

RESISTOR COLOR CODE

The sequence of colors can be easily remembered by the little Rhyme I learned in school one day! Here it is for what it's worth!

			1st & 2nd BAND VALUE	3rd BAND MULTIPLIER
BAD	= BLACK =	0		$10^0 = X 1$
BOYS	= BROWN =	1		$10^1 = X 10$
ROB	= RED =	2		$10^2 = X 100$
OUR	= ORANGE =	3		$10^3 = X 1K$
YOUNG	= YELLOW =	4		$10^4 = X 10K$
GIRLS	= GREEN =	5		$10^5 = X 100K$
BUT	= BLUE =	6		$10^6 = X 1M$
VIOLET	= VIOLET =	7		$10^7 = X 10M$
GAVE	= GRAY =	8		$10^8 = X 100M$
WILLINGLY	= WHITE =	9		$10^9 = X 1G$

K = Kilo = X 1000

M = Meg - X 1,000,000

G = Giga = X 1,000,000,000

EXAMPLES: Red-Red-Orange = $22 \times 1,000 = 22,000$ or 22K

Brown-Black-Black = $10 \times 1 = 10$

Violet-Black-Green = $70 \times 100K = 7,000,000 = 7Meg$

If the third band is Gold or Silver, the value is less than 10 ohms, and is calculated the same way except the multiplier is different.

Gold = X .1

Silver = X .01

EXAMPLES: Yellow-Violet-Gold = $47 \times .1 = 4.7$

Red-Red-Silver = $22 \times .01 = .22$

RESISTOR COLOR CODE (Cont'd)

Sometimes a Fourth band is included to show tolerance. If it is Silver, it indicates that the value marked by the colors is within + or - 10%. If it were Gold, a value within + or - 5% would be indicated. If no Fourth band is present, tolerance is + or - 20%.

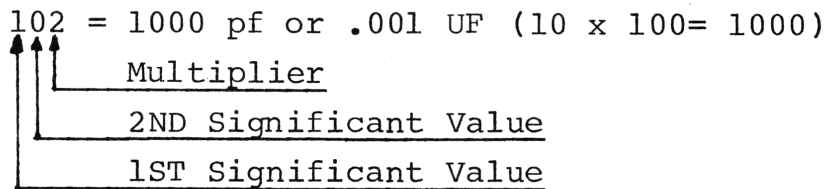
EXAMPLE: Yellow-Violet-Red-Gold

$$4 \quad 7 \quad \times 100 \quad + \text{ or } - 5\% = 4700 = 4.7\text{K} + \text{ or } - 5\%$$

This means the resistor has a resistance somewhere between 4935 (+ 5%) and 4465 (- 5%).

CAPACITOR CODES

Capacitor is marked 102. What value is it?



To convert PF to UF, move decimal 6 places to the left.

$$1000.\text{PF} = 0 \ 0 \ 0 \ 0 \ 1 \ 0 \ 0 \ 0. = .001\text{UF}$$

6 5 4 3 2 1



$$223 - \underline{22}000 \quad \text{or} \quad .022\text{UF} \quad (22 \times 1000 = 22000)$$

REFERENCE: Volume 11 page 59.