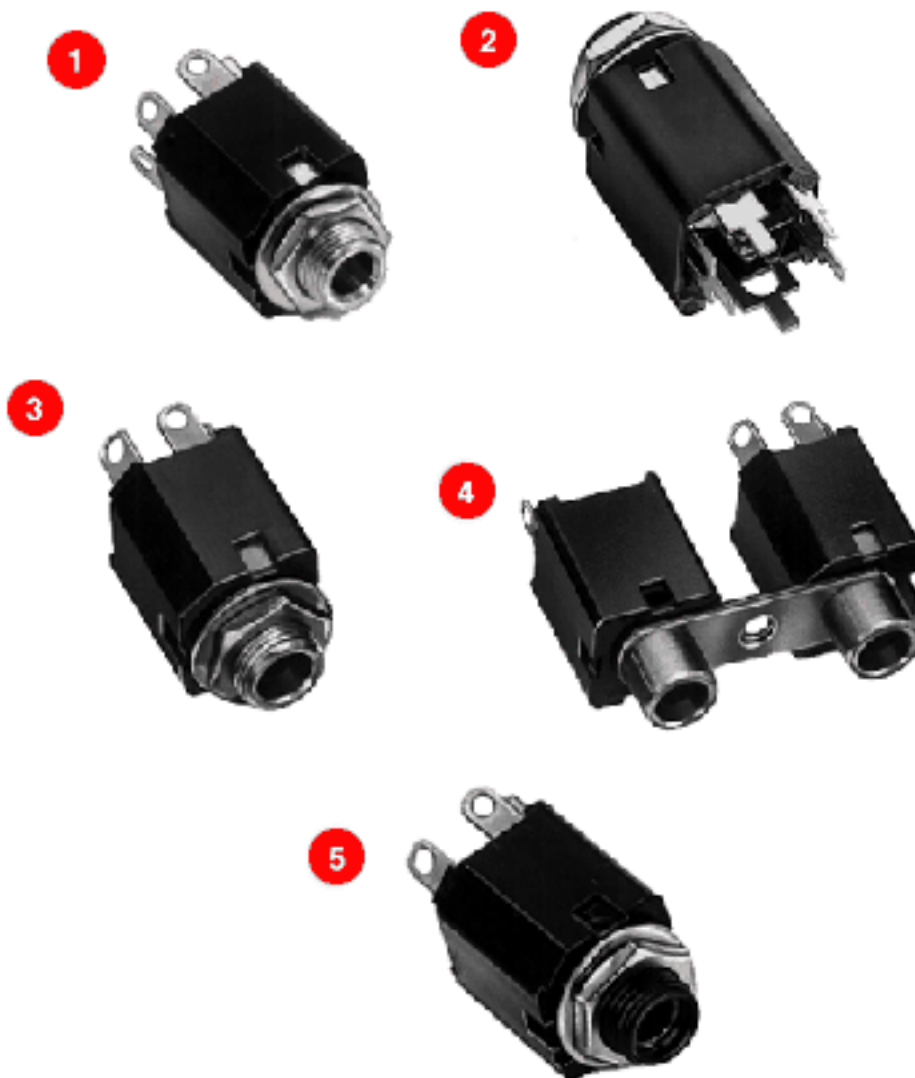


# Switchcraft®

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## 1/4" ENCLOSED TELEPHONE JACKS

### 1. Series M11\*

2. **Series MNS11\***
3. **Series MS11\***
4. **Twin Hi-D Jax**
5. **Series MN11\***

[click here to download a schematic drawing](#)

(you will need to have Adobe Acrobat installed on your system to do this)



Compactly constructed jacks permit direct cross-patching with Switchcraft, WEco and MIL-type telephone plugs and patch cords. Series M Hi-D Jax® offer a choice of solder lugs or PC terminals. Both insulated and metal bushings can be specified, as well as .21 inch inside diameter sleeves for narrow plug fingers. Maximum contact resistance is .1 ohm. Springs are made of a special gold-plated copper alloy. Welded cross bar gold alloy contacts are available on special order.

### **SERIES M-11\* Hi-D JAX®**

Two- and 3-conductor type mate with .25 inch diameter finger plugs. Tip and ring springs are gold-plated. Shunts (if used) have welded crossbar palladium contacts. Ring springs (where used with shunts) have welded crossbar palladium contacts. Tip springs (when used) do not have a contact welded to the spring. Bushing has 3/8-32-NEF-2 thread; locknut and flat washer for mounting are supplied.

### **SERIES MN-11\* Hi-D JAX®**

Same as Series M-11\* except threaded bushing is molded thermoplastic for insulated mounting. Continuous sleeve contact assures positive sleeve connection without exposed metal on front of panel.

### **SERIES M113 AND M114 Hi-D JAX®**

The versatile 3-conductor M113 and M114 feature springs which accept a wide variety of 1/4 inch plug designs. Self-aligning PC terminals allow for easier insertion into a printed circuit board. Also feature a metric thread mounting.

## **SPECIFICATIONS**

## **MATERIALS**

**Mounting Bushing:** Series M11\*, MS11\* - Nickel-plated copper alloy. Series MN11\*, MNS11\* - Molded thermoplastic.

**Housing:** Molded thermoplastic, UL 94V-0.

**Springs:** Copper alloy.

**Contacts (mil-type):** Tip and Ring Springs are gold-plated. Shuntsprings (where used) are welded crossbar palladium. Welded crossbar gold alloy contacts are available on special order.

**Contacts (commercial):** Tin-plated integral contacts.

**Sleeve Terminal:** Steel, tin-plated.

**Hardware:** Supplied with one **P10001** copper alloy, nickel-plated locknut and one **S10221** steel, nickel-plated washer.

## **MECHANICAL**

**Life:** 10,000 insertion/withdrawal cycles, minimum.

**Insertion/Withdrawal Forces:** Nominal plug retention on

2-conductor jack is .75 pounds with .5 pounds minimum.

Nominal plug retention on 3-conductor jack is 2 pounds

with 1.5 pounds minimum. With double tips, the nominal

is 1.5 pounds and 1 pound minimum.

**Maximum Recommended Mounting Torque:**

6 inch-lb. for thermoplastic bushing.

**Mounting Torque (for Spring Lock PC Terminal):**

8 inch-pound for thermoplastic bushings.

## **ELECTRICAL**

**Contact Resistance:** .020 ohms maximum (initial), .050 ohms maximum (after humidity, durability exposure).  
Per MIL-STD-202E.

**Insulation Resistance:** 10,000 M(ohm) minimum (initial), 1,000 M(ohm) minimum (after humidity).

**Dielectric Withstanding Voltage:** 500 V, 60 Hz (rms) AC.

**Contact Rating:** .25A, 48 VDC make and break, 3A carry only.

## **ENVIRONMENTAL**

**Thermal Range:** -55°C to +85°C (non-operating); -20°C to +65°C (operating).

**Thermal Shock:** Per MIL-STD 202, method 107.

**Humidity:** Per MIL-STD 202, method 106.

**Salt Spray:** Per MIL-STD 202, method 101.

## **SERIES MS11\* Hi-D JAX®**

3-conductor with .21 inch inside diameter sleeve. Mates with plugs having .206 inch diameter finger. Protects against accidental insertion of .25 inch diameter finger plugs. Gold-plated tip and ring springs. Welded crossbar palladium contacts on shunt springs standard. Bushing has 3/8-32-NEF-2 thread; locknut and flat washer for mounting are supplied.

## **ý MNS11\* Hi-D JAX®**

Same as Series MS11\* except bushing is molded thermoplastic.

## **ý M11\* Hi-D JAX®**

Two Series M11\* Hi-D Jax strapped on .625 inch centers. Mates with Switchcraft® Twin Plugs. 411, 412 and 413. MIL-type Littell-Plug® phone plugs, 420, 430 and 440 (2-conductor) and 482 and 483 (3-conductor) are also recommended for mating with this

series.

### ý MNS11\* Hi-D JAX®

Same as Twin M11\* except with insulated bushing. Mounting centers larger than .625 inch and unthreaded bushings are available on special order.

### ý MS11\* Hi-D JAX®

Mates with Switchcraft 415 Twin-Plug® plug, which has one .25 inch diameter finger and one .206 inch diameter finger. Also mates with MIL- type plugs listed in this section.

| <b>2-CONDUCTOR</b>             |                             |   |                    |                             |
|--------------------------------|-----------------------------|---|--------------------|-----------------------------|
| <b>Part Number Solder Lugs</b> | <b>Part Number PC Terms</b> | <b>Description</b>                                  | <b>Schematic**</b> | <b>Typical Mating Plug*</b> |
| M111                           |                             | .25 inch I.D. sleeve metal bushing.                 | I                  |                             |
| MN111                          |                             | .25 inch I.D. sleeve molded thermoplastic bushing.  |                    |                             |
| ý                              | ý                           | .25 inch I.D. sleeve, metal bushing.                | III                |                             |
| MN112A                         | ý                           | .25 inch I.D. sleeve, molded thermoplastic bushing. |                    |                             |
| M113E                          |                             |   | IX                 |                             |
| MN113E                         |                             | .25 inch I.D. sleeve, molded thermoplastic bushing. |                    |                             |

ý Special Order only; contact Switchcraft.

\* Other mating plugs are contained in this plug section.

\*\* See pages 65 and 66.

### **MILITARY Hi-D JAX® PART NUMBERING SYSTEM**

| <b>Mating Plug Option</b> | <b>Bushing Option</b> | <b>Series</b> | <b>Circuitry</b> | <b>Suffix Options</b> |
|---------------------------|-----------------------|---------------|------------------|-----------------------|
|                           |                       |               |                  |                       |

|                          |   |                   |             |   |
|--------------------------|---|-------------------|-------------|---|
| Accepts 1/4"<br>MIL plug | Blank - 1/4"<br>Commercial Jack                                 | 11 - Hi-D<br>Jax® | 1 - I       | PC - PC<br>Terminals  |
|                          | L - .375" Long Bushing  |                   | 2A - III    | PCS - Snap Lock<br>PC Terminals                                       |
|                          | N - Insulated Bushing   |                   |             | 2B - IV   |
|                          | NL - Insulated Bushing<br>and .375" Long Bushing                | 3 -               | V M-        | M-Reshaped<br>Springs accept<br>wide variety of<br>1/4" plug designs. |
|                          | NS - Insulated Bushing<br>and<br>Accepts .206 Diameter<br>Plugs |                   | 3B - VII    |   |
|                          | S - Accepts .206<br>Diameter Plugs                              |                   | 3D - VI     |   |
|                          |   |                   | 3E - IX     |   |
|                          |   |                   | 3F - XXVIII |   |
|                          |   |                   | 4B - XII    |   |

See page 92 for Commercial Hi-D Jax® part numbering system.

### 3-CONDUCTOR

| Part Number | Part Number | Description   | Schematic <sup>1</sup> | Typical Mating<br>Plug <sup>2</sup> |
|-------------|-------------|---|------------------------|-------------------------------------|
| Solder Lugs | PC Terms    |   |                        |                                     |
| M112B       | ý           | .25 inch I.D. sleeve metal<br>bushing.                    | IV                     | 482                                 |
| ML112B      | -           | .25 inch I.D. sleeve, .375<br>inch long metal bushing.    |                        |                                     |
| MN112B      | ý           | .25 inch I.D. sleeve,<br>molded thermoplastic<br>bushing. |                        |                                     |
| MNL112B     | -           | .25 inch I.D. sleeve .375<br>inch long metal bushing.     |                        |                                     |
| MNS112B     | -           | .21 inch I.D. sleeve,<br>molded thermoplastic<br>bushing. |                        | 480, 484                            |

|        |           |   |     |     |
|--------|-----------|---|-----|-----|
| MS112B | MS112BPC  | .21 inch I.D. sleeve,metal bushing.                                 |     |     |
| M113B  | -         | .25 inch I.D. sleeve,metal bushing.                                 | VII | 482 |
| MN113B | MN113BPC  | .25 inch I.D. sleeve, molded thermoplastic bushing.                 |     |     |
|        | M113BPC1M | .25 inch I.D. sleeve, molded thermoplastic bushing, metric hardware |     | 482 |

**3-CONDUCTOR**

| Part Number | Part Number | Description  | Schematic <sup>1</sup> | Typical Mating Plug <sup>2</sup> |
|-------------|-------------|--|------------------------|----------------------------------|
| Solder Lugs | PC Terms    |  |                        |                                  |
| MNL113B     | --          | .25 inch I.D. sleeve, .375 inch long metal bushing.  | VII                    | 482                              |
| MNS113B     | --          | .21 inch I.D. sleeve, molded thermoplastic bushing.  |                        | 480, 484                         |
| MS113B      | --          | .21 inch I.D. sleeve, metal bushing.                 |                        |                                  |
| M114B       | ý M114BPC   | .25 inch I.D. sleeve, metal bushing.                 |                        | XII                              |
|             | M114BPC1M   | .25 inch I.D. sleeve, metal bushing,metric hardware. |                        |                                  |
| MN114B      | ý MN114BPC  | .25 inch I.D. sleeve, molded thermoplastic bushing.  |                        |                                  |
| MNS114B     | --          | .21 inch I.D. sleeve, molded thermoplastic bushing   | 480, 484               |                                  |
| ý MS114B    | ý MS114BPC  | .21 inch I.D. sleeve, metal bushing                  |                        |                                  |

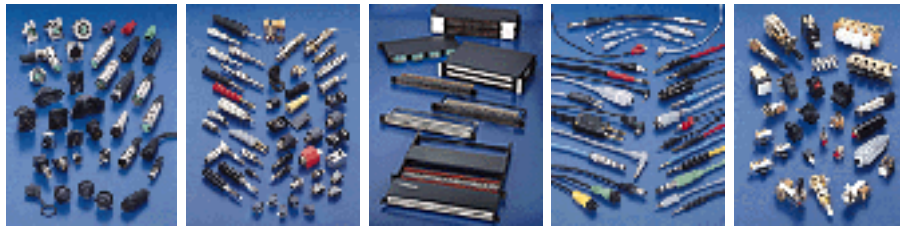
ý Special order only; contact Switchcraft for price and delivery.

1 See schematics, pages 65 and 66.

2 Number(s) specified are not necessarily the only mating plug(s). See Plugs Section.

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