

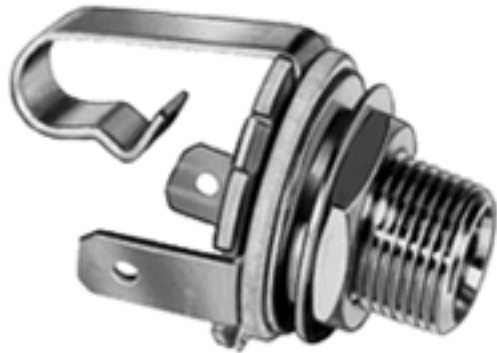
# Switchcraft®

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1



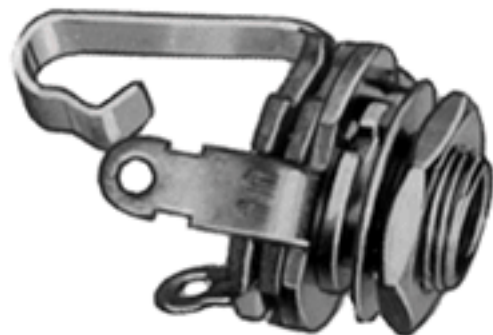
2



3



4



## 1/4" PHONE JACKS

- 1. 14B
- 2. FAL-11 .205 FASTON TERMINAL
- 3. PC-12A
- 4. 11

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

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

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



## **Littel-Jax® COMMERCIAL PHONE JACKS**

### **2- and 3-CONDUCTOR**

Littel-Jax phone jacks mate with standard commercial phone plugs and are available with .25 inch and .21 inch inside diameter bushings.

## **MIL Littel-Jax® PHONE JACKS**

### **2- and 3-CONDUCTOR MIL-SPEC, MIL-J-641 (E)**

MIL jacks mate with MIL-type phone plugs with .25 inch (6.35mm) or .21 inch (5.34mm) diameter bushings. Numbers C11 and C12B have a non-turn locating pin which keys the jack to the mounting surface. For low contact resistance applications, jack number C12A has fine silver contacts on shunts and tip springs.

## **MOUNTING**

**Chassis/Panel:** See Mounting Data drawing below; small

hole is required only for jacks numbers C11 and C12B

with non-turn locating pin.

**Maximum Panel Thickness:** .156 inch (4mm) for standard

.276 inch (7mm) long bushing; .25 inch (6.35mm) for .375

inch (9.5mm) long bushing.

**NOTE:** For panels thicker than .25 inch see Thick Panel

Phone Jax.

**Insulated Mount:** See drawing. S1028 flatwasher and Part Number S1029 shoulder washer must be

ordered separately for mounting in .437 inch diameter hole.

**NOTE:** See Hi-D Jax® for jack specifically designed

for insulated mounting without additional washers.

**PC Board Mounting:** See Recommended PC Board Layout

drawing below for jacks with PC terminals. Recommended

PC board thickness is .062 inches.

**Mounting Centers:** 1.188 inch (30mm) recommended.

Centers may vary with jack selected, for example, Number

11 mounts on .813 inch (20.6mm) and 14B mounts on 1.125 inch (28.6mm) minimum centers.

| PREFIX OPTIONS                                        | SERIES             | CIRCUITRY |
|-------------------------------------------------------|--------------------|-----------|
| Blank- 1/4" Commercial                                | Jack 1-Littel Jax® | 1- I      |
| C- Accepts Mill Plug                                  |                    | 2A- III   |
| FA- .205" Faston Terminals                            |                    | 2B- IV    |
| FAL- .205" Faston Terminals<br>and .375" Long Bushing |                    | 3- V      |
| L- .375" Long Bushing                                 |                    | 3A- VI    |
| PC- PC Terminals                                      |                    | 3B- VII   |
| S- Accepts .206 Diameter Plugs                        |                    | 3E- IX    |
|                                                       |                    | 4B- XII   |

#### TWO CONDUCTOR PART NUMBERS

| Part Number | Description | Jack Schematic <sup>1</sup> | Typical Mating Plug |
|-------------|-------------|-----------------------------|---------------------|
|-------------|-------------|-----------------------------|---------------------|

|                                                                                               |                                                   |     |      |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------|-----|------|
| 11                                                                                            | Open circuit                                      | I   | 250  |
| C11                                                                                           | MIL Number M641/6-1                               | I   | 440  |
| FA11                                                                                          | .205 inch FASTON terminal                         | I   | 250  |
| FAL11                                                                                         | .375 inch long bushing<br>.205 FASTON terminal    | I   | 250  |
| L11                                                                                           | .375 inch long bushing                            | I   | 250  |
| 12A                                                                                           | Tip shunt                                         | III | 250  |
| C12A                                                                                          | MILNumber M641/12-1                               | III | 440  |
| L12A                                                                                          | .375 inch long bushing                            | III | 250  |
| PC12A                                                                                         | PC board mount                                    | III | 250  |
| 13                                                                                            | Isolated "make" circuit                           | V   | 250  |
| 13A                                                                                           | Transfer circuit                                  | VI  | 250  |
| 13E                                                                                           | Isolated "break" circuit                          | IX  | 250  |
| <b>THREE CONDUCTOR PART NUMBERS</b>                                                           |                                                   |     |      |
| 12B                                                                                           | Double open circuit                               | IV  | 267  |
| L12B                                                                                          | .375 inch long bushing                            | IV  | 267  |
| C12B                                                                                          | MIL number M641/5-1,<br>.210 inch inside diameter | IV  | 480  |
| 13B                                                                                           | Tip shunt                                         | VII | 267  |
| 14B                                                                                           | Double closed circuit                             | XII | 267  |
| <b>PART NUMBERS (.210 inch inside diameter bushing)</b>                                       |                                                   |     |      |
| S11                                                                                           | 2 conductor                                       | I   | S250 |
| S12A                                                                                          | 2 conductor                                       | III | S250 |
| S12B                                                                                          | 3 conductor                                       | IV  | S267 |
| S13B                                                                                          | 3 conductor                                       | VII | S267 |
| 1 Refer to jack schematics on pages 65 and 66. Other circuits are available; contact factory. |                                                   |     |      |

## SPECIFICATIONS

### MECHANICAL

**Life:** Commercial Jacks - 10,000 insertion/withdrawal

cycles, minimum.

Military Jacks - 20,000 insertions/withdrawals, minimum.

**Mechanical Shock:** Military Jacks - Per MIL-STD 202,

method 213, Test Condition H (75g).

**Vibration:** Military Jacks - Per MIL-STD-202, method 213,

(10-55 Hz).

**Insertion/Withdrawal Forces:** (see charts below)

| Commercial Jacks       |       |       |
|------------------------|-------|-------|
| Plug Diameter (inches) | .210  | .250  |
| Insertion (maximum)    | 7 lb. | 7 lb. |
| Withdrawal (minimum)   | 1 lb. | 1 lb. |

| Military Jacks       |       |       |         |
|----------------------|-------|-------|---------|
| Part Number          | C11   | C12A  | C12B    |
| Insertion (maximum)  | 6 lb. | 7 lb. | 6 lb.   |
| Withdrawal (minimum) | 2 lb. | 3 lb. | 1.5 lb. |
| Withdrawal (maximum) | 7 lb. | 7 lb. | 5 lb.   |

## ELECTRICAL

**Contact Resistance:** Commercial Jacks - .030 ohms

maximum (initial), .050 ohms maximum (after humidity,

durability exposure). Per MIL-STD-202E.

Military Jacks - .010 ohms maximum (initial), .020 ohms

maximum (after life), .10 ohms maximum (after salt spray).

**Insulation Resistance:** Commercial Jacks - 10,000 M(omega)

minimum (initial), 1,000 M(omega) minimum (after humidity).

Military Jacks - 10,000 M(omega) minimum (initial), 1,000 M(omega)

minimum (after humidity, durability exposure).

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

**Contact Rating:** 1 A, 25 V DC.

## **ENVIRONMENTAL**

**Thermal Range:** Commercial Jacks; -55°C to +85°C (non-

operating); -20°C to +65°C (operating).

Military Jacks; -55°C to +85°C (non-operating); -40°C to

+65°C (operating).

**Thermal Shock:** Commercial Jacks - Per MIL-STD 202,

method 107. Military Jacks - Per MIL-STD 202,  
method 107.

**Humidity:** Commercial Jacks - Per MIL-STD 202,

method 106. Military Jacks - 0% to 95% operating and  
non-operating.

**Salt Spray:** Commercial Jacks - Per MIL-STD 202,

method 101. Military Jacks - Per MIL-STD 202, method  
101 (48 hours).

**Moisture Resistance:** Military Jacks - Per MIL-STD 202,

method 106 (240 hours).

## MATERIAL

**Mounting Bushing:** Nickel-plated copper alloy.

**Insulation:** Rigid plastic.

**Springs:** Special copper alloy. Integral contacts are standard in the isolated switching circuits; fine silver contacts in C12A switching circuit.

**Sleeve Terminal:** Copper alloy.

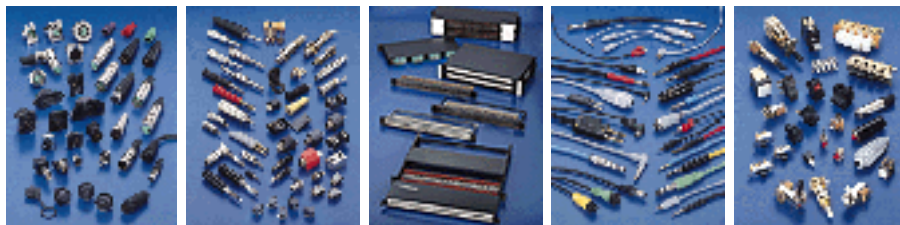
**Hardware:** Supplied with one Number **P10001** copper alloy nickel-plated hex nut, and one Number **S1022** steel nickel-plated washer - except copper alloy nickel-plated washer

Number **S10451** supplied on C11, C12A and C12B.

\* Commercial jacks feature integral contacts. Integral contacts should not be used where low contact resistance is a requirement.

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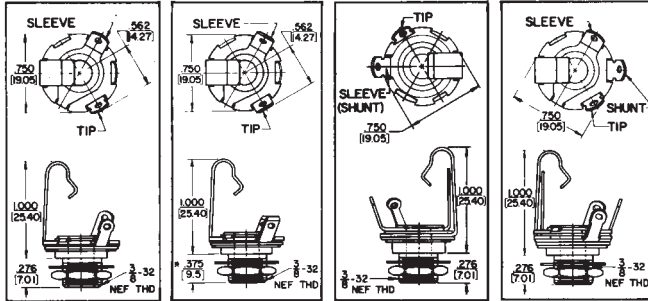


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## 1/4" PHONE JACKS

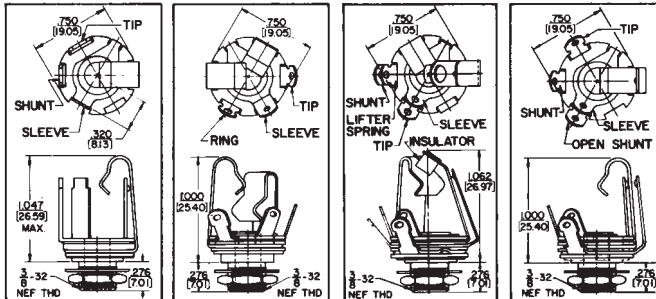
### Littel Jax® Jacks



**11, L-11, C-11, S-11**  
FA-11, FAL-11  
\*.276 in. for No. FA-11

**12**

**12A, L-12A,  
S-12A, SC-12A**

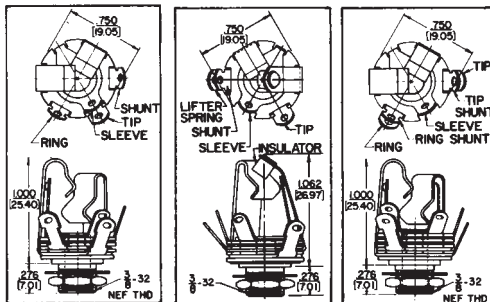


**PC-12A**

**12B, C-12B,  
S-12B, SC-12B**

**13**

**13A**



**13B, S-13B**

**13E**

**14B**