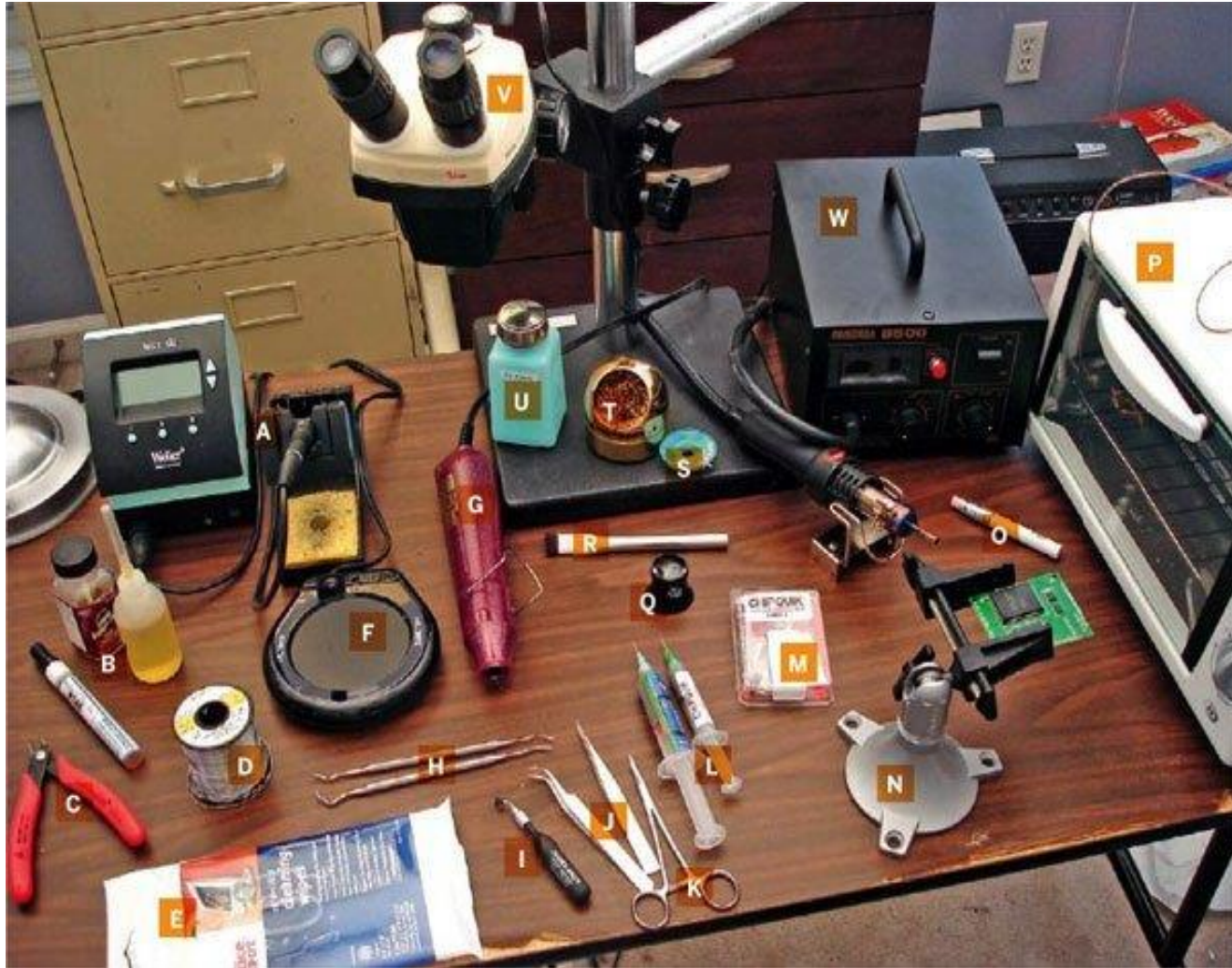


INTRODUCTION TO
SURFACE MOUNT SOLDERING

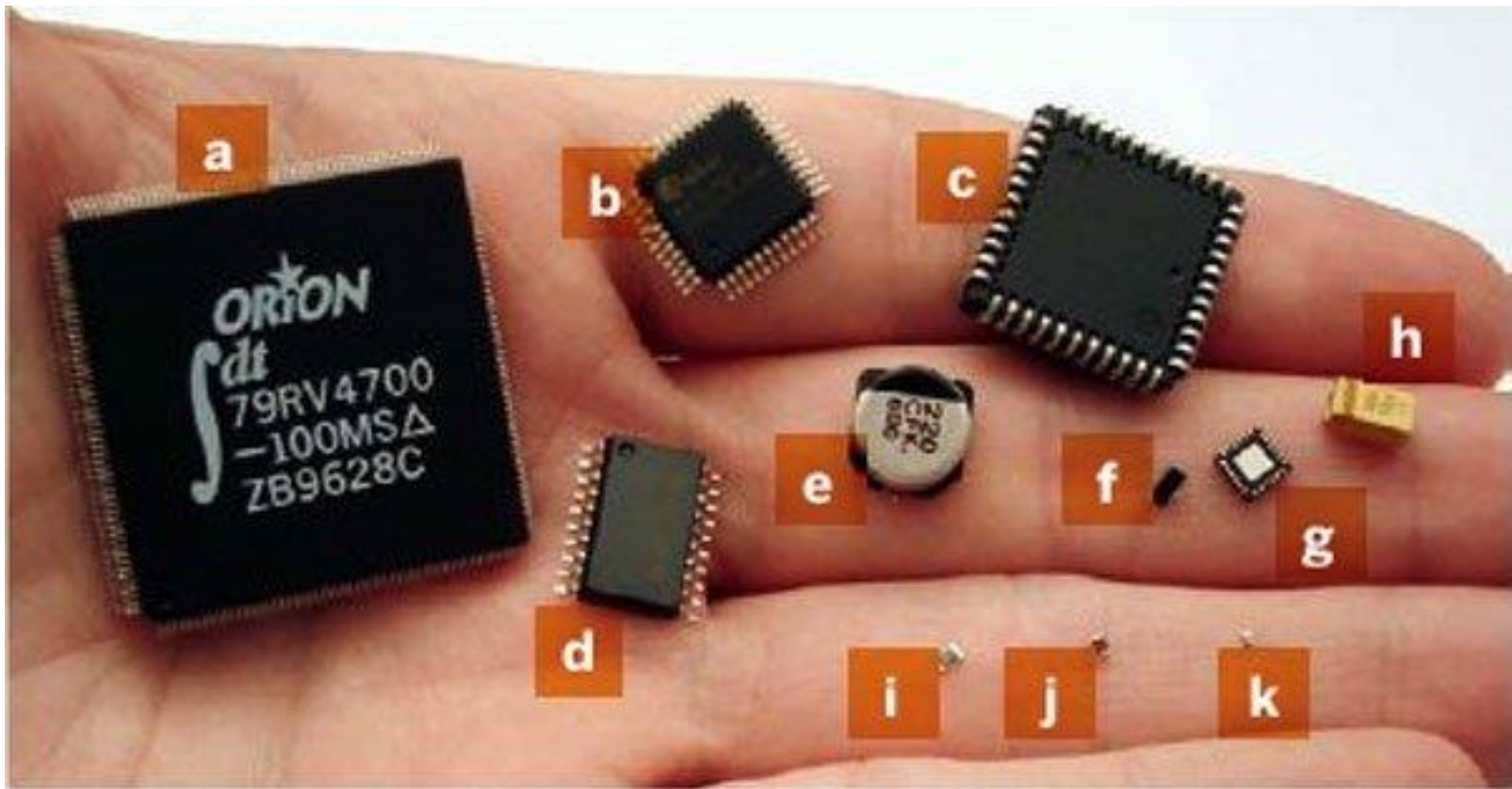
WA VHF GROUP INC
ACTIVITY 28 – 03 - 2016

TOOLS

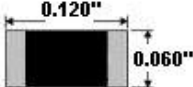


Identification

http://www.topline.tv/SMT_Nomenclature.pdf

























Identification -2








0.120"
0.060"

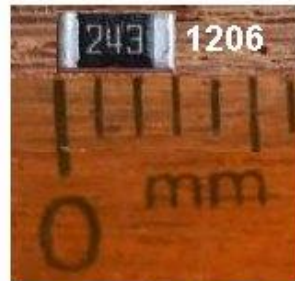
"120 thou"
x
"60 thou"
"one hundred and
twenty thousands
of an inch"

 10R 10 ohm	 0.047R sense resistor	 0.025R
 121k	 499R	 240R
 474 470 k Ω	 118 11.8 ohm	 10R0 10 ohm
 M47 470 k Ω		

 R47 0.47 Ω	 4R7 4.7 Ω	 47R 47 Ω	 K47 470 Ω	 4K7 4.7 k Ω	 47K 47 k Ω
 R464 0.464 Ω	 464R 464 Ω	 4K64 4.64 k Ω	 471 470 Ω	 472 4.7 k Ω	 473 47 k Ω

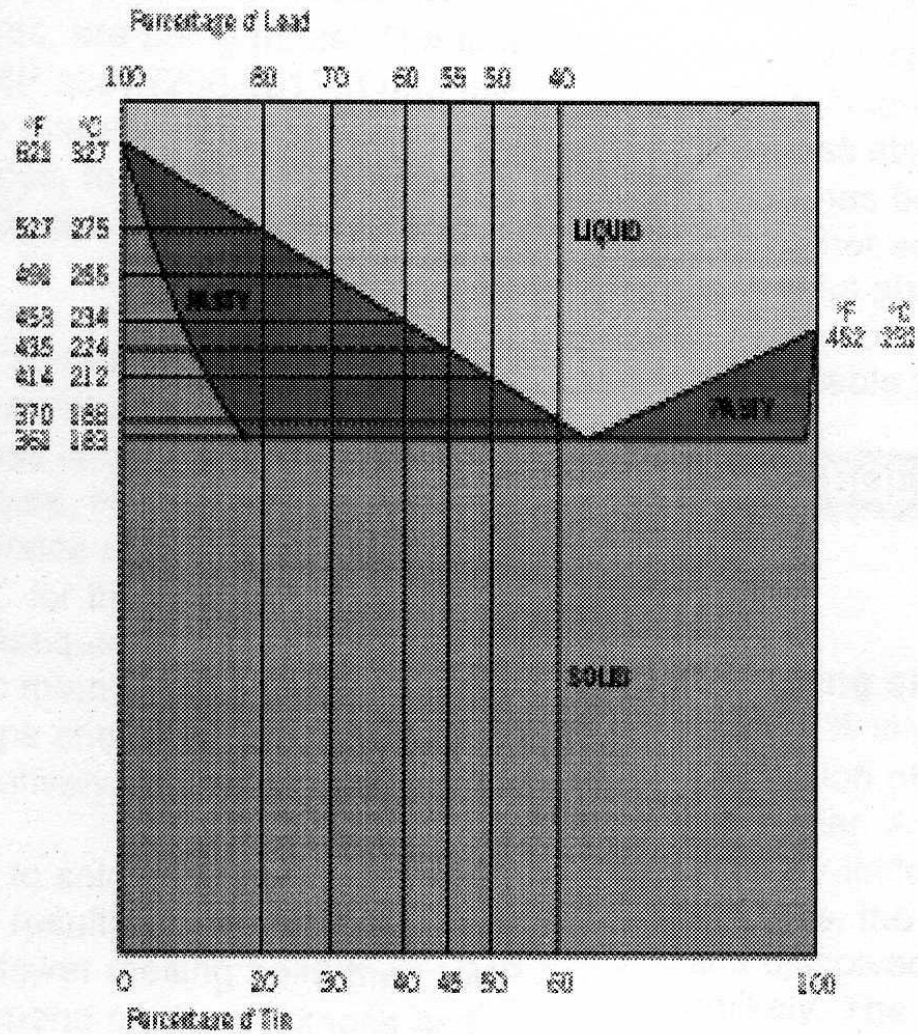
 0	 00	 000	 0000	 0000
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SHORT-CIRCUITING "ZERO-OHM LINKS" OR "JUMPERS"



1206 and 0805 SURFACE MOUNT RESISTORS

SOLDERS & FLUX



SOLDERS & FLUX-2

- **What is Flux?**
- When solder melts and forms a joint between two metal surfaces, it actually forms a metallurgical bond by chemically reacting with the other metal surfaces.
- A good bond requires two things, a solder that is metallurgically compatible with the metals being bonded and good metal surfaces, free of oxides, dust, and grime that prevent good bonding. Grime and dust can easily be removed by cleaning or prevented with good storage techniques. Oxides, on the other hand need another approach.

HAND SOLDERING

Basic requirements

Temperature Controlled Iron with fine tip.

Not too fine, but with sufficient mass.

Seek advice from well known manufactures.

Use thermocouple and multimeter to monitor.

Above all practice, practice, practice, practice.

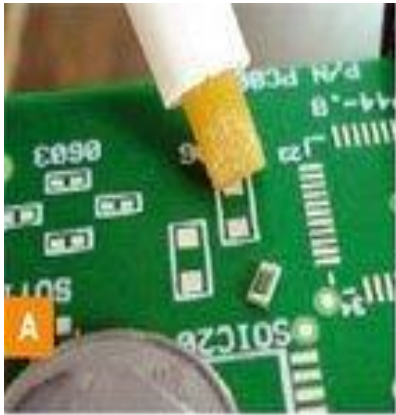
Buy practice boards with components -EBAY.

Good PCB preparation everything be **CLEANED**

Bare Essentials



Soldering Process



Other SMD Techniques

Using temperature controlled
HOT AIR soldering.
Ovens or frypans/skillet.



Local Suppliers

ALTRONICS

Tweezers P175-176 2016 catalog \$4.95 - \$19.95

Loupe (15x) P174 \$8.95

Flux Gel P160 \$12.95

Solder paste P160 lead-\$11.95 Lead free \$15.95

Jaycar

Tweezers P58 2016 catalog \$4.95 - \$19.95

Flux Gel P43 \$15.95

Solder paste P160 lead-\$12.95 Lead free \$13.95

THE END

If enough interest is shown a practical “hands on” session will be implemented for one of the club daytime Saturday meets usually 1300hrs