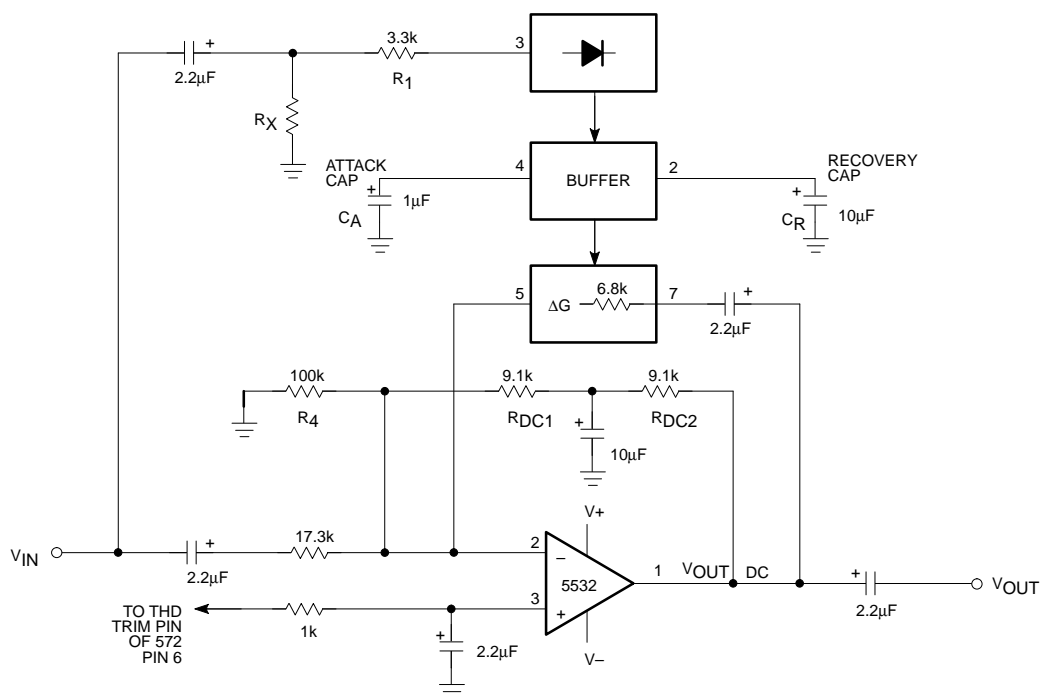


Automatic level control using the NE572

AN175

NE572 AUTOMATIC LEVEL CONTROL



$$V_{ODC} = V_{REF} \left(1 + \frac{R_{DC1} + R_{DC2}}{R_4} \right)$$

WHERE: $R_4 = 100k$
 $R_{DC1} = R_{DC2} = 9.1k$
 $V_{REF} = 2.5V$

$$\text{OUTPUT LEVEL} = \left(\frac{R_1 R_2 I_B}{2R_3} \right) \left(\frac{V_{IN}}{V_{IN(avg)}} \right)$$

WHERE: $R_1 = 6.8k$ (Internal)

$$\text{Gain} = \frac{R_1 R_2 I_B}{2R_3 V_{IN(avg)}}$$

$R_2 = 3.3k$
 $R_3 = 17.3k$
 $I_B = 140\mu A$

ATTACK TIME = $(10k) C_A$

RECOVERY TIME = $(10k) C_R$

TO LIMIT THE GAIN AT VERY LOW INPUT LEVELS, ADD R_X :

$$\text{GAIN MAX.} = \frac{R_1 + R_X}{2.5V} \times R_2 \times I_B$$

$$\frac{V_{IN}}{V_{IN(avg)}} = \frac{\pi}{2\sqrt{2}} = 1.11$$

(FOR SINE WAVES)

NOTE:

Pin numbers are for side A of the NE572.

SR00753