

**SN54122, SN54123, SN54130, SN54LS122, SN54LS123, SN74122, SN74123, SN74130, SN74LS122, SN74LS123**  
**RETRIGGERABLE MONOSTABLE MULTIVIBRATORS**

DECEMBER 1983 — REVISED MARCH 1988

- D-C Triggered from Active-High or Active-Low Gated Logic Inputs
- Retriggerable for Very Long Output Pulses, Up to 100% Duty Cycle
- Overriding Clear Terminates Output Pulse
- '122 and 'LS122 Have Internal Timing Resistors

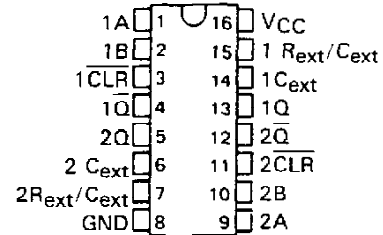
**description**

These d-c triggered multivibrators feature output pulse-duration control by three methods. The basic pulse time is programmed by selection of external resistance and capacitance values (see typical application data). The '122 and 'LS122 have internal timing resistors that allow the circuits to be used with only an external capacitor, if so desired. Once triggered, the basic pulse duration may be extended by retriggering the gated low-level-active (A) or high-level-active (B) inputs, or be reduced by use of the overriding clear. Figure 1 illustrates pulse control by retriggering and early clear.

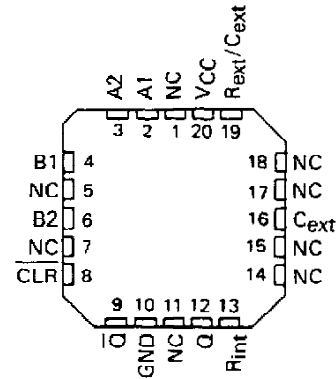
The 'LS122 and 'LS123 are provided enough Schmitt hysteresis to ensure jitter-free triggering from the B input with transition rates as slow as 0.1 millivolt per nanosecond.

The  $R_{int}$  in nominal 10 k $\Omega$  for '122 and 'LS122.

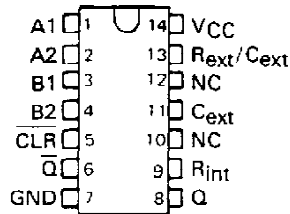
SN54123, SN54130, SN54LS123 . . . J OR W PACKAGE  
 SN74123, SN74130 . . . N PACKAGE  
 SN74LS123 . . . D OR N PACKAGE  
 (TOP VIEW) (SEE NOTES 1 THRU 4)



SN54LS122 . . . FK PACKAGE  
 (TOP VIEW) (SEE NOTES 1 THRU 4)

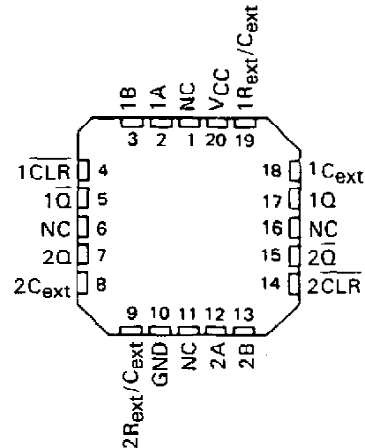


SN54122, SN54LS122 . . . J OR W PACKAGE  
 SN74122 . . . N PACKAGE  
 SN74LS122 . . . D OR N PACKAGE  
 (TOP VIEW) (SEE NOTES 1 THRU 4)



- NOTES:
1. An external timing capacitor may be connected between  $C_{ext}$  and  $R_{ext}/C_{ext}$  (positive).
  2. To use the internal timing resistor of '122 or 'LS122, connect  $R_{int}$  to  $V_{CC}$ .
  3. For improved pulse duration accuracy and repeatability, connect an external resistor between  $R_{ext}/C_{ext}$  and  $V_{CC}$  with  $R_{int}$  open-circuited.
  4. To obtain variable pulse durations, connect an external variable resistance between  $R_{int}$  or  $R_{ext}/C_{ext}$  and  $V_{CC}$ .

SN54LS123 . . . FK PACKAGE  
 (TOP VIEW) (SEE NOTES 1 THRU 4)



NC - No internal connection

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