It is important to understand metric prefixes in order to properly read a DMM display

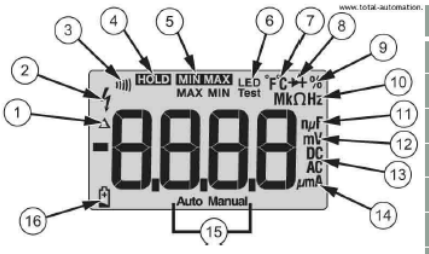
Metric Prefixes

METRIC PREFIX	METRIC SYMBOL	POWER OF TEN	VALUE
tera	T	10^{12}	one trillion
giga	G	10^{9}	one billion
mega	M	10^{6}	one million
kilo	k	10^{3}	one thousand
milli	m	10^{-3}	one- thousandth
micro	μ	10^{-6}	one- millionth
nano	n	10^{-9}	one- billionth
pico	P	10^{-12}	one- trillionth

Notes

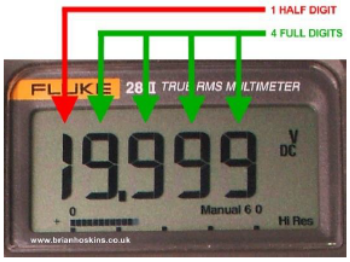
- Highlight the prefixes that are used most often in electricity:
  - Mega, kilo, milli, and micro
  - Go through several examples to illustrate how the prefixes replace numbers
  - Examples:
    - 1,200,000 Ω = 1.2M Ω
    - .000044 A = 44uA
    - 13,470V = 13.47kV
    - .005 A = 5mA

It is also important to understand and interpret the symbols and decimal point placement on a DMM display



AC	Alternating current
DC	Direct current
V	Volts
kV	Kilovolts
mV	Millivolts
A	Ampere
mA	Milliamps
uA	Microamps
Ω	Ohms, resistance
kΩ	Kilo-ohms
MΩ	Mega-ohms

4½ DIGIT DISPLAY



Notes

- Most technicians have an auto-ranging meter. Stress the importance of paying attention to the symbols that appear on the display
- When a meter is described as “4 ½” digits what that really means is the 4 digits on the reading will display digits 0-9, the “1/2” digit will display only 2 digits, with 1 being the highest (so 0 and 1)