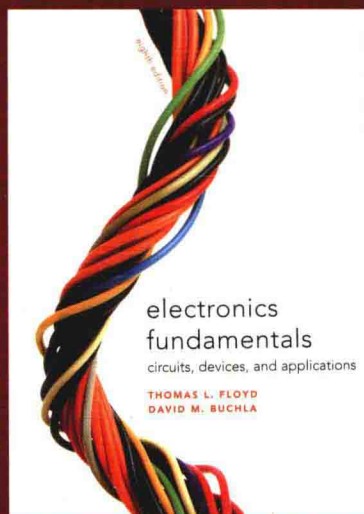


清华大学版 双语教学用书

PEARSON



电路、器件及应用 (第8版)

Electronics Fundamentals
Circuits, Devices, and Applications
(Eighth Edition)

Thomas L. Floyd
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于歆杰 编译

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	Digit	Color
Resistance value, first three bands: First band—1st digit Second band—2nd digit *Third band—multiplier (number of zeros following the 2nd digit)	0	Black
	1	Brown
	2	Red
	3	Orange
	4	Yellow
	5	Green
	6	Blue
	7	Violet
	8	Gray
	9	White
Fourth band—tolerance	$\pm 5\%$	Gold
	$\pm 10\%$	Silver

TABLE 1-1

4-band resistor color code.

* For resistance values less than $10\ \Omega$, the third band is either gold or silver. Gold is for a multiplier of 0.1 and silver is for a multiplier of 0.01.

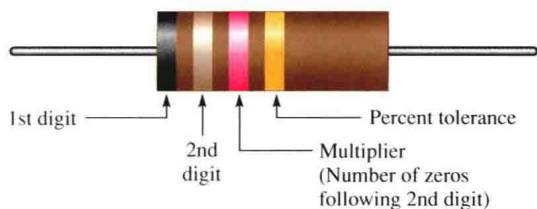


FIGURE 1-27

Color-code bands on a 4-band resistor.

FIGURE 1-28



FIGURE 1-29

Color-code bands on a 5-band resistor.

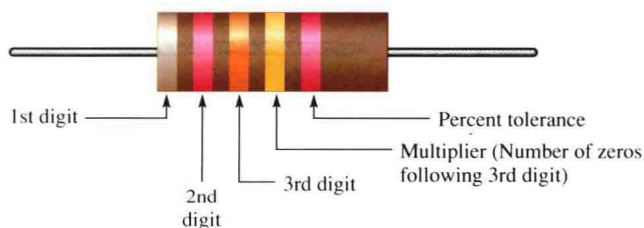
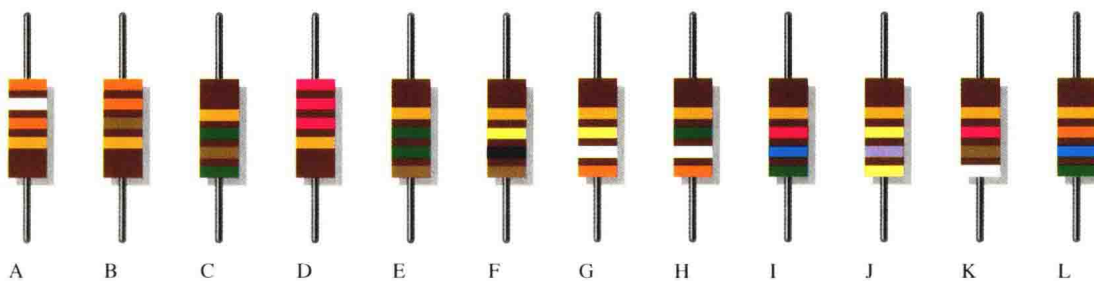


FIGURE 1-30





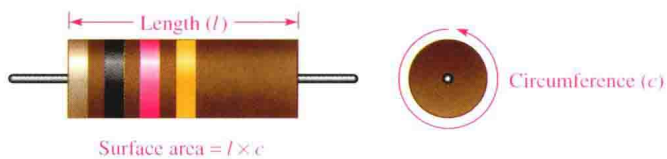
(a)



(b)

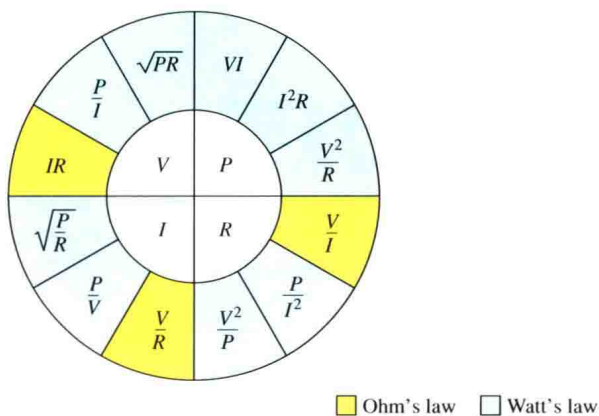
▲ FIGURE 1-61

► FIGURE 1-62



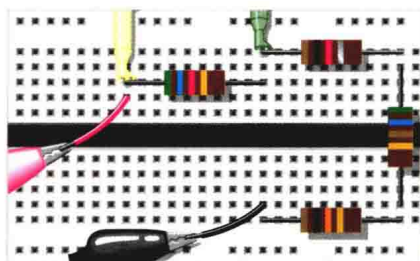
▲ FIGURE 2-16

► FIGURE 2-26





(a) Meter with leads going to protoboard

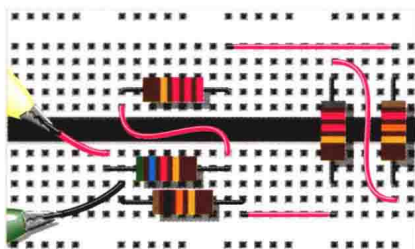


(b) Protoboard with meter leads (yellow and green) and power supply leads (red and black) connected

▲ FIGURE 3-75



(a) Meter with leads going to protoboard

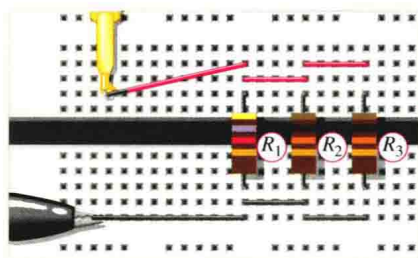


(b) Protoboard with meter leads connected

▲ FIGURE 3-79

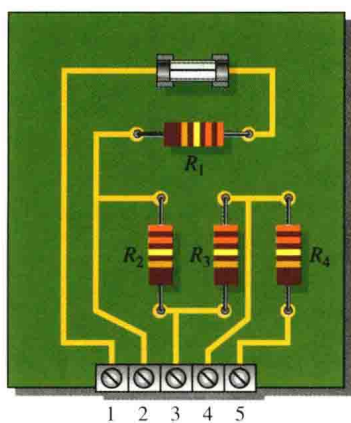


(a) Meter with yellow lead going to protoboard and red lead going to the positive terminal of the 25 V power supply.

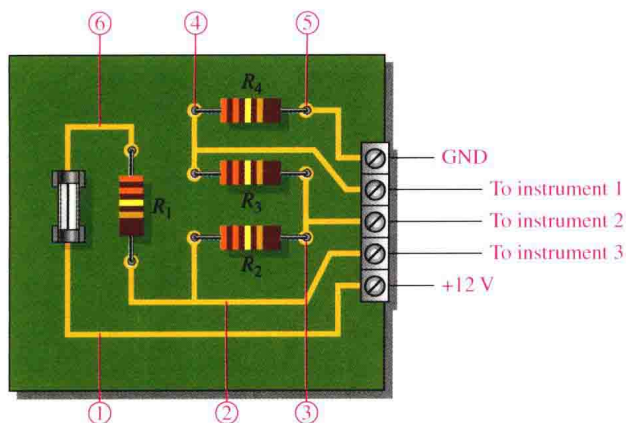


(b) Protoboard with leads connected. Yellow lead is from meter and gray lead is from 25 V power supply ground. The red meter lead goes to +25 V.

▲ FIGURE 4-80



▲ FIGURE 5-70

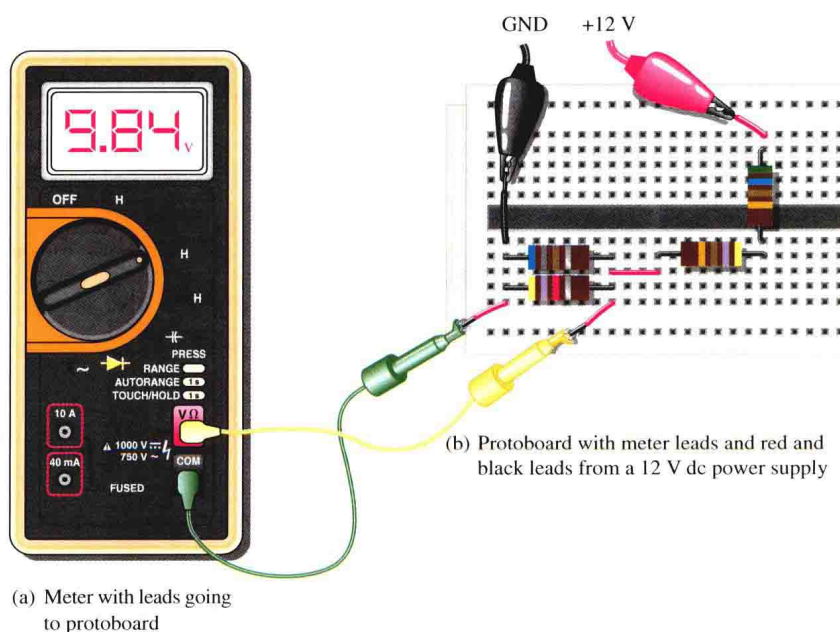


The following voltmeter readings are taken at test points 1 through 6 with respect to ground. The readings are in volts.

Case	Test points (volts)					
	1	2	3	4	5	6
1	0	0	0	0	0	0
2	12	0	0	0	0	0
3	12	0	0	0	0	12
4	12	11.6	0	0	0	12
5	12	11.3	10.9	0	0	12
6	12	11	10.3	10	0	12
7	12	5.9	0	0	0	12
8	12	7.8	3.8	0	0	12

▲ FIGURE 5-72

► FIGURE 5-87



Sine wave generator

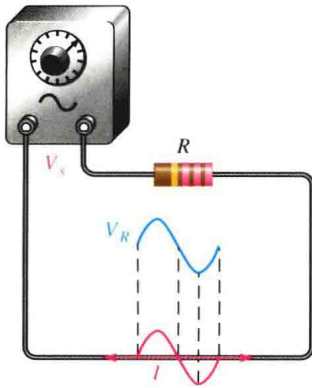


FIGURE 6-31

A sinusoidal voltage produces a sinusoidal current.

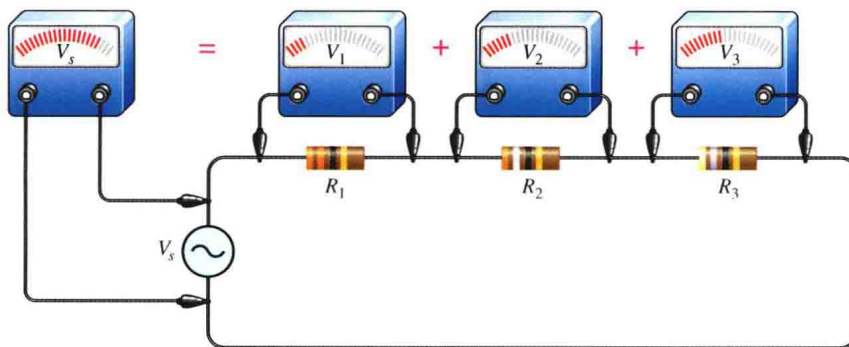


FIGURE 6-32

Illustration of Kirchhoff's voltage law in an ac circuit.

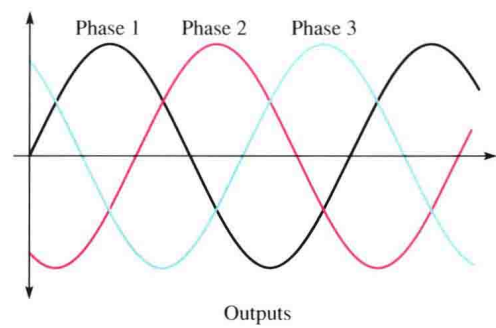
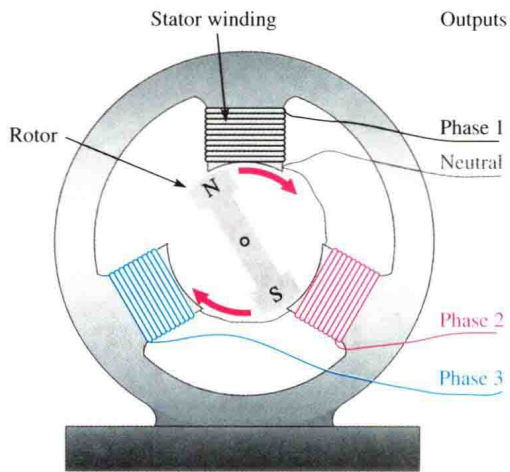
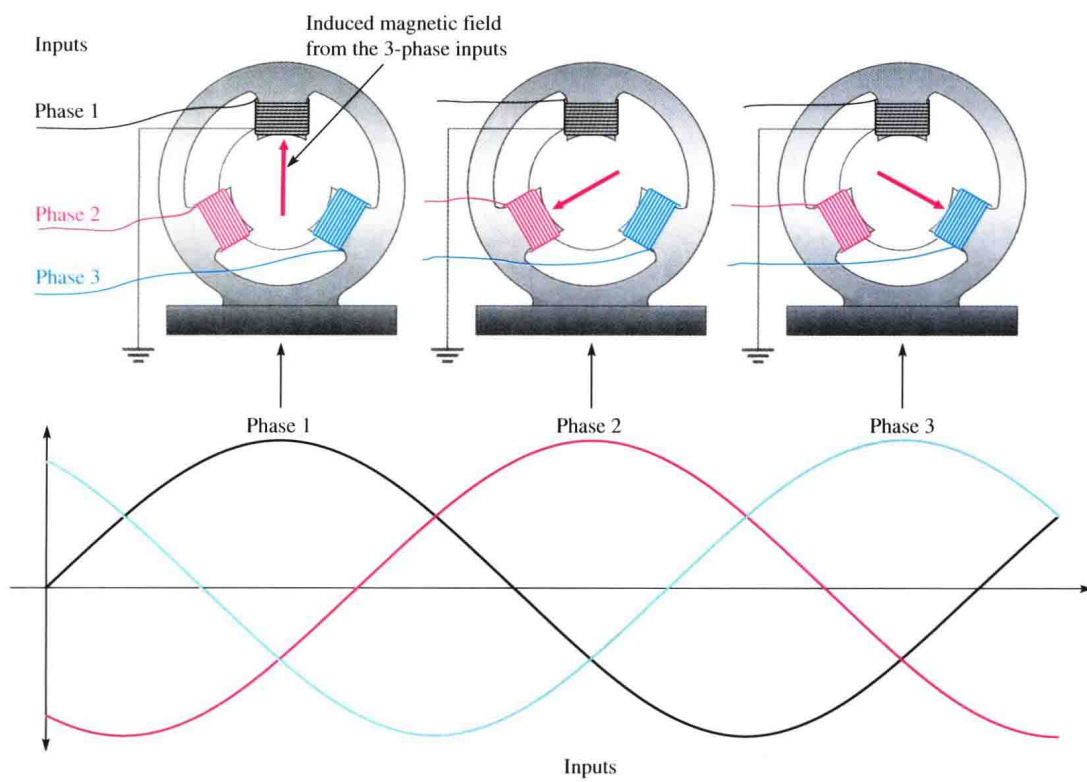
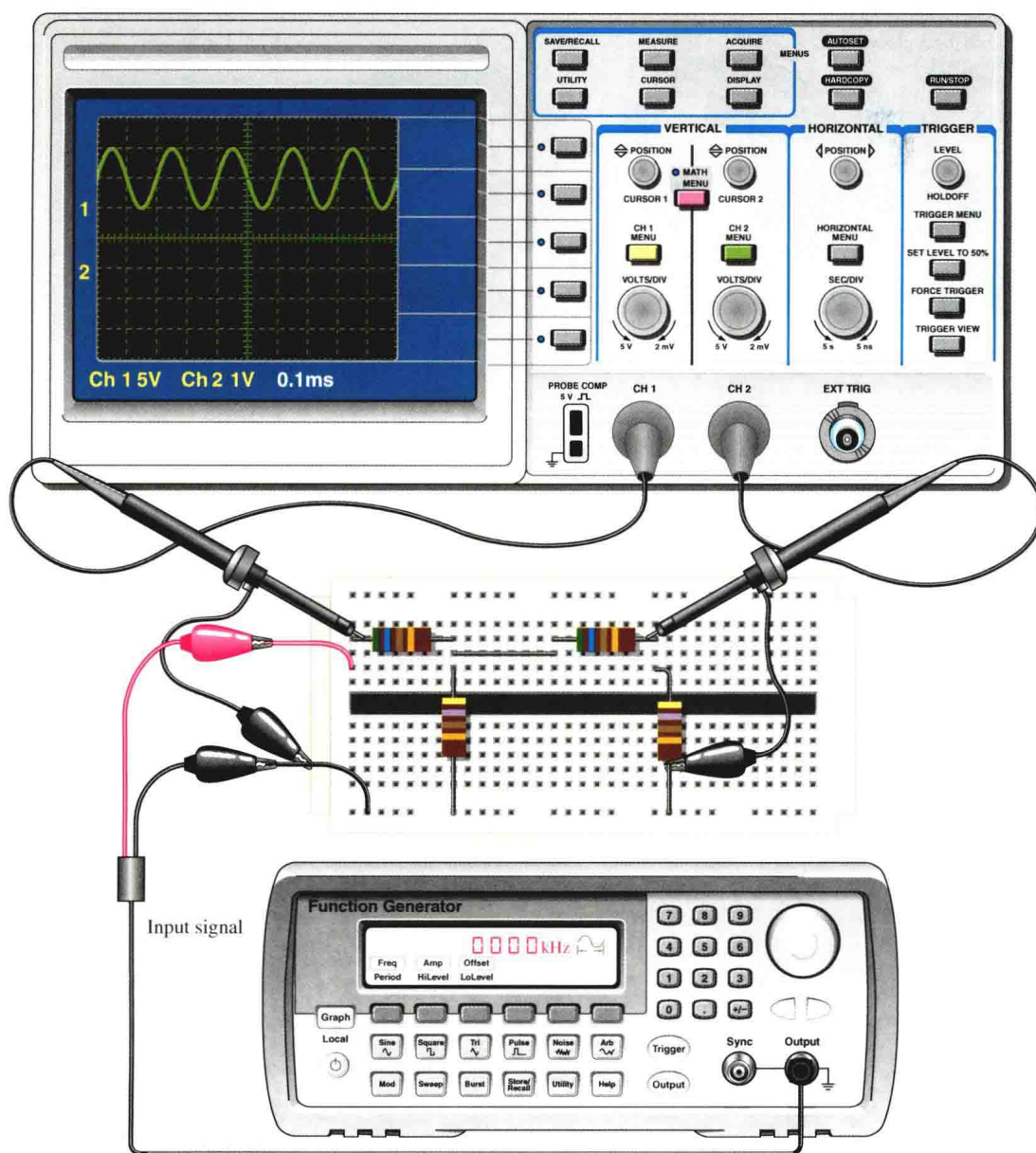


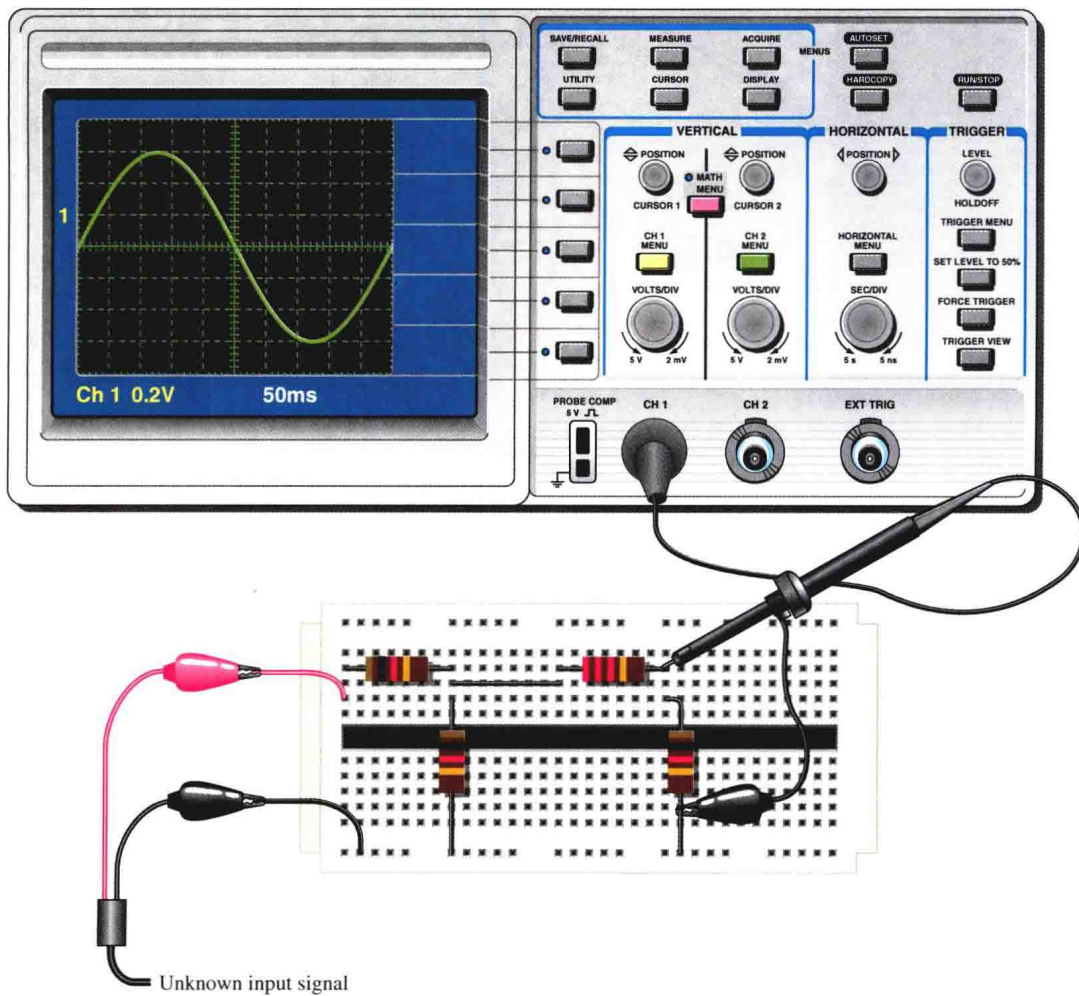
FIGURE 6-41



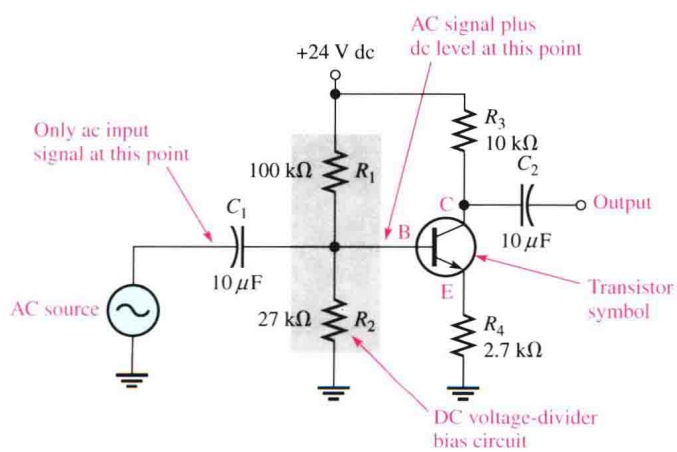
▲ FIGURE 6-43



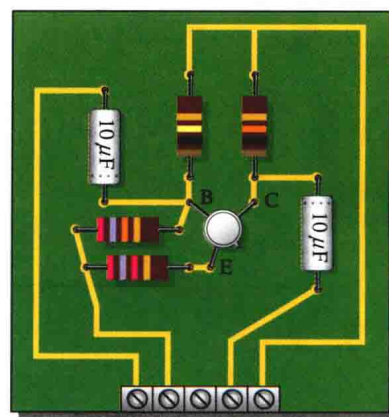
▲ FIGURE 6-87



▲ FIGURE 6-88

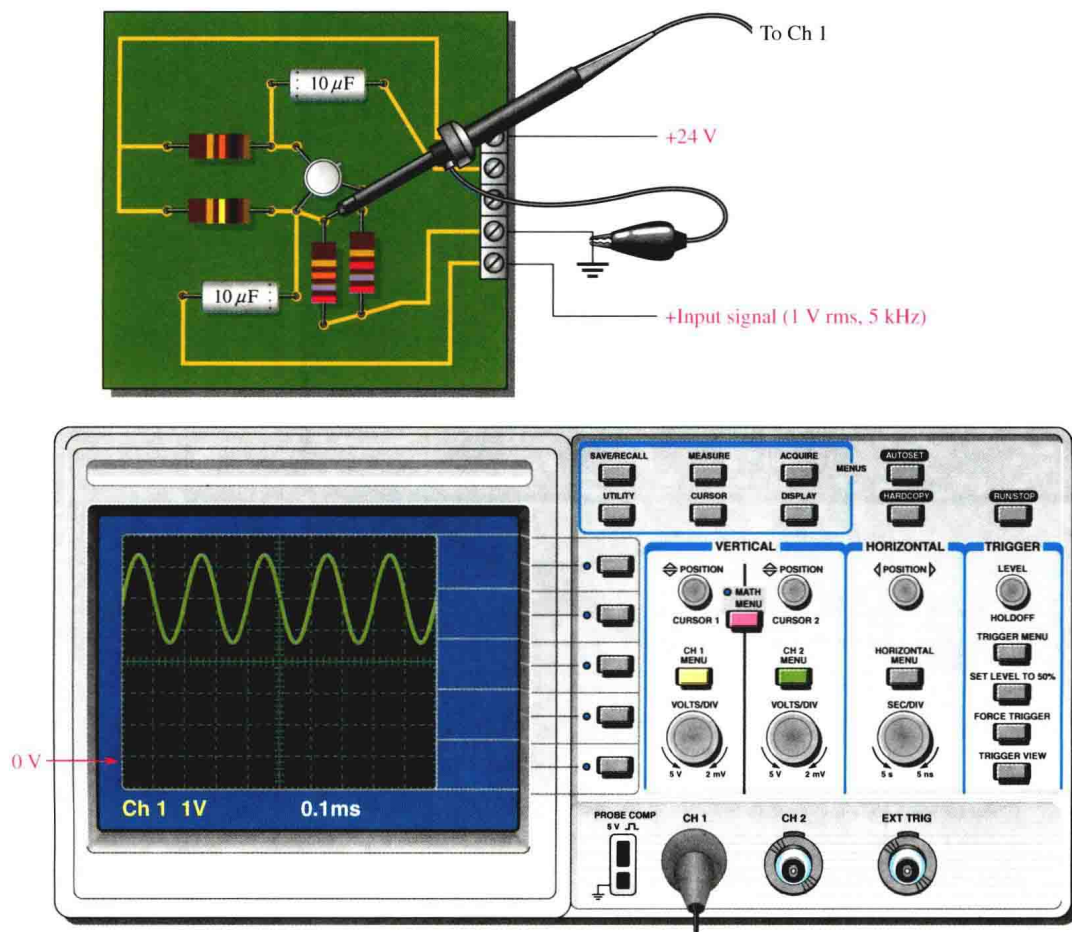


(a) Amplifier schematic



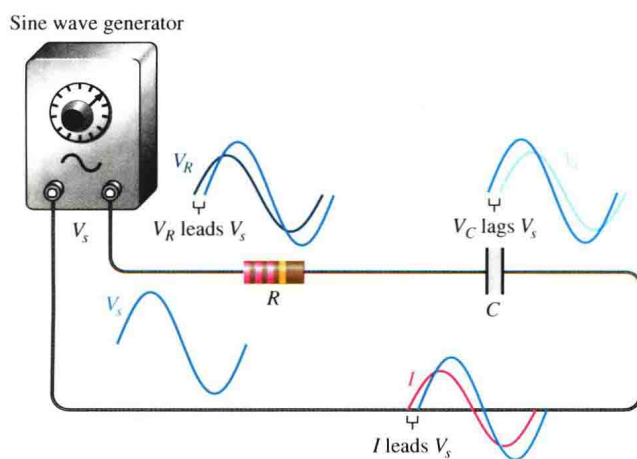
(b) Amplifier board

▲ FIGURE 7-57

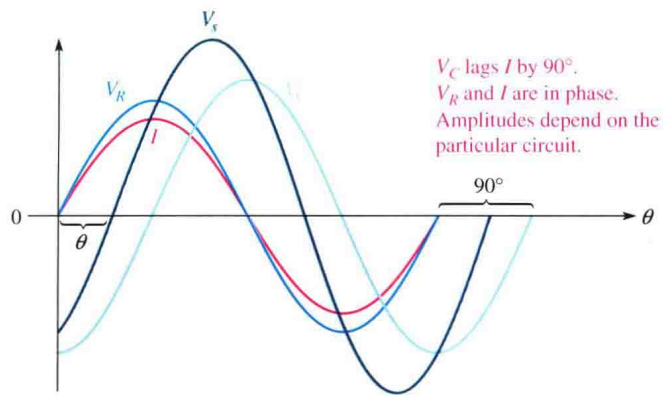


Note: Ground reference has been established as indicated by 0 V.

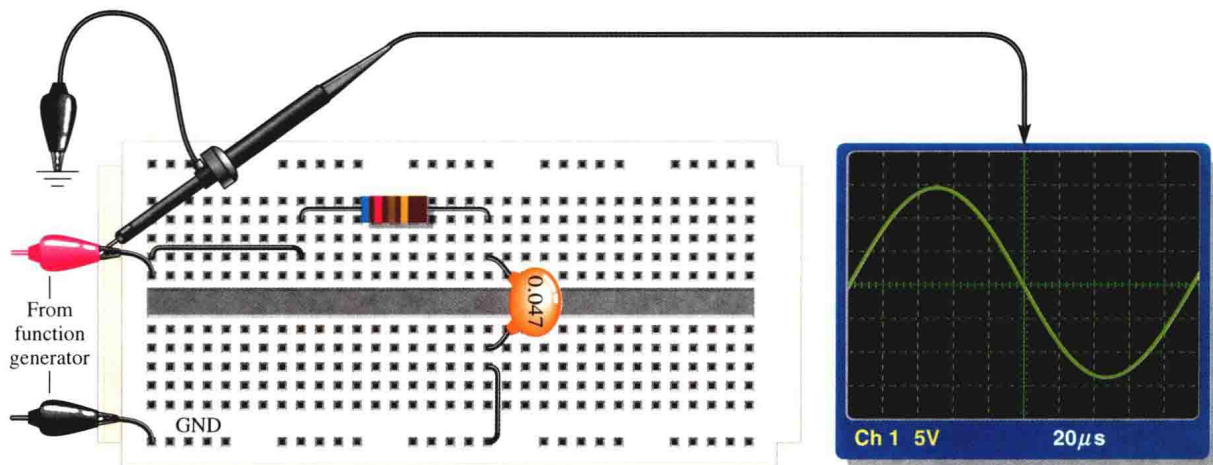
▲ FIGURE 7-58



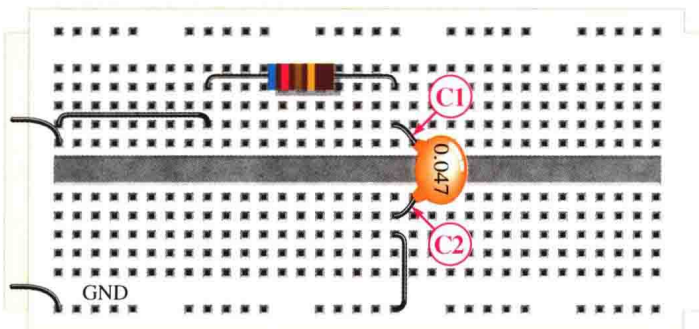
▲ FIGURE 8-1



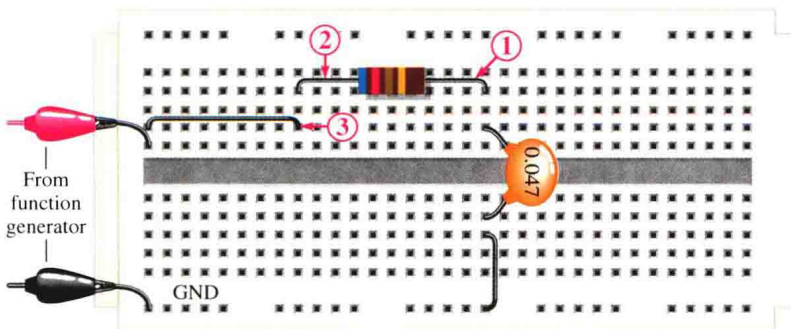
▲ FIGURE 8-10



(a) Scope shows the correct voltage at the input.



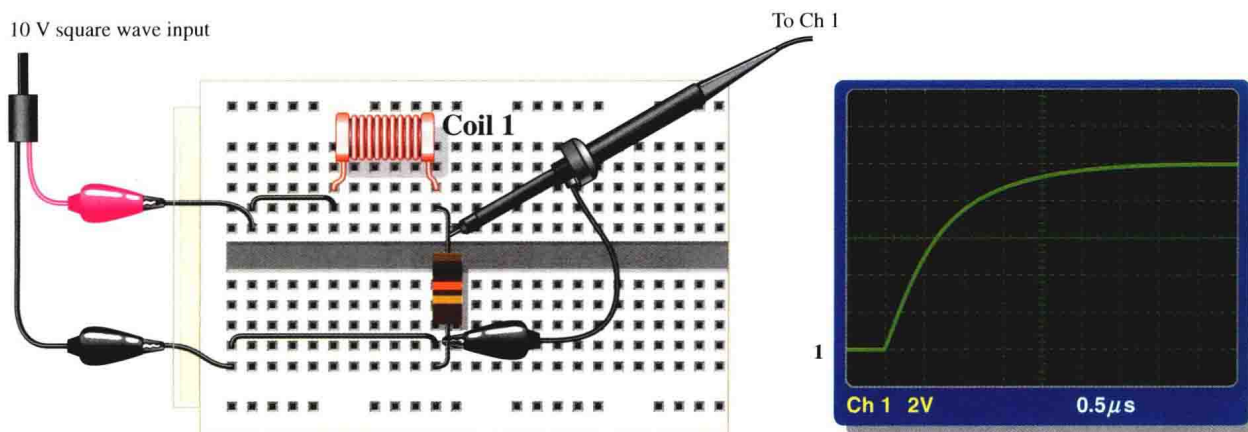
(b) With function generator disconnected, the meter indicates the capacitor is not shorted.



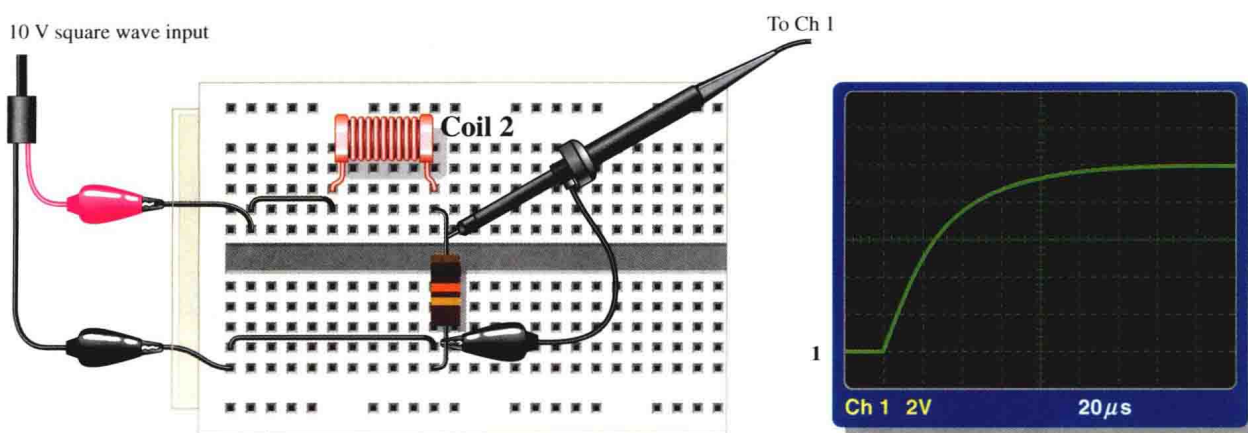
(c) The voltage is found at point ③, indicating that one of the two used protoboard contacts in that row is bad.



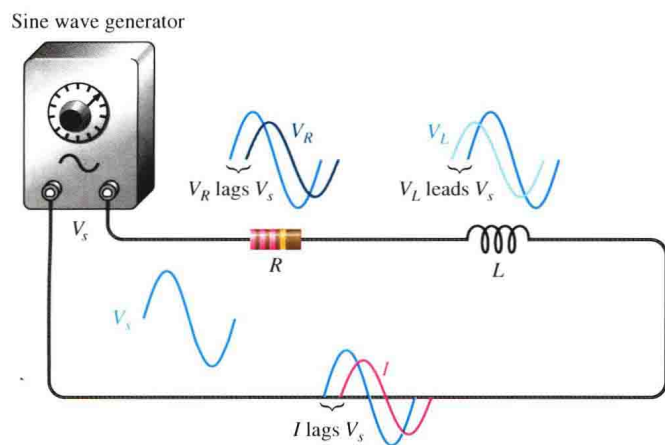
▲ FIGURE 8-60



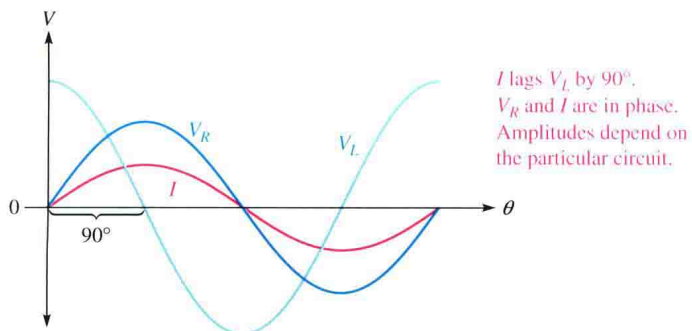
▲ FIGURE 9-39



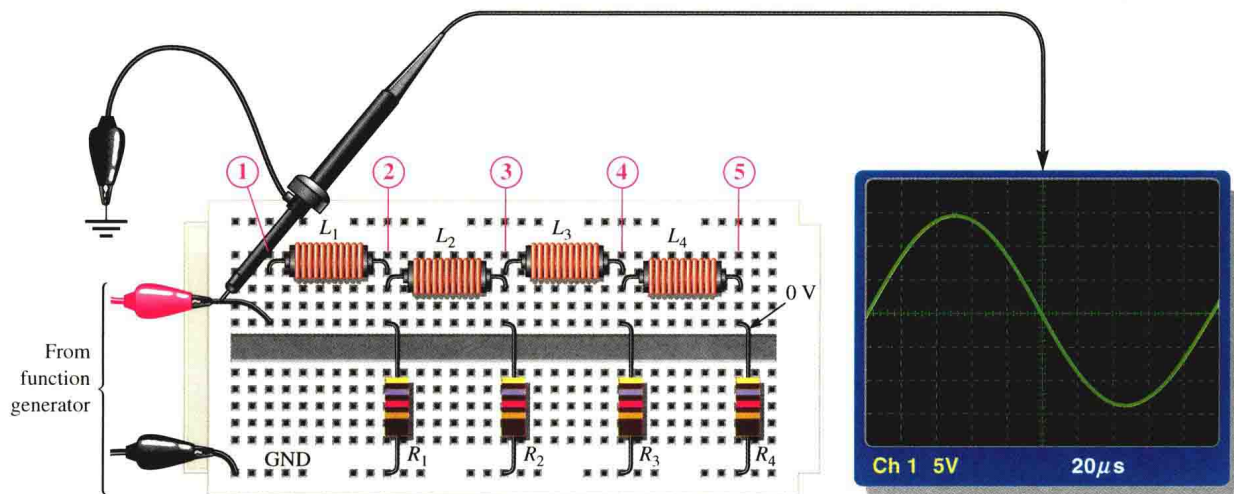
▲ FIGURE 9-40



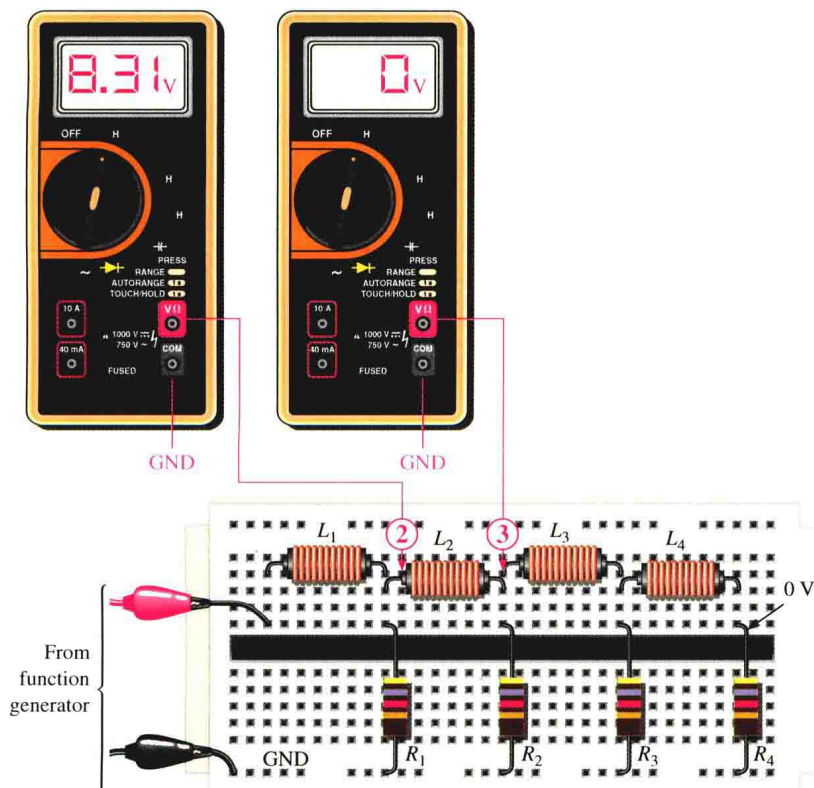
► FIGURE 10-1



► FIGURE 10-7



(a) Scope shows the correct voltage at the input.



(b) A zero voltage at point ③ indicates the fault is between point ③ and the source. A reading of 8.31 V at point ② shows that L_2 is open.

▲ FIGURE 10-43