

Anderson Powerpoles

Modified by Dave Bruse, W4DTR

Original by Rene “Ren” Ramirez W3BNY

What are Power Poles?



Anderson Powerpoles

- **Invented by Anderson Power Products – APP**
- **Wide Product Range**
 - *I=15 through 350 amps*
 - *V=600VAC/DC*
- **Silver Plated Contacts**
 - *Offers greatest longevity when using high power, elevated temperature applications*
- **Flat Wiping Contact System**
 - *Allows for minimal contact resistance at high current, wiping action cleans contact surface during connection/disconnection*



Anderson Powerpoles (continued)

- **Colored Modular Housings**

- *Provides visual identification of proper mating connector*
- *11 different colors!*

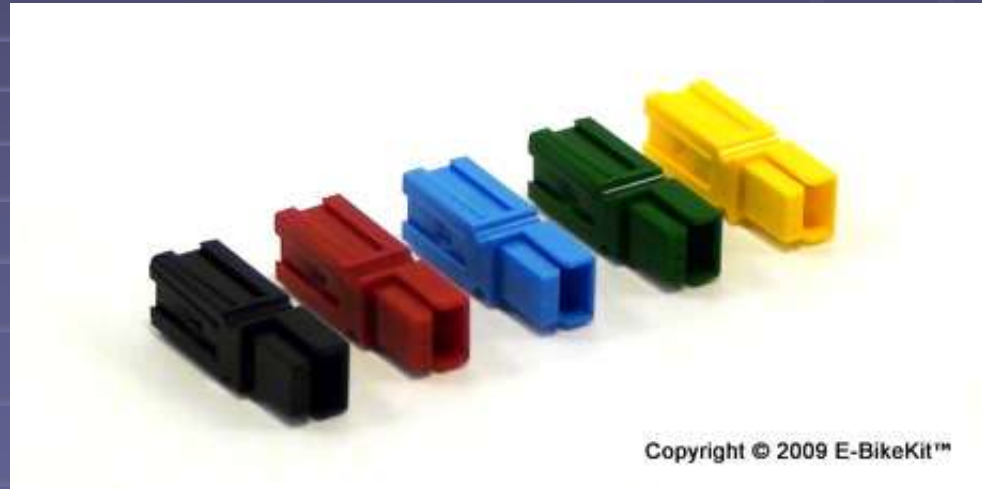
- **Molded-in Dovetails**

- *Secures individual connectors together*

- **Interchangeable Genderless Design**

- **Polarized Housings**

- *Prevents damage to connectors (and equipment) from being mated incorrectly*



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Powerpole Identification

- 4 different sizes
- PP15/30/45
- PP75
- PP120
- PP180
- Only PP15/30/45 are interchangeable. All others are not!



Powerpole Identification

- Additional Powerpole Connector Types (SB50, SB120, SB175, SB350)



Powerpole parts breakdown

1.Housing

2.Contacts

3.Locking pin
(EVIL)



PP 15/30/45 Differences

- 15 & 30 - Only difference is the size of the wire barrel on contact
- 45 - Style of wire mount is different than the 15/30
- When connected, hard to distinguish other than wire gauge used.



Housing Selection

- Remember, 11 different colors
- (Red, Black, Blue, Green, White, Orange, Yellow, Grey, Brown, Violet, PINK!)



Housing Selection

Is there a standard color code?

- Amateur Radio uses red/black to indicate +12vdc.
- Industrial powerpoles have an industry standard color scheme.
- **BE VERY CAREFUL** when mating to non amateur power sources!
- **ASK FIRST** or **CRY** later

Housing Selection (Industry Standard)

Powerpole Color Code Chart

	RED Housing	GREEN Housing	BLACK Housing	WHITE Housing	BLUE Housing
Powerpole®	24V	72V	80V	144V	48V
	YELLOW Housing	ORANGE Housing	GRAY Housing	BROWN Housing	PURPLE Housing
Powerpole®	12V	18V	36V	96V	120V

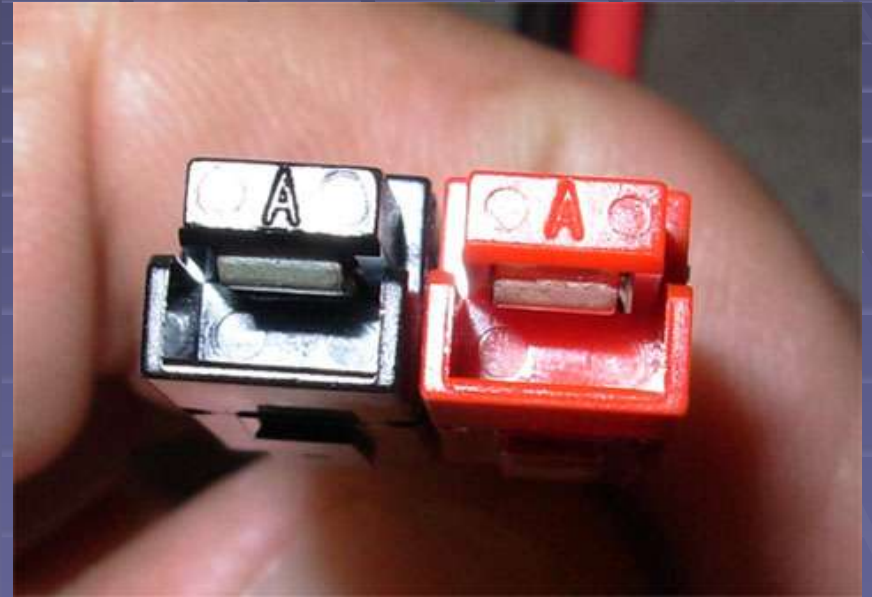
Housing Selection (For AMATEUR RADIO FOLKS)

- **RED** +12vdc
- **BLACK** negative
- If you use any other combinations, **YOU BETTER DOCUMENT IT!**



Housing Assembly

- Shell orientation VERY important.
- As you are looking at the connector.
 1. Tongues up
 2. "A"s up
 3. Red on right ***
 4. Black on left



Housing Assembly

- Locking pins...
- EVIL!!!
- **THROW THEM AWAY OR RECYCLE!**
- Chances of pin coming out under vibration very good
- Steel and electricity not good partners
- Just glue it!



Housing Assembly

- Get correct orientation.
- ONE DROP of CA (don't need much) on the inside dovetail
- QUICKLY and with a little force, slide them together till they are both level
- DONE!



Housing Assembly



- Permanently Bonded Powerpole Connectors (Ultrasonically welded sets save assembly time, guarantee correct configuration, eliminate the need for a roll pin)

Contactor Selection

- 15/30/45???

What is the wire size?

- 15 = 16~20ga

- 30 = 12~14ga

- 45 = 10ga



FAQ's

- “I’m using 15A connectors and the wire is just too small. What do I do?”

Easy, double it then crimp it!

- “I’m not going to double the wire. That’s just now how I roll. Any other options?”

FAQ's

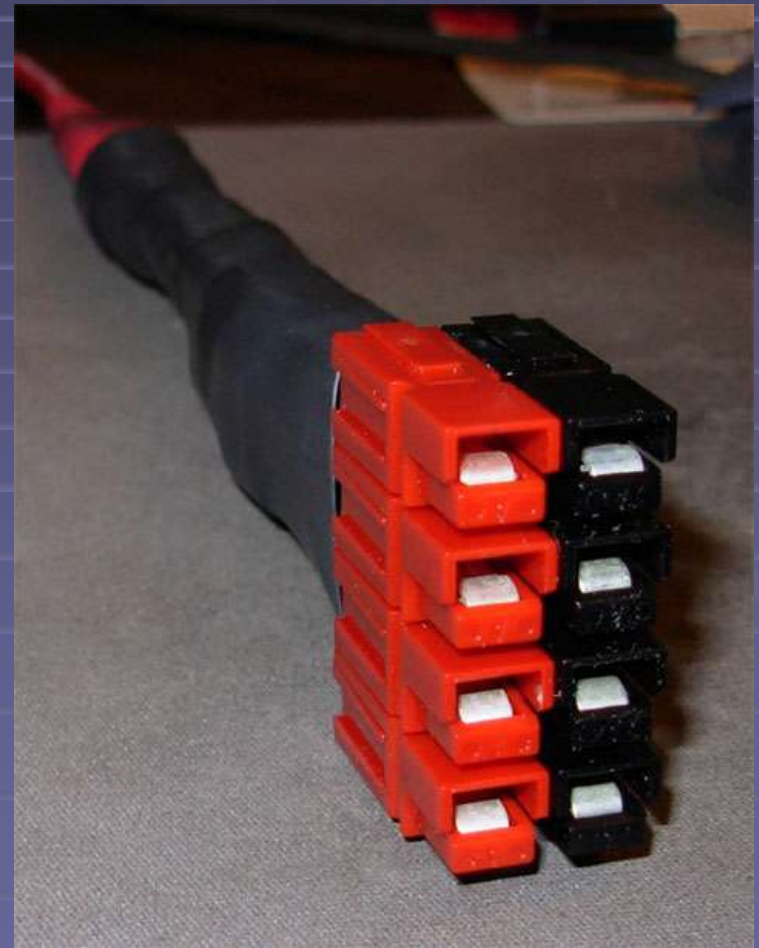
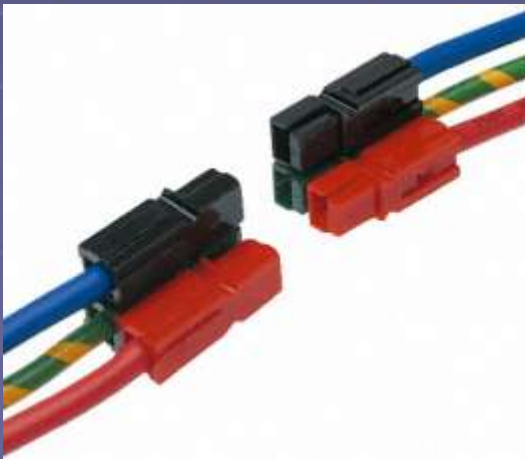
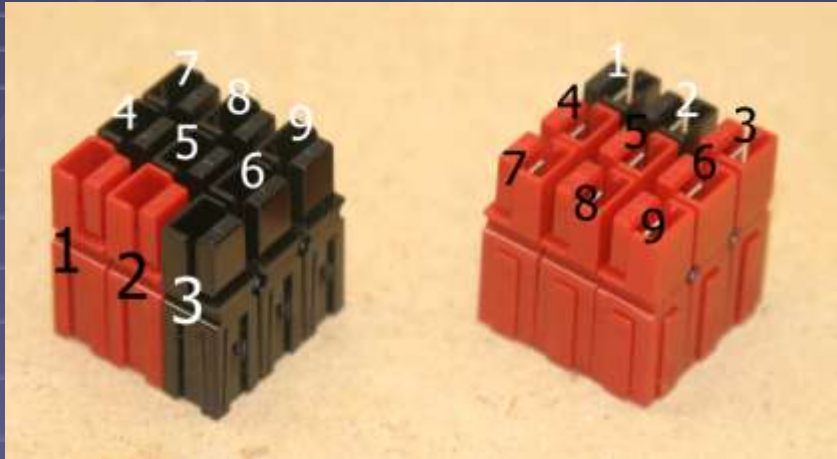
- Reducing bushings!



FAQ's

- “I’m a non-standard type-o-guy and none of my installations are standard...can these things make a non-standard configuration?”

Yes they can! Use your imagination
and document your work!



How to Install Powerpoles



Some accessories for your new powerpole family



Some Vendors

- Ham Radio Outlet
(www.hamradio.com)
- PowerWerx
(www.powerwerx.com)
- West Mountain Radio
(www.westmountainradio.com)

Questions?

