

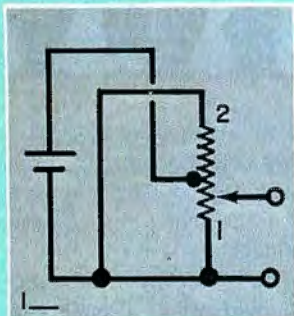
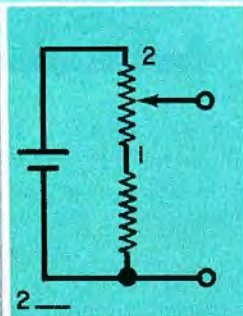
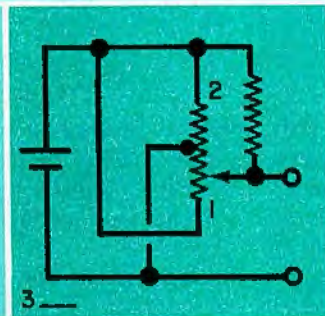
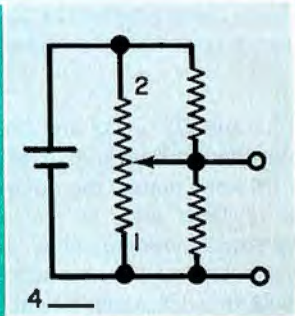
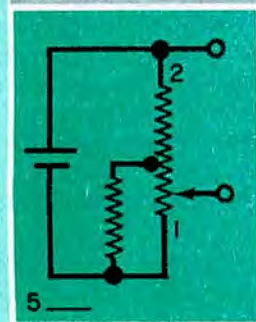
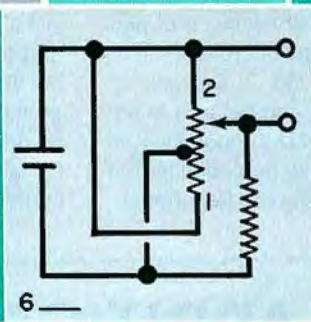
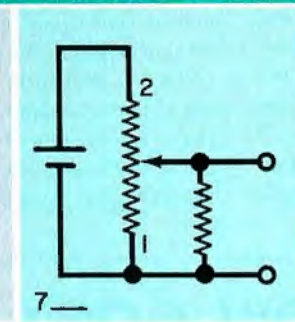
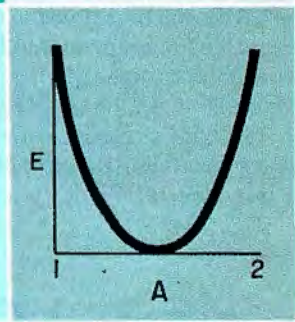
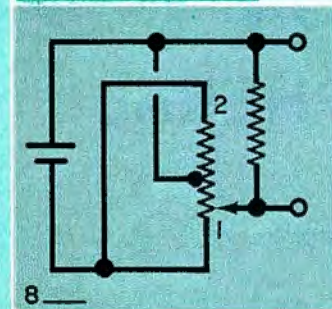
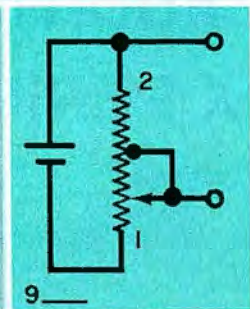
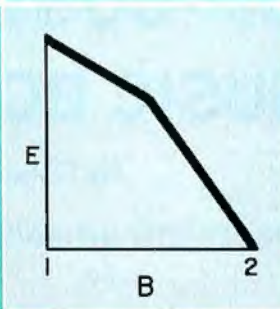
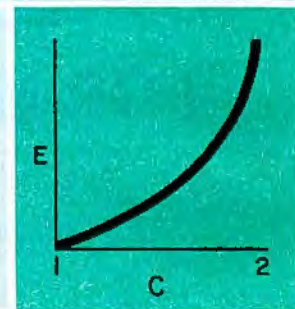
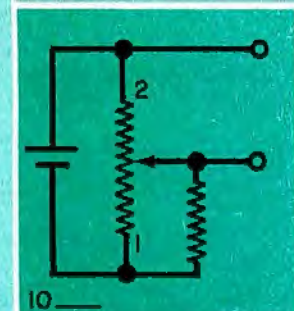
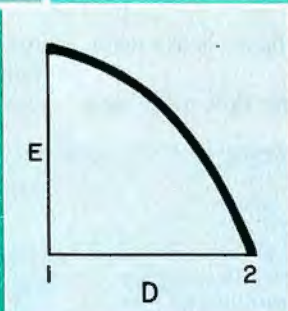
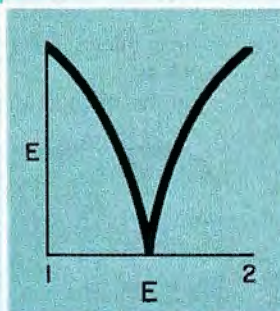
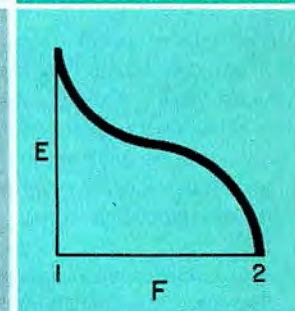
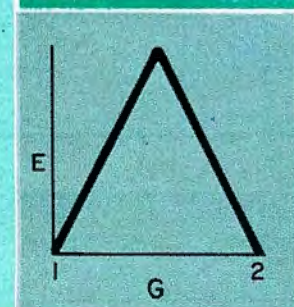
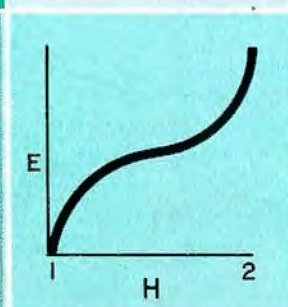
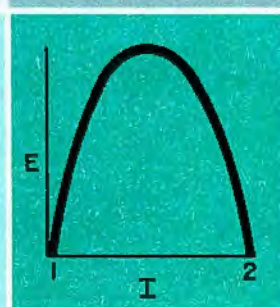
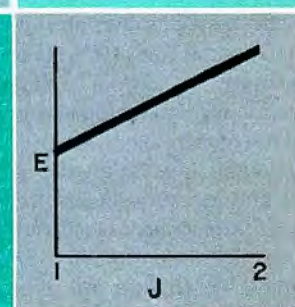
# POT QUIZ

**T**HE taper of a potentiometer can be easily changed to suit a particular application by the simple addition of one or more resistors. The new curve is easily predictable if you carefully observe the locations of the output terminals and which parts of a centertapped potentiometers are shunted by fixed resistors.

See if you can match the pot circuits (1-10) with their corresponding output voltage curves (A-J) produced when the wiper arm is moved from point 1 to point 2 in the circuit in each case.

Assume that all resistors and linear pots, some of which are center-tapped, have the same total resistance values.

(Answers on page 85)

## POTENTIOMETER QUIZ ANSWERS

*(Quiz is on page 56)*

- 1-G. E is between wiper and negative.  
At 1 and 2,  $E=0$   
At center tap,  $E=\text{input}$   
At  $\frac{1}{2}$  and  $\frac{3}{4}$ ,  $E=\frac{1}{2} \times \text{input}$
- 2-J. E is between wiper and positive.  
At 1,  $E=\frac{1}{2} \times \text{input}$   
At 2,  $E=\text{input}$
- 3-E. E is between wiper and C.T.  
At 1 and 2,  $E=\text{input}$   
At C. T.,  $E=0$   
At  $\frac{1}{2}$  and  $\frac{3}{4}$ , E is more than  
 $\frac{1}{2} \times \text{input}$   
E is not shunted, hence is more  
than linear value.
- 4-H. E is between wiper and positive.  
At 1,  $E=0$   
At 2,  $E=\text{input}$   
At center tap,  $E=\frac{1}{2} \times \text{input}$   
At  $\frac{1}{4}$ , E is more than  $\frac{1}{4} \times \text{input}$   
At  $\frac{3}{4}$ , E is less than  $\frac{3}{4} \times \text{input}$
- 5-B. E is between wiper and positive.  
At 1,  $E=\text{input}$   
At 2,  $E=0$   
At center tap, E is more than  
 $\frac{1}{2} \times \text{input}$
- 6-I. E is between wiper and positive.  
At 1 and 2,  $E=0$   
At center tap,  $E=\text{input}$   
At  $\frac{1}{4}$  and  $\frac{3}{4}$ , E is more than  
 $\frac{1}{2} \times \text{input}$   
E is not shunted, hence is larger  
than linear value.
- 7-C. E is between wiper and negative.  
At 1,  $E=0$   
At 2,  $E=\text{input}$   
E is shunted, hence is always  
smaller than linear value.
- 8-A. E is between wiper and C.T.  
At 1 and 2,  $E=\text{input}$   
At center tap,  $E=0$   
At  $\frac{1}{4}$  and  $\frac{3}{4}$ , E is less than  
 $\frac{1}{2} \times \text{input}$   
E is shunted, hence is smaller  
than linear value.
- 9-F. E is between wiper and positive.  
At 1,  $E=\text{input}$   
At 2,  $E=0$   
At  $\frac{1}{4}$ ,  $E=\frac{2}{3} \times \text{input}$   
At C. T.,  $E=\frac{1}{2} \times \text{input}$   
At  $\frac{3}{4}$ ,  $E=\frac{1}{3} \times \text{input}$
- 10-D. E is between wiper and positive.  
At 1,  $E=\text{input}$   
At 2,  $E=0$   
Between 1 and 2, E is not shunted,  
hence always larger than  
linear.