

# Terminals and Connectors

Hooking up the ends . . .



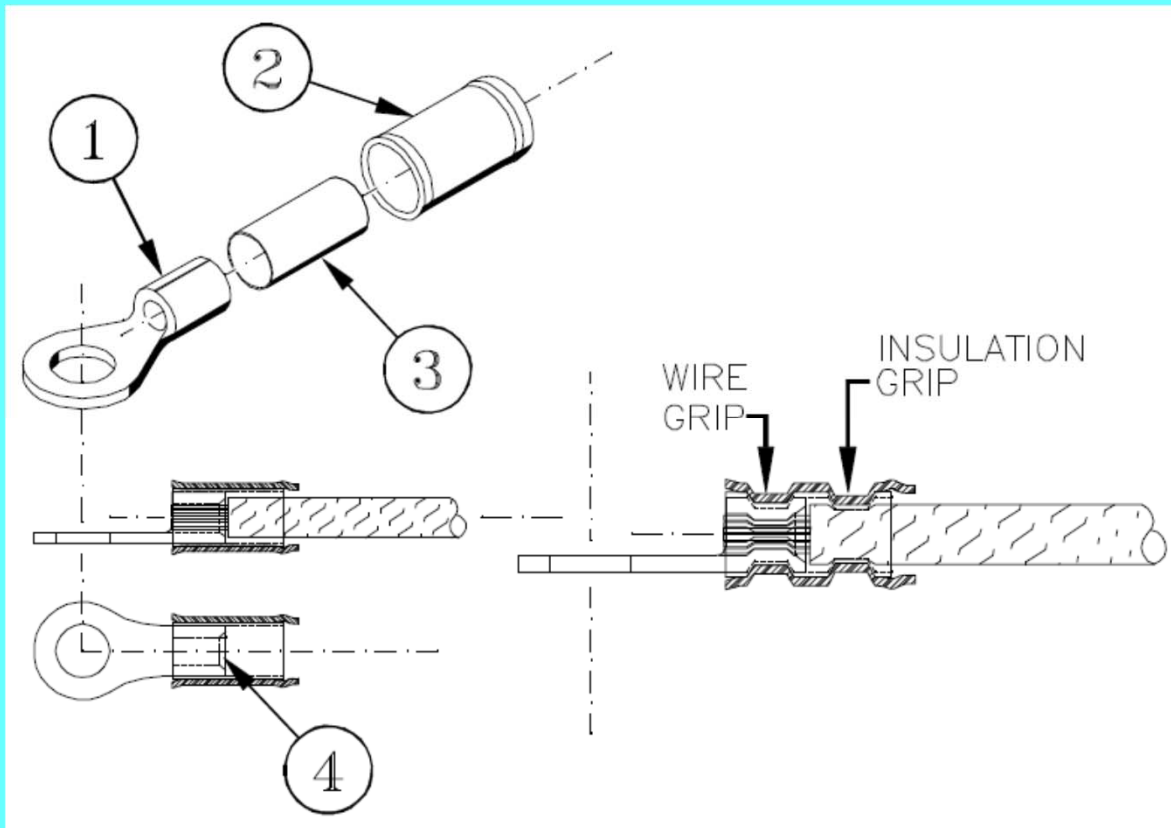
**The Pre-Insulated,  
Diamod-Grip Fast-On  
Terminals**



**PIDG Ring terminals**



**PIDG Splices**



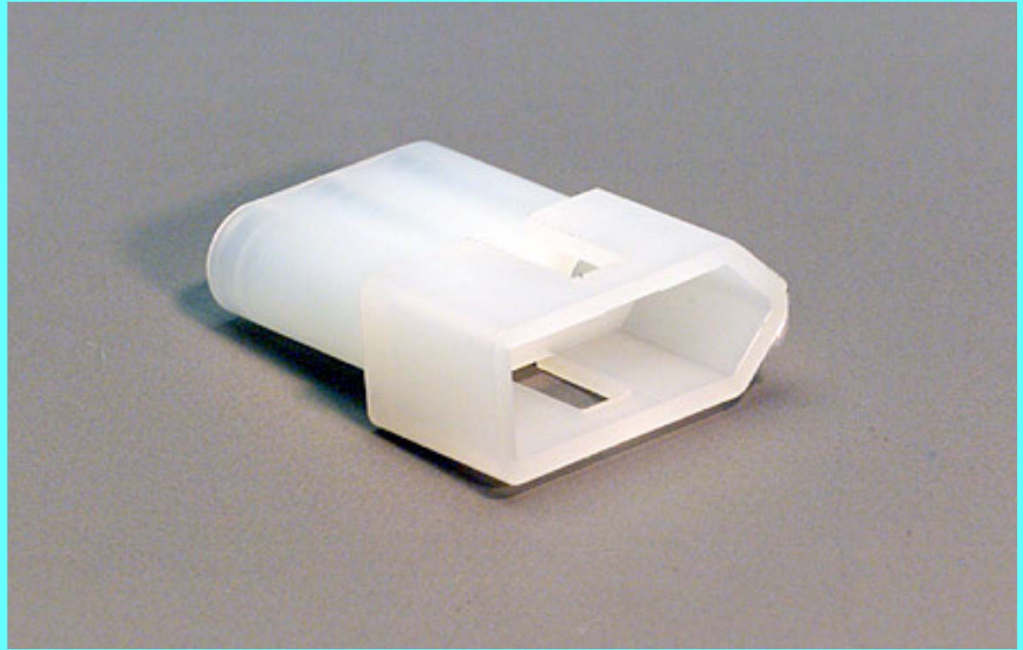
**The Pre-Insulated, Diamod-Grip (PIDG) terminals are a 3-piece design that’s been a benchmark of solderless terminal technology for 70+ years.**

**While “PIDG” is an AMP trademark, many other companies offer similar terminals built to military specifications.**





- These pins are typical of Molex and AMP Mate-n-Lock plastic connectors . . .
- Proper installation folds the wire grip into a "B" crimp and the insulation grip into a "bear hug".



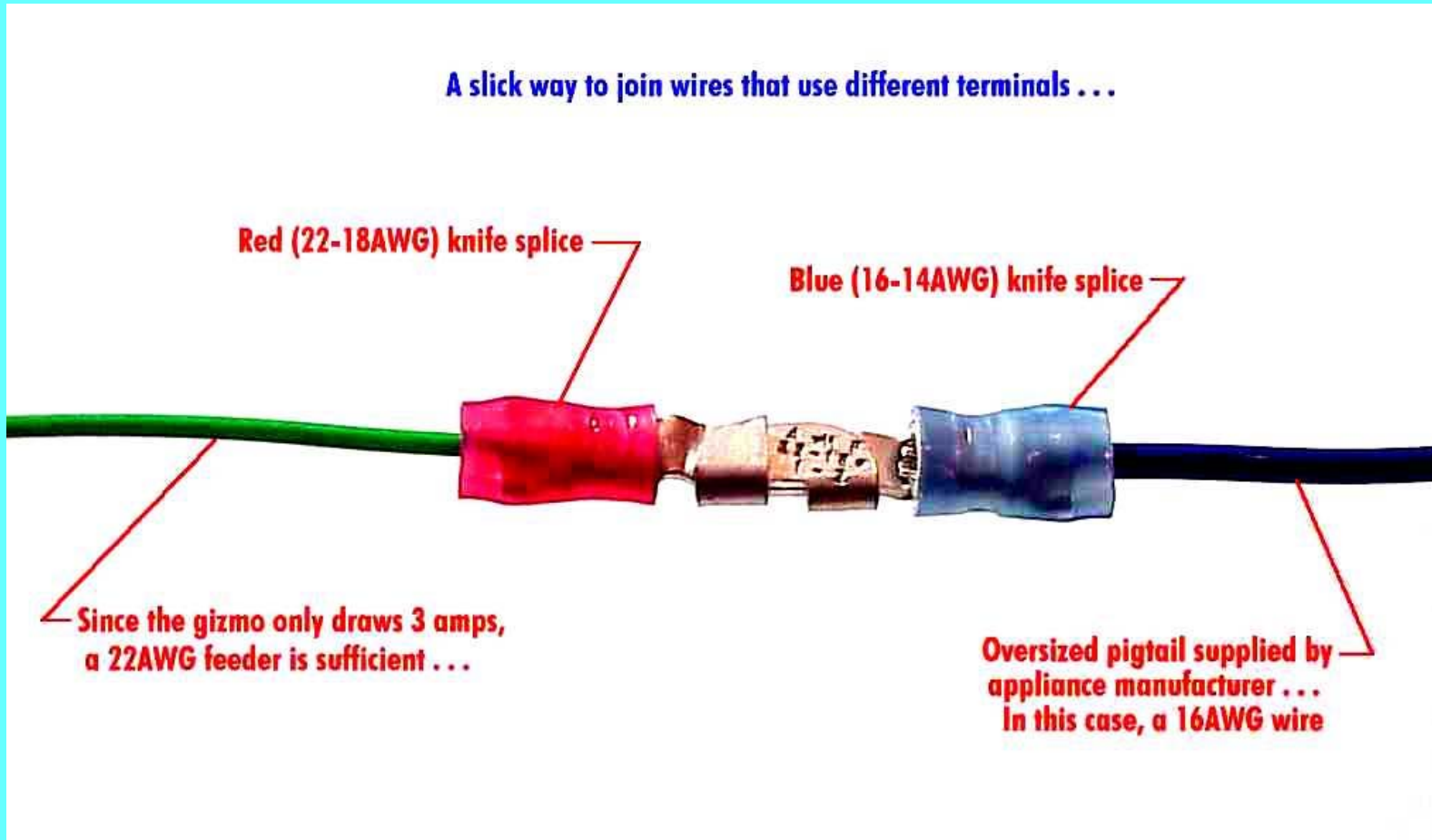
A slick way to join wires that use different terminals . . .

Red (22-18AWG) knife splice

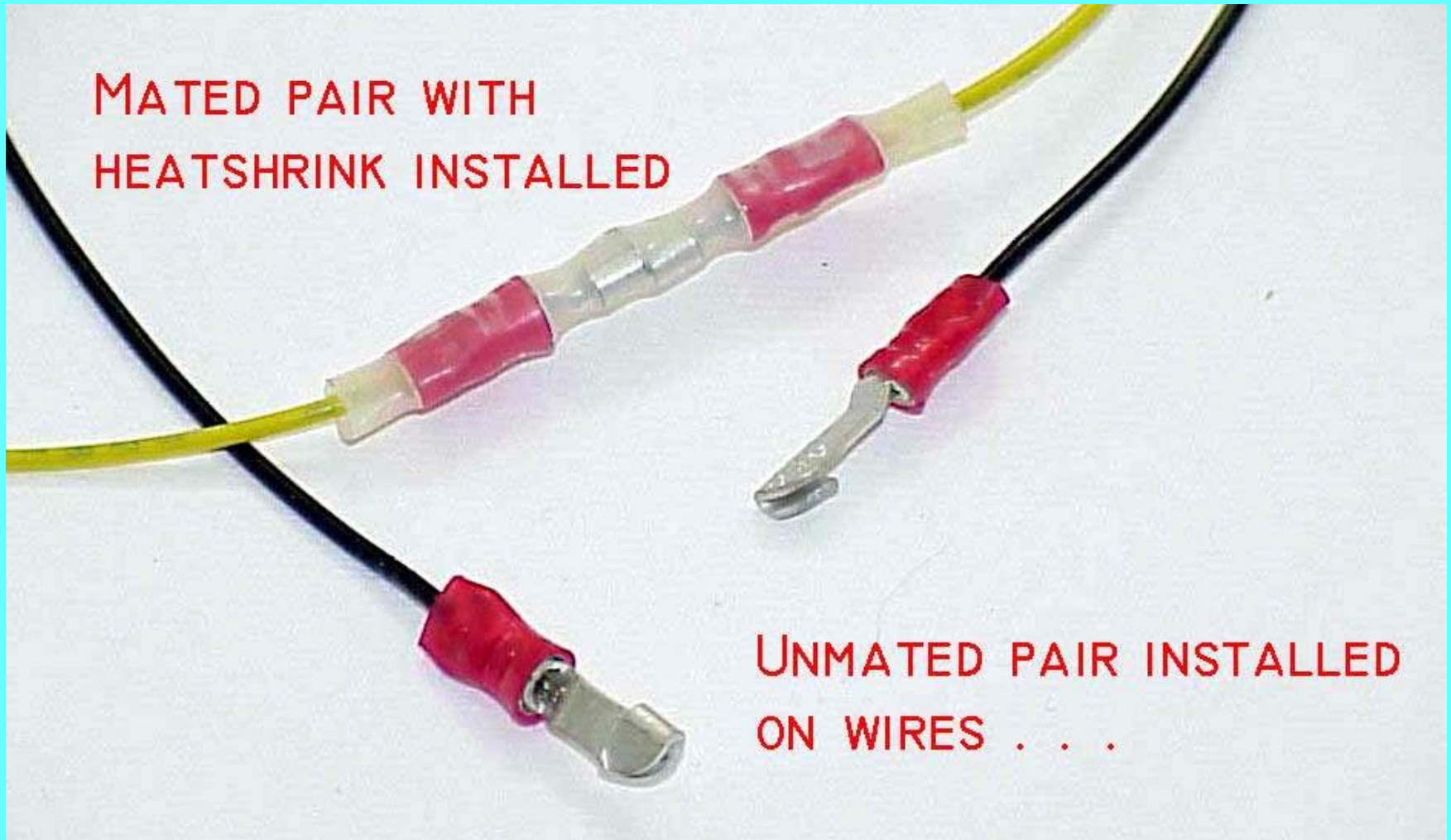
Blue (16-14AWG) knife splice

Since the gizmo only draws 3 amps,  
a 22AWG feeder is sufficient . . .

Oversized pigtail supplied by  
appliance manufacturer . . .  
In this case, a 16AWG wire

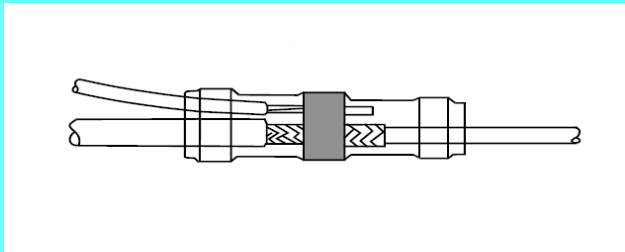




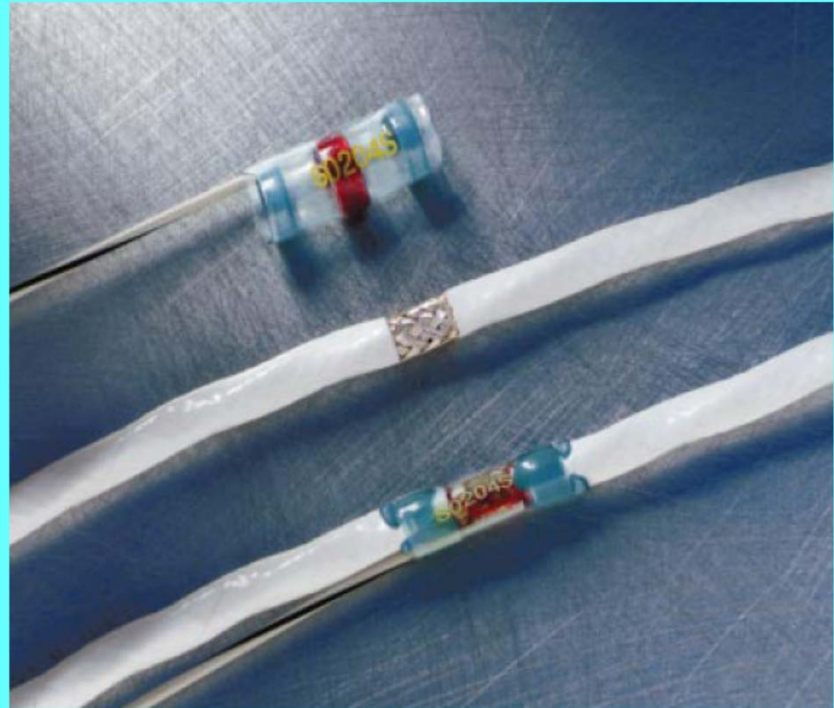




## AEC Weekend Seminars



## Terminals and Connectors





## RAYCHEM SOLDER SLEEVES

Raychem's SolderSleeves heat-shrinkable wire and cable interconnection devices are a labor-saving alternative to conventional wire and cable termination methods such as craft-sensitive, time-consuming hand soldering or crimping.

### Features:

- Controlled soldering with high level of sealing
- Strain relief
- Insulation
- Easy one step installation
- Application from 125°C to 280°C
- NAS, MIL-SPEC, and UL approvals



### 150C Mil-Spec 83519 Qualified

MOUSER STOCK NO.	Raychem Part No.	Inner Dia. Min.	Shield Dia. Min.	Price Each				
				1	50	100	250	500
850-S0101R	S01-01-R	.075*	.085*	2.44	2.22	2.03	1.88	1.74
850-S0102R	S01-02-R	.105*	.065*	2.40	2.18	2.01	1.85	1.72
850-S0103R	S01-03-R	.170*	.085*	2.54	2.31	2.12	1.95	1.82
850-S0104R	S01-04-R	.235*	.130*	3.03	2.75	2.52	2.33	2.17
850-S0105R	S01-05-R	.275*	.170*	3.51	3.19	2.92	2.70	2.50



### 125C (Commercial shield term w/lead)

MOUSER STOCK NO.	Raychem Part No.	Inner Dia. Min.	Shield Dia. Min.	Price Each				
				1	50	100	250	500
850-CWT3122	CWT-3-W122-5	.098*	.059*	1.39	1.26	1.15	1.05	.96
850-CWT5122	CWT-5-W122-5	.168*	.079*	1.43	1.31	1.22	1.10	1.02
850-CWT7122	CWT-7-W122-5	.252*	.130*	1.56	1.42	1.29	1.20	1.10



### Solder Splicing Sleeves (For wire to wire splices)

MOUSER STOCK NO.	Raychem Part No.	Wire Jacket O.D. (mm)		Price Each				
		Min.	Max.	1	50	100	250	500
850-CWT9001	CWT-9001	0.4	1.7	.59	.54	.50	.46	.40
850-CWT9002	CWT-9002	1.3	2.7	.64	.59	.55	.50	.45
850-CWT9003	CWT-9003	1.8	4.5	.67	.62	.58	.53	.46



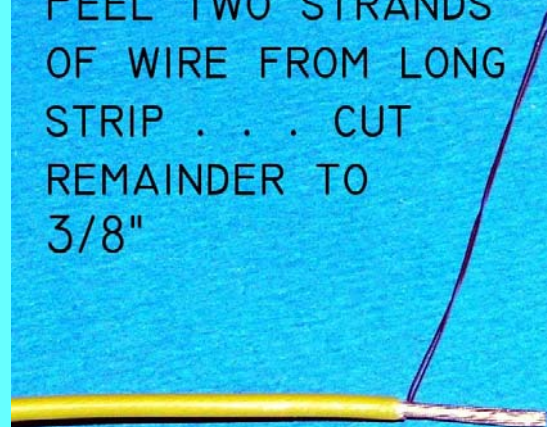
## AEC Weekend Seminars

## Terminals and Connectors

STRIP WIRES TO BE SPLICED.  
3/8" ONE END, 1-1/2"  
ON OTHER END.



PEEL TWO STRANDS  
OF WIRE FROM LONG  
STRIP . . . CUT  
REMAINDER TO  
3/8"

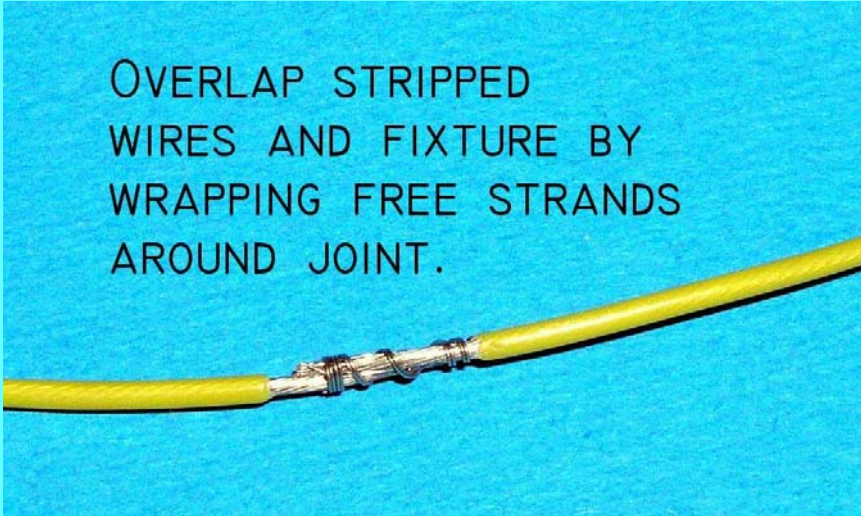




## AEC Weekend Seminars

## Terminals and Connectors

OVERLAP STRIPPED  
WIRES AND FIXTURE BY  
WRAPPING FREE STRANDS  
AROUND JOINT.



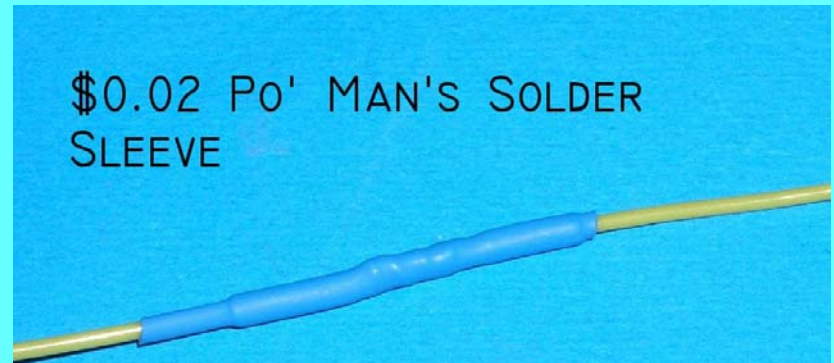
SOLDER OVERLAPPED  
WIRES (63/37 ELECTRONIC  
GRADE SOLDER)



COVER JOINT WITH TWO  
LAYERS OF HEAT SHRINK . . . .

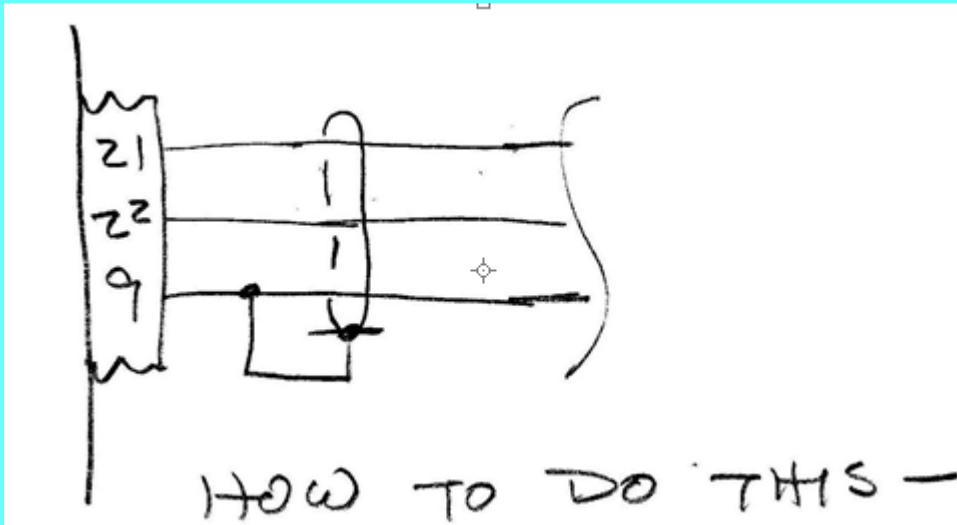


\$0.02 Po' MAN'S SOLDER  
SLEEVE

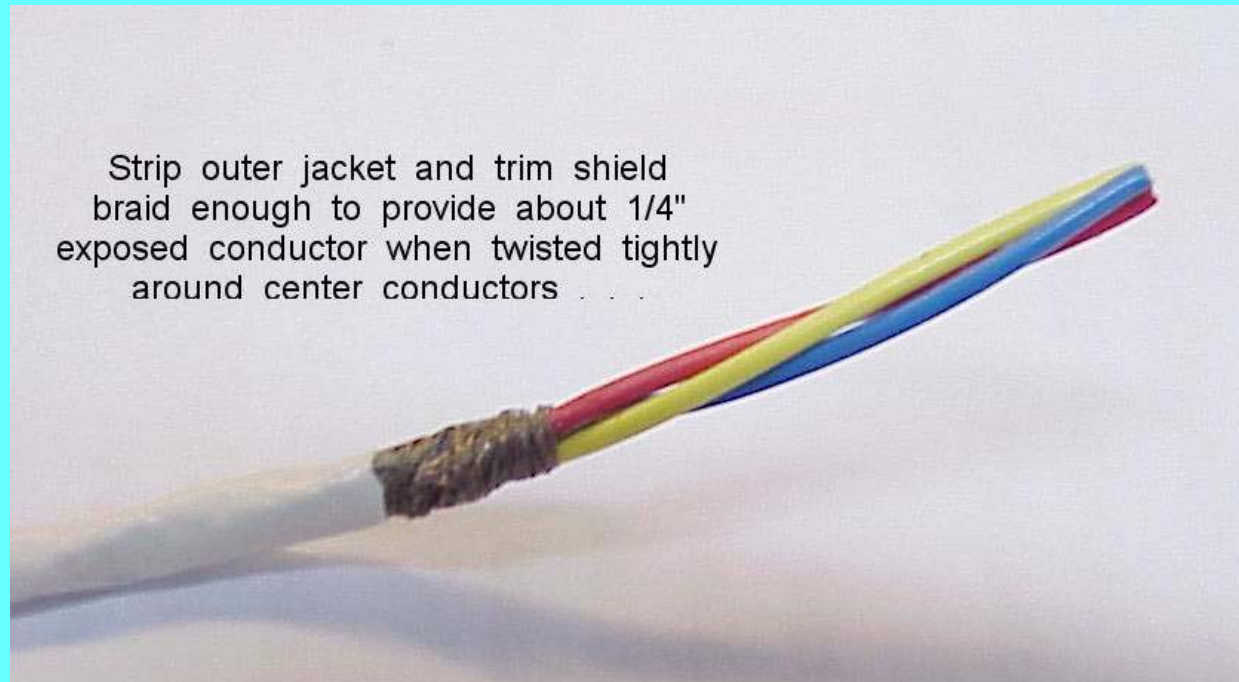


\$2.00 "REAL" SOLDER SLEEVE



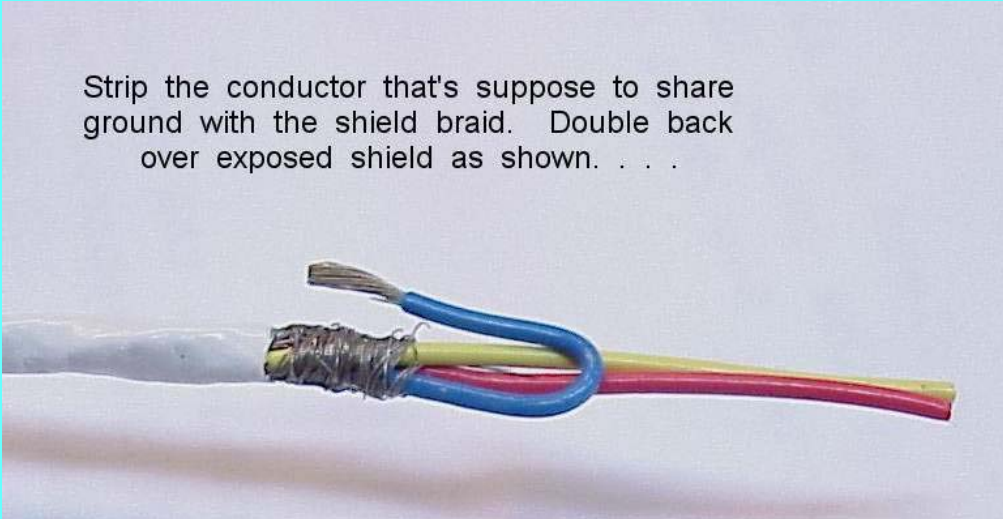


Strip outer jacket and trim shield braid enough to provide about 1/4" exposed conductor when twisted tightly around center conductors

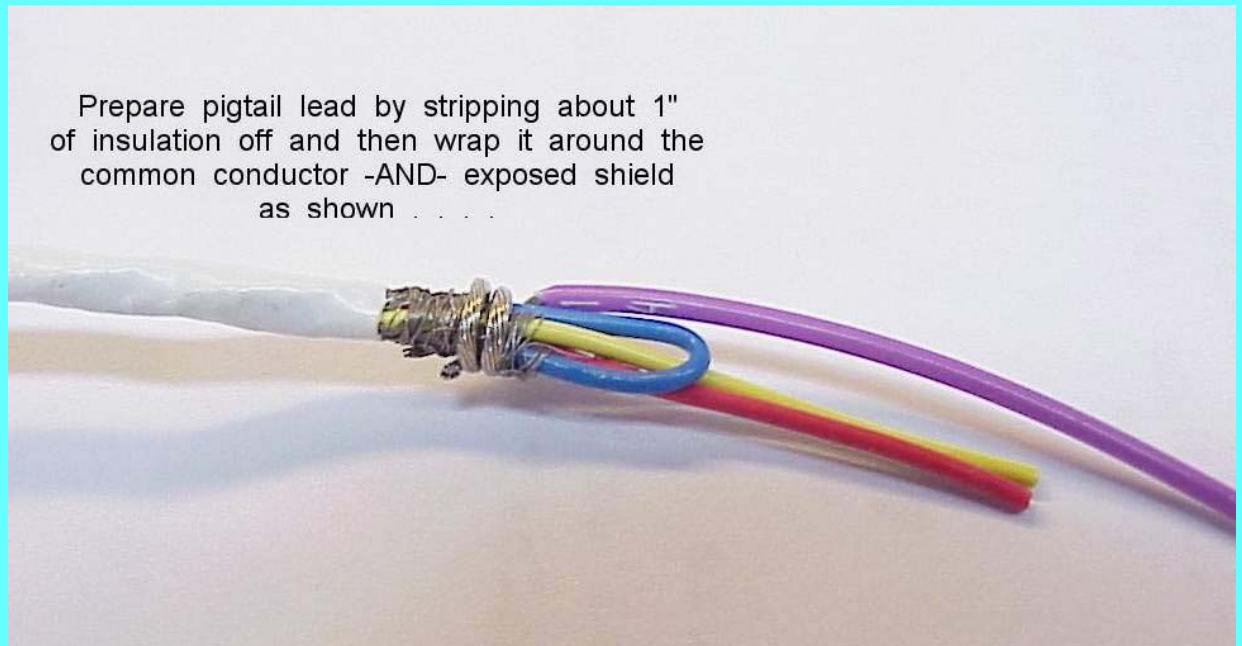




Strip the conductor that's suppose to share ground with the shield braid. Double back over exposed shield as shown. . . .



Prepare pigtail lead by stripping about 1" of insulation off and then wrap it around the common conductor -AND- exposed shield as shown . . . .



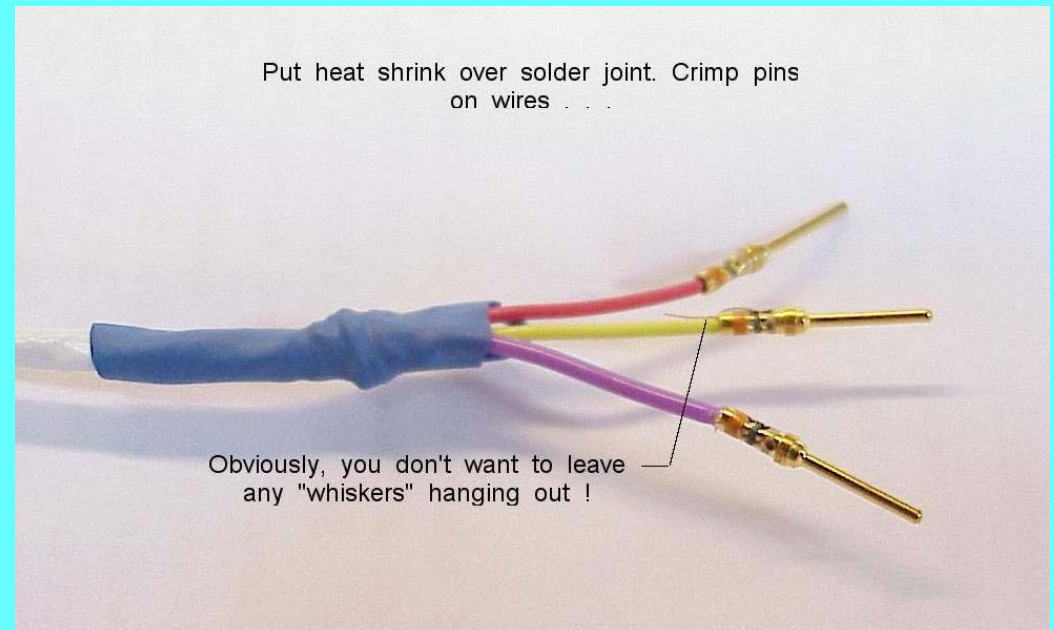
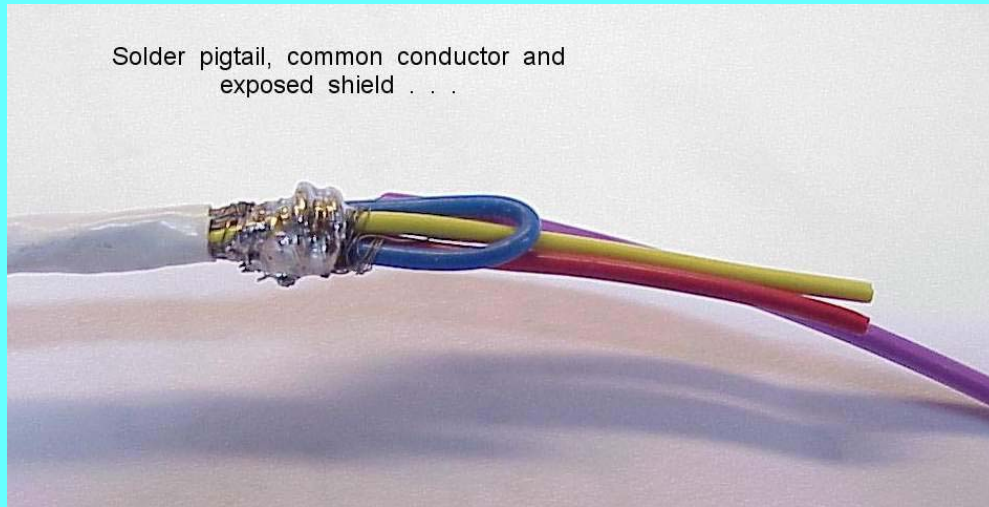




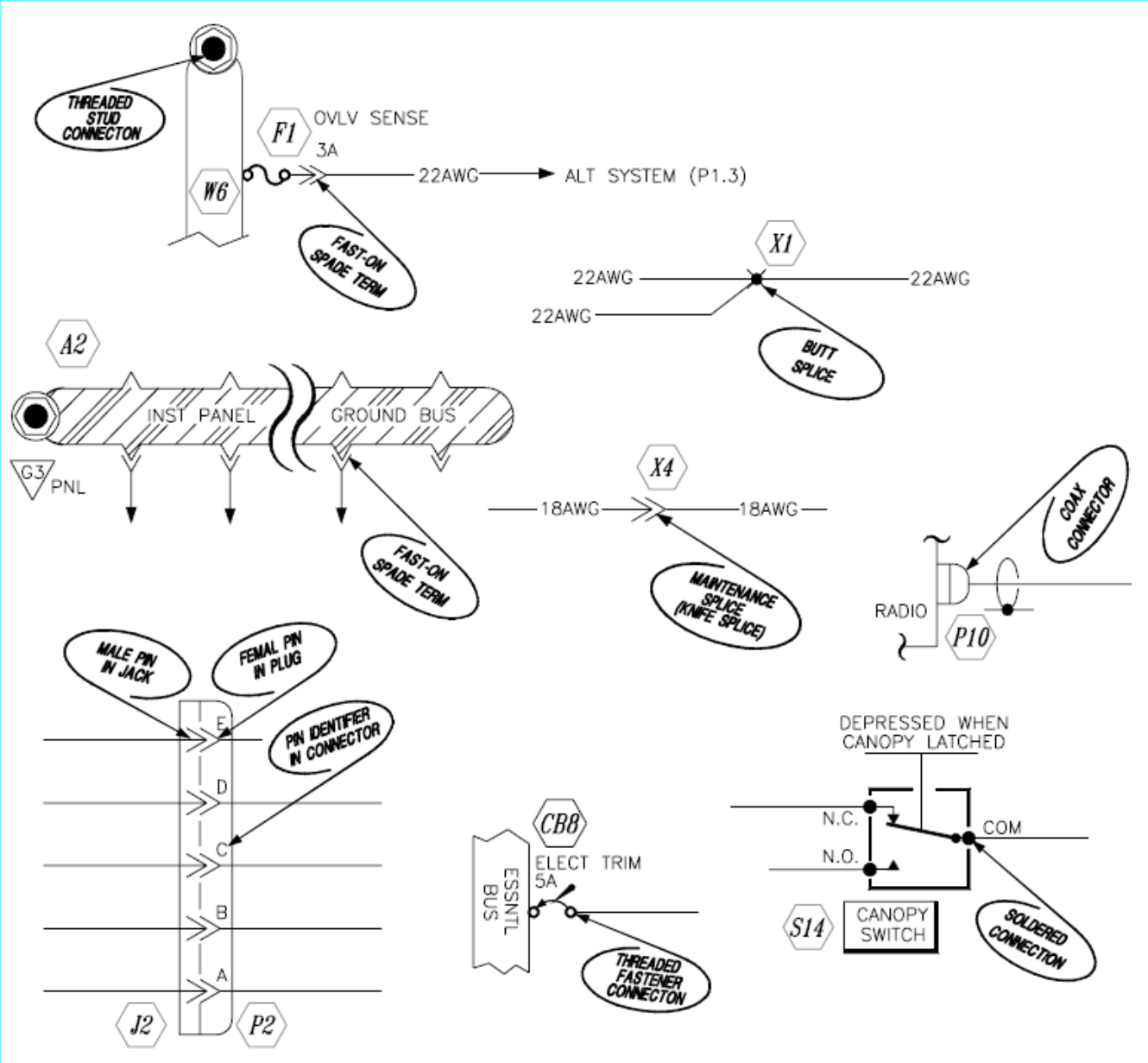


Figure 4. Turning Up the Heat.



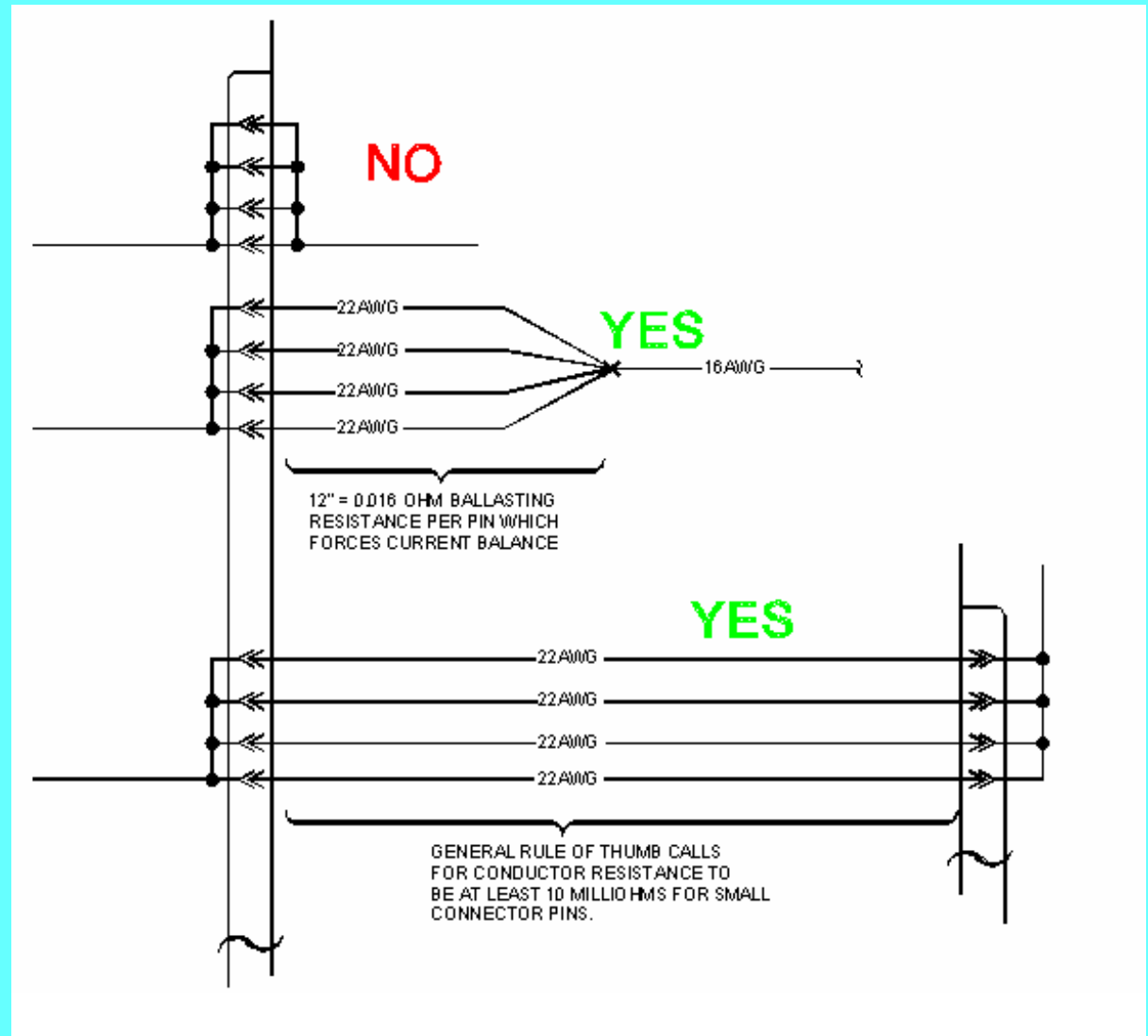
Figure 6. Finished Terminal Installation.





A few examples of how connection details can be incorporated into your wirebook by the use of descriptive symbology . . .

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### In a nutshell . . . .

- There's not much value in skimping on wire quality. Tefzel wire has stood the test of time in commercial aviation with exemplary performance.
- Copper clad aluminum can be considered when you have LONG runs of fat wires (like in a seaplane) and you can live with the stiffness.
- Welding cable is slightly heavier than Tefzel but exceedingly robust, very flexible and inexpensive.
- Irrespective of what wire you use elsewhere, consider welding cable jumpers for battery connections.