

### NOTES to Figures 6.2 and 6.3:

1. All plugs shall be capable of meeting the requirements of the plugs go and no-go gauges.
2. Section BB applies to any jack contact receiving slot that does not contain a plug contact.
3. The major cordage cross section should be 2.5400 mm (0.100 in) max. thick by 5.0800 mm (0.200 in) max. wide, with rounded corners. It should exit the plug on the plug centerline. Other cordage configurations are permitted but may inhibit the special features of some network jack enclosures.
4. The standard plug length shall be 11.6840 mm (0.460 in) max. Plugs may be made longer than standard or adapted for direct use on special cords, adapters with out cordage, and on apparatus or equipment subject to the limitations described in section 6.1.1. Plugs longer than standard could inhibit the special features of some network jack enclosures.
5. A 12.0396 mm (0.474 in) minimum tab length shall be required. A maximum tab length should be no longer than 13.2080 mm (0.520 in). Longer tabs may be used with the same limitations as described in Note 4.
6. To obtain maximum plug guidance when 6-position plugs are inserted in 8-position jacks, the front plug nose should be extended to the 2.3368 mm (0.092 in) maximum.
7. These dimensions shall apply to the location of jack contact receiving slots. Plug contacts should be centered axially in these slots.

94

TIA-968-A

8. The 6.0452/6.1722 mm (0.238/0.243 in) dimension ~~normally~~ shall be used to obtain maximum plug guidance in jacks with more than 6 conductors. ~~A tolerance range of 5.9182/6.1722 mm (0.233/0.243 in) is permitted, but could create targeting problems in 8-position jacks.~~
9. The center rib centerline shall be coincident with the plug width 9.6520 mm (0.380 in) ref. center line within +/- 0.0762 mm (+/- 0.003 in).

### NOTES to Figure 6.4:

1. The plug/jack contact interface shall be hard gold to hard gold and shall have a minimum gold thickness of 1.2700  $\mu\text{m}$  (0.050 mil) on each side of the interface. The minimum contact force should be 0.98 N (100 g). The configuration of the jack contact should prevent jack contacts from being damaged during insertion of a compatible 6 position plug into jacks. In such case, the minimum contact force should be maintained. Any non-gold contact material shall be compatible with gold and provide equivalent contact performance. A smooth, burr-free surface shall exist at the interface in the area shown.
2. The jack contact design is based upon 0.4572 mm (0.018 in) spring temper phosphor bronze round wire in the modular plug blade and

jack contact interface. Other contact configurations that provide contact performance equal to or better than the preferred configurations and do not cause damage to the plug or jack are permitted. The jack contact width should be 0.44958/0.49530 mm (0.0177/0.0195 in). Deviations from the preferred jack contact width are permitted for round contacts as well as noncircular cross sectional shapes but they shall be compatible with existing plug configurations. The requirements of Note 1 shall apply to all possible contact areas.

3. The configuration of the plug contact and the front plastic of the plug shall prevent jack contacts from being damaged during plug insertion into jacks.

4. This nominal contact angle should be provided between plugs and jacks with the plug latched into the jack. This angle shall be less than 24° to avoid loss of electrical contact between the plug and jack. The nominal contact angle shall be greater than 13° to avoid interference between jack contacts and the internal plastic in the plug.

5. To avoid loss of electrical contact, the dimension from datum B to the highest point "X" should be 5.0800 mm (0.200 in) max. A dimension greater than 5.3594 mm (0.211 in) could result in loss of electrical contact between plugs and jacks. The 5.3594 mm (0.211 in) max. shall be considered an absolute maximum.

6. The 24° min. angle applies only to plugs with front plastic walls higher than 4.8260 mm (0.190 in).

### **Figure 6.12 8-Position Unkeyed plug, Plug/Jack Contact Specification**

#### **NOTES:**

1. The plug/jack contact interface shall be hard gold to hard gold and shall have a minimum gold thickness of 1.2700  $\mu\text{m}$  (0.050 mil) on each side of the interface. The minimum contact force shall be 0.98 N (100 g). Any non-gold contact material shall be compatible with gold and provide equivalent contact performance. A smooth, burr-free surface shall exist at the interface in the area shown.

2. The jack contact design is based upon 0.4572 mm (0.018 in) spring temper phosphor bronze round wire in the modular plug blade and jack contact interface. Other contact configurations that provide contact performance equal to or better than the preferred configurations and do not cause damage to the plug or jack are

106

TIA-968-A

permitted. Contact width should be 0.44958/0.49530 mm (0.0177/0.0195 in). Deviations from the desirable jack contact width are permitted for round contacts as well as noncircular cross sectional shapes but they shall be compatible with existing plug configurations. The requirements of Note 1 shall apply to all possible contract areas.

3. The configuration of the plug contact and the front plastic of the plug shall prevent jack contacts from being damaged during plug insertion into jacks.

4. This nominal contact angle should be provided between plugs and jacks with the plug latched into the jack. This angle shall be equal to or less than 24° to avoid loss of electrical contact between the plug and jack. The nominal contact angle shall be equal to or greater than 13° to prevent interference between jack contacts and the internal plastic in the plug.
5. To avoid loss of electrical contact, the dimension from datum B to the highest point "X" should be 5.0800 mm (0.200 in) max. A dimension greater than 5.3594 mm (0.211 in) could result in loss of electrical contact between plugs and jacks. The 5.3594 mm (0.211 in) max. shall be considered an absolute maximum.
6. The 24° min. angle shall apply only to plugs with front plastic walls higher than 4.8260 mm (0.190 in).

**NOTES to Figures 6.16 and 6.17:**

1. Front surface projections beyond the 1.3970 mm (0.055 in) minimum shall be configured so as not to prevent finger access to the plug release catch (Reference Figure 6.2 and Figure 6.10, 6 and 8-Position Plug, Mechanical Specifications). A catch length greater than 1.3970 mm (0.055 in) should be provided for greater breakout strength and improved guidance when interfacing with a 6-position plug.
2. Surface Z need not be planar or coincident with the surface under the plug release catch. Surface Z projections shall not prevent insertion, latching, and unlatching of the standard 8-position plug on Figure 6.10.
3. The indicated plug stop surface should be provided. If some other internal feature is used as a plug stop, it shall be located so that

112

TIA-968-A

the axial movement of a latched plug is no greater than 1.1430 mm (0.045 in).

4. To prevent mistargeting between the plug and jack contacts, the jack contacts shall be completely contained in their individual contact zones, (0.7112 mm (0.028 in) max. wide), where they extend into the jack openings. There is no location requirement for jack contacts below these zones (5.8420 mm (0.230 in) max.), but adequate contact separation shall be maintained to prevent electrical breakdown. These shaded contact zones shall be centrally located, (include all locating tolerances), about the jack opening width 11.9126 mm (0.469 in) Ref, (Datum -W-). Contacts located outside of these zones could result in mistargeting between the jack and plug contacts.

5. The configuration of the jack contact should prevent jack contacts from being damaged during insertion of a compatible 6 position plug into jacks. In such case, the minimum contact force of .98 N (100 grams) should be maintained.

~~5.6.~~ All inside and outside corners in the plug cavity shall be 0.3810 mm (0.015 in) radius max. unless specified.

~~6.7.~~ These surfaces shall have 0°15' maximum draft.

~~7.8.~~ Relief inside the dotted areas on both sides of the jack opening is permitted. The 6.8326 mm (0.269 in) Ref and 11.9126 mm (0.469

in) Ref Gauge Requirements shall be maintained in each of the corners indicated, (Ref. 1.5240 mm (0.060 in) min), to assure proper plug/jack interface guidance.

~~8.9.~~ 4.0640 mm (0.160 in) and 6.2992 mm (0.248 in) dimensions shall be centrally located to jack opening width -W- within  $\pm 0.1270$  mm (0.005 in).

~~9.10.~~ The contact lengths shall be such that the contacts will always be contained inside the guide slots, and the contacts shall move freely in the slots so as not to restrain plug insertion or damage jack contacts.