COAX	-41	-020	272	40	75
COMMSCOPE	57604	COAX	-41	-020	272	40	75
COMMSCOPE	57605	COAX	-41	-020	272	40	75
COMMSCOPE	72001	COAX	-22	-009	155	20	75
COMMSCOPE	72012	COAX	-22	-009	155	20	75
COMMSCOPE	72312	COAX	*	-026	127	16	75
COMMSCOPE	73501	COAX	*	-026	130	16	75
COMMSCOPE	73502	COAX	*	-026	130	16	75
COMMSCOPE	73503	COAX	*	-026	130	16	75
COMMSCOPE	73506	COAX	*	-026	127	16	75
COMMSCOPE	73508	COAX	*	-026	127	16	75
COMMSCOPE	73509	COAX	*	-026	127	16	75
COMMSCOPE	73512	COAX	*	-026	126	15	75
COMMSCOPE	75603	COAX	_	-009	150	22	75
COMMSCOPE	75604	COAX	_	-009	150	22	75
COMMSCOPE	556510	COAX	-2	-014	242	32	75
COMMSCOPE	576503	COAX	-41	-020	272	40	75
COMMSCOPE	576504	COAX	-41	-020	272	40	75
COMMSCOPE	576505	COAX	-41	-020	272	40	75
COMMSCOPE	753603	COAX	-4	-009	150	22	75
COMMSCOPE	753604	COAX	-4	-009	150	22	75
COMMSCOPE	753605	COAX	-4	-009	150	22	75
COMMSCOPE	0132K	COAX	*	-024	242	40	75
COMMSCOPE	0132V	COAX	*	-024	242	40	75
COMMSCOPE	0219K	COAX	-1	-012	200	36	50

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
COMMSCOPE	0243K	COAX	_	_	277	64	75
COMMSCOPE	0247K	COAX	-41	-020	268	40	75
COMMSCOPE	0247V	COAX	-41	-020	268	40	75
COMMSCOPE	0359K	COAX	*	-024	241	41	75
COMMSCOPE	0359K	COAX	*	-024	241	41	75
COMMSCOPE	2020K	COAX	*	*	209	32	75
COMMSCOPE	2020V	COAX	*	*	209	32	75
COMMSCOPE	2022K	COAX	-2	-023	239	32	75
COMMSCOPE	2022V	COAX	-2	-23	239	32	75
COMMSCOPE	2037V	COAX	*	*	199	32	75
COMMSCOPE	2039K	COAX	*	*	199	32	75
COMMSCOPE	2039V	COAX	*	*	199	32	75
COMMSCOPE	2040K	COAX	*	*	197	25	75
COMMSCOPE	2040V	COAX	*	*	197	25	75
COMMSCOPE	2041K	COAX	*	*	205	23	75
COMMSCOPE	2045K	COAX	*	*	209	32	75
COMMSCOPE	2045V	COAX	*	*	209	32	75
COMMSCOPE	2054K	COAX	_	*	161	32	75
COMMSCOPE	2065V	COAX	*	*	199	32	75
COMMSCOPE	2068K	COAX	-63	-025	219	32	_
COMMSCOPE	2096K	COAX	*	*	205	32	75
COMMSCOPE	2100K	COAX	-21	*	169	32	50
COMMSCOPE	2100V	COAX	-21	*	169	32	53
COMMSCOPE	2104K	COAX	*	*	166	37	50
COMMSCOPE	2104V	COAX	*	*	166	37	50
COMMSCOPE	2125K	COAX	-1	-012	200	36	50
COMMSCOPE	2227K	COAX	-41	-020	264	40	75
COMMSCOPE	2227V	COAX	-41	*	264	40	75
COMMSCOPE	2229V	COAX	-41	-020	268	40	75
COMMSCOPE	2249K	COAX	*	*	204	25	93
COMMSCOPE	2249V	COAX	*	*	206	25	93
COMMSCOPE	2250K	COAX	*	*	214	25	93
COMMSCOPE	2250V	COAX	*	*	214	25	93
COMMSCOPE	2251K	COAX	*	*	207	25	93
COMMSCOPE	2274V	COAX	*	-024	241	40	75
COMMSCOPE	2275K	COAX	*	-024	241	40	75
COMMSCOPE	2275V	COAX	*	-024	241	40	75
COMMSCOPE	2276V	COAX	*	-024	241	40	75
COMMSCOPE	2277K	COAX	*	*	233	40	75
COMMSCOPE	2277V	COAX	*	*	233	40	75
COMMSCOPE	2278K	COAX	*	-024	242	40	75
COMMSCOPE	2279K	COAX	*	*	237	40	75
COMMSCOPE	2279V	COAX	*	*	237	40	75
COMMSCOPE	2281K	COAX	*	TOO LARGE	347	89	50

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
COMMSCOPE	2282K	COAX	_	_	359	64	75
COMMSCOPE	2285K	COAX	*	TOO LARGE	359	64	75
COMMSCOPE	2286K	COAX	_	_	353	64	75
COMMSCOPE	2287K	COAX	*	TOO LARGE	380	64	75
COMMSCOPE	2288K	COAX	_	_	378	64	75
COMMSCOPE	2291K	TWINAX	-25	_	260	39	100
COMMSCOPE	2312K	COAX	_	_	534	109	75
COMMSCOPE	2426K	COAX	_	_	355	106	50
COMMSCOPE	2427K	COAX	_	_	362	106	50
COMMSCOPE	2525K	COAX	*	-016	290	31	75
COMMSCOPE	2527K	COAX	-41	*	279	32	75
COMMSCOPE	4022(K)	TWINAX	*	_	219	38	78
COMMSCOPE	425-0256	COAX	_	-025	240	33	75
COMMSCOPE	5060F	COAX	-6	*	308	40	75
COMMSCOPE	5060R	COAX	-6	*	308	40	75
COMMSCOPE	5550M	COAX	-2	-013A	242	30	75
COMMSCOPE	5568M	COAX	*	-025	240	33	_
COMMSCOPE	5726R	COAX	-41	-020	276	41	75
COMMSCOPE	5740F	COAX	-6	*	308	38	75
COMMSCOPE	5740H1	COAX	-6	*	308	40	75
COMMSCOPE	5740R	COAX	-6	*	308	40	75
COMMSCOPE	5913R	COAX	-6A	_	415	64	75
COMMSCOPE	5916R	COAX	-6A	TOO LARGE	415	64	75
COMMSCOPE	720T1	COAX	-22	-009	155	20	75
COMMSCOPE	720T2	COAX	-22	-009	155	20	75
COMMSCOPE	734C()	COAX	-63	-025	236	32	75
COMMSCOPE	734C1H	COAX	-63	-025	236	32	75
COMMSCOPE	734C1P	COAX	-63	*	219	32	75
COMMSCOPE	734S( )	COAX	-63	-025	236	32	75
COMMSCOPE	734S1H	COAX	-63	-025	236	32	75
COMMSCOPE	734ST	COAX	-63	-025	236	32	75
COMMSCOPE	734STH	COAX	-63	-025	236	32	75
COMMSCOPE	735(#)	COAX	*	-026	130	16	75
COMMSCOPE	735()H	COAX	*	-026	129	16	75
COMMSCOPE	735()P	COAX	*	-026	127	16	75
COMMSCOPE	73501B	COAX	_	-026	137	16	75
COMMSCOPE	73501H	COAX	*	-026	127	16	75
COMMSCOPE	73501S	COAX	_	*	137	16	75
COMMSCOPE	73502H	COAX	*	-026	127	16	75
COMMSCOPE	735T()H	COAX	*	-026	129	16	75
COMMSCOPE	735T2	COAX	*	-026	126	16	75
COMMSCOPE	F1160BV	COAX	-6A	*	395	64	75
COMMSCOPE	F1160BVV	COAX	-6A	*	395	64	75
COMMSCOPE	F11SSEF	COAX	-6A	_	405	64	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
COMMSCOPE	F11SSVV	COAX	-6A	TOO LARGE	395	64	_
COMMSCOPE	F59 HEC T/CU	COAX	*	*	270	32	75
COMMSCOPE	F59 HEC/3-22	COAX	*	*	265	32	75
COMMSCOPE	F59 HEC-2	COAX	*	*	265	32	75
COMMSCOPE	F5967BVM	COAX	-2	-014	240	32	75
COMMSCOPE	F5967BVV	COAX	-2	-014	240	32	75
COMMSCOPE	F59SSEF	COAX	*	*	265	32	75
COMMSCOPE	F59SSV	COAX	*	*	272	33	75
COMMSCOPE	F660BVV	COAX	-41	-020	272	40	75
COMMSCOPE	F6SSEF	COAX	-6	*	300	40	75
COMMSCOPE	F6SSVM-APDI-22-APD	COAX	_	-020	281	40	75
COMMSCOPE	F6SSVR	COAX	*	*	300	40	75
COMMSCOPE	F6SSVV	COAX	*	*	300	40	75
COMMSCOPE	F6SSVX	COAX	*	*	298	40	75
COMMSCOPE	HEC/3-22	COAX	*	*	265	32	75
COMMSCOPE	HEC-2	COAX	*	*	265	32	75
COMMSCOPE	OP73801DB	COAX	-6	*	290	40	75
COMMSCOPE	S59 HEC	COAX	*	*	269	23	75
COMMSCOPE	VDM230	COAX	_	-009	171	23	75
COMMSCOPE	WBC-240(R)	COAX	*	*	240	56	50
COMMSCOPE	WBC-300(R)	COAX	-6	*	70	70	50
COMMSCOPE NETWORK CABLE	73608 8/30 AWG	COAX	*	*	112	12	75
COMMSCOPE	5726	COAX	-41	-020	272	40	74
COMPOSITE VIDEO	VA-2/2	COAX	_	-009	_	_	75
COMPREHENSIVE VIDEO	CVC-59STXF	COAX	-2	-023	236	31	75
CONDUMEX	77827876	COAX	*	*	183	21	_
CONDUMEX	801289	COAX	_	*	304	40	75
CONSOLIDATED	4459	COAX	-5	-003	105	19	50
CONSOLIDATED	4462	TRIAX	*	_	485	91	50
CONTEL	1429425182	TWINAX	*	_	194	25	_
COONER WIRE	AS 450-3075SR	COAX	-36	_	97	12	75
COONER WIRE	AS450-3000SR	COAX	-44	*	70	12	_
COONER WIRE	AS471	COAX	-5A	_	65	12	_
COONER WIRE	CW2040-2675 SR	COAX	_	-026	136	19	75
CPI	33-1102-00-02	TRIAX	_	*	145	23	40
CUSHCRAFT	90262	COAX	-1	-011	195	39	50
DABURN	D-43M	TWINAX	-25	_	265	19	_
DEARBORN	2498	TWINAX	-8	TOO LARGE	333	37	100
DEC	FEP 17-01246-01/02/03	COAX	-3	-011	_	_	_
DEC	FEP17-0246-01/02	COAX	-3	-011	_	_	_
DEC	FEP17-0248-01/02	COAX	-3	-011	_	_	_
DELCO	1354	COAX	-51	-016	303	33	75
DELCO	91783	COAX	-21	-021	194	36	50
DELCO	389636	COAX	*	-016	309	31	75

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
DELCO	396121	coax	_	-009	161	24	75
DELCO	396121	COAX	-4	-009	161	19	75
DELCO	396191	COAX	_	-009	161	24	75
DOD	DOD-DNA-RF-21	TWINAX	*	_	260	22	_
DRAKA	0.6/3.7	COAX	_	-022	237	24	75
DRAKA	IMAGE720	COAX	_	-019	232	31	75
DRAKA USA	7341101	CAOX	*	*	298	40	75
DRAKA USA	7341102	COAX	*	*	298	40	75
DRAKA-HELEX	32448A	COAX	_	-030	_	_	75
DRAKE	IMAGE1000	COAX	_	-020	268	39	75
DYTRAN	6425A03	COAX	-1	-011	193	37	50
ECS	322001	TRIAX	_	-306	240	37	50
ECS	322401	TRIAX	_	*	255	25	75
ECS	352001	COAX	-21	*	162	42	50
ECS	392402	TWINAX	-24	*	162	24	100
ECS	632101	TRIAX	-43	_	169	34	_
ECS	3C178TX-C	TRIAX	*	_	125	13	50
ELECTRONIC CABLE	412301-75	COAX	_	-009	150	23	75
EMTEQ	D12502-200	TWINAX	-33	-224	205	26	_
EMTEQ	PFLX200-100	COAX	-3	-012	205	39	50
EMTEQ	TFLX130-100	COAX	_	_	130	30	50
ENDEVCO	3090C	COAX	-5B	-001	90	12	50
ENDEVCO	PS6960	TWINAX	*	_	190	37	_
ERICSSON	1301-TZC 751 08	TRIAX	*	-305	177	12	_
ERICSSON	1301-TZE 101 09	COAX	_	*	140	13	75
ERICSSON	TZC 750 24	COAX	-22	*	143	12	75
ERICSSON	TZC 751 08	TRIAX	*	-305	179	12	_
ESA/SCC	3902/002 VARIANT 20	TWINAX	_	-204	149	26	75
ESA/SCC	3902/002-06	COAX	*	-006	114	19	75
ESSEX	1000	COAX	-6A	_	405	85	_
ESSEX	21-004	COAX	-6A	_	405	85	_
ESSEX	21-025	COAX	-2	_	242	25	_
ESSEX	21-204	TRIAX	-42	_	285	36	_
ESSEX	21-529	TRIAX	-14	_	460	49	_
ESSEX	21-537	COAX	-1	-011	195	36	_
ESSEX	21-541	COAX	-2	-013	242	25	_
ESSEX	21-583	TRIAX	-15	TOO LARGE	490	85	53
ESSEX	21-597	COAX	-22	-009	150	17	_
ESSEX	21-780	COAX	-6B	_	420	87	_
ESSEX	21-795	COAX	-2	_	242	23	_
ESSEX	421-098	COAX	-22	-008	145	12	_
ESSEX	421-111	COAX	-22	-008	155	12	_
ESSEX	421-176	COAX	-1	_	195	39	_
ESSEX	621-100	COAX	-6A	_	405	64	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
ESSEX	621-106	TRIAX	-7	_	242	25	_
ESSEX	621-243	COAX	-41	_	270	40	_
ESSEX	621-284	COAX	-41	_	270	40	_
ESSEX	621-715	COAX	-1	*	195	25	_
EUROCABLE	LKRX75S2D4	COAX	-22	-009	157	20	75
EXTRON	22-021-01	COAX	-5	-003	_	_	_
EXTRON	22-032-02/-03	COAX	*	*	107	16	75
EZ FORM CABLE CORP	EZ FLEX 402	COAX	-21	*	163	36	50
FARINON	003-R003	COAX	-37	-009	162	20	75
FILECA	F2703-51	TWINAX	_	-217	_	_	_
FILECA	F27-09/9	TWINAX	*	_	176	31	_
FILOTEX	11820	TRIAX	*	_	283	37	50
FILOTEX	63247	TWINAX	_	-212	179	25	_
FILOTEX	96770	TWINAX	-47	_	142	24	_
FILOTEX	374693	COAX	-22	-009	149	20	_
FILOTEX	ET39110ED2	TRIAX	-15	TOO LARGE	490	64	_
FILOTEX	L910/39	COAX	-22	-009	155	20	_
FILOTEX	L910-42	COAX	-22	-009	155	20	_
FILOTEX	SP 68150	TWINAX	_	*	180	27	125
FILOTEX	SP714	TRIAX	-23	_	138	12	75
FLEXTRONICS	2001	COAX	-22	*	143	13	75
FLEXTRONICS	2003	COAX	*	-018	270	24	75
FOKKER SPACE	DK75-2-22	COAX	*	-026	130	17	75
FOKKER SPACE	KBCO-75	TWINAX	-29	-217	149	24	_
FUJIKURA	1990	COAX	-5B	*	102	12	50
FUJIKURA	3C-2V	COAX	*	-019	225	20	75
FUJIKURA	3C-2W	COAX	_	_	261	20	_
FUJIKURA	5C-2V	COAX	-6	-016	301	31	_
FURUNO	RW-6895-0	COAX	-22	*	143	14	75
GENERAL	C1156	COAX	-5	-003	100	19	50
GENERAL	T-43	TWINAX	-10	_	420	40	_
GENERAL	T-43M	TWINAX	-25	_	265	19	_
GENERAL	V1-AL	TWINAX	-12	_	460	51	_
GENERAL	V1-DSAL	QUADRAX	28	_	530	50	_
GENERAL CABLE	1891Q-222-32	COAX	*	*	194	32	_
GENERAL CABLE	C3500	COAX	*	*	200	23	75
GENERAL CABLE	C3519	COAX	-21	*	161	36	50
GENERAL CABLE	C3521	COAX	*	*	235	40	75
GENERAL CABLE	C5844	COAX	_	-014	242	32	75
GENERAL CABLE	E86009	COAX	*	*	200	32	75
GENERAL CABLE	LL79301	COAX	*	*	200	32	75
GENERAL DYNAMICS	C10989-1	TWINAX	_	_	_	_	120
GENERAL DYNAMICS	C8898	TRIAX	-24A	-309	153	13	95
GENERAL WIRE	82K03878/9A	COAX	-21	-011	173	38	50

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
GENERAL WIRE	C5025	COAX	-6A	-053	405	64	75
GENERAL WIRE PRODUCTS	001-16416	TWINAX	-12	TOO LARGE	444	35	_
GENERAL WIRE PRODUCTS	001-21287	TWINAX	*	TOO LARGE	256	24	_
GENERAL CABLE	4162A	TWINAX	*	_	210	25	_
GEPCO	7174	COAX	-5	-003	101	19	50
GEPCO	7537	COAX	-4	-009	160	23	75
GEPCO	7538	COAX	-37	-009	159	23	75
GEPCO	7826	TRIAX	*	TOO LARGE	512	68	_
GEPCO	7913	COAX	_	_	405	64	75
GEPCO	7915	COAX	_	_	405	64	75
GEPCO	2279K	COAX	*	*	237	40	75
GEPCO	2279V	COAX	*	*	237	40	75
GEPCO	2297V	COAX	*	*	237	40	75
GEPCO	LVT61811	TRIAX	-15	TOO LARGE	516	68	75
GEPCO	LVT61859	TRIAX	*	TOO LARGE	357	31	75
GEPCO	RGB6000	COAX	-6	-016	304	32	75
GEPCO	RGB809	COAX	-22	-009	150	21	75
GEPCO	RGBS809	COAX	-22	-009	150	21	75
GEPCO	RGBSC809	COAX	-22	-009	150	21	75
GEPCO	V61859M	COAX	-2	_	242	30	75
GEPCO	V618J59	COAX	-2	-013	242	23	75
GEPCO	V618M59	COAX	-2	-013	242	23	75
GEPCO	V618M59TK	COAX	*	*	200	23	75
GEPCO	VDFM809	COAX	-22	-009	150	21	75
GEPCO	VE61859	COAX	-2	-013A	242	30	75
GEPCO	VE61859M	COAX	-2	-013A	242	30	75
GEPCO	VFM809	COAX	-22	-009	150	22	75
GEPCO	VP6000	COAX	-6	-016	304	32	75
GEPCO	VP618PE/AP	COAX	-6	-016	304	32	75
GEPCO	VP618PE01	COAX	-6	-016	304	31	75
GEPCO	VP618PVC	COAX	-6	-016	304	32	75
GEPCO	VP618TK	COAX	-41	*	276	32	75
GEPCO	VPM1000	COAX	-2	-013	242	23	75
GEPCO	VPM2000	COAX	-2	-014	242	32	75
GEPCO	VPM2000TK	COAX	*	*	200	32	75
GEPCO	VPM2000TS	COAX	*	*	199	32	75
GEPCO	VPM618	COAX	-2A	-022	220	27	75
GEPCO	VS102000	COAX	-2	-014	243	32	75
GEPCO	VSD20001TS	COAX	_	_	237	45	75
GEPCO	VSD2001	COAX	-41	-020	273	40	75
GEPCO	VSM618	COAX	-22	-009	150	17	75
GEPCO	VT61811	TRIAX	-14	TOO LARGE	474	65	75
GEPCO	VT61859	TRIAX	*	TOO LARGE	360	34	75
GORE	03352/CX	TRIAX	_	-303	150	12	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
GORE	C06C032	COAX	-5A	-001	75	19	_
GORE	CXA-8220	TRIAX	-60	-305	187	25	_
GORE	CXN-1267C	COAX	*	_	135	24	75
GORE	CXN-1352B	COAX	-44	*	78	16	_
GORE	CXN-1362	COAX	-36	_	101	31	_
GORE	CXN-1384	COAX	*	_	_	_	_
GORE	CXN-1388	COAX	-5	-003	110	20	_
GORE	CXN-1417A	COAX	*	*	107	20	_
GORE	CXN-1456	COAX	-44	_	74	19	_
GORE	CXN-1722	COAX	-86	*	86	12	_
GORE	CXN-1839	COAX	*	TOO LARGE	280	88	_
GORE	CXN-1939	COAX	-44	*	78	10	93
GORE	CXN-2223	TWINAX	-24	_	141	25	_
GORE	CXN-2268	TWINAX	_	-204	135	25	_
GORE	CXN-2363	TWINAX	_	-221	166	25	_
GORE	CXN-2702	TWINAX	_	-221	166	25	100
GORE	CXN-3101	COAX	-5	-004	93	12	75
GORE	CXN-3162	TWINAX	*	-223	112	21	100
GORE	CXN-3194	TWINAX	_	-204	138	24	80
GORE	CXN3268	TRIAX	-27 (150)	_	100	12	50
GORE	CXP 3716	COAX	*	_	_	_	_
GORE	DXN1830	TWINAX	_	*	130	19	_
GORE	DXSN1482	TWINAX	*	_	103	18	_
GORE	DXSN-1735	COAX	*	*	81	18	_
GORE	DXSN-1747	COAX	-44	-001	80	11	_
GORE	DXSN-1878	TWINAX	*	_	113	19	_
GORE	DXSN-1888	TWINAX	_	-203	148	15	150
GORE	DXSN1892	COAX	-36	*	103	18	_
GORE	DXSN-1896	COAX	_	*	82	14	_
GORE	GBL-075-024	TWINAX	-29	-204	132	25	_
GORE	GCX-075-26-REV A	COAX	-36	*	99	19	_
GORE	GSC 03-2236-00	COAX	_	-004	92	12	75
GORE	GSC-01-40583-01	COAX	_	*	63	10	75
GORE	GSC-01-81457-00	TWINAX	-27	-209	118	16	120
GORE	GSC-03-1276-00	TRIAX	*	_	103	20	50
GORE	GSC-03-40389-00	COAX	*	_	62	10	75
GORE	GSC-05-80583-00	TWINAX	_	-202	145	21	_
GORE	GSC-12-1381-01	TWINAX	-45	_	160	24	_
GORE	GSC-12-1381-01-93	TWINAX	*	_	143	23	_
GORE	GWN2388	TWINAX	*	_	95	15	_
GREAT LAKES	70014	COAX		*	107	19	75
GREENWOOD	RA523PVC	COAX	*	_	320	75	_
GRUMMAN	GC875ACH1	TWINAX	*	-224	190	24	98
GRUMMAN	GC875GBI	TRIAX	-57	-302	164	33	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
GRUMMAN	GC875GC1	TRIAX	-56	-301	164	12	_
GRUMMAN	GC875GP1	COAX	-31	-006	128	20	_
GRUMMAN	GC875LNI	TWINAX	59	_	167	20	_
GRUMMAN	GC875PD1	COAX	-5A	_	63	12	_
GRUMMAN	GC875RM1	TWINAX	-45	-204	144	25	_
GRUMMAN	GC875RR1	QUADRAX	-33	-220	179	25	_
GRUMMAN	GC875TM24H	TRIAX	-58	-221	160	25	_
GRUMMAN	GC875TMH	TWINAX	-45	-204	146	25	_
H.P.	TXA114-P	TRIAX	*	*	217	21	_
HABIA	1652	TRIAX	*	_	115	12	50
HABIA	1852	TRIAX	*	_	110	12	50
HABIA	4570	TRIAX	-23	-303	145	12	75
HABIA	4570	TRIAX	-23	-303	142	12	75
HABIA	103-06208-010	TWINAX	_	-204	141	24	78
HABIA	31482-009-02	TWINAX	-47	-201	134	24	77
HABIA	31789-003-01	COAX	-21	-021	176	32	_
HABIA	HPD 6UK4577TK-03	TWINAX	*	*	169	24	83
HABIA	HPD 6UK4674LT-01	TRIAX	*	-303	138	12	50
HABIA	RG 223	TRIAX	-7	-306	248	35	50
HABIA	RGS-T-302(HFJ)	TRIAX	*	TOO LARGE	335	25	_
HABIA	RGT 178	TRIAX	-23	-303	142	12	50
HABIA	RGT 180	TRIAX	-60	-305	197	12	95
HABIA	RGT 316	TRIAX	-23	_	142	21	50
HABIA	RGX180	TRIAX	-60	_	186	12	_
HABIA	Y-HRGT-213	TRIAX	*	TOO LARGE	531	88	50
HABIA	Y-HRGT-58	TRIAX	*	_	291	35	50
HABIA	Y-HRGT-59	TRIAX	-13	_	335	24	75
HAN WEI	1928 001A	COAX	_	-026	132	18	75
HAN WEI	1928-008A	COAX	*	-026	139	16	75
HAN WEI	735A	COAX	_	-026	139	18	75
HAN WEI	RG 179	COAX	_	-004	102	12	75
HAN WEI	RG 213	COAX	-6B	TOO LARGE	417	87	50
HAN WEI	RG 59	COAX	-2	-013	242	24	75
HAN WEI	RG 62A	COAX	-2B	-013B	242	26	93
HARBOUR	12-557	TRIAX	-64	-303	147	12	75
HARBOUR	H7000	COAX	*	_	200	52	50
HARBOUR	HPF195	COAX	_	-011	195	37	75
HARBOUR	IEEE 802.3	COAX	-21	*	167	38	_
HARBOUR	LL142	COAX	*	_	195	51	50
HARBOUR	SB142	COAX	-1	-021	195	37	50
HARBOUR	SS405	COAX	-5	-003	104	20	50
HARBOUR	TRX179	TRIAX	-23	_	141	12	_
HARBOUR	TRX180	TRIAX	-60	-305	180	12	95
HARBOUR	TRX400	TRIAX	*	-306	215	39	_

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
HARBOUR IND	ST5M1212-002	TWINAX	-47	-201	124	23	68
HARRIS	2000566	TWINAX	_	-205	95	15	_
HAVEG INDUSTRIES	51-04416	TWINAX	_	-223	104	19	_
HEADEND	2240V	COAX	*	*	269	32	_
HELIX	CF18C0011030	COAX	*	*	231	40	_
HELIX	CF30P001XXXX	TWINAX	*	_	139	13	124
HELIX/HITEMP	8340101	COAX	_	*	223	32	75
HELIX/HI-TEMP	735201	COAX	_	-026	135	16	75
HELIX/HI-TEMP	7340101	COAX	_	-025	241	32	75
HEWLETT PACKARD	03053-61672	TRIAX	*	_	200	21	_
HEWLETT PACKARD	8120-0049	COAX	-4	-008	155	10	_
HEWLETT PACKARD	8120-0552-1	COAX	-5B	*	110	15	50
HEWLETT PACKARD	8120-0789	COAX	-5B	_	110	15	_
HEWLETT PACKARD	8120-1105	COAX	-5B	-002	110	15	_
HEWLETT PACKARD	8120-1289	COAX	-2B	-015	255	25	_
HEWLETT PACKARD	8120-4461	COAX	-5	-003	93	18	50
HEWLETT PACKARD	8120-9026	COAX	-5B	_	110	15	_
HEWLETT PACKARD	A-8120-9077-1	COAX	-5	*	110	15	_
HITACHI	HCM-39441/1	COAX	*	-027	128	16	75
HITACHI	HCM-9441/12	COAX	*	-026	133	16	75
HITEMP	117P80660	COAX	-50	_	375	86	_
HITEMP	RD1152	COAX	*	-026	132	16	75
HITEMP	RD1152-1	COAX	*	*	159	16	75
HITEMP	RD1152-2	COAX	-22	*	143	16	75
HITEMP	SP50-738CWSSTJ	COAX	*	_	85	12	_
HOMESTAR	1501	COAX	_	_	288	40	75
HONEYWELL	P7500577	TRIAX	-25A	-306	250	38	50
HUBER-SUHNER	G04233D	COAX	_	-013	240	24	75
HUGHES	710855-35	TRIAX	*		460	47	_
HUGHES	720304-1	COAX	-5	*	80	12	_
HUGHES	HMS 2-1149/76	TRIAX	*	*	215	20	95
HUGHES	HMS-1480/2	TWINAX	-45	_	_	_	_
HUGHES	HMS2-1149/77	TWINAX	-47	_	122	25	_
HUGHES	HMS2-1149/78	TWINAX	-27	-223	110	20	68
HUGHES	STFM1398	COAX	-41	_	280	59	50
IBM	4885584	COAX	_	-022	222	25	_
IBM	7362211	TWINAX	-8	_	330	39	_
IBM	07F9635	COAX	*	*	112	19	75
INDUSTRIA BRASILEIRA	“RF75-0,8/4,8”	COAX	*	-016	304	32	75
IN-LINE	7000	COAX	-36	-007	115	15	75
IN-LINE	7100	COAX	-21	*	170	23	75
IN-LINE	7400	COAX	-36	-007	115	15	75
IN-LINE	7600	COAX	-21	*	175	23	75
INTERCOMP	12402	TWINAX	*	_	444	50	_

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
INTERFACE CABLE	SM-A-939852	COAX	*	-010	159	30	_
INTERNATIONAL WIRE & CABLE	9091	COAX	*	*	239	52	50
JOURNEY	7001740	COAX	-5	-003	100	18	_
JPL	ST12008-24	TWINAX	_	-206	110	26	75
JPL	ST12008-26	TWINAX	*	-223	100	20	75
JUDD	740	COAX	_	-004	80	10	75
JUDD	735S01	COAX	*	-026	134	18	75
JUDD	C1401053	COAX	-63	-025	232	31	75
JUDD	C1401064	COAX	*	-026	132	16	75
JUDD	C1401741	COAX	_	-004	99	10	75
JUDD WIRE INC	SS502401	COAX	-5	-003	_	_	_
KAMERAKABEL	11MM	TRIAX	*	_	_	_	_
KAMERAKABEL	8.5MM	TRIAX	*	_	_	_	_
KEITHLEY	SC-22	TRIAX	-23	*	145	24	40
KEITHLEY	SC-9	COAX	-1	-021	195	35	50
KOVID CACTUS	8900-0007-0000	COAX	-36	105-1820 (220)	104	19	75
LAMNCASA	CECBV-75-2	COAX	-37	*	162	12	_
LINK	CVS LKRX75S2D4	COAX	-22	-009	157	20	75
LOCKHEED MARTIN	6815176	TWINAX	*	TOO LARGE	375	41	120
LOCKHEED MARTIN	ABA	TWINAX	-29	-206	120	25	_
LOCKHEED MARTIN	STM01-600 TYPE I	TWINAX	*	*	162	30	_
LOCKHEED MARTIN	STM01-600 TYPE II	TWINAX	*	-204	130	25	_
LOCKHEED MARTIN	5PTM1T04-5	TWINAX	-60	_	177	24	100
LOCKHEED MARTIN	6121176-1	TRIAX	*	_	121	12	_
LOCKHEED MARTIN	ST5M1284-003	TWINAX	-45	_	146	20	_
LUCENT	407529262	COAX	-5	-004	106	10	75
LUCENT	848068607	COAX	-37	*	166	16	75
LUCENT	106 309 206 (2734A)	COAX	_	-025	225	31	75
LUCENT	106 309 214 (2734A)	COAX	_	*	225	38	75
LUCENT	1928 001A 1C/36	COAX	*	-026	133	15	75
LUCENT	2734A R1000	COAX	_	*	225	31	75
LUCENT	2734A RVAR	COAX	_	*	225	31	75
LUCENT	2735B	COAX	_	*	145	17	75
LUCENT	735C	COAX	*	-026	139	16	75
LUCENT	KS23918 L2	COAX	_	-004	89	13	75
LUCENT	WP91681 L2	COAX	_	-004	89	13	75
M/A COM	FLC78-50J	COAX	_	_	_	_	50
M/A-COM	2250-E82832	COAX	-53	-022	_	_	_
MADISON	022H22BZID	TWINAX	-9	_	250	38	100
MADISON	0722W00001	COAX	*	_	114	19	75
MADISON	12CFE00002	COAX	_	-009	158	20	75
MADISON	12EEK00001	COAX	_	-026	132	16	75
MADISON CABLE CORP	6096	COAX	-21	*	158	37	_
MALCO	250-4070-0000	TRIAX	-57	-302	175	30	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
MALCO	250-4818-0009	TRIAX	*	*	131	11	50
MALCO	250-4820-0009	TRIAX	*	_	128	11	95
MALCO	295-3804-0000	TRIAX	_	-305	184	10	95
MANHATTAN	M32011	TWINAX	-47	-203	140	13	124
MANHATTAN	M4207	COAX	-6A	_	405	48	_
MANHATTAN	M4216	COAX	*	-018	260	25	_
MANHATTAN	M4227	TWINAX	-9	-213	_	_	_
MANHATTAN	M4243	COAX	-5	-004	94	12	75
MANHATTAN	M4244	COAX	*	*	158	17	75
MANHATTAN	M4276	COAX	-2	-013	242	25	93
MANHATTAN	M44209	COAX	*	*	158	32	_
MANHATTAN	M64227	TWINAX	*	_	227	37	_
MANHATTAN CDT	M4237	COAX	-2	-013A	242	30	75
MANHATTAN/CDT	M14462	TWINAX	*	-212	187	27	_
MARTIN MARIETTA	STME637-2	TWINAX	_	-206	_	_	_
MCDONNELL DOUGLAS	STD0101-01	TWINAX	*	*	147	30	
MCDONNELL DOUGLAS	HS5965	COAX	_	_	185	48	50
MCDONNELL DOUGLAS	HS4863	TRIAX	-23	-303	146	15	_
MCDONNELL DOUGLAS	HS4885	TWINAX	*	-204	133	25	_
MCDONNELL DOUGLAS	SSQ21655	TWINAX	-45	-218	158	29	_
MCDONNELL DOUGLAS	NDBC-TFE-24S2SJ-75	TWINAX	*	-201	130	23	75
MCDONNELL DOUGLAS	NRFC-50-COAX-3	COAX	*	_	185	54	50
MCDONNELL DOUGLAS	NRFC-75-SHCO-7	COAX	-2A	-023	220	35	75
MCDONNELL DOUGLAS	ST5M1298F26M2S6	TWINAX	-27	_	114	19	_
MCDONNELL DOUGLAS	5M2022-001	TWINAX	-27	-206	114	20	_
MCDONNELL DOUGLAS	5M2022-003	TWINAX	*	-204	130	24	_
MCDONNELL DOUGLAS	5M2022-008	TWINAX	-27	-206	114	20	_
MCDONNELL DOUGLAS	5M2142-001	TRIAX	*	_	_	_	_
MCDONNELL DOUGLAS	5M2397-001	TRIAX	-23	-303	140	12	_
MCDONNELL DOUGLAS	5M2397-002	TRIAX	-23	-303	_	_	_
MCDONNELL DOUGLAS	HS5930-1	TWINAX	-64	-217	144	24	77
MCDONNELL DOUGLAS	ST5M1212-001	TWINAX	-24	_	154	31	68
MCDONNELL DOUGLAS	ST5M1212-003	TWINAX	*	_	98	20	68
MCDONNELL DOUGLAS	ST5M1323	TRIAX	*	*	210	19	_
MCDONNELL DOUGLAS	STDO102-113	TWINAX	-56	*	170	37	78
MERCURY	DOD/DNA RF21	TWINAX	_	-214	_	_	_
MERITEC	700152	COAX	-44	*	73	12	
MERITEC	700279	COAX	*	-026	135	16	75
METRO OPTIX	160-00003-001	COAX	_	*	90	11	75
MICRO COAX	UFB197C	COAX	_	_	200	55	_
MICRODOT	202-3927-0000	TWINAX	-27	-208	110	11	117
MICRODOT	202-3934-0000	TWINAX	-24	-211	168	12	160
MICRODOT	202-3942-0000	TWINAX	-27	-209	120	12	110
MICRODOT	202-4547	TWINAX	-24	-211	168	12	160

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
MICRODOT	250-3833-0000	TRIAX	*	-303	130	11	_
MICRODOT	250-3834-0000	COAX	-5A	-001	75	12	50
MICRODOT	250-3836-0000	TRIAX	*	_	128	12	50
MICRODOT	250-3902-0000	COAX	-5A	-001	67	11	50
MICRODOT	250-3908-0000	COAX	-5A	-001	68	12	50
MICRODOT	250-3909-0000	COAX	-44	*	71	10	50
MICRODOT	250-3920-0000	COAX	-5A	-001	80	12	50
MICRODOT	250-3967-0000	COAX	-5	-003	110	20	50
MICRODOT	250-4021-0000	COAX	-31	*	116	20	50
MICRODOT	250-4044-0000	TRIAX	-43	_	175	32	50
MICRODOT	250-4045-0000	TRIAX	-43	-302	169	32	50
MICRODOT	250-4070-0000	TRIAX	-56	-302	175	30	50
MICRODOT	250-4172-0000	COAX	*	_	300	89	50
MICRODOT	250-4180-0000	COAX	-5	-003	110	19	50
MICRODOT	250-4208-0000	COAX	_	_	325	89	50
MICRODOT	250-4804-0000	TRIAX	-32	-203	150	11	50
MICRODOT	250-4816-0009	TRIAX	-27	_	140	12	50
MICRODOT	275-3930-000	TRIAX	_	_	155	12	75
MICRODOT	275-3933-0000	COAX	-4	-009	150	23	75
MICRODOT	275-3991	COAX	-36	*	110	15	75
MICRODOT	293-3902	COAX	*	-026	130	11	93
MICRODOT	293-3922-0000	TRIAX	-60	-305	184	12	93
MICRODOT	293-3930-0000	TRIAX	-43	_	175	11	100
MICRODOT	293-3968-0000	COAX	-22	-008	155	11	93
MICRODOT	295-3801-0000	COAX	-22	-008	155	10	95
MICRODOT	295-3802-0000	COAX	-22	*	144	11	95
MICRODOT	295-3950-0000	TRIAX	-43	_	175	12	95
MICRODOT	295-3952-0000	TRIAX	-43	_	175	12	95
MICRODOT	295-3966-0000	TRIAX	*	_	210	19	95
MICRODOT	295-3992-000	COAX	-36	-007	114	12	95
MICRODOT	295-3993-0000	TRIAX	-64	-303	150	12	95
MICROGNOSIS	MICROGNOSIS	COAX	*	-004	107	14	_
MICROPORE	190	COAX	*	_	190	51	50
MICROSTOCK	UT85-75	COAX	-86	_	84	12	75
MIDISCO	MDC8084	COAX	-86	_	90	12	75
MIL-SPEC	M17/203-00001	TWINAX	*	_	161	25	77
MILESTEK	30-01010	COAX	-2	-013	242	25	75
MIL-SPEC	2C2219EXJ	TWINAX	-47	-206	120	23	_
MIL-SPEC	LS2SJ-22	TWINAX	*	TOO LARGE	275	31	_
MIL-SPEC	M17/015-RG022	TWINAX	-10	_	430	47	95
MIL-SPEC	M17/015-RG111	TWINAX	*	_	490	47	95
MIL-SPEC	M17/094-RG179	COAX	-5	-004	105	13	75
MIL-SPEC	M17/095-RG180	COAX	-22	-008	145	13	95
MIL-SPEC	M17/110-RG302	COAX	*	*	207	25	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
MIL-SPEC	M17/113-RG316	COAX	-5	-003	98	20	50
MIL-SPEC	M17/116-RG307	TRIAX	*	_	270	30	75
MIL-SPEC	M17/127-RG393	COAX	*	TOO LARGE	400	95	50
MIL-SPEC	M17/128-RG400	COAX	_	_	_	_	50
MIL-SPEC	M17/130-RG402	COAX	-141		141	36	50
MIL-SPEC	M17/131-RG403	TRIAX	*	*	128	12	50
MIL-SPEC	M17/133-00001	COAX	-86	*	87	21	50
MIL-SPEC	M17/133-00002	COAX	-86	*	87	21	50
MIL-SPEC	M17/133-RG405	COAX	-86	*	87	21	50
MIL-SPEC	M17/134-00001	TRIAX	-7	-306	245	35	50
MIL-SPEC	M17/134-00002	TRIAX	-7	-306	245	33	50
MIL-SPEC	M17/135-00001	TRIAX	-14A	TOO LARGE	500	89	50
MIL-SPEC	M17/135-00003	TRIAX	-14A	_	500	81	50
MIL-SPEC	M17/135-00004	TRIAX	-14A	TOO LARGE	500	89	50
MIL-SPEC	M17/135-00005	TRIAX	-14A	TOO LARGE	500	81	50
MIL-SPEC	M17/135-00006	TRIAX	-14A	TOO LARGE	500	81	50
MIL-SPEC	M17/136-00001	COAX	-5	-004	105	12	75
MIL-SPEC	M17/137-00001	COAX	-22	-008	145	13	95
MIL-SPEC	M17/138-00001	COAX	-5	-003	102	21	50
MIL-SPEC	M17/152-00001	COAX	-5	-006	120	21	50
MIL-SPEC	M17/155-00001	COAX	-1	-011	200	38	50
MIL-SPEC	M17/157-00001	COAX	-4	-010	160	31	50
MIL-SPEC	M17/158-00001	COAX	-1	-012	200	39	50
MIL-SPEC	M17/162-00001	COAX	-6E	_	336	57	50
MIL-SPEC	M17/163-00001	COAX	-6A	_	412	90	50
MIL-SPEC	M17/164-00001	COAX	-6B	_	432	90	50
MIL-SPEC	M17/164-00002	COAX	-6B	_	432	90	50
MIL-SPEC	M17/167-00001	COAX	-3	-012	216	36	50
MIL-SPEC	M17/169-00001	COAX	-5A	-001	75	13	50
MIL-SPEC	M17/170-00001	COAX	-21	-011	175	38	50
MIL-SPEC	M17/171-00001	COAX	-41	_	288	60	50
MIL-SPEC	M17/172-00001	COAX	-5	-003	102	21	50
MIL-SPEC	M17/173-00001	COAX	-5	-003	100	19	50
MIL-SPEC	M17/174-00001	COAX	-6A	_	400	90	50
MIL-SPEC	M17/175-00001	COAX	-1	-012	200	39	50
MIL-SPEC	M17/176-00002	TWINAX	-47	-201	134	24	77
MIL-SPEC	M17/177-00001	TRIAX	-60	-305	189	13	95
MIL-SPEC	M17/179-00001	TRIAX	*	-305	195	13	75
MIL-SPEC	M17/180-00001	COAX	-6E	-017	336	29	75
MIL-SPEC	M17/181-00001	COAX	-6A	_	412	50	75.E
MIL-SPEC	M17/181-00002	COAX	*	TOO LARGE	475	48	50
MIL-SPEC	M17/184-00001	COAX	-2	-013	246	24	75
MIL-SPEC	M17/186-00001	TWINAX	-9 ***	-213	245	40	78
MIL-SPEC	M17/187-00001	COAX	-4	*	160	31	50

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
MIL-SPEC	M17/189-00001	COAX	-6A	_	412	90	50
MIL-SPEC	M17/190-00001	COAX	-6B	TOO LARGE	432	89	50
MIL-SPEC	M17/196-00001	COAX	-5	*	115	19	50
MIL-SPEC	M17/200-00001	COAX	-3	-012	216	36	50
MIL-SPEC	M17/29-RG59	COAX	-2	-013	245	23	75
MIL-SPEC	M17/2-RG6	COAX	-6E	-017	336	29	75
MIL-SPEC	M17/30-RG062	COAX	-2B	-013	250	25	93
MIL-SPEC	M17/31-RG63	COAX	-6A	_	415	26	125
MIL-SPEC	M17/45-RG108	TWINAX	-9	-213	235	38	78
MIL-SPEC	M17/47-RG114	COAX	-6A	_	415	8	185
MIL-SPEC	M17/60-RG142	COAX	-1	-012	200	40	50
MIL-SPEC	M17/62-RG144	COAX	-6B	TOO LARGE	412	525	75
MIL-SPEC	M17/6-RG11	COAX	-6A	-053	412	50	75
MIL-SPEC	M17/77-RG216	COAX	-6B	_	432	50	75
MIL-SPEC	M17/84-RG223	COAX	-3	-012	216	35	50
MIL-SPEC	M17/86-00001	COAX	-6B	_	440	94	50
MIL-SPEC	M17/90-RG71	COAX	-2B	-015A	250	25	93
MIL-SPEC	M17/97-RG210	COAX	-2B	-013B	250	26	93
MIL-SPEC	M24643/33-01UN	TWINAX	*	_	255	50	75
MIL-SPEC	M27500-22ML2T00	TWINAX	_	*	117	31	_
MIL-SPEC	M27500-22TE2T14	TWINAX	-45	-210	137	32	_
MIL-SPEC	M27500-22TN2N06	TWINAX	-29	-201	134	29	_
MIL-SPEC	M27500-24S82T23	TWINAX	_	-208	101	21	78
MIL-SPEC	MC24643/33-01UN	TWINAX	*	_	255	50	75
MIL-SPEC	RG108/U	TWINAX	SEE MIL-SPEC M17/ CABLE # FOR ALL RG#				78
MIL-SPEC	RG11/U	COAX					75
MIL-SPEC	RG111/U	TWINAX					95
MIL-SPEC	RG114/U	COAX					185
MIL-SPEC	RG122	COAX					50
MIL-SPEC	RG13/U	COAX					75
MIL-SPEC	RG141/U	COAX					50
MIL-SPEC	RG142/U	COAX					50
MIL-SPEC	RG144/U	COAX					75
MIL-SPEC	RG174/U	COAX					50
MIL-SPEC	RG178B/U	COAX					50
MIL-SPEC	RG179/U	COAX					75
MIL-SPEC	RG180B/U	COAX					95
MIL-SPEC	RG187A/U	COAX					75
MIL-SPEC	RG188/U	COAX					50
MIL-SPEC	RG195A/U	COAX					95
MIL-SPEC	RG196A/U	COAX					50
MIL-SPEC	RG210/U	COAX					93
MIL-SPEC	RG212/U	COAX					50
MIL-SPEC	RG213/U	COAX					50

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
MIL-SPEC	RG214/U	COAX	SEE MIL-SPEC M17/ CABLE # FOR ALL RG#				50
MIL-SPEC	RG216/U	COAX					75
MIL-SPEC	RG223/U	COAX					50
MIL-SPEC	RG225/U	COAX					50
MIL-SPEC	RG22B/U	TWINAX					95
MIL-SPEC	RG302	COAX					75
MIL-SPEC	RG303/U	COAX					50
MIL-SPEC	RG304/U	COAX					50
MIL-SPEC	RG307	TRIAX					75
MIL-SPEC	RG316	COAX					50
MIL-SPEC	RG393	COAX					50
MIL-SPEC	RG400/U	COAX					50
MIL-SPEC	RG402/U	COAX					50
MIL-SPEC	RG403	TRIAX					50
MIL-SPEC	RG405/U	COAX					50
MIL-SPEC	RG55B/U	COAX					50
MIL-SPEC	RG58/U	COAX					50
MIL-SPEC	RG59B/U	COAX					75
MIL-SPEC	RG5B/U	COAX					50
MIL-SPEC	RG62A/U	COAX					93
MIL-SPEC	RG62B/U	COAX					93
MIL-SPEC	RG63/U	COAX					125
MIL-SPEC	RG6A/U	COAX					75
MIL-SPEC	RG71/U	COAX					93
MIL-SPEC	RG87A/U	COAX					50
MIL-SPEC	RG8A/U	COAX					50
MIL-SPEC	RG9B/U	COAX					50
MOGAMI	2947	COAX		*	121	20	75
MOGAMI	2964	COAX	*	*	189	24	75
MOGAMI	3145	COAX	_	*	117	21	75
MOHAWK	5305-8	TWINAX	_	_	420	40	_
MOHAWK	HT10431 TWINAX	TWINAX	-9	-214	245	22	124
MOHAWK	HTAA328-5	COAX	*	TOO LARGE	347	64	_
MOHAWK	M52001-HT10431	TWINAX	-9	_	_	_	_
MOHAWK	M52210	COAX	_	-016	300	32	75
MOHAWK	M54426	COAX	*	-009	153	20	75
MOHAWK	M80248	TRIAX	*	TOO LARGE	360	31	75
MOHAWK	MS2001	TWINAX	*	-214	245	22	_
MOHAWK	PNHT10431	TWINAX	_	-214	245	22	124
MOHAWK WIRE & CABLE	M52057	COAX	_	-024	260	40	_
MOLEX	711530009	COAX	-5A	_	60	10	75
MOLEX	71153-3019	COAX	_	*	70	17	50
MONSTER CABLE	SU-RG6 CL	COAX	-41	-020	278	42	75
MONTROSE	6248	COAX	*	*	189	21	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
MONTROSE	9835-735	COAX	*	-026	135	15	75
MONTROSE	CDT 735A	COAX	_	-026	129	16	75
MONTROSE	IFX4385	COAX	_	-004	100	13	75
MONTROSE/CDT	CBL 1225	TWINAX	_	-225	200	22	124
MONTROSE/CDT	CBL 1233	COAX	-2A	-025	225	33	75
MONTROSE/CDT	CBL 1235	COAX	-2A	-025	235	31	75
MONTROSE/CDT	CBL 1288-()	COAX	_	-026	129	16	75
MONTROSE/CDT	CBL 2108	COAX	-2A	-025	235	31	75
MONTROSE/CDT	CBL 2109	COAX	-2A	-025	241	34	75
MONTROSE/CDT	CBL 2721	TRIAX	-7	-306	250	37	50
MONTROSE/CDT	CBL 2726	COAX	*	-026	133	16	75
MONTROSE/CDT	CBL 7382	COAX	_	*	215	58	50
MONTROSE/CDT	CBL 7820	COAX	-21	*	165	35	_
MONTROSE/CDT	CBL 8411	TRIAX	*	TOO LARGE	356	41	_
MONTROSE/CDT	CBL 8415	TRIAX	*	TOO LARGE	438	57	_
MONTROSE/CDT	CBL 9835-735	COAX	*	-026	136	14	75
MONTROSE/CDT	CBL 9956	TWINAX	-56	*	170	37	78
MONTROSE/CDT	CBL3340	COAX	_	-004	77	11	75
NATIONAL WIRE & CABLE	S10-9723	TWINAX	-55	-214	226	21	_
NAVAIR	67A37A130	COAX	-4	*	140	31	_
NAVAIR	67A37A130	COAX	*	_	135	31	50
NAVSEA	6322369	TRIAX	-60	_	188	29	50
NAVSEA	6322493	TRIAX	*	TOO LARGE	480	50	75
NAVSEA	6323054	COAX	*	_	430	47	75
NAVSEA	6323055	TWINAX	*	_	281	40	_
NAVSEA	6323056	TRIAX	*	_	291	38	_
NAVSEA	6323059	TRIAX	*	TOO LARGE	325	25	_
NAVSEA	6262065-1	TRIAX	*	TOO LARGE	437	89	_
NEK	51021	TRIAX	*	TOO LARGE	334	45	75
NEK	PSF 1/3M	COAX	*	-018	256	24	75
NEK CABLE	156503	COAX	-2A	-022	220	25	_
NEK CABLE	IEEE 802.3 10 BASE 2	COAX	-21	*	165	36	_
NEK CABLE	NEK 23795	COAX	-21	*	170	24	75
NEK/CDT	51041	TRIAX	*	TOO LARGE	325	46	75
NEK/CDT	HF75 0.6/3.7 HV DS	COAX	-2	-015	257	23	75
NEK/CDT	VTF8.5	TRIAX	*	_	335	41	75
NEMAL	1835F	TRIAX	*	*	360	32	75
NEW ENGLAND	N13-44B-480	TWINAX	*	_	_	_	_
NEW ENGLAND ELECTRIC WIRE	TR70748	COAX	*	*	262	30	75
NIKKAI	2.5C-FXW	COAX	*	*	185	20	_
NK NETWORKS	320784	TRIAX	*	_	341	38	75
NK NETWORKS	0.51/2.4	COAX	-4	-009	162	21	75
NK NETWORKS	0.58/2.6	COAX	-21	_	161	24	75
NK NETWORKS	0.5L/2.4	COAX	-4	*	153	20	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
NK NETWORKS	0.6/2.8	COAX	*	*	180	26	75
NK NETWORKS	0.6/3.7	COAX	-2B	-015	250	26	75
NK NETWORKS	0.6/3.7 DZ	COAX	-2B	-015	256	25	75
NK NETWORKS	0.6L/3.7	COAX	-2	-013	244	25	75
NK NETWORKS	0.8/3.7	COAX	_	*	244	32	75
NK NETWORKS	0.8/4.9	COAX	-51	-016	303	33	75
NK NETWORKS	1.0/4.8	COAX	_	*	289	40	75
NORCOM	28215742	COAX	_	-027	13	16	75
NORCOM	735M	COAX	_	-007	_	_	75
NORCOM/CDT	735	COAX	_	-026	139	18	75
NORCOM/CDT	28216802	735AT	_	-026	129	16	75
NORCOM/CDT	734A	COAX	_	-025	235	31	75
NORCOM/CDT	734D	COAX	_	-025	235	31	75
NORCOM/CDT	734T	COAX	_	*	241	34	75
NORCOM/CDT	735A	COAX	*	-026	131	18	75
NORDEN	154-085-0002	TRIAX	-64	_	145	12	_
NORTHERN TELECOM	NT-734	COAX	_	-025	_	_	_
NORTHERN TELECOM	NT-735	COAX	*	-026	130	16	75
NORTHROP	05A077-1	TWINAX	*	_	155	25	_
NORTHROP	05A078-1	TWINAX	*	-204	127	23	_
NORTHROP	O5A077-1	TWINAX	-24	-221	161	24	_
OLFLEX	3649FD	TWINAX	_	-213	259	38	78
OLYMPIC	6254T	COAX	*	TOO LARGE	354	105	50
OLYMPIC AVIATION	NHU-EFTXF 6.07/2.26	TRIAX	-62	_	449	91	50
OLYMPIC CABLE CORP	6273T	COAX	*	-021	188	36	_
ORION	TEF2202	TWINAX	_	*	196	29	_
PANAVIA	6421	TWINAX	-45	-204	135	25	_
PANAVIA	6595	TRIAX	-23	-303	141	12	75
PANAVIA	6425 ZA 002	TWINAX	-45	-218	151	24	_
PANAVIA	6595XM	TRIAX	-23	-303	137	12	_
PENN WIRE	25Q821	COAX	-6A	_	378	64	75
PERCON	VK6	COAX	-2	-014	240	32	75
PERENA	KX6	COAX	-2	-013	243	23	_
PIC WIRE	L8620TX	TRIAX	-60	_	178	35	_
PIC WIRE	V75268	COAX	*	*	127	20	75
PIC WIRE & CABLE	L2201TX	TRIAX	-25A	-306	250	38	50
PIC WIRE & CABLE	S33141	COAX	-41	_	272	67	_
PKI	“0,6/2,8”	COAX	*	*	180	25	75
PKI	“0,6/3,7”	COAX	-2	-019	237	23	_
PKI	“1,0/6,6”	COAX	*	TOO LARGE	352	40	_
PKI	“1,6/73 AF”	COAX	*	TOO LARGE	429	61	_
PKI KAMERAKABEL	1-Nov	TRIAX	-14	TOO LARGE	481	56	_
PRIME STOCK	M32011P	TWINAX	*	-203	151	10	_
PRIME STOCK	PS665PL	TWINAX	*	_	190	21	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
PRIME STOCK	PS666PL	TWINAX	-47	_	131	10	_
PRIME STOCK	M32012L	TWINAX	_	*	225	26	124
RADIALL	C291982060	TRIAX	-42	_	285	35	_
RADIO CORP OF AMERICA	852493-5	TWINAX	-29	*	132	30	_
RAYCHEM	EPD49311Q	COAX	-1	-021	197	35	50
RAYCHEM	10584	TRIAX	-24A	_	148	12	_
RAYCHEM	10586	TRIAX	-24A	_	148	12	_
RAYCHEM	10595	TWINAX	*	-204	133	25	_
RAYCHEM	10599	TWINAX	-24	-210	145	31	_
RAYCHEM	10600	TWINAX	*	-213	216	32	_
RAYCHEM	10602	TWINAX	-45	-204	144	25	_
RAYCHEM	10605	TWINAX	*	*	173	32	_
RAYCHEM	10606	TWINAX	*	-223	117	21	75
RAYCHEM	10612	TWINAX	*	-204	128	25	77
RAYCHEM	10613	TWINAX	*	-222	154	25	77
RAYCHEM	10614	TWINAX	-24	-221	161	25	77
RAYCHEM	0024A0024	TWINAX	-24	-217	152	25	100
RAYCHEM	0026A0024	TWINAX	*	_	_	19	100
RAYCHEM	0528A0424	TWINAX	-47	_	116	15	105
RAYCHEM	10598-30-9X	TRIAX	*	-303	148	12	_
RAYCHEM	10612-24-9	TWINAX	*	-204	132	27	77
RAYCHEM	1301-TZD 101 06 UX	TWINAX	-55	-204	217	24	_
RAYCHEM	13317 12515	TWINAX	*	_	91	19	_
RAYCHEM	2012M3612	COAX	*	TOO LARGE	310	89	50
RAYCHEM	2024D0014	TWINAX	*	_	210	25	120
RAYCHEM	2524A0424	TWINAX	*	-212	172	25	125
RAYCHEM	2524A1311	COAX	*	TOO LARGE	404	24	125
RAYCHEM	2.52E+117	TWINAX	_	*	190	25	125
RAYCHEM	2524E0311-9	TWINAX	*	-224	201	25	125
RAYCHEM	2524F0524	TWINAX	*	-218	148	25	125
RAYCHEM	2524K0524	TWINAX	-55	-224	194	25	125
RAYCHEM	2526D1114	TWINAX	*	-219	144	19	125
RAYCHEM	2526E1114	TWINAX	-24	-219	147	19	125
RAYCHEM	2530A0314	TWINAX	-27	-208	105	12	125
RAYCHEM	2530A1317	COAX	-63	_	203	13	125
RAYCHEM	26433/30147K	TWINAX	*	*	91	19	_
RAYCHEM	30-03101	TWINAX	*	_	110	29	_
RAYCHEM	44M9996-20-2/6-0	TWINAX	-24	*	157	39	_
RAYCHEM	5012A3311	COAX	-50	_	350	88	50
RAYCHEM	5012M3612	COAX	*	TOO LARGE	301	89	50
RAYCHEM	5012W5812	TRIAX	-61	*	437	89	50
RAYCHEM	5020A1311	COAX	-4	*	155	40	50
RAYCHEM	5020A1811	COAX	-21	*	165	39	50
RAYCHEM	5020A3422	COAX	*	*	169	39	50

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
RAYCHEM	5020A3612	COAX	*	*	153	40	50
RAYCHEM	5021D1331	COAX	*	-021	188	35	50
RAYCHEM	5021H5331	TRIAX	-25A	_	258	35	50
RAYCHEM	5022D5112	TRIAX	-43	_	175	32	50
RAYCHEM	5022D5311	TRIAX	-43	_	175	32	50
RAYCHEM	5022E5111	TRIAX	-57	-302	164	33	50
RAYCHEM	5024A1311	COAX	-36	*	104	25	50
RAYCHEM	5024A1661	TWINAX	-27	*	108	25	50
RAYCHEM	5024A3111	COAX	-5	-003	113	19	50
RAYCHEM	5024A3314	COAX	*	*	127	25	50
RAYCHEM	5026A1111	COAX	-44	_	80	19	50
RAYCHEM	5026A1614	COAX	-44	_	80	19	50
RAYCHEM	5026A1664	TWINAX	-49	*	85	19	50
RAYCHEM	5026A5624	TRIAX	*	*	130	19	50
RAYCHEM	5026D5314	TRIAX	-23	_	132	19	50
RAYCHEM	5026N5611	TRIAX	*	_	124	19	50
RAYCHEM	5028A2211-9	COAX	-44	_	_	13	50
RAYCHEM	5028A3318	COAX	-5B	-004	90	14	50
RAYCHEM	5028D5312	TRIAX	*	_	110	13	50
RAYCHEM	5030A1114	COAX	-5A	-001	61	12	50
RAYCHEM	5030A1214	COAX	-5A	_	61	12	50
RAYCHEM	5030A1314	COAX	-5A	_	63	12	50
RAYCHEM	5030A1318	COAX	-5A	_	63	12	_
RAYCHEM	5030A1411	COAX	-5A	_	66	12	50
RAYCHEM	5030A1511	COAX	-5A	_	66	12	50
RAYCHEM	55A1121-24	TWINAX	-27	-223	107	25	_
RAYCHEM	55A1122-26	TWINAX	*	-223	102	21	_
RAYCHEM	7028A5518	TRIAX	-26	_	143	15	70
RAYCHEM	7518A0811	TRIAX	*	TOO LARGE	480	50	75
RAYCHEM	7518A5611	TRIAX	*	TOO LARGE	324	54	75
RAYCHEM	7518A5811	TRIAX	*	TOO LARGE	417	52	_
RAYCHEM	7520A1311	COAX	-52	-024	241	40	75
RAYCHEM	7522A1311	COAX	_	-023	_	_	75
RAYCHEM	7522A1312	COAX	_	*	194	32	75
RAYCHEM	7522A1811	COAX	*	*	210	32	75
RAYCHEM	7522A5811	TRIAX	*	_	258	30	75
RAYCHEM	7522D5311	TRIAX	-25A	_	269	31	75
RAYCHEM	7523D1331	COAX	-2	-013	246	23	75
RAYCHEM	7524A1311	COAX	-21	_	160	25	75
RAYCHEM	7524A1312	COAX	-22	_	152	25	75
RAYCHEM	7524A1811	COAX	-37	_	152	25	75
RAYCHEM	7524D5011	TRIAX	*	*	200	25	75
RAYCHEM	7524D5111	TRIAX	*	*	195	25	75
RAYCHEM	7524D5811	TRIAX	_	-306	243	25	_

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
RAYCHEM	7526A5311	TRIAX	-60	_	215	19	75
RAYCHEM	7526D5318	TWINAX	-59	_	167	20	75
RAYCHEM	7526J1660	TWINAX	-47	_	115	19	75
RAYCHEM	7528A1114	COAX	-36	-004	100	15	75
RAYCHEM	7528A1317	COAX	-5	-004	102	15	75
RAYCHEM	7528A5314	TRIAX	-64	-303	148	15	75
RAYCHEM	7528F5614	TRIAX	*	-303	141	15	75
RAYCHEM	7528G1312-7	COAX	-36	*	110	15	_
RAYCHEM	7530A5218	TRIAX	*	*	117	13	75
RAYCHEM	7530A5314	TRIAX	*	_	129	12	75
RAYCHEM	7530A5524	TRIAX	*	*	130	12	75
RAYCHEM	7720C8662	TWINAX		-213	_	20	77
RAYCHEM	7722C2664	TWINAX	-24	-210	143	32	77
RAYCHEM	7722C3661	TWINAX	-24	*	178	32	77
RAYCHEM	7722C3861	TWINAX	*	-215	232	31	77
RAYCHEM	7722D1161	TWINAX	*	*	75	32	77
RAYCHEM	7724C1664-9	TWINAX	*	-204	127	23	77
RAYCHEM	7724C3864	TWINAX	*	-212	200	24	77
RAYCHEM	7724C8664	TWINAX	*	-221	155	25	_
RAYCHEM	7724G3664	TWINAX	-45	-222	154	25	77
RAYCHEM	7724N0664	TWINAX	-45	-204	144	25	78
RAYCHEM	7726D066A	TWINAX	-27	-223	112	20	77
RAYCHEM	7820D0111	TWINAX	*	_	182	40	78
RAYCHEM	7824D0130	TWINAX	*	_	172	25	78
RAYCHEM	7824E0422	TWINAX	-29	-204	135	25	78
RAYCHEM	7826D0130	TWINAX	-29	-206	120	25	78
RAYCHEM	9324D0130	TWINAX	*	212	167	25	93
RAYCHEM	9528A1317	COAX	*	-026	137	15	95
RAYCHEM	9528A1417	COAX	*	-026	137	15	95
RAYCHEM	9528A1517	COAX	*	-026	137	15	95
RAYCHEM	9528D5114	TRIAX	-60	-305	177	15	95
RAYCHEM	9530A5117	TRIAX	-24A	_	149	12	_
RAYCHEM	9530D5117	TRIAX	-56	-301	164	13	95
RAYCHEM	9530D5317	TRIAX	-59	_	170	12	95
RAYCHEM	9530H1118	COAX	-36	_	108	13	95
RAYCHEM	9532A5114	TRIAX	-23	_	140	8	95
RAYCHEM	9532A5314	TRIAX	-23	_	130	8	95
RAYCHEM	EPC29116C	TRIAX	-32	-309	152	17	_
RAYCHEM	EPD 30881A	TWINAX	*	*	201	24	77
RAYCHEM	EPD 60441	TRIAX	-25A	TOO LARGE	256	35	50
RAYCHEM	EPD22030E	TWINAX	*	-224	209	26	_
RAYCHEM	EPD22030F	TWINAX	_	-215	251	25	_
RAYCHEM	EPD22188B	TWINAX	_	-218	150	25	_
RAYCHEM	EPD26467Q	TRIAX	-23	-303	136	12	_

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
RAYCHEM	EPD27364A	TWINAX	-11	TOO LARGE	311	38	77
RAYCHEM	EPD29102A	COAX	-2	-013	243	23	75
RAYCHEM	EPD29697A	TWINAX	*	_	165	25	_
RAYCHEM	EPD30653Q	TWINAX	*	-217	150	25	_
RAYCHEM	EPD33017Q	COAX	-5	-003	106	20	_
RAYCHEM	EPD33698Q	TRIAX	-32	_	142	15	_
RAYCHEM	EPD33727Q	TRIAX	-33	_	185	12	_
RAYCHEM	EPD38474Q	TRIAX	-13	TOO LARGE	330	22	_
RAYCHEM	EPD43297	TWINAX	*	_	465	40	_
RAYCHEM	EPD44692	TWINAX	-29	-217	146	25	77
RAYCHEM	EPD45673	TRIAX	*	_	254	23	75
RAYCHEM	EPD46145Q	TRIAX	*	TOO LARGE	323	23	_
RAYCHEM	EPD46270Q	TRIAX	-9	-306	260	37	_
RAYCHEM	EPD49317Q	COAX	-63	_	228	25	75
RAYCHEM	EPD49334Q	TRIAX	-8	TOO LARGE	322	23	75
RAYCHEM	EPD49336Q	TRIAX	-13A	TOO LARGE	322	23	_
RAYCHEM	EPD49338Q	TWINAX	-9	_	_	_	_
RAYCHEM	EPD60947Q	TRIAX	-7	_	260	42	_
RAYCHEM	EPD6314	TWINAX	-29	-201	136	25	77
RAYCHEM	EPD6344-22-9CS1833	TWINAX	_	*	195	30	_
RAYCHEM	EPD647100-01	COAX	-6B	TOO LARGE	433	88	50
RAYCHEM	EPD67364Q	TRIAX	*	TOO LARGE	268	32	75
RAYCHEM	EPD71818A	TWINAX	*	*	264	25	_
RAYCHEM	EPD7246Q	COAX	-6A	TOO LARGE	406	48	75
RAYCHEM	EPD76761	TWINAX	_	-212	177	24	77
RAYCHEM	EPD78310	TRIAX	*	*	208	35	50
RAYCHEM	EPD8274-1	TRIAX	-13	TOO LARGE	314	_	_
RAYCHEM	EPD84067	TRIAX	*	_	301	35	50
RAYCHEM	M27500-22ML2TO8	TWINAX	-45	-204	134	28	_
RAYCHEM	M27500-22RC2S06	TWINAX	*	-217	145	25	_
RAYCHEM	M27500-26RC2S06	TWINAX	-47	-223	110	19	_
RAYCHEM	M27500-26RC2S09	TWINAX	-27	_	110	18	_
RAYCHEM	URM54	TRIAX	-13	_	327	23	_
RAYDEX/CDT	RLF7	COAX	*	*	295	73	50
RAYDEX/CDT	RA7000	COAX	-21	*	177	26	75
RAYDEX/CDT	RA750-8CORE	COAX	_	-026	139	12	_
RAYTHEON	979268	TRIAX	-24A	-307	189	12	75
RAYTHEON	10271188	TRIAX	-23	_	131	9	_
RAYTHEON	11464169	TWINAX	-55	*	214	38	78
REMEE	1575	COAX	_	*	295	41	75
ROCKBESTOS	RSS-6-104	COAX	-2	_	242	32	_
ROCKBESTOS	RSS-6-154	COAX	-2	-014	242	32	75
ROCKWELL	LE572-0003-0008	TWINAX	*	-204	132	26	77
ROCKWELL	LE572-0035	TRIAX	-23	_	135	15	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
ROCKWELL	MP572-0279-0002	TWINAX	-29	-201	125	25	_
ROCKWELL	MP572-0328-0002	TWINAX	-29	-204	130	25	_
SABRITEC	540-1050-000	TRIAX	-23	TOO SMALL	127	14	_
SAXTON	8405	COAX	-2B	-013A	249	30	93
SAXTON	8421F	COAX	-6B	TOO LARGE	425	91	50
SCC	3901/018/52	TWINAX	*	-201	125	27	90
SCI	41	COAX	-44	*	74	12	75
SEIMENS	2YCYCY 0.63/3.7-75	TRIAX	-13A	TOO LARGE	307	25	75
SEMFLEX	BPE400	CAOX	*	-050 (90)	409	110	
SEMFLEX	FSCM 60637	COAX	*	*	123	26	50
SEMFLEX	SW110	COAX	*	*	123	26	50
SENSORMATIC	K0100-0106-006	COAX	*	*	193	32	_
SEQUOIA	1000NS1V	COAX	-31	_	120	40	_
SIECOR	8712812	TWINAX	-47	-201	_	_	_
SIEMANS-GERMANY	O2YCYCY-1.2/5.7-75LiGR	TRIAX	*	_	430	47	_
SONIC WIRE	28/736TFCXECXE	TRIAX	-32	_	142	14	_
SOUTH BAY CABLE (SBC)	SB-39602 REV C	COAX	*	TOO LARGE	423	54	_
SPF	KX8	COAX	-6A	TOO LARGE	400	50	_
STANDARD WIRE/CABL	1100-66F	TWINAX	-45	-210	145	32	_
STORM	34-001	TRIAX	-59	_	175	19	50
STORM	34-003	TRIAX	*	_	113	12	50
SUHNER	G 04233 D-10	COAX	-2B	*	256	23	75
SUHNER	G01330HT	TRIAX	-56	_	177	16	_
SUHNER	G02262	COAX	-5	-003	110	19	_
SUHNER	G02330HT	TRIAX	*	_	210	20	_
SUHNER	G02332	TRIAX	-26	_	167	35	_
SUHNER	G02333	TRIAX	-59	_	169	10	_
SUHNER	G03233D	COAX	-3	_	212	17	_
SUHNER	G04233D	COAX	*	_	260	23	_
SUHNER	GX03272D-06	COAX	-3	-012	213	35	_
SUHNER	S02223	COAX	_	-004	100	4	75
SUHNER	S04233	COAX	-2B	-014	243	34	75
SUMIRE	4C-HEB-NL	COAX	_	-25	236	35	75
SUMITOMO	2.5C	COAX	-22	-008	154	15	_
SUMITOMO	2C	COAX	*	-008	147	12	_
SUPERIOR	FVP224	TWINAX	-9	-214	242	21	_
SUPERIOR ESSEX	SERIES 11	COAX	-6A	-052	400	60	75
SURPRENANT	M16878/4-BDE-2ST	TWINAX	-27	_	111	20	_
SURPRENANT	4236	COAX	*	_	160	17	_
SURPRENANT	9872	COAX	-22	-009	145	17	_
SURPRENANT WIRE & CABLE	C-01-1317/1A	TWINAX	*	-212	169	25	78
SYLVANIA (GTE)	19-805709-1	COAX	*	*	85	12	
SYLVANIA (GTE)	73-1317911-1	TWINAX	-27	-208	110	11	
SYNERGISTIC RESEARCH	E102194	COAX	-2A	-023	235	32	75

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
SYNERGY	VIDEO 1000	COAX	_	-013	_	_	75
TELEDYNE	14796/1	TWINAX	-10	TOO LARGE	420	36	_
TELEDYNE	5M2022-002	TWINAX	*	_	161	30	_
TELEDYNE	ST5M1322-001	TRIAX	-24A	_	165	24	_
TELEDYNE THERMATICS	5M2559-001	TRIAX	*	-309	150	15	_
TELEFONICA	3623G01	COAX	-22	-026	138	15	75
TENSOLITE	92607	TRIAX	*	*	215	19	_
TENSOLITE	8712812	TWINAX	-47	-201	_	_	_
TENSOLITE	10047-9219-01	TRIAX	-32	-302	166	31	_
TENSOLITE	1936-TX-10C2SW	TWINAX	-47	-201	129	24	_
TENSOLITE	24453/42810 Q-2	QUADRAX	-58	-217	145	25	_
TENSOLITE	24499/898X2	TWINAX	-24	-204	125	25	_
TENSOLITE	26433/9P175T-2	TWINAX	-27	-205	90	19	_
TENSOLITE	26840/9D099LV-2	TWINAX	*	-223	110	19	_
TENSOLITE	28883/31169Q-1	TRAIX	-23	_	135	15	75
TENSOLITE	28883/T290TX-1	TRIAX	-23	_	135	15	75
TENSOLITE	30852/9B2581V-1 28GA	COAX	-5A	-001	79	10	_
TENSOLITE	30880/4119X-1	COAX	-44	*	73	11	_
TENSOLITE	30895/25L-1	TRIAX	60	_	_	_	_
TENSOLITE	5M2142-001	TRIAX	*	_	_	_	_
TENSOLITE	5M2397-002	TRIAX	-23	-303	136	14	_
TENSOLITE	5M2559-001	TRIAX	*	_	160	15	_
TENSOLITE	5M2870-22C2J	TWINAX	*	*	100	29	_
TENSOLITE	E6372429	TWINAX	*	_	_	_	_
TENSOLITE	S280W502	TWINAX	-24	-218	154	23	_
TENSOLITE	ST5M1284-001	TWINAX	*	-212	180	24	96
TENSOLITE	STME637-2	TWINAX	_	-206	_	_	_
TEXAS INSTRUMENTS	417889-2	TRIAX	*	-307	185	12	93
TEXAS INSTRUMENTS	802857-1	TWINAX	-24	*	162	31	70
THERMATICS	11079	TWINAX	-29	-204	130	25	_
THERMATICS	11421	TWINAX	_	-223	104	19	_
THERMATICS	11421	TWINAX	_	-223	_	_	_
THERMATICS	425-1680-030VW-1	COAX	_	-013	_	_	_
THERMATICS	5M2022-003	TWINAX	*	-204	130	24	_
THERMATICS	8712812 (A/F DWG)	TWINAX	-47	-201	125	23	_
THERMATICS	NEC725-2(G)	COAX	53	_	_	_	_
THERMAX	68-1938TF(2)SXE	TWINAX	_	-223	104	19	_
THERMAX	77-1936TF(2)TFPA	TWINAX	-47	-201	125	24	77
THERMAX	947-494	COAX	*	*	159	40	
THERMAX	983-495	COAX	-4	*	144	24	75
THERMAX	985-495	COAX	-4	*	144	24	75
THERMAX	M27500-22TG2T14	TWINAX	-29	_	132	31	_
THERMAX	MCD-THI	TWINAX	*	_	_	_	125
THERMAX	RG58/BLACK	COAX	-1	-011	_	_	50

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Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
THERMAX	RGS-316	COAX	-5	-003	102	20	50
THERMAX	RGS-316	COAX	-5	-003	102	20	50
TIMES	2382	COAX	-6A	_	400	64	75
TIMES	2391	COAX	-41	-020	273	41	75
TIMES	2560	COAX	-41	_	271	40	_
TIMES	68999	TRIAX	*	_	335	26	_
TIMES	8712812	TWINAX	-47	-201	_	_	_
TIMES	100A	COAX	-5	-003	105	18	50
TIMES	2240V	COAX	*	*	262	32	75
TIMES	2260V	COAX	-6	*	296	40	75
TIMES	2360V	COAX	-41	-020	273	40	75
TIMES	25B3M	COAX	-2	-014	242	31	_
TIMES	65555-RD316	COAX	-5	-003	113	21	_
TIMES	AA-2317	TRIAX	-24A	*	169	25	50
TIMES	AA-2325	TRIAX	*	-308	215	20	95
TIMES	AA-2511	COAX	-2A	_	220	20	_
TIMES	AA-3096	COAX	-34	_	242	50	_
TIMES	AA-3369	TWINAX	_	_	_	_	78
TIMES	AA-4668.2	COAX	-2	*	236	51	_
TIMES	AA-4888	TRIAX	-64	-303	145	13	75
TIMES	AA-5885	COAX	*	_	480	134	_
TIMES	AA-5886	COAX	*	_	390	105	_
TIMES	AA-5887	COAX	*	*	270	67	50
TIMES	AA-6045	TWINAX	_	_	_	_	78
TIMES	AA-6151	TRIAX	-64	_	143	12	75
TIMES	AA-6343	COAX	-1	-011	193	37	_
TIMES	AA-6894	TRIAX	*	TOO LARGE	480	50	75
TIMES	AA-6895	TRIAX	*	TOO LARGE	450	89	_
TIMES	AA-6899	COAX	-6B	_	434	64	75
TIMES	AA-7028	TWINAX	-9	-215	240	28	_
TIMES	AA-7032	COAX	-6E	-017	332	29	_
TIMES	AA-7038	COAX	-2	-013	242	23	_
TIMES	AA-7279	TWINAX	-10	TOO LARGE	425	46	_
TIMES	AA-7618	COAX	*	_	430	47	75
TIMES	AA-7621	TRIAX	*	TOO LARGE	325	25	_
TIMES	AA-7740	COAX	_	*	160	36	50
TIMES	AA-7740	COAX	_	*	160	36	50
TIMES	AA-7741	COAX	-5	-003	100	20	50
TIMES	AA-7909	TWINAX	*	_	155	19	_
TIMES	AA-8314	TWINAX	*	*	115	12	_
TIMES	AA-8469	COAX	_	-004	242	59	50
TIMES	AA-8624	COAX	-31	-005	121	12	75
TIMES	AA-8699	TRIAX	*	_	110	12	_
TIMES	BL1242	TWINAX	-9	-216	245	22	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
TIMES	BL782	TWINAX	-9	-213	245	39	78
TIMES	BL784	TWINAX	-10	TOO LARGE	420	67	78
TIMES	BL982	TWINAX	-9	-215	245	32	_
TIMES	LMR-100A	COAX	-36	-026	124	19	50
TIMES	LMR195	COAX	-3	-011	197	38	50
TIMES	LMR-200	COAX	-1	_	190	45	50
TIMES	LMR240	COAX	*	*	240	59	50
TIMES	LMR-240-LLPL	COAX	_	_	240	51	50
TIMES	LMR-300	COAX	-6	*	300	70	50
TIMES	LMR400	COAX	*	-050 (90)	409	110	_
TIMES	LMR-500	COAX	*	TOO LARGE	_	_	50
TIMES	LMR-600	COAX	*	_	590	176	50
TIMES	M17/182-00001	TWINAX	-10	TOO LARGE	425	46	_
TIMES	MI2240V	COAX	*	*	272	32	_
TIMES	MI4007	COAX	*	-026	138	17	_
TIMES	MI-655555	COAX	-5	*	115	21	_
TIMES	RD-316	COAX	-31	-006	118	20	50
TIMES	RDT-302	TRIAX	-25A	_	260	25	_
TIMES	RDT-316	TRIAX	-26	_	155	20	50
TIMES	RT-142	TRIAX	*	_	215	39	_
TIMES	RT-179	TRIAX	-64	-303	145	12	75
TIMES	RT-180	TRIAX	*	_	191	25	_
TIMES	RT-302	TRIAX	-25	*	242	26	75
TIMES	RT-316	TRIAX	*	_	154	20	50
TIMES	RT-400	TRIAX	*	*	215	20	_
TIMES	SF-142B	COAX	-1	-011	195	37	50
TIMES	SF-214	COAX	-6B	_	425	89	_
TIMES	SF-304	COAX	*	_	290	59	50
TIMES	TRF-58	TRIAX	-7	-306	250	39	50
TIMES	TRF-59	TRIAX	-13	TOO LARGE	325	23	_
TIMES	TRF-8	TRIAX	-14A	_	500	86	50
TIMES FIBER	2644	COAX	-6A	TOO LARGE	400	64	75
TIMES FIBER CABLE	173	COAX	-51	-016	308	33	75
TIMES FIBER COMM (TFC)	23T2	COAX	-6A	_	400	64	75
TIMES MICROWAVE	405	COAX	-36	-003	104	20	50
TIMES MICROWAVE	AA-8371	TRIAX	*	*	210	36	50
TIMES MICROWAVE	AA-8746	COAX	*	*	131	28	50
TIMES MICROWAVE	LMR200LLPL	COAX	-1	-011	195	40	50
TOSHIBA	NHU-EFTXF 6.07/2.26	TRIAX	*	TOO LARGE	457	90	50
TROMPETER	M17/176-00002	TWINAX	-47	-201	134	24	77
TROMPETER	QRC- 78-1	QUADRAX	39	_	TBD	22	78
TROMPETER	QRC- 78-2	QUADRAX	17	_	286	40	78
TROMPETER	QRC- 78-3	QUADRAX	38	_	325	39	78
TROMPETER	QRC-124-1	QUADRAX	40	_	TBD	12	124

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
TROMPETER	QRC-124-3	QUADRAX	38	_	335	22	124
TROMPETER	TCC-50-2	COAX	-1	-011	199	38	50
TROMPETER	TCC-75-2	COAX	-2	-013A	246	31	75
TROMPETER	TCC-75-3D	COAX	_	*	185	24	75
TROMPETER	TCC-75-3S	COAX	_	*	185	24	75
TROMPETER	TCC-75-4D	COAX	_	*	145	19	75
TROMPETER	TCC-75-4S	COAX	_	*	145	19	75
TROMPETER	TRC-50-1	TRIAX	-32	-309	161	15	50
TROMPETER	TRC-50-2	TRIAX	-7	-306	250	38	50
TROMPETER	TRC-75-1	TRIAX	-33	-307	194	12	75
TROMPETER	TRC-75-2	TRIAX	-7	-308	250	19	75
TROMPETER	TRCH-50-2	TRIAX	-7	-306	250	38	50
TROMPETER	TRCH-75-1	TRIAX	_	_	250	12	75
TROMPETER	TWAC-78-1F1	TWINAX	_	_	_	_	_
TROMPETER	TWAC-78-1F2	TWINAX	-49	-205	100	15	78
TROMPETER	TWC-124-1A	TWINAX	-29	-203	155	12	124
TROMPETER	TWC-124-2	TWINAX	-9	-214	250	22	124
TROMPETER	TWC-78-1	TWINAX	-29	-202	155	22	78
TROMPETER	TWC-78-2	TWINAX	-9	-213	247	37	78
TROMPETER	TWCF-78-1	TWINAX	-29	-202	155	22	78
TROMPETER	TWCH-78-1	TWINAX	-29	-202	155	22	78
TROMPETER	TWCH-78-2	TWINAX	-9	-213	247	37	78
TROMPETER	TWCN-124-1A	TWINAX	-29	-203	_	_	_
TROMPETER	TWCP-124-2	TWINAX	-9	-214	250	24	124
TROMPETER	TWCP-124-3	TWINAX	-55	-224	215	24	124
TROMPETER	TWCP-124-5	TWINAX	*	-226 (70MC)	335	48	124
TROMPETER	TWCP-78-1	TWINAX	-29	-202	155	21	78
TROMPETER	TWCP-78-1	TWINAX	-47	_	155	19	78
TROMPETER	TWCP-78-2	TWINAX	-9	-213	247	37	78
TVA	F660BVV	COAX	-41	-020	267	42	75
TVE	92	TRIAX	*	TOO LARGE	433	54	_
UK	BICC T3304	COAX	-2B	-015	252	24	_
UK	BICCT(M)3205	COAX	_	-016	_	_	_
ULRICH HEER	VIM222-318/97	TRIAX	-23	_	138	12	75
UNICABLE	ICN417-2052P	COAX	*	*	162	36	_
UNICABLE	IEEE 802.3A	COAX	-21	*	171	39	_
UNK	PCC-FTS	COAX	*	*	213	34	75
UNK	TR17901	TRIAX	-23	-303	140	11	_
UNK	VCB 100	COAX	*	*	279	49	_
UNK	VCB 75	COAX	-2	-023	238	34	75
URM 102	RAYCHEM	COAX	*	TOO LARGE	382	99	50
USAF	8712812	TWINAX	-47	-201	_	_	_
VCS	PSF1/3	COAX	*	-018	260	20	75
VDO	711-PAN 6421	TWINAX	-45	_	_	_	_

Note: * = Special contact factory

Cable group table

CABLE MANUFACTURER	CABLE NUMBER	CABLE TYPE	WRENCH STYLE	CRIMP STYLE	JACKET SIZE	CONDUCTOR	IMPEDANCE
VIDEO TIME S.P.A.	RX75/56	TRIAX	*	TOO LARGE	437	54	_
VIDEOKABEL	0.6/3.7	COAX	-2	-022	237	25	75
VOLEX	DXSN 1530	COAX	_	*	87	16	75
VOUGHT AERONAUTICS	202-2964-222	TRIAX	-57	_	_	_	_
WEICO	55222	TWINAX	*	-217	145	25	_
WEST PENN	812	COAX	-1	-011	195	37	52
WEST PENN	814	COAX	-53	-019	232	25	75
WEST PENN	815	COAX	-2A	-023	232	32	75
WEST PENN	816	COAX	-2	-023	239	30	75
WEST PENN	819	COAX	-2A	-023	232	32	75
WEST PENN	825	COAX	-22	-009	146	18	75
WEST PENN	841	COAX	_	-024	254	41	75
WEST PENN	843	COAX	-2	-014	242	32	75
WEST PENN	3815	TRIAX	-13	TOO LARGE	330	32	75
WEST PENN	25806	COAX	*	*	236	40	75
WEST PENN	25806	COAX	*	*	236	41	75
WEST PENN	25815	COAX	*	_	_	32	75
WEST PENN	25819	COAX	*	*	207	32	75
WEST PENN	25825	COAX	_	*	146	18	75
WEST PENN	25841	COAX	_	-024	254	40	_
WEST PENN	28515	COAX	*	*	207	32	_
WEST PENN	CL2Q843	COAX	-34	*	248	32	_
WEST PENN	HD825	COAX	_	-009	150	19	75
WEST PENN	P806	COAX	-6	-016	305	32	75
WEST PENN	Q841	COAX	*	*	283	41	75
WEST PENN CABLE	818	COAX	-2A	-014	242	31	75
WEST PENN WIRE	6350	COAX	_	-020	275	40	75
WESTINGHOUSE	128C147H01	TRIAX	-26	_	165	12	_
WEST PENN	25821	COAX	*	_	352	64	75
WEST PENN	25Q841	COAX	-41	-020	273	40	75
WHITMORE	24002001	TRIAX	-23	-303	142	12	75
WOVEN ELEC	T19TPSJ2619EN	TWINAX	-27	-208	105	12	_
YAMADA	AMB/A-C2-11-2-9	TWINAX	_	-201	135	25	_
Z MICROSYSTEMS	CTL3VGAMM	COAX	-36	-004	100	15	75

Note: * = Special contact factory

Digital Signal Integrity, Printed Circuit Board Design and the Interconnect Interface at Microwave Frequencies

Article written by Dale Reed (VP Sales & Marketing, Trompeter/Semflex)

In the world of electronics hardware, one perspective is to categorize the various pieces of the mix as (1) components and (2) connecting elements that hook components together. From this vantage, components include integrated circuits, resisters, capacitors, and other devices that "do something to" or "because of" the electronic signal. The connection element is the set of transmission lines that enable the functionality of these components. (While wireless transmission lines do exist, for the purposes of this article our focus is with wired or "wire line" transmission lines). Interconnects are the junction between the device and the transmission line. Some are separable (involving connectors) and some are not (solder joints). All are potentially degrading to the success of the transmission line.

There are two fundamental types of wired transmission lines used in digital signal transport, whether they are from component to component or from device to device. Differentiated by the physics involved, they are (1) light pulsed on or off (fiber) and (2) an electrical sine wave, shaped by using the harmonics of the wave form to look like a square wave (copper). Fiber has proven to be a wonderful high capacity solution for long haul transport of digital data signals because it offers dramatically higher distance without requiring costly amplification or signal regeneration. The application of wave division multiplexing utilizes frequency stacking technology, a trick from the copper world, to give fiber bandwidth an additional boost. The downside of fiber is that, since the digital signal exists in "on/off" conditions of the source laser, the binary code requires conversion to its electrical counterpart before it is useful for logic devices like programmed integrated circuits. This is referred to as the OEO conversion (OEO=electrical/optical/electrical). We understand now that the hype and promise of the pure photonics end-to-end optical network is likely a decade off, largely because logic and switching/routing functions remain best solved in copper technology for both technical and economic reasons. Copper technology, while mature, provides virtually all of the component-to-component and the lions' share of the device-to-device transmission line assignment.

To be sure, as line rates rise in frequency and in data rate (interrelated), new problems have surfaced. The signal limits of copper are now better understood than ever before, and this article explores some of those limitations, how they are overcome, and suggests that progress will continue in this field.

When engineers talk about higher frequency signal lines, they often characterize their needs in terms of "S" parameters. Ever wonder what the "S" in "S parameters" stands for? Some of us think it is "scatter". One way to view the signal line performance at a transition is to think of the transition as being in a box. Then picture the effects of a less-than-perfect transition as scattered signals - referred to as attenuation, return loss, ingress (EMI from outside) and cross talk -from an adjacent signal line.

* Attenuation is another name for signal loss, usually over distance. Obviously, without adequate signal strength, the ability to distinguish signal from noise may be compromised. Losses show up as radiation in signal or heat. At higher frequencies, the electromagnetic field that surrounds the signal movement becomes important, as does the dielectric material that this field moves through. Selecting materials with a low dielectric constant and resulting high propagation velocity becomes desirable.

* Return loss has mostly to do with impedance mismatch, typically at the interconnection points. Return loss is a signal reflected back on itself and may be a source of data errors as ones and zeros in the digital data stream are confused.

* Ingress involves outside interference. Without proper de signed-in shielding, any transmission line runs the risk of becoming an antenna and picking up spurious noise.

* Cross-talk is the effect that one signal line's electromagnetic field has on an adjacent signal line (an inducted signal).

In managing a high frequency signal with copper wire line technology, the best signal line is symmetrical with regard to spacing from the active trace to the ground, with a known low loss material in between. This is coax. In a perfect world, the material in coaxial transmission lines would be air, but as it is difficult to keep spacing accurate without a "solid" material, use of structural materials such as polyethylene, polytetrafluoroethelene, and other

dielectric materials provides structure with managed signal performance degradation. The material selected depends on the frequency involved, the best solid material is polytetrafluoroethylene or PTFE.

Most point-to-point interconnection of electronic elements is accomplished on printed circuit boards (PCBs). The PCB supports the components and provides the transmission lines between them, using etched traces of copper "on " the PCB in lieu of discrete wires.

With the increasing use of high frequency board-level packaging for wireless telecommunications applications, it is important to remember that "wireless" phenomena occurs on the PCB itself. For example, two closely spaced adjacent traces might be designed to produce electromagnetic fields to function as a coupler. In another case, a series of cascading patches will function as a band pass filter component at microwave frequencies. (Twisted pair is a very cost effective solution to low-end high frequency RF transmission line problems. Without the twist, the cross talk problems between the pairs would be huge, particularly since they are so closely spaced. This is pretty hard to do on a PCB, however.)

High frequency electronics is one situation where size matters. At 100 MHz (i.e., the clock rate on the "standard" Pentium(chip of 1996) the wavelength is several meters long. Even the harmonics, those odd multiples of the fundamental wave that allow it to become "square" and exhibit a far faster rise time for that crisp on/off condition, are low frequency. Low enough, in fact, that the full sinusoidal wave is usually larger than the PCB carrying the wave. At 1 GHz, the wave is only 10 inches long and the harmonics of the waveform are only 2 inches if the 5th harmonic is considered.

At the board level, digital signal integrity is currently being accomplished with the use of exotic laminate materials, a change from the low cost workhorse FR4 that has been the standard choice for the last 4 decades. High performance laminate suppliers have introduced improved products that address many of the inherent difficulties like co-efficient of thermal expansion issues in the z-direction, dimensional stability, and cost that dogged previous product offerings.

It is useful to remember that, until recently, the market was dominated by the military industry's emphasis on electrical/electromagnetic performance over low cost assembly technology or low cost materials. Currently, the need for multi-layer high frequency materials and high reliability plated thru hole (pth) applications is met with a series (is series the correct description?) of new, highly engineered polytetrafluorethelene-based-but-heavily-filled laminate products. These materials solve z-axis pth co-efficient of thermal expansion (CTE) mismatches with copper plated into the via plated thru holes. A recent development in this area is the affordability of the new laminates, approximately $2/sq foot for FR4, compared to the older class of high performance PTFE-based exotic microwave laminates that were in the range of $100/sq foot. New laminate products, including some that are not PTFE-based, have tackled the cost agenda and several good candidates are emerging in the $8/sq foot range.

At higher frequencies, new complex board-level engineering issues arise. For example, the tidy 90 degree turns that digital designers use to conserve routing space on the board are destructive to high frequency performance, causing VSWR problems. One high frequency effect of this conventional pcb board layout practice is return loss reflection that cancels the incoming signal due to being 180 degrees out of phase. This can be solved by using mitered corners or by using a radius to the transition.

In addition, the length of traces relative to each other becomes important as designers try to match phase on the board. Etch precision becomes critical for lateral perfection, and in-trace-pinholes are not allowed. Even the cross-sectional geometry (trapezoid or hourglass) of the trace becomes important as conductor "skin effects" become dominate with rising frequency.

Digital Signal Integrity, Printed Circuit Board Design and the Interconnect Interface at Microwave Frequencies

At elevated frequencies, feature size and the precision of that feature matter. Since the three key variables to a given transmission line are conductor-to-ground spacing, dielectric constant, and conductor characteristics - the simultaneous precision of these three things is paramount to achieving the demanding "budgets" for variation. On PCB etched flat conductors, for example, it is not uncommon to have fairly "fat" trace widths of 20 mils but with +/-0.0006 tolerance overall as measured at the trace flair. And tolerances for dielectric constant of the laminate itself is usually held to 2 decimal places!

Coax is best replicated by stripline design on a PCB. Stripline, however, has major drawbacks in the level of difficulty with fabrication of the PCB itself and the corresponding cost. Over the years, designers have learned to make use of a related approach known as copper-backed co-planar micro strip PCB design, also referred to as "micro strip".

Micro strip rides on the surface of the board and can be thought of as 70% or so of a stripline. While the top electromagnetic fields are open to radiation ingress and egress, the signal impact is largely predictable and can be managed. For example, the use of solder mask for coverage of surface traces is a workhorse approach in surface mount technology (SMT) assembly. In an RF design, the broad use of solder mask has a degrading impact on micro strip transmission lines, since the solder mask itself has uncertain dielectric constant attributes and uncertain thickness. How is this solved? One answer is solder dams that minimize the use of the mask yet still provide the assembly function of "damming" the trace to prevent solder from wicking down during reflow. These dams need only have a 20 mil footprint to do their job, and the micro strip function is nearly untouched by their presence in this size configuration.

At elevated frequencies, transitions are very important to minimize return loss. One of the most challenging transition is getting the high frequency signal on and off of the PCB itself. Connectors are a necessary evil and almost always a source of signal degradation as the frequency increases. Separable connectors are greater culprits than solder joints or similar permanent connections.

At this point, our discussion of signal limits gets specific. It may be that there are no known signal limits in frequency, other than cost. But cost is a big one. As frequency rises, the wave size shrinks and the physical geometries needed to support the wave shrink. Remember that on our PCB, etched traces become narrow, vias become even smaller, dielectrics become tight-toleranced, and lumped element features become so tight that fabrication cost is impacted.

While the issues are difficult regarding high frequency signal line management using wired transmission lines and, more importantly, where they transition from one platform to another (i.e., PCB to coaxial cable), the talent of our collective engineering personnel and the things they think of continues to amaze. ■

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