

PIC Wire & Cable

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Termination Instructions

T-110981

Approved :

PFT

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Termination Instructions for PIC P/N 110981, ARINC 600 Size 12 Socket Contact

(for S31601 Coax Cable)

Required Tooling :	Soldering Iron w/fine tip, Resistance Soldering Unit w/.050" electrodes, M22520/5-01 Hex Crimp Tool w/M22520/5-35 Hex Crimp Die Set (.128" hex)
Recommended Hand Tools :	Scribe, Sharp Razor, Wire Cutters, Small Side Snips, Cuticle Scissors, Calipers w/depth guage, needlenose pliers .030" Feeler Guage (for dielectric trim)

- 1) Make sure end of cable is cut square. Make Cut A @ .850" though the cable jacket (Fig. 1). Do Not nick or cut into the braids. Remove the jacket.
- 2) Flare the braids partially, maintain approximately half of the braid weave (Fig. 2). Fold braids back over the end of the jacket. Push braids flush with the end of the jacket (Fig. 3). Score the foil as close as possible to the folded-over braids, and remove foil (Fig. 3). Do Not nick or cut into the dielectric. Clean dielectric as needed using compressed air and Isopropanol.
 - 2a) To Remove Foil: Apply heat with heat gun if necessary to weaken the bond of the foil to the dielectric. Do Not exceed 500° F, and Do Not apply heat for more than 10 seconds max.
- 3) Make Cut B @ .375" from the cable end, through the dielectric, remove dielectric (Fig. 4a). Make Cut C, trimming off the exposed center conductor evenly with the end of the dielectric (Fig. 4b). These two steps are to create a clean, square edge to facilitate the installation of the inner ferrule over the braids in following steps.
- 4) Flip the braids back over the dielectric, pull taut, twist braid ends together to allow installation of the inner ferrule (Fig. 5). Tamp down braids adjacent to the jacket, and at the end of the dielectric (Fig. 5), to facilitate installation and seating of the inner ferrule against the jacket.
- 5) Install inner ferrule over the braids, until seated flush up to the jacket (Fig. 6). Fold braids back over inner ferrule and over jacket, until flat against the front edge of the inner ferrule, to provide a reliable reference point (Fig. 7).
- 6) Using a feeler gauge against the folded braids, trim the dielectric to $.030" \pm .003"$ (Fig. 7). Do Not nick or cut into the small stranded center conductor. Remove the dielectric carefully, to maintain the center conductor stranding twist (Fig. 7).
- 7) Lightly tin the center conductor, then trim to .090", cutting the end squarely (Fig. 7). Check dry fit of the center contact; if necessary, use smooth-jaw needlenose to gently tamp down any high points inhibiting the free fit of the center contact ($\varnothing .021"$ entry ID) onto the center conductor ($\varnothing .020"$ wire OD).
- 8) Install small length of solder into center contact (~.050" - .040"), to tin center contact, while installing onto the center conductor. Solder the contact on, seated up to the dielectric (Fig. 8). Carefully clean off any excess solder with X-acto knife, compressed air, and Isopropyl alcohol. Verify dielectric is clean and free of stray braids or debris.
- 9) Check insulator in connector shell to verify free fit. Install the insulator onto center contact and dielectric until seated (Fig. 9). Trim off excess braids, at the shoulder on the inner ferrule (Fig. 9).
- 10) Install the connector shell over insulator, contact, and braids until fully seated (Fig. 10). Trim off any stray braids between shell and inner ferrule. Verify the insulator depth from the front of the connector is .047" Max (Fig. 10).
- 11) Engage the ARINC Size 12 Socket with the mating connector before crimping, to stabilize the insulator & contact position during crimp. Crimp the rear of the connector shell using the M22520/5-01 hex crimp tool w/ M22520/5-35 hex die set, cavity B (.128" hex). Crimp ONLY in the specified Hex Crimp Zone (Fig. 10), to avoid internal component damage.

Note : Connector Length added to cable = + .160" nominal

Dimensions in Inches (NOT to Scale)

Figure 1

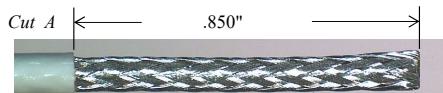


Figure 2

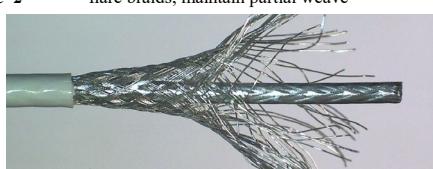


Figure 3 fold braids back over jacket, remove foil



Figure 4a



Figure 4b



Figure 5



Figure 6



Figure 7

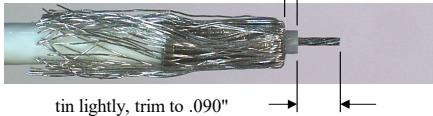
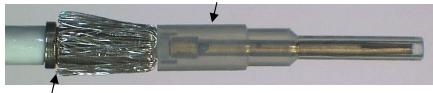


Figure 8

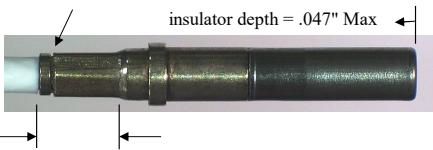


Figure 9



trim off excess braids @ shoulder

Figure 10



Hex Crimp Zone