





QPL AND HIGH-PERFORMANCE MCOTS

Series 152 HiPer 55116 with EMI ground spring

# MIL-DTL-55116 RADIO CONNECTORS AND CABLES

Industry-standard QPL solutions *plus* HiPer 55116 MCOTS versions with superior electrical, environmental, and mechanical performance

SERIES 151 AND 152

## QPL Standard and High-Performance MCOTS

Series 151 (MIL-DTL-55116 QPL standardduty) and Series 152 (high-performance) tactical radio connectors



The MIL-DTL-55116 audio frequency connector has been used in tactical radio systems for generations. Now, this reliable, field-cleanable interconnect has been specified for use in the Joint Tactical Radio System—the next generation voice and data radio for U.S. military field operations, ensuring its continued use and service to soldiers, sailors and airmen. Glenair manufactures two versions of the MIL-DTL-55116 connector: a standard-performance QPL solution, and an intermateable advanced-performance MCOTS derivative with:

- Low contact resistance: less than 10 milliohms
- Integrated EMI ground spring provides improved 2.5 milliohm shell-to-shell conductivity performance
- IP68 rated sealing in mated and unmated condition
- 1,000 hour+ salt spray corrosion resistance
- Integrated cable shield termination band porch
- Superior 100 pound cable pull test rating



For more information contact Glenair at **818-247-6000** or visit our website at **www.glenair.com** U.S. CAGE code 06324

#### **SERIES 151 AND 152**

### MIL-DTL-55116

### **Radio Connectors and Cables**



### Selection guide

#### Series 152 HiPer 55116 Audio Connectors • pg. 2



**152-002** HiPer 55116 audio plug



157-010 HiPer 55116 crimp-removable contact audio plug



152-005 HiPer 55116 overmolded audio plug cordset



152-001 HiPer 55116 audio plug with wire strain relief



157-009 HiPer 55116 crimp-removable contact audio plug with wire strain relief



152-006 HiPer 55116 audio plug cordset



152-004 HiPer 55116 in-line audio receptacle



157-011 HiPer 55116 crimpremovable contact in-line audio receptacle



152-007 HiPer 55116 overmolded in-line audio receptacle cordset



152-003 HiPer 55116 radio-mount jam nut audio receptacle



152-013 HiPer 55116 audio receptacle with PC tails



152-012 HiPer 55116 audio receptacle with PC tails and 3 ground pins



240-152-003 HiPer 55116 filtered radiomount jam nut audio receptacle, solder cups



240-152-013 HiPer 55116 filtered radiomount jam nut audio receptacle, PC tails

#### Series 151 Standard MIL-DTL-55116 QPL audio connectors • pg. 18



151-001 MIL-DTL-55116 QPL audio plug with wire strain relief



151-002 MIL-DTL-55116 QPL audio plug with overmold adapter



151-003 MIL-DTL-55116 QPL radio-mount jam nut audio receptacle



151-004 MIL-DTL-55116 QPL in-line audio receptacle with wire strain relief

#### Series 151 MIL-DTL-55116 type special connectors, adapters, and accessories $\cdot$ pg. 24



151-015 MIL-DTL-55116 type all-metal audio plug with wire strain relief



157-008 MIL-DTL-55116 type audio plug with integral configurable 90° backshell



151-005 MIL-DTL-55116 type audio receptacle with PC tails



151-010 MIL-DTL-55116 type audio receptacle with PC tails and 3 ground pins



157-005 Audio connector feed-thru adapter, 55116 to D38999



157-012 Audio connector feed-thru adapter, 55116 to Mighty Mouse 804



657-098 Dummy receptacle for series 151 and 152 plugs



667-374 and 667-355
Protective covers for series 151 and 152 connectors



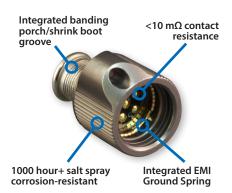
151-008 Rubber protective cover for series 151 and 152 receptacles



SERIES 152

# HiPer 55116 Tactical Radio Connectors and Cables

Series 152 HiPer 55116 connectors offer significant performance advantages for modern soldier communication systems



Fully intermateable and interoperable with MIL-DTL-55116 connectors

- Intermateable and interoperable with standard MIL-DTL-55116 connectors
- Low contact resistance: Less than 10 milliohms
- Integrated EMI ground spring provides improved 2.5 milliohm shell-to-shell conductivity performance
- IP68 rated sealing in mated and unmated condition, prevents water ingress into radio equipment
- 1,000 hour+ salt spray corrosion resistance
- Integrated cable shield termination band porch
- Superior 100 pound cable pull test rating

# SERIES 152 INTERMATEABLE HiPer 55116 Radio Connectors and Cables



### **Selection Guide • Performance specifications**

Serie:	s 152 Hi Per 55	116 Selection Guide			
Part Description	Glenair P/N	Corresponding Mil P/N, "U" designator	Mates with	Page	
Audio plug, field serviceable, with wire strain relief and rigid contacts, crimp and solder cup	152-001	_	152-003 HiPer 55116 type jam nut receptacle 152-004 HiPer 55116 type in-line receptacle	4	
Crimp-removable contact audio plug, field- serviceable with wire strain relief	157-009	M55116/1 – /4 type U-229	151-003 standard 55116 type jam nut receptacle	5	
Overmolded audio plug cordset with wire strain relief	152-006		151-004 standard 55116 type in-line receptacle any M55116 receptacle	6	
Audio plug with shield termination porch, overmolding adapter and rigid contacts, crimp and solder cup	152-002		152-003 HiPer 55116 type jam nut receptacle 152-004 HiPer 55116 type in-line receptacle	7	
<i>Crimp-removable contact</i> audio plug with shield termination porch and overmolding adapter	157-010	M55116/5 – /8 type U-182	7 -	151-003 standard 55116 type jam nut receptacle	8
Overmolded audio plug cordset	152-005		151-004 standard 55116 type in-line receptacle any M55116 receptacle	9	
In-line receptacle with shield termination porch, overmolding adapter, and non-rigid spring contacts, crimp and solder cup	152-004		152-003 HiPer 55116 type jam nut receptacle 152-004 HiPer 55116 type in-line receptacle	10	
Crimp-removable contact in-line audio receptacle, shield termination porch and overmolding adapter	157-011	M55116/11 – /14 type U-228	151-003 standard 55116 type jam nut receptacle 151-004 standard 55116 type in-line	11	
Overmolded in-line audio receptacle cordset	152-007		receptacle any M55116 receptacle	12	
Radio-mount jam nut audio receptacle with non-rigid spring contacts	152-003			13	
Radio-mount jam nut audio receptacle with PC tails	152-013		152-001 HiPer 55116 type plug	14	
Radio-mount jam nut audio receptacle with PC tails and 3 ground pins	152-012	M55116/9 – /10 type U-183	152-002 HiPer 55116 type plug 151-001 standard 55116 type plug 151-002 standard 55116 type plug	15	
Filtered radio-mount jam nut audio receptacle with non-rigid spring contacts, solder cup	240-152-003		any M55116 plug	16	
Filtered radio-mount jam nut audio receptacle with PC tails	240-152-013			17	

#### **SERIES 152 HIPER 55116 PERFORMANCE SPECIFICATIONS**

Complies with all MIL-DTL-55116 specifications and exceeds the following performance criteria:

#### Shell-to-shell conductivity

152-001 and -002 Plugs: 2.5 milliohms max.

152-003 receptacle: 2.5 milliohms max when mated to Glenair HiPer 55116 plug 152-001 or -002

Cable shield-to-shell conductivity: 2.5 milliohms max.
Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Water immersion (mated & un-mated): 152-002 plug, 152-003 receptacle: IP68 (10 meters standing water/1 hr.)

Air Pressure:15 psi

Salt spray: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 152-001 and -002 plugs: 100 lbs.

(Cable shield strength dependent)

## Audio plug with wire strain relief 152-001



### AUDIO PLUG, FIELD-SERVICEABLE WITH WIRE STRAIN RELIEF AND RIGID CRIMP TERMINAL OR SOLDER CUP CONTACTS

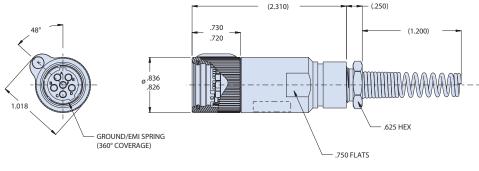
#### MATES WITH 152-003 AND 152-004, 151-003 AND 151-004, AND STANDARD MIL-DTL-55116 RECEPTACLES



How To Order					
Sample Part Number		152-001	-1	-3	
Series	HiPer 55116 Audio plug w	HiPer 55116 Audio plug with wire strain relief			
Connector Configuration (See Table I)	-1 = 5 pin, crimp -2 = 6 pin, crimp	-3 = 5 pin, solder cup -4 = 6 pin, solder cup			
Size (cable accommodation)	-1 = .165 $\pm$ .010 -2 = .228 $\pm$ .010 -3 = .250 $\pm$ .010	-4 = .290 ± .010 -5 = .320 ± .010		•	



Consult factory for details



#### **Table I: Connector Configuration** 5 Contacts 6 Contacts M55116/1 type (U-229) Plug, 152-001-1 5 crimp sleeve terminals M55116/2 type 152-001-2 (U-229) Plug, 6 crimp sleeve terminals M55116/3 type 152-001-3 (U-229) Plug, 5 Solder Cup Contacts M55116/4 type 152-001-4 (U-229) Plug, 6 Solder Cup Contacts

#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

Seals: Ethylene propylene rubber

Other metals: Aluminum alloy 6061 T6/hard anodized (dark gray)

Strain Relief Spring: Steel corrosion resistant wire/chemical blackening

Contacts: Copper alloy/gold plate

#### **NOTES**

Plugs are identified with Glenair's name, part number and date code.

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP67 (1 meter of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 100 lbf. (Cable shield strength dependent)

## Audio Plug with wire strain relief, crimp-removable contacts



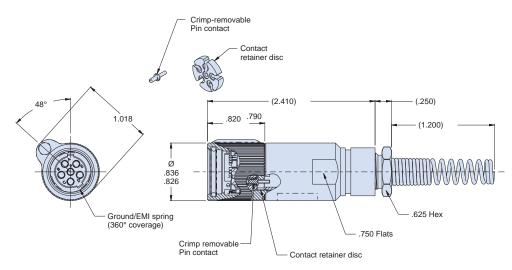
157-009

#### AUDIO PLUG, FIELD-SERVICEABLE WITH WIRE STRAIN RELIEF AND CRIMP-REMOVABLE CONTACTS

MATES WITH 152-003 AND 152-004, 151-003 AND 151-004, AND STANDARD MIL-DTL-55116 RECEPTACLES



How To Order					
Sample Part Number		157-009	-1	-3	
Series	HiPer 55116 Audio plug with wire strain relief				
Connector Configuration (See Table I)	-1 = 5 pin, crimp-removable contacts -2 = 6 pin, crimp-removable contacts				
Size (cable accommodation)	-1 = .165 $\pm$ .010 -2 = .228 $\pm$ .010 -3 = .250 $\pm$ .010	$-4 = .290 \pm .010$ $-5 = .320 \pm .010$			



#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

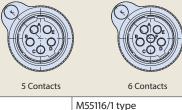
Seals: Ethylene propylene rubber

Other metals: Aluminum alloy 6061 T6/hard anodized (dark gray)

Strain Relief Spring: Steel corrosion resistant wire/chemical blackening

Contacts: Copper alloy/gold plate

#### Table I: Connector Configuration



157-009-1 (U-229) Plug,
5 crimp-removable contacts

M55116/2 type
(U-229) Plug,
6 crimp-removable contacts

#### **NOTES**

Plugs are identified with Glenair's name, part number and date code.

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP67 (1 meter of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 100 lbf. (Cable shield strength dependent)

Crimp-removable pin contacts and contact retainer disc are supplied loose. Contact Glenair for the crimp tool and locator.

5

## Audio Plug Cordset with Wire Strain Relief

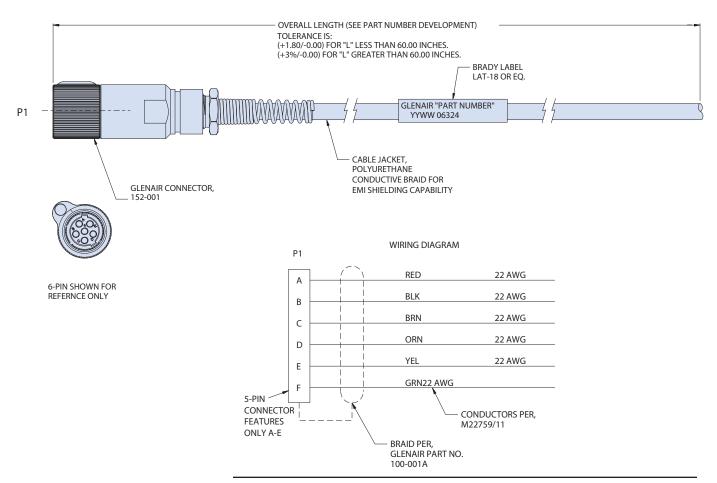




#### **AUDIO PLUG CORDSET WITH WIRE STRAIN RELIEF, FACTORY TERMINATED PIGTAIL**



How To Order				
Sample Par	t Number	152-006	-6	-хх
Series	HiPer 55116 Cordset with Wire Strain Relief			
Pin Count	<b>5</b> - 5-Pin			
Pin Count	<b>6</b> - 6-Pin			
Length	Overall length in inches			-



#### **NOTES**

100% electrical test, continuity, DWV (500 VAC sea level) and insulation resistance (200 Megohms minimum)

Unit Pack: 1 ea. 4 mil poly bag, heat-sealed. Includes dust cap.

Refer to part no. 152-001 for connector materials, finishes, and dimensions.

Wire corresponding to contact "F" to be trimmed and insulated with M23053/8 shrink tubing if 5-pin connector is specified.

## Audio Plug with termination porch and overmolding adapter



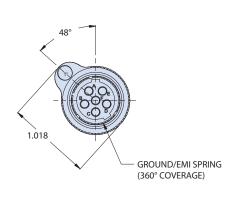
152-002

### AUDIO PLUG WITH INTEGRATED EMI GROUND SPRING, SHIELD TERMINATION PORCH, INTEGRATED OVERMOLDING/SEALING BOOT FEATURE AND RIGID CRIMP TERMINAL OR SOLDER CUP CONTACTS

MATES WITH 152-003 AND 152-004, 151-003 AND 151-004, AND STANDARD MIL-DTL-55116 RECEPTACLES



How To Order					
Sample Part Number		152-002	-1	-3	
Series	HiPer 55116 Audio plug w	ith overmold adapter			
Connector Configuration (See Table I)	-1 = 5 pin, crimp -2 = 6 pin, crimp	-3 = 5 pin, solder cup -4 = 6 pin, solder cup	•		
Size (cable accommodation)	-1 = .165 ± .010 -2 = .228 ± .010 -3 = .250 ± .010	$-4 = .290 \pm .010$ $-5 = .320 \pm .010$		-	



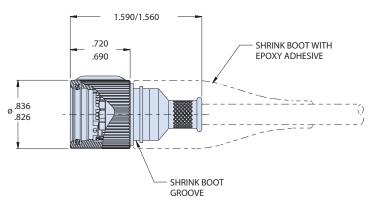


Table I: Con	nector Configuration
5 Contacts	6 Contacts
152-002-1	M55116/5 type (U-182) Plug, 5 crimp sleeve terminals
152-002-2	M55116/6 type (U-182) Plug, 6 crimp sleeve terminals
152-002-3	M55116/7 type (U-182) Plug, 5 Solder Cup Contacts
152-002-4	M55116/8 type (U-182) Plug, 6 Solder Cup Contacts

#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

Seals: Ethylene propylene rubber Contacts: Copper alloy/gold plate

#### NOTES

Plugs are identified with Glenair's name, part number and date code

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 100 lbf. (Cable shield strength dependent)

## Audio Plug with band/overmold adapter, crimp-removable contacts



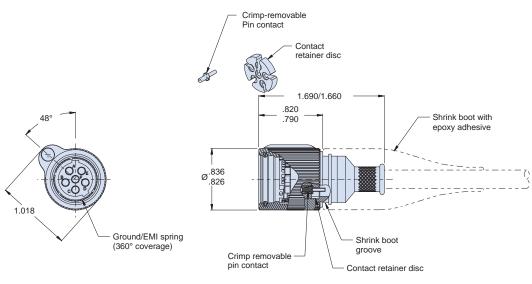
157-010

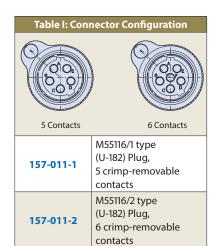
### AUDIO PLUG WITH INTEGRATED EMI GROUND SPRING, SHIELD TERMINATION PORCH, INTEGRATED OVERMOLDING/SEALING BOOT FEATURE AND CRIMP-REMOVABLE CONTACTS

MATES WITH 152-003 AND 152-004, 151-003 AND 151-004, AND STANDARD MIL-DTL-55116 RECEPTACLES



How To Order					
Sample Part Number		157-010	-1	-3	
Series	HiPer 55116 Audio plug w	ith overmold adapter			
Connector Configuration (See Table I)	-1 = 5 pin, crimp-removable contacts -2 = 6 pin, crimp-removable contacts				
Size (cable accommodation)	-1 = .165 ± .010 -2 = .228 ± .010 -3 = .250 ± .010	$-4 = .290 \pm .010$ $-5 = .320 \pm .010$		-	





#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

Seals: Ethylene propylene rubber Contacts: Copper alloy/gold plate

#### **NOTES**

Plugs are identified with Glenair's name, part number and date code

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 100 lbf. (Cable shield strength dependent)

Crimp-removable pin contacts and contact retainer disc are supplied loose. Contact Glenair for the crimp tool and locator.

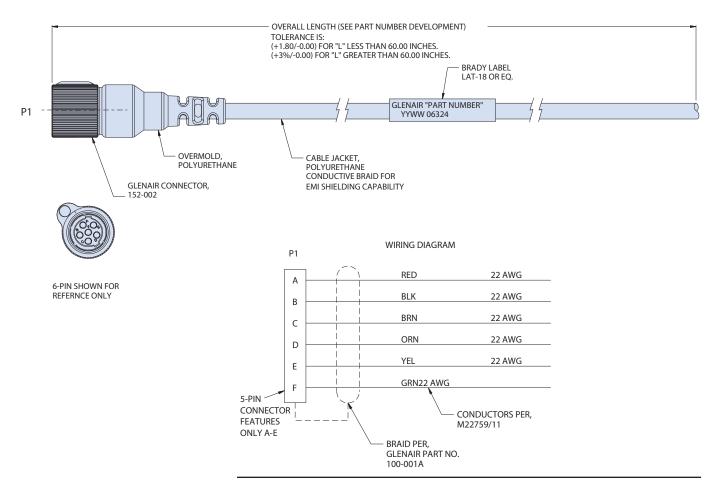


152-005

#### **OVERMOLDED AUDIO PLUG CORDSET, FACTORY TERMINATED PIGTAIL**



How To Order					
Sample Pa	rt Number	152-005	-6	-XX	
Series	HiPer 55116 Overmolded Cordset				
Pin Count	<b>5</b> - 5-Pin		-		
Pin Count	<b>6</b> - 6-Pin				
Length	Overall length in inches			_	



#### **NOTES**

100% electrical test, continuity, DWV (500 VAC sea level) and insulation resistance (200 Megohms minimum)

Unit Pack: 1 ea. 4 mil poly bag, heat-sealed. Includes dust cap.

Refer to part no. 152-002 for connector materials, finishes, and dimensions.

Wire corresponding to contact "F" to be trimmed and insulated with M23053/8 shrink tubing if 5-pin connector is specified.

## **In-Line Audio Receptacle**

152-004

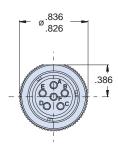


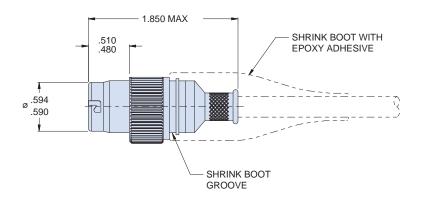
## SHORT-LENGTH IN-LINE RECEPTACLE WITH SHIELD TERMINATION PORCH, INTEGRATED OVERMOLDING/SEALING BOOT FEATURE AND NON-RIGID SPRING CONTACTS, CRIMP TERMINAL AND SOLDER CUP

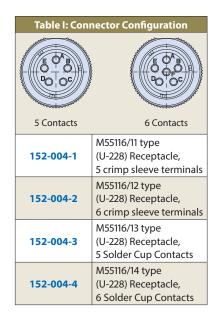
MATES WITH 152-001 AND 152-002, 151-001 AND 151-002, AND STANDARD MIL-DTL-55116 PLUGS



How To Order					
Sample Part Number 152-004		-1	-3		
Series	HiPer 55116 in-line recept	acle			
Connector Configuration (See Table I)	-1 = 5 pin, crimp -2 = 6 pin, crimp	-3 = 5 pin, solder cup -4 = 6 pin, solder cup			
Size (cable accommodation)	-1 = .165 ± .010 -2 = .228 ± .010 -3 = .250 ± .010	$-4 = .290 \pm .010$ $-5 = .320 \pm .010$		•	







#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

Seals: Ethylene propylene rubber Contacts: Copper alloy/gold plate

#### **NOTES**

Connectors are identified with Glenair's name, part number and date code

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 100 lbf. (Cable shield strength dependent)

## In-Line Audio Receptacle with crimp-removable contacts

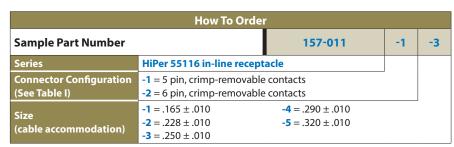


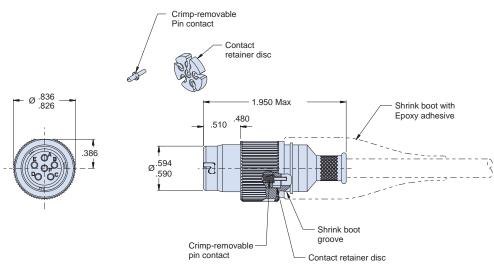
157-011

### SHORT-LENGTH IN-LINE RECEPTACLE WITH SHIELD TERMINATION PORCH, INTEGRATED OVERMOLDING/SEALING BOOT FEATURE AND CRIMP-REMOVABLE CONTACTS

MATES WITH 152-001 AND 152-002, 151-001 AND 151-002, AND STANDARD MIL-DTL-55116 PLUGS







## Table I: Connector Configuration

5 Contacts

6 Contacts

M55116/11 type
(U-228) Receptacle,
5 crimp-removable
contacts

M55116/12 type
(U-228) Receptacle,
6 crimp-removable
contacts

#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F Seals: Ethylene propylene rubber

Contacts: Copper alloy/gold plate

#### **NOTES**

Connectors are identified with Glenair's name, part number and date code

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 100 lbf. (Cable shield strength dependent)

Crimp-removable pin contacts and contact retainer disc are supplied loose. Contact Glenair for the crimp tool and locator.

## Overmolded In-Line Audio Receptacle Cordset

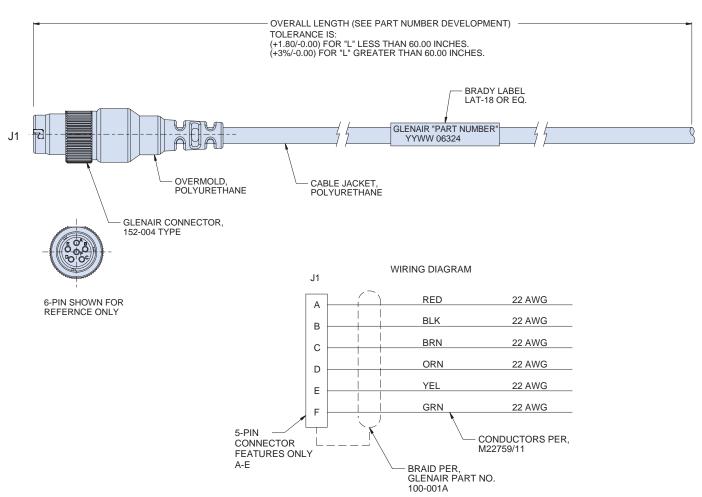


152-007

#### **OVERMOLDED IN-LINE AUDIO RECEPTACLE CORDSET, FACTORY TERMINATED PIGTAIL**



How To Order				
Sample Par	t Number	152-007	-6	-XX
Series	HiPer 55116 Cordset with	Wire Strain Relief		
Pin Count	<b>5</b> - 5-Pin		_	
Pin Count	<b>6</b> - 6-Pin			
Length	Overall length in inches			



#### **NOTES**

100% electrical test, continuity, DWV (500 VAC sea level) and insulation resistance (200 Megohms minimum)

Unit Pack: 1 ea. 4 mil poly bag, heat-sealed. Includes dust cap.

Refer to part no. 152-004 for connector materials, finishes, and dimensions.

Wire corresponding to contact "F" to be trimmed and insulated with M23053/8 shrink tubing if 5-pin connector is specified.

12

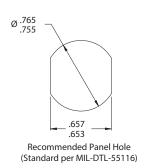


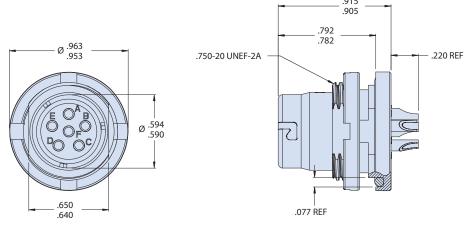
#### RADIO-MOUNT JAM NUT RECEPTACLE WITH NON-RIGID SPRING CONTACTS, SOLDER CUP

MATES WITH 152-001 AND 152-002, 151-001 AND 151-002, AND STANDARD MIL-DTL-55116 PLUGS



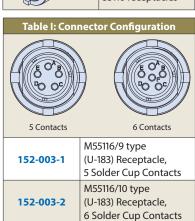
How To Order				
Sample Part Number		152-003	-1	
Series	eries HiPer 55116 radio-mount jam nut receptacle			
Connector Configuration (See Table I)	-1 = 5 pin, solder cup -2 = 6 pin, solder cup			





All dimensions are compliant with MIL-DTL-55116/9 and /10





#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

Seals: Ethylene propylene rubber Contacts: Copper alloy/gold plate

#### **NOTES**

Connectors are identified with Glenair's name, part number and date code.

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Cable pull-out force (unmated): 100 lbf. (Cable shield strength dependent)

### Radio Mount Audio Receptacle with PC tails

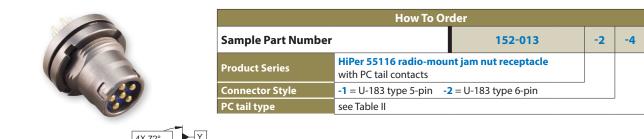


152-013

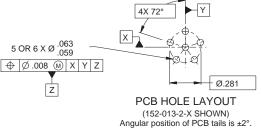
#### RADIO MOUNT JAM NUT RECEPTACLE WITH NON-RIGID SPRING CONTACTS, PC TAIL

MATES WITH 152-001 AND 152-002, 151-001 AND 151-002, AND STANDARD MIL-DTL-55116 PLUGS

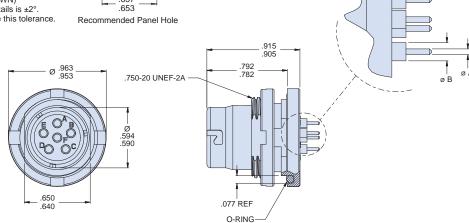
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.657



(152-013-2-X SHOWN) Angular position of PCB tails is ±2°. PCB layout will accommodate this tolerance.





Spanner tool with socket drive attachment for all Series 151 and 152 55116 receptacles

Tab	le II: PC	Tail Din	nension	s
Dash No.	ØΑ	ØΒ	С	D
-1	.040	.089	.115	.169
-2	.040			.437
-3	.028	.089	.188	.590
-4	.028	.089	.125	.194
-5	.028	.089	.208	.257
-6	.040			.110
-7	.028	.089	.150	.437
-8	.030			.120
-9	.028	.089	.140	.390
-10	.040			.744
-11	.030			.564
-12	.040	<i>—</i>	<i>—</i>	.110
-13	.040			.900
-14	.040			.257

#### **MATERIALS AND FINISHES**

Shell and nut: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

Seals: Ethylene propylene rubber Contacts: Copper alloy/gold plate Contact spring: CRES/passivated

#### **NOTES**

Connectors are identified with Glenair's name, part number and date code.

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water / 1 hr.)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

## Radio Mount Audio Receptacle with PC tails and 3 ground pins

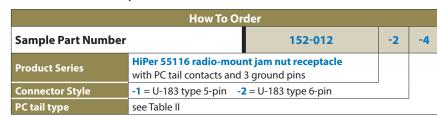


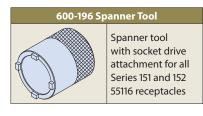
152-012

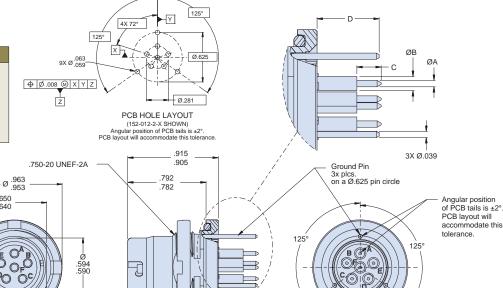
### RADIO MOUNT JAM NUT RECEPTACLE WITH NON-RIGID SPRING CONTACTS, PC TAIL, WITH 3 GROUND PINS

MATES WITH 152-001 AND 152-002, 151-001 AND 151-002, AND STANDARD MIL-DTL-55116 PLUGS









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Recommended Panel Hole

Tab	le II: PC	Tail Din	nension	S
Dash No.	ØΑ	ØΒ	С	D
-1	.040	.089	.115	.169
-2	.040		-	.437
-3	.028	.089	.188	.590
-4	.028	.089	.125	.194
-5	.028	.089	.208	.257
-6	.040	-	-	.110
-7	.028	.089	.150	.437
-8	.030		-	.120
-9	.028	.089	.140	.390
-10	.040			.744
-11	.030			.564
-12	.040	<del></del>	<del></del>	.110
-13	.040			.900
-14	.040			.257

#### **MATERIALS AND FINISHES**

Shell and nut: Stainless steel/PTFE-nickel plated (matte finish)

Inserts: Diallylphthalate resin type SDG-F

Seals: Ethylene propylene rubber Contacts: Copper alloy/gold plate Contact spring: CRES/passivated

#### NOTES

Connectors are identified with Glenair's name, part number and date code.

Meets interface configurations and IAW specifications of MIL-DTL-55116 Type C, and exceeds the following:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Contact resistance (mated): 15 milliohms max. average; 20 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water / 1 hr.)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

## Filtered Audio Receptacle, Radio Mount with Solder Cup Contacts



240-152-003

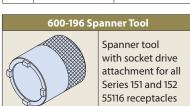
#### FILTERED RADIO-MOUNT JAM NUT RECEPTACLE WITH NON-RIGID SPRING CONTACTS, SOLDER CUP

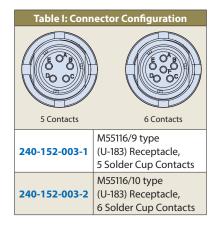
MATES WITH 152-001 AND 152-002, 151-001 AND 151-002, AND STANDARD MIL-DTL-55116 PLUGS

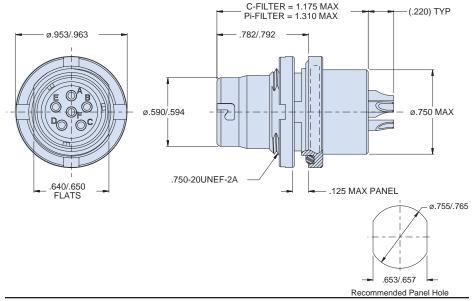


How To Order								
Sample Part Number		240-152-003	-1	ZMT	-C	A		
Series	HiPer 55116 filtered receptacle, solder cups							
Connector Configuration	-1 = 5 pin, solder cup							
(See Table I)	-2 = 6 pin, solder cup							
Shell / Nut Finish	ZMT = Nickel-PTFE							
Filter Type	C = C-Filter P = Pi Filter							
Filter Capacitance	See Table III							

Ti	Table III: Capacitor Array Code/ Capacitance Range						
Class	Pi - Circuit (pF)	C - Circuit (pF)					
Х	160,000 - 240,000	80,000 - 120,000					
Υ	80,000 - 120,000	40,000 - 60,000					
Z	60,000 - 90,000	30,000 - 45,000					
Α	38,000 - 56,000	19,000 - 28,000					
В	32,000 - 45,000	16,000 - 22,500					
С	18,000 - 33,000	9,000 - 16,500					
D	8,000 - 12,000	4,000 - 6,000					
E	3,300 - 5,000	1,650 - 2,500					
F	800 - 1,300	400 - 650					
G	400 - 600	200 - 300					
J	70-120	35-60					







#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)
Inserts: Diallylphthalate resin type SDG-F Seals: Ethylene propylene rubber
Contacts: Copper alloy/gold plate Contact Spring: CRES/passivated

#### **NOTES**

Connectors are identified with Glenair's name, part number and date code.

Meets interface configurations and IAW specifications of MIL-DTL-55116, and exceeds:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Filters meet the requirements of MIL-STD-2120

#### **ELECTRICAL PERFORMANCE**

Filter topology and capacitance: see Table III

Insulation resistance = 1000 Meghoms min at 200 VDC DWV = 500 VDC

Contact resistance (mated): 15 m $\Omega$  max average, 20 m $\Omega$  max Current rating: 0.5 Amp

## Filtered Audio Receptacle, Radio Mount with PC tails



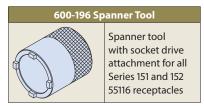
240-152-013

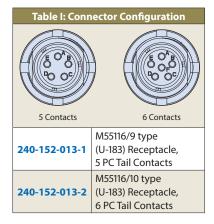
#### FILTERED RADIO-MOUNT JAM NUT RECEPTACLE WITH NON-RIGID SPRING CONTACTS, PC TAIL

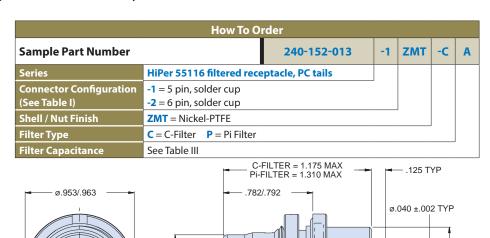
MATES WITH 152-001 AND 152-002, 151-001 AND 151-002, AND STANDARD MIL-DTL-55116 PLUGS

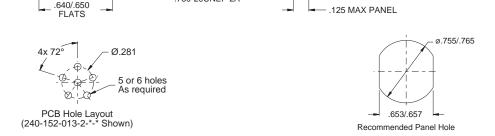


Ta	able III: Capacitor	Array Code/
	Capacitance	Range
Class	Pi - Circuit (pF)	C - Circuit (pF)
Х	160,000 - 240,000	80,000 - 120,000
Υ	80,000 - 120,000	40,000 - 60,000
Z	60,000 - 90,000	30,000 - 45,000
Α	38,000 - 56,000	19,000 - 28,000
В	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60









#### **MATERIALS AND FINISHES**

Shells and backshells: Stainless steel/PTFE-nickel plated (matte finish)
Inserts: Diallylphthalate resin type SDG-F Seals: Ethylene propylene rubber
Contacts: Copper alloy/gold plate Contact Spring: CRES/passivated

.750-20UNEF-2A

ø.590/.594

#### **NOTES**

Connectors are identified with Glenair's name, part number and date code.

Meets interface configurations and IAW specifications of MIL-DTL-55116, and exceeds:

Shell-to-shell conductivity: 2.5 milliohms max.

Cable shield-to-shell conductivity: 2.5 milliohms max.

Pressure sealing (mated & un-mated): IP68 (10 meters of standing water for 1 hour)

Salt atmosphere: 1,000 hours (MIL-STD-202, Method 101E)

Filters meet the requirements of MIL-STD-2120

#### **ELECTRICAL PERFORMANCE**

Filter topology and capacitance: see Table III

Insulation resistance = 1000 Meghoms min at 200 VDC DWV = 500 VDC

Contact resistance (mated): 15 m $\Omega$  max average, 20 m $\Omega$  max Current rating: 0.5 Amp

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## MIL-DTL-55116 QPL Audio Frequency Connectors



**Selection Guide** 

### MIL-DTL-55116 QPL SERIES 151 STANDARD VERSION CONNECTORS PLUS SPECIAL-PURPOSE DERIVATIVES AND CONNECTOR ACCESSORIES



Glenair offers a series of qualified MIL-DTL-55116 audio plugs and receptacles in all standard configurations: field-servicable plug, plug with overmold adapter, in-line receptacle with wire strain relief, and radio-mount jam nut receptacle. Our family of special-purpose derivatives features performance IAW M55116 specifications with options not available in the mil-spec, and a complement of connector accessories is available including adapters, dummy receptacles, and protective covers.

Series 151 MIL-DTL-55116 Selection Guide							
Part Description		Glenair P/N	Mil P/N, "U" designator	Mates with	Page		
	Audio plug, field-serviceable with wire strain relief and rigid contacts, crimp (COTS) and solder cup	151-001	M55116/1 – /4 U-229	152-003 HiPer 55116 type jam nut receptacle 152-004 HiPer 55116 type in-line receptacle 151-003 standard 55116 type jam nut receptacle			
	Audio plug with overmold adapter and rigid contacts, crimp (COTS) and solder cup	151-002	M55116/5 – /8 U-182	151-004 standard 55116 type in-line receptacle any M55116 receptacle	21		
	Radio-mount Jam Nut receptacle with non-rigid spring contacts	151-003	M55116/9 – /10 U-183	152-001 HiPer 55116 type plug 152-002 HiPer 55116 type plug	22		
	In-line receptacle with wire strain relief and non-rigid spring contacts, crimp (COTS) and solder	151-004	M55116/11 – /14 U-228	151-001 standard 55116 type plug 151-002 standard 55116 type plug any M55116 plug	23		

	Series 151 MIL-DTL-55116-Type Special Connectors, Adapters, and Accessories Selection Guide							
	Part Description		Corresponding Mil P/N, "U" designator	Mates with	Page			
	All-metal audio plug with wire strain relief	151-015	M55116/1 – /4 type U-229	152-003 HiPer 55116 type jam nut receptacle 152-004 HiPer 55116 type in-line receptacle	24			
	Audio plug with integral configurable 90° backshell	157-008	N/A	151-003 standard 55116 type jam nut receptacle 151-004 standard 55116 type in-line receptacle any M55116 receptacle	25			
	Radio-mount jam nut audio receptacle with PC tails	151-005   152-001 HiPer 55116 type plug   152-002 HiPer 55116 type plug   152-002 HiPer 55116 type plug		,, ,	26			
	Radio-mount jam nut audio receptacle with PC tails and 3 ground pins	151-010	U-183	151-002 standard 55116 type plug any M55116 plug	27			
The second	Audio connector feed-thru adapter, 55116 to D38999	157-005	N.A	Adapts any 151- or 152- series 55116 type plug or any M55116 plug to 09-35 D38999 Series III threaded plug.	28			
Elle	Audio connector feed-thru adapter, 55116 to Mighty Mouse 804	157-012	N/A	Adapts any 151- or 152- series 55116 type plug or any M55116 plug to 6-6 Series 804 Mighty Mouse plug	29			
	Dummy receptacle for series 151 and 152 plugs	657-098	N/A	Any 151- or 152- series plug Any M55116 plug	30			
0	Protective covers for series 151 and 152 connectors	667-374 667-355	N/A	Any 151- or 152- series connector Any M55116 connector	31			
	Rubber protective cover for series 151 and 152 receptacles	151-008	N/A	Any 151- or 152- series receptacle Any M55116 receptacle	32			

Rev. 06.20.19

# SERIES 151 MIL-DTL-55116 QPL MIL-DTL-55116 QPL Audio Frequency Connectors



## Performance Specifications

	Series 151 Performance Specifications	
Test Description	Performance Requirements/Specifications	Procedure Per MIL-DTL-55116 Or Other Standard
Dielectric withstanding voltage	No arcing or dielectric breakdown. Sea level: 500 V RMS between each contact, remaining contacts connected together, and to the shell. One minute dwell. High altitude: barometric pressure 3.4 in of mercury, 300 V RMS applied as described above.	4.7.1
Insulation resistance	Not less than 1000 megohms (not less than 100 megohms for unmated connectors following the immersion test). Measured between each contact, remaining contacts connected together, and to the shell.	4.7.2
Contact resistance	Terminal-to-terminal resistance of mated connector contacts shall not exceed 0.050 ohms.	4.7.3
Contact depression	Force required to depress contacts .080 inches from the normal plane of the contact face: Individual contacts: 1.25 lbs. – 1.75 lbs. 5 contacts: 6.25 lbs. – 8.75 lbs. 6 contacts: 7.5 lbs. – 10.5 lbs.	4.8.1
Air pressure	No evidence of leakage through the connector under 2.5 psi applied to contact face and rear of the plug or receptacle	4.8.2
Mating durability	3000 cycles with no mechanical damage. Dielectric, contact resistance and air pressure requirements as described above shall be met after 3000 mating cycles.	4.8.3
Contact retention	Individual contacts capable of withstanding at least 10 pounds axial load applied uniformly at one pound per second.	4.8.4
Compression	No distortion or damage that would affect form, fit, or function at 500 pounds applied to axis.	4.8.6
Pull test	Connectors shall withstand an abrupt axial force of 40 lbs. applied to the shell, and 25 lbs. applied to the cable with no visible damage, and lock and unlock without difficulty.	4.8.7
Bounce	Test on package testing table, operating at 284±2 rpm for 3 hours, circular-synchronous motion in a vertical plane with a one in dia. orbital displacement. Connectors show no evidence of cracking, breaking, or loosening. Connectors will meet electrical and leakage requirements following test.	4.9.1
Vibration	Plugs and receptacles mounted to vibration table, subjected to a simple harmonic motion with amplitude of 0.03 inch (0.06 maximum), frequency varied uniformly from 10-55 Hz., entire range traversed in approximately one minute, for two hours in each of three perpendicular directions. No evidence of cracking, breaking or loosening of parts, and the plug shall not become disengaged from the receptacle.	4.9.2 and MIL-STD-202G, method 201A
Drop	Connectors dropped six times at random from a height of six feet to two inch fir floor backed with concrete or rigid steel frame shall show no degradation in performance, no physical damage that would affect mateability, and no loose parts. Following the test, connectors shall meet electrical and air leakage requirements described above.	4.9.3
Temperature cycling	-55°C to +85°C, 5 cycles. Connectors are capable of mating and unmating during fifth cycle, and meet electrical and air leakage requirements described above.	MIL-STD-202, method 107, test condition A
Salt spray	48 hours, 5% solution, 35°C $\pm$ 3°C. No evidence of base metal corrosion.	MIL-STD-202, method 101E, test condition B
Humidity	50% mated and 50% unmated, cycled between 25°C at 80% – 98% relative humidity to 65°C at 90% – 98% relative humidity. Ramp time = 2.5 hrs. Dwell time = 3 hrs., 10 cycles, 240 hrs. total. Following test, connectors meet electrical and air leakage requirements described above.	4.9.6 and EIA-364-31, method IV (step 7a not required)
Water immersion	Plugs assembled to test cables and each other, and to receptacles, immersed in tap water to a depth of six feet for 48 hours. No evidence of leakage into the body of unmated connectors or into the body or contact-face area of mated connectors.	4.9.7

## Field-Serviceable Audio Plug with wire strain relief



151-001 • M55116/3 - /4 • U-229

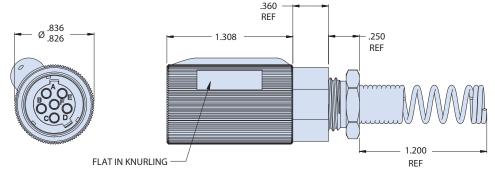


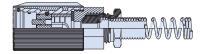
Series 151 MIL-DTL-55116 QPL audio plugs are designed for high-reliability, severe environment radio communications equipment. They are available in both 5 pin and 6 pin configurations, with either crimp sleeve (COTS) or solder cup terminals (QPL). All feature versatile wire strain relief to protect cable conductors from damage. Shells are made of nylon overmolded passivated stainless steel, contacts are gold plated copper alloy. Plug connector contacts are sealed in the unmated condition.





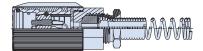






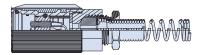






U-229 Plug, 5 Solder Cup Contacts









No. of Contacts	Contact Type	Ø Cable ± .010	MIL SPEC Part Number	Glenair Part Number	Mates With
		.165	N/A	151-001-1-1	152-003-1
	Culman	.228	N/A	151-001-1-2	152-004-1 152-004-3
5	Crimp (COTS)	.250	N/A	151-001-1-3	152-007-5
	(CO13)	.290	N/A	151-001-1-4	151-003-1 151-004-1
		.320	N/A	151-001-1-5	151-004-3
		.165	N/A	151-001-2-1	152-003-2
		.228	N/A	151-001-2-2	152-004-2
6	Crimp	.250	N/A	151-001-2-3	152-004-4 152-007-6
	(COTS)	.290	N/A	151-001-2-4	151-003-2
		.320	N/A	151-001-2-5	151-004-2 151-004-4
		.165	M55116/3-1	151-001-3-1	152-003-1
		.228	M55116/3-2	151-001-3-2	152-004-1
5	Solder Cup	.250	M55116/3-3	151-001-3-3	152-004-3 152-007-5
J	(QPL)	.290	M55116/3-4	151-001-3-4	151-003-1
		.320	M55116/3-5	151-001-3-5	151-004-1 151-004-3
		.165	M55116/4-1	151-001-4-1	152-003-2
6		.228	M55116/4-2	151-001-4-2	152-004-2
	Solder Cup	.250	M55116/4-3	151-001-4-3	152-004-4 152-007-6
	(QPL)	.290	M55116/4-4	151-001-4-4	151-003-2
		.320	M55116/4-5	151-001-4-5	151-004-2 151-004-4

### **Molded Audio Plug**

151-002 • M55116/7 - /8 • U-182





Series 151 MIL-DTL-55116 QPL molded audio plugs are designed for overmolding in cable cordsets for high-reliability, severe environment radio communications equipment, and are not field-serviceable. They are available in 5 pin and 6 pin configurations, with crimp sleeve (COTS) or solder cup (QPL) terminals. Shells are made of nylon overmolded passivated stainless steel, contacts are gold plated copper alloy. Plug connector contacts are sealed in the unmated condition.





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1.308 REF .095 REF FLAT IN KNURLING

U-182 Plug, **5 Crimp Contacts** 





**U-182 Plug, 6 Crimp Contacts** 





U-182 Plug, **5 Solder Cup Contacts** 





U-182 Plug, 6 Solder Cup **Contacts** 

No. of Contacts	Contact Type	Ø Cable ± .010	MIL SPEC Part Number	Glenair Part Number	Mates With
		.165	N/A	151-002-1-1	152-003-1
		.228	N/A	151-002-1-2	152-004-1
_	C.:	.250	N/A	151-002-1-3	152-004-3
5	Crimp	.290	N/A	151-002-1-4	152-007-5 151-003-1
		.320	N/A	151-002-1-5	151-004-1 151-004-3
		.165	N/A	151-002-2-1	152-003-2
		.228	N/A	151-002-2-2	152-004-2
_	Crimp	.250	N/A	151-002-2-3	152-004-4
6		.290	N/A	151-002-2-4	152-007-6 151-003-2
			.320	N/A	151-002-2-5
		.165	M55116/7-1	151-002-3-1	152-003-1
		.228	M55116/7-2	151-002-3-2	152-004-1
_	Solder Cup	.250	M55116/7-3	151-002-3-3	152-004-3
5		.290	M55116/7-4	151-002-3-4	152-007-5 151-003-1
		.320	M55116/7-5	151-002-3-5	151-003-1 151-004-1 151-004-3
6		.165	M55116/8-1	151-002-4-1	152-003-2
		.228	M55116/8-2	151-002-4-2	152-004-2
	6.11.6	.250	M55116/8-3	151-002-4-3	152-004-4
	Solder Cup	.290	M55116/8-4	151-002-4-4	152-007-6 151-003-2
		.320	M55116/8-5	151-002-4-5	151-003-2 151-004-2 151-004-4

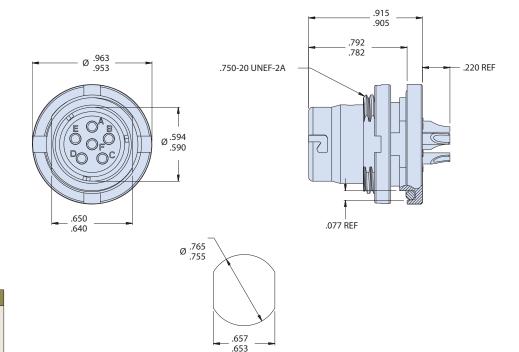
### Radio-Mount Jam Nut Audio Receptacle



151-003 • M55116/9 - /10 • U-183



Series 151 MIL-DTL-55116 QPL panel mount jam nut receptacles are designed for high-reliability, severe environment communications equipment. They are available in either a 5 pin or 6 pin configuration. Receptacles are equipped with solder cup spring terminals and a jam nut for panel mounting. Shells and nuts are made of passivated stainless steel, contacts are gold plated copper alloy. Receptacle connector contacts are sealed in the unmated condition.



Recommended Panel Hole







55116 receptacles

U-183 Jam Nut Receptacle, 5 Solder Cup Contacts





U-183 Jam Nut Receptacle, 6 Solder Cup Contacts

No. of Contacts	Contact Type	MIL SPEC Part Number	Glenair Part Number	Mates With
5	Solder Cup	M55116/9-0	151-003-1	152-001-1 152-001-3 152-002-1 152-002-3 152-005-5 152-006-5 151-001-1 151-001-3 151-002-1 151-002-3
6	Solder Cup	M55116/10-0	151-003-2	152-001-2 152-001-4 152-002-2 152-002-4 152-005-6 152-006-6 151-001-2 151-001-4 151-002-2 151-002-4

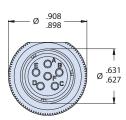
# SERIES 151 MIL-DTL-55116 QPL In-Line Audio Receptacle with wire strain relief

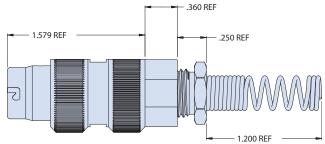


151-004 • M55116/13 - /14 • U-228



Series 151 MIL-DTL-55116 QPL in-line audio receptacles are designed for high-reliability tactical communications equipment. They are available in both 5 pin and 6 pin configurations, with either crimp sleeve (COTS) or solder cup (QPL) pogo pin terminals. All feature wire strain relief to protect cable conductors from damage. Shells are made of passivated stainless steel, contacts are gold plated copper alloy. Receptacle connector contacts are sealed in the unmated condition.







U-228 Receptacle, 5 Crimp Contacts





U-228 Receptacle, 6 Crimp Contacts





U-228 Receptacle, 5 Solder Cup Contacts





U-228 Receptacle, 6 Solder Cup Contacts



				1.2	00 REF
No. of Contacts	Contact Type	Ø Cable ± .010	MIL SPEC Part Number	Glenair Part Number	Mates With
		.165	N/A	151-004-1-1	152-001-1 152-001-3
		.228	N/A	151-004-1-2	152-002-1 152-002-3
5	Crimp	.250	N/A	151-004-1-3	152-005-5 152-006-5
		.290	N/A	151-004-1-4	151-001-1 151-001-3
		.320	N/A	151-004-1-5	151-002-1 151-002-3
		.165	N/A	151-004-2-1	152-001-2 152-001-4
		.228	N/A	151-004-2-2	152-002-2 152-002-4
6	Crimp	.250	N/A	151-004-2-3	152-005-6 152-006-6
		.290	N/A	151-004-2-4	151-001-2 151-001-4
		.320	N/A	151-004-2-5	151-002-2 151-002-4
		.165	M55116/13-1	151-004-3-1	152-001-1 152-001-3
	Solder Cup	.228	M55116/13-2	151-004-3-2	152-002-1 152-002-3
5		.250	M55116/13-3	151-004-3-3	152-005-5 152-006-5
		.290	M55116/13-4	151-004-3-4	151-001-1 151-001-3
		.320	M55116/13-5	151-004-3-5	151-002-1 151-002-3
		.165	M55116/14-1	151-004-4-1	152-001-2 152-001-4
6		.228	M55116/14-2	151-004-4-2	152-002-2 152-002-4
	Solder Cup	.250	M55116/14-3	151-004-4-3	152-005-6 152-006-6
		.290	M55116/14-4	151-004-4-4	151-001-2 151-001-4
		.320	M55116/14-5	151-004-4-5	151-002-2 151-002-4

## All-Metal Audio Plug with wire strain relief

### 151-015



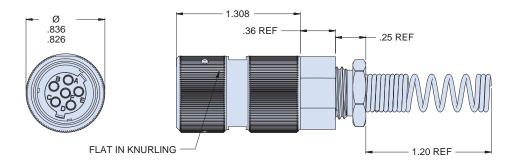


Series 151 MIL-DTL-55116 type all-metal audio plugs are designed for high-reliability, severe environment radio communications equipment. They are available in both 5 pin and 6 pin configurations, with either crimp sleeve (COTS) or solder cup terminals (QPL). All feature versatile wire strain relief to protect cable conductors from damage. Shells are made of passivated stainless steel, contacts are gold plated copper alloy. Plug connector contacts are sealed in the unmated condition.

















U-329 Plug, 5 Solder Cup Contacts





U-329 Plug, 6 Solder Cup Contacts



No. of Contacts	Contact Type	Ø Cable ± .010	MIL SPEC Part Number	Glenair Part Number	Mates With
		.165	N/A	151-015-1-1	152-003-1
		.228	N/A	151-015-1-2	152-004-1 152-004-3
5	Crimp (COTS)	.250	N/A	151-015-1-3	152-007-5
	(6015)	.290	N/A	151-015-1-4	151-003-1 151-004-1
		.320	N/A	151-015-1-5	151-004-3
		.165	N/A	151-015-2-1	152-003-2
	<u> </u>	.228	N/A	151-015-2-2	152-004-2 152-004-4
6	Crimp (COTS)	.250	N/A	151-015-2-3	152-007-6
	(CO13)	.290	N/A	151-015-2-4	151-003-2 151-004-2
		.320	N/A	151-015-2-5	151-004-4
		.165	N/A	151-015-3-1	152-003-1
		.228	N/A	151-015-3-2	152-004-1 152-004-3
5	Solder Cup (OPL)	.250	N/A	151-015-3-3	152-007-5
	(QFL)	.290	N/A	151-015-3-4	151-003-1 151-004-1
		.320	N/A	151-015-3-5	151-004-1
		.165	N/A	151-015-4-1	152-003-2
		.228	N/A	151-015-4-2	152-004-2 152-004-4
6	Solder Cup (QPL)	.250	N/A	151-015-4-3	152-007-6
	(QPL)	.290	N/A	151-015-4-4	151-003-2 151-004-2
		.320	N/A	151-015-4-5	151-004-2

# SERIES 151 MIL-DTL-55116 TYPE Audio Plug with 8-position configurable 90° cable entry

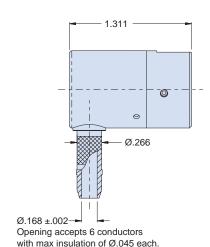


157-008

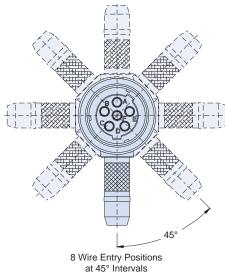


157-008 MIL-DTL-55116 type audio plugs feature 90° cable entry with an integrated, configurable 8-position backshell. 6 conductors accommodation with max  $\emptyset$  .045" insulation each. Available in both 5 pin and 6 pin configurations. Shells are made of passivated stainless steel, contacts are gold plated copper alloy. Plug connector contacts are sealed in the unmated condition.

How To Order					
Sample Part Number		157-008	-2		
Product Series	MIL-DTL-55116 type audio plug with 90° cable entry				
Connector Style	-1 = 5 pin -2 = 6 pin				





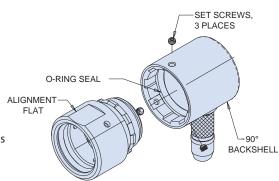


#### **CABLE ASSEMBLY INSTRUCTIONS FOR 157-008**

- 1. Strip the cable back 2.125" 2.375" In and cut back the shield to leave .750" .875" from the cable jacket.
- 2. Strip the end of the wires back .15" .19" and pre-tin the ends.
- 3. Slide the adhesive-lined shrink tubing over the cable to shrink later.
- 4. Insert the 5 or 6 wires into the ferrule and out the front of the backshell, guiding the shield over the ferrule to provide sufficient wire to exit the backshell.
- A short piece of shrink tubing may be applied to each of the individual wires to shrink after soldering. If used, slide shrink tubing down each wire before soldering.
- 6. Solder the pre-tinned wires to the appropriate contact position.
- 7. Shrink the individual shrink sleeves over the solder bucket and wires.
- Position the flat relative to the desired ferrule exit angle. Rotate the connector to form a service loop and push into the backshell until the alignment keys come close to the keyways. Then rotate the connector back to the desired angle and push into the backshell until seated.
- 9. Lock down each of the 3 set screws while holding the backshell tight against the plug connector. Apply Locktite Theadlocker 290 and torque the screws 3.2 In lbs.
- 10. Push the cable against the end of the ferrule and wind the constant force spring (3M CFS 59, not supplied) over the shield.

  Slide the shrink sleeve over the ferrule and constant force spring. Shrink down and observe that the adhesive exits on each end.

Your assembly is now complete.



EXPLODED VIEW

## Jam Nut Audio Receptacle with PC tails

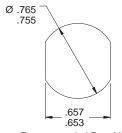




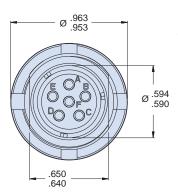


151-005 MIL-DTL-55116 type receptacles available in 5 or 6 pin configuration, equipped with PC tails. Shell and nut is stainless steel with passivated/light sand blasted finish IAW MIL-F-14072 type F300. Also available with Nickel-PTFE finish. Contacts are gold plated copper.

How To Order								
Sample Part Number	er	151-005	-2	-4	-ZMT			
Product Series	MIL-DTL-55116 type jam with PC tail contacts	MIL-DTL-55116 type jam nut audio receptacle with PC tail contacts						
Connector Style	-1 = U-183 type 5-pin -2 = U-183 type 6-pin							
PC tail type	see Table II							
Finish option	ish option -ZMT = Nickel-PTFE finish. Leave blank for standard passivated finish							







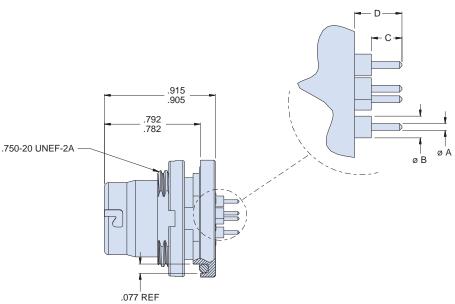
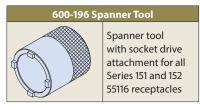


	Table II: PC Tail Dimensions							
Dash No.	Ø A Ø B		С	D				
-1	.040	.089	.115	.169				
-2	.040	<del></del>	-	.437				
-3	.028	.089	.188	.590				
-4	.028	.089	.125	.194				
-5	.028	.089	.208	.257				
-6	.040	-	-	.110				
-7	.028	.089	.150	.437				
-8	.030	<del></del>	-	.120				
-9	.028	.089	.140	.390				
-10	.040			.744				
-11	.030			.564				
-12	.040		<del></del>	.110				
-13	.040			.900				
-14	.040			.257				



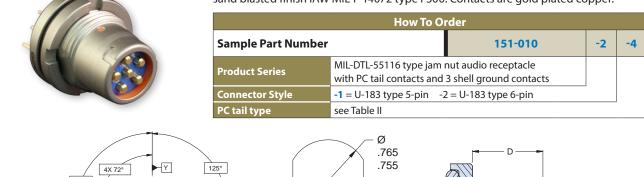
### SERIES 151 MIL-DTL-55116 TYPE Jam Nut Audio Receptacle with PC Tails and 3 ground pins

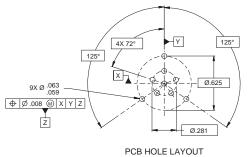


ØΑ

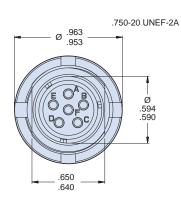
151-010

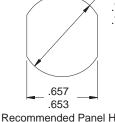




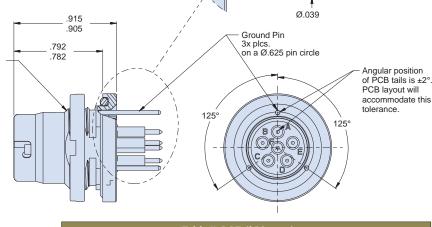


(151-010-2-X SHOWN)
Angular position of PCB tails is ±2°.
PCB layout will accommodate this tolerance



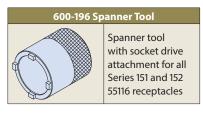


Recommended Panel Hole



.040

	Table II: PC Tail Dimensions								
Dash No.	ØΑ	Ø B	С	D					
-1	.040	.089	.115	.169					
-2	.040	<del>/</del>	<del></del>	.437					
-3	.028	.089	.188	.590					
-4	.028	.089	.125	.194					
-5	.028	.089	.208	.257					
-6	.040	<del></del>	<del></del>	.110					
-7	.028	.089	.150	.437					
-8	.030	<del>/</del>	<del></del>	.120					
-9	.028	.089	.140	.390					
-10	.040			.744					
-11	.030	,	,	.564					
-12	.040			.110					



.900

## Audio Connector Feed-Thru Adapter, 55116 to D38999



157-005

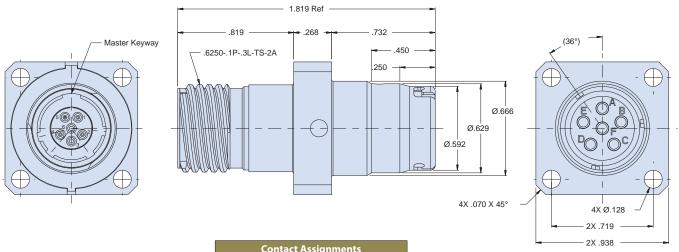






157-005 is a wall/panel-mount, square-flange feed-thru adapter. MIL-DTL-55116 type receptacle on one side, MIL-DTL-38999 Series III threaded plug on the other, shell size





Contact Assignments					
MIL-DTL-55116	MIL-DTL-38999				
Α	1				
В	2				
С	3				
D	4				
Е	5				
F	6				

# SERIES 151 MIL-DTL-55116 TYPE **Audio Connector Feed-Thru Adapter, 55116 to Mighty Mouse**

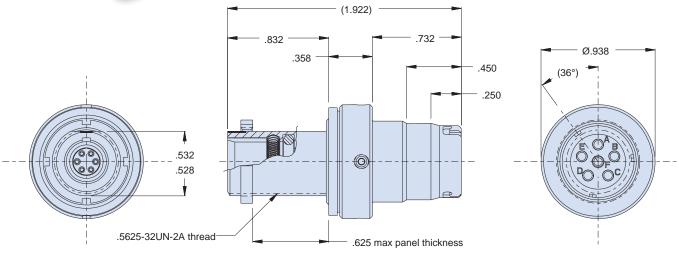


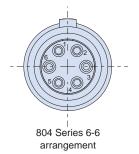
157-012



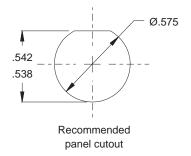
157-012 jam nut adapter mates to any M55116 /2, /4, /6, or /8 audio plug on one end, and a Series 804 Mighty Mouse push-pull connector with a 6-6 arrangement on the other, such as 804-001 or 804-002, Z1 material/finish code. Stainless steel passivated shell/jam nut, gold-plated copper contacts and copper alloy contact springs.







Contact Assignments						
MIL-DTL-55116	Series 804 Mighty Mouse					
Α	2					
В	1					
С	5					
D	4					
Е	3					
F	6					



## Dummy Receptacle for Series 151 and 152 Plugs

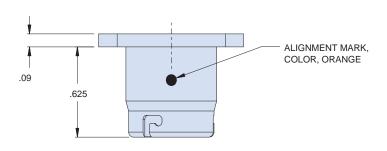


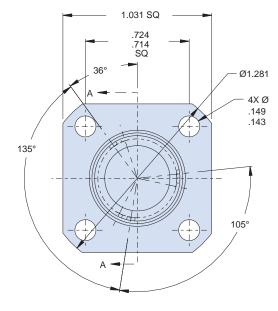
657-098

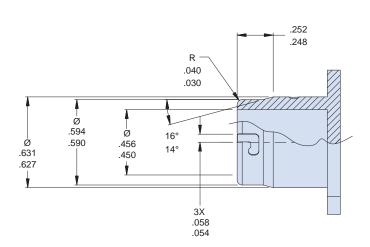


657-098 dummy receptacle mates with all Glenair series 151 and 152 MIL-DTL-55116 plugs. Stainless steel construction with black oxide finish per MIL-C-13924, Class 4.

How To Order					
Sample Part Number	657-098				
Product Series	y receptacle				







## Protective Covers for 151 and 152 Series Plugs/Receptacles

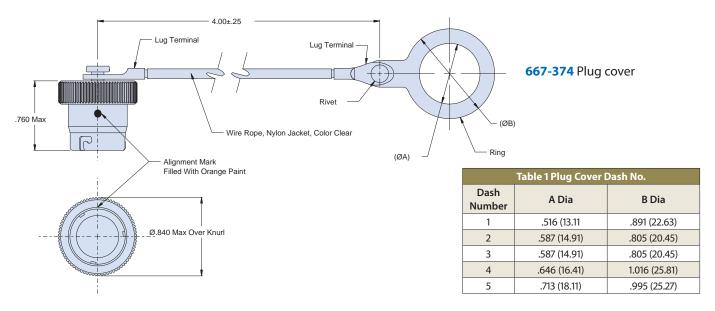


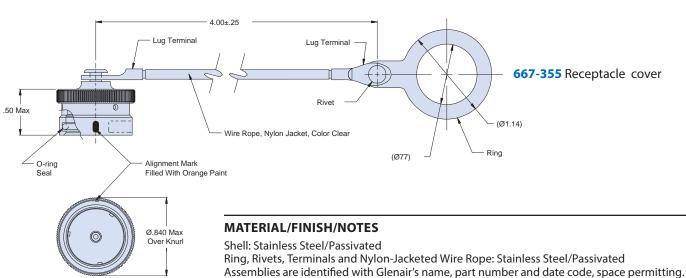
667-374 and 667-355



667-374/355 Protective Covers are designed for high-reliability, severe environment communications Series 151 MIL-DTL-55116 Type Connectors and meet the interface configurations and specifications of MIL-DTL-55116C.

How To Order							
Sample Part Number	667-374	ZMT	-3				
Cover Configuration	<b>667-374</b> = Plug cover <b>667-355</b> = Receptacle cover						
Finish	ZMT = Nickel Teflon over Passivated Stainless Steel (Omit for Stainless Steel, Passivated)						
Dash Number (Plug Cover only)	See Table I						





## Rubber Protective Cover for Sr. 151/152 Receptacles

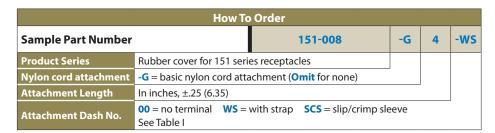


**151-008** 





151-008 Rubber Protective Covers are designed for high-reliability, severe environment communications Series 151 MIL-DTL-55116 Type receptacles, and meet the interface configurations and specifications of MIL-DTL-55116C.



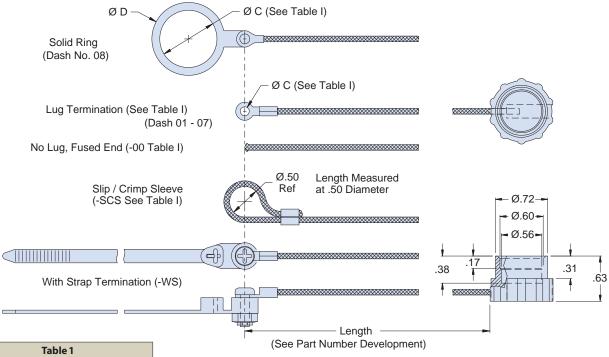


Table 1						
Dash Number	C Dia ±.010 (0.3)	D Dia ±.010 (0.3)				
01	.126 (3.2)	.30 (7.6)				
02	.140 (3.6)	.30 (7.6)				
03	.145 (3.7)	.30 (7.6)				
04	.156 (4.0)	.30 (7.6)				
05	.167 (4.2)	.30 (7.6)				
06	.188 (4.8)	.30 (7.6)				
07	.197 (5.0)	.30 (7.6)				
08	.766 (19.5)	1.14 (29.0)				

#### MATERIAL/FINISH/NOTES

Cover: Neoprene, no finish Cord: 1/16" diameter nylon Tie-Wrap Strap: black nylon

Screw and Locknut: CRES, passivated

Slip/Crimp Sleeve: copper/black chromate over zinc cobalt

Assemblies are identified with Glenair's name, part number and date code, space permitting.

Slip/Crimp Sleeve (-SCS) attachment provides an adjustable "slip-knot" style termination. Altarnatively, after positioning cord onto a cable, it can be crimped with pliers to attach permanently.

### **EMI/RFI Shield Termination**

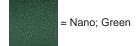


## Nano banding tool and bands for Series 151 and 152 connectors with banding platforms

#### THE 601-108 BAND-MASTER ATS® NANO TOOL WITH COUNTER FOR NANO BANDS



Color-coded tool handle:



Weighs 1.15 lbs., and is designed for nano flat .075" width clamping bands in a tension range from 20 to 50 lbs. Calibrate at 50 lbs.  $\pm$  3 lbs. for most shield terminations. Tool and band should never be lubricated.

		Band-Master ATS® Nano Band Selection					
	Len	Length Part Number Fits Dia					
Bands	in.	mm.	Flat	Pre-Coiled	in.	mm.	
Short Nano	6.0	152.4	601-500	601-501	.60	15.2	
Medium Nano	9.0	228.6	601-504	601-505	.94	23.9	
Long Nano	14.0	355.6	601-508	601-509	1.8	45.7	

Cable Pull Strength for Band-Master ATS® Nano Bands								
Name	Material Type	Band Width		Band Thick- ness		Tool Setting	Cable Pull	
		ln.	mm.	ln.	mm.		Strength	
Nano	300 SS	0.075	1.91	.009	.23	50 ±3 lbs	50 lbs*	

<sup>\*</sup> Nano Bands are work hardened to achieve higher cable pull force

#### Short Flat 601-500 Short Precoiled 601-501

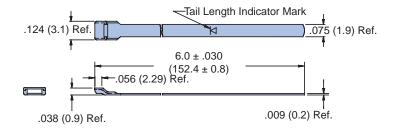
Nano Bands are precision constructed of work hardened, 300 Series SST passivate IAW AMS 2700. Short nano bands are 6.00 inches (152.4) in length and designed for use with the 601-108 Band-Master™ ATS hand banding tool or the 601-118 pneumatic banding tool. Bands should always be double wrapped and will accommodate diameters up to approximately .60 inches (15.2).

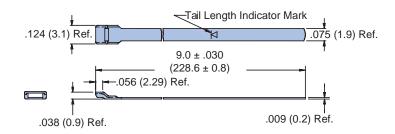
#### Medium Flat 601-504 Medium Precoiled 601-505

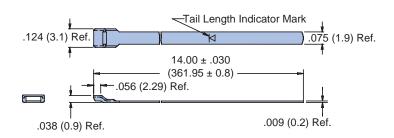
Nano Bands are precision constructed of work hardened, 300 Series SST passivate IAW AMS 2700. Medium nano bands are 9.00 inches (228.6) in length and designed for use with the 601-108 Band-Master™ ATS hand banding tool or the 601-118 pneumatic banding tool. Bands should always be double wrapped and will accommodate diameters up to approximately .94 inches (23.9).

#### Long Flat 601-508 Long Precoiled 601-509

Nano Bands are precision constructed of work hardened, 300 Series SST passivate IAW AMS 2700. Long nano bands are 14.25 inches (361.95) in length and designed for use with the 601-108 Band-Master™ ATS hand banding tool or the 601-118 pneumatic banding tool. Bands should always be double wrapped and will accommodate diameters up to approximately 1.8 inches (45.7).









## WARFIGHTER TOUGH STAR-PAN™

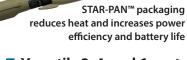
### Multiport power and data hubs for soldier personal area networks

Ruggedized soldier-worn electronics have revolutionized mission effectiveness. But the evolution of advanced radio communications, tactical video, night vision technologies, GPS/navigation, blue force tracking, personal computing and smart phones have added significant mission weight to the dismounted soldier ensemble. Battery power management for this broad range of electronic gear is a significant challenge in terms of mission time, weight and supply logistics. The Glenair STAR-PAN™ data hub and power distribution system enables soldiers to make the most of Personal Area Network (PAN) devices improving situational awareness, surveillance, intelligence and reconnaissance—while optimizing power monitoring, conditioning, and distribution performance.

Importantly, all STAR-PAN™ technologies, from field-proven Glenair connectors and cables to the low-profile hub enclosures are designed for optimal size, weight, and ruggedized mil-

> spec performance. Glenair STAR-PAN™ hubs feature integrated connectors and brazed construction: no bulky bolt-on connectors to vibrate loose, no tongue-and-groove construction leading to poor

environmental or EMC performance. Glenair's Tactical Interconnect Solutions team is backed



- Versatile 2, 4, and 6-port **USB** high-speed hub configurations
- Compatible with USB 1.1, USB 2.0, and SMBus
- Embedded power charging/conditioning electronics in all designs
- Smart power monitoring for longer mission life
- Robust circuit protection
- Sealed and IAW MIL-STD-810 harshenvironment standard

by six decades of proven, made-in-America interconnect industry performance in service of US and allied armed forces Export of STAR-PAN™ USB Hub/Power Distribution systems is restricted and/or controlled by U.S. Department of Commerce Export Administration

## STAR-PAN™

### Multiport USB Hub / Power **Distribution Technology for C4ISR Systems**



#### STAR-PAN™ HUB AND BOARD TECHNOLOGIES



Glenair multiport STAR-PAN™ USB hub and power distribution systems are engineered and manufactured under one ISO 9001 and AS9100 certified quality system in our 1,000,000 sq. ft Southern California factory. All components, from the I/O interconnects to the precision-machined enclosures are produced in-house by Glenair. The STAR-PAN™ system is designed for maximum compatibility with non-proprietary Ethernet\* and USB data interfaces, and is capable of smart charging and power distribution for the broad range of military batteries, as well as from Direct Current (DC) power sources including vehicle power, solar panels, kinetic energy devices and fuel cells.

\* Requires STAR-PAN™ Ethernet Adapter

#### STAR-PAN™ II

- Universal PAN compliant ports (up to two devices)
- 1 designated host/EUD port
- 1 designated radio peripheral port
- 1 expandable PAN port for up to two USB peripherals
- Hot-swappable power sources
- Radio-supplied backup power
- Glenair power port management
- Brazed construction, integrated connectors

Lightweight, non-reflective, power and data hub for tactical radios and peripheral devices





#### STAR-PAN™ IV

- Universal PAN compliant ports (up to four Devices)
- 1 designated host/EUD port
- 4 PAN receptacles for up to four peripherals
- Battery and auxiliary power source input
- Glenair power port management
- Smart battery charging from auxiliary power
- Up to 5A battery power per port, 5A system total
- Up to 3A 5 Volt VBUS power per port, 5A system total
- Brazed construction, integrated connectors

#### STAR-PAN™ VI

- Universal PAN compliant ports (up to six devices)
- 1 designated host/EUD port
- 2 designated radio peripheral ports
- 4 PAN receptacles for up to four peripherals
- Battery and auxiliary power source input
- Glenair power port management
- Radio-supplied backup power
- Smart battery charging from auxiliary power
- Up to 5A battery power per port, 5A system total
- Up to 3A 5 Volt VBUS power per port, 5A system total
- Brazed construction, integrated connectors

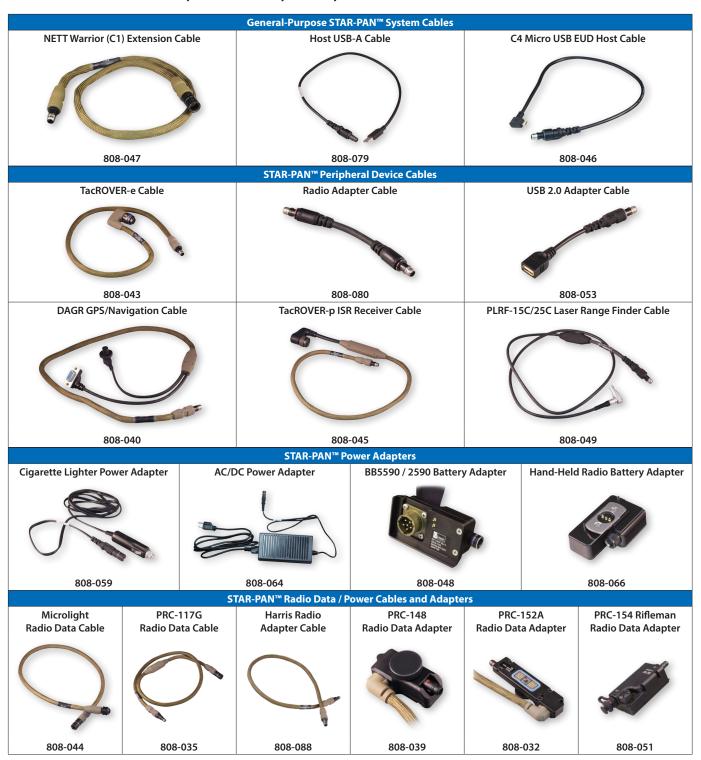


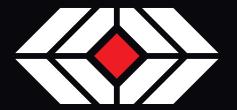
## STAR-PAN™



## System host, peripheral, radio, and hub charging cable assembly showcase

#### STAR-PAN™ SYSTEM HOST, PERIPHERAL, RADIO, AND HUB CHARGING CABLE ASSEMBLIES



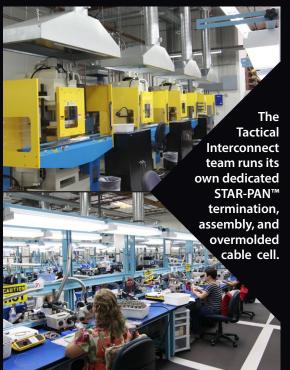


## TACTICAL INTERCONNECT SOLUTIONS

The Glenair Tactical Interconnect Solutions Team is backed by a company of scale with over 3000 technical employees, 1,000,000 sq. feet of manufacturing space, and over 60 years of experience designing and building interconnect solutions for military customers. Here is a quick tour of some of our core capabilities.

Our connector machining and box milling facilities are the largest in the interconnect industry, with ample capacity for both small and large production runs.









Just a small slice of the engineering talent at work at Glenair. In addition to their interconnect design work, the team generates acceptance test requirements for printed circuit boards as well as complete systems.



For more information contact Glenair at **818-247-6000** or visit our website at **www.glenair.com** U.S. CAGE code 06324



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# INTERCONNECT SOLUTIONS

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