





SEE P. 4/4

R28-55

U8-14

U8-12

U8-15

U8-13

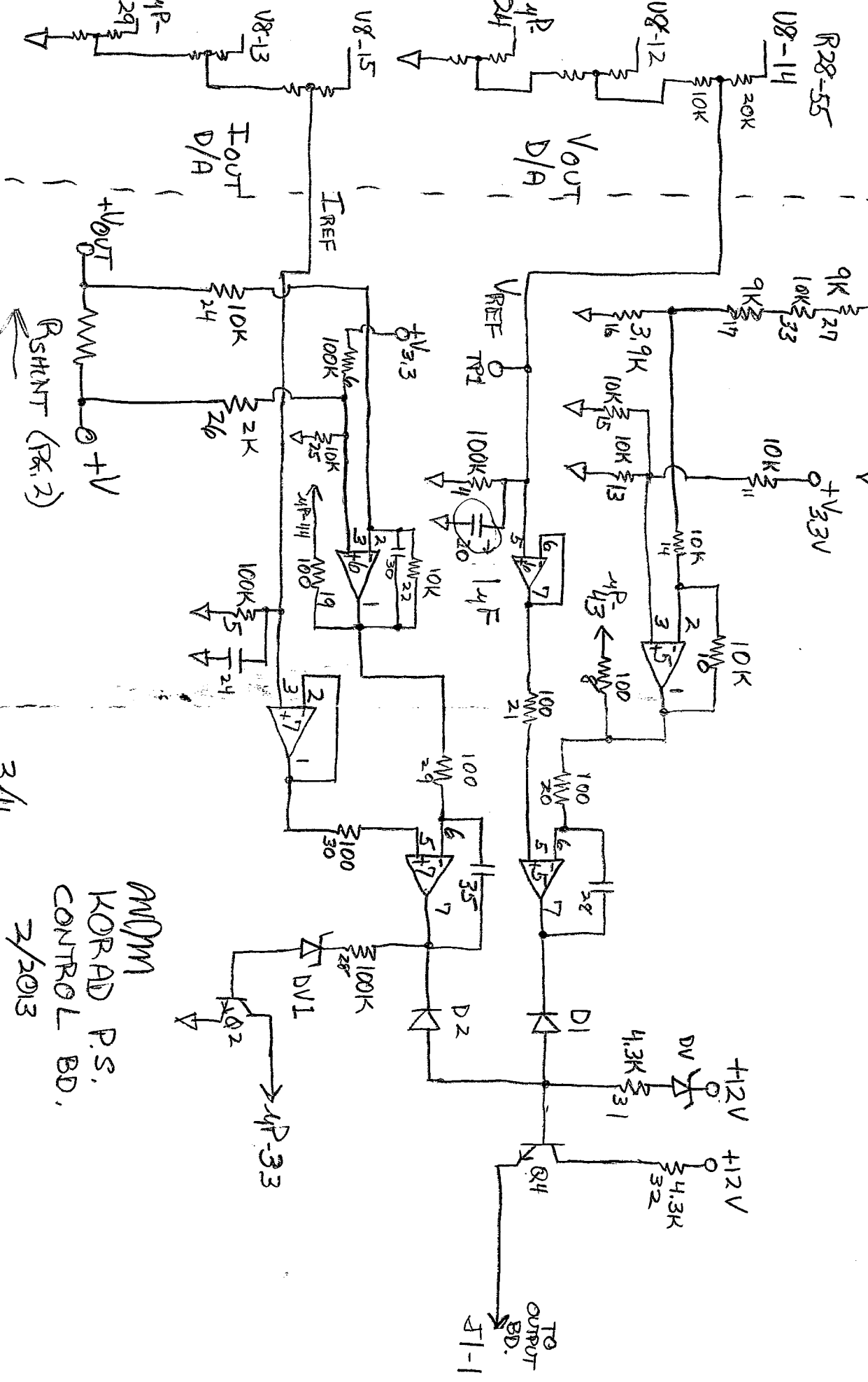
U8-13

U8-13

-VSENSE  
+VSENSE

0821C  
I2 0.52

OFF - -105mV  
OV - +7.7mV



ANDM  
KORAD P.S.  
CONTROL BD.  
2/2013

3/4

## 8-BIT SHIFT REGISTERS WITH 3-STATE OUTPUT REGISTERS

Check for Samples: SN54HC595 SN74HC595

### FEATURES

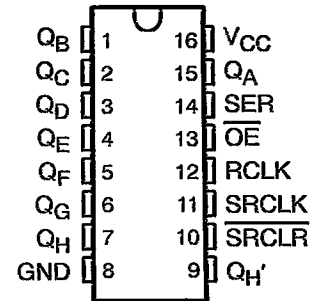
- 8-Bit Serial-In, Parallel-Out Shift
- Wide Operating Voltage Range of 2 V to 6 V
- High-Current 3-State Outputs Can Drive Up To 15 LSTTL Loads
- Low Power Consumption: 80- $\mu$ A (Max)  $I_{CC}$
- $t_{pd} = 13$  ns (Typ)
- $\pm 6$ -mA Output Drive at 5 V
- Low Input Current: 1  $\mu$ A (Max)
- Shift Register Has Direct Clear

### DESCRIPTION

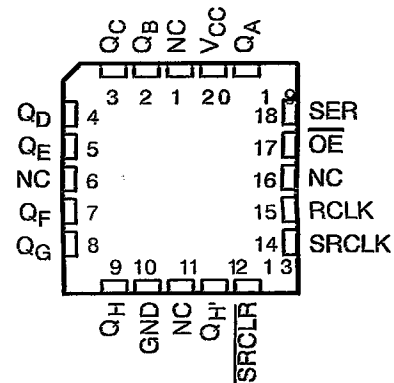
The 'HC595 devices contain an 8-bit serial-in, parallel-out shift register that feeds an 8-bit D-type storage register. The storage register has parallel 3-state outputs. Separate clocks are provided for both the shift and storage register. The shift register has a direct overriding clear (SRCLR) input, serial (SER) input, and serial outputs for cascading. When the output-enable ( $\overline{OE}$ ) input is high, the outputs are in the high-impedance state.

Both the shift register clock (SRCLK) and storage register clock (RCLK) are positive-edge triggered. If both clocks are connected together, the shift register always is one clock pulse ahead of the storage register.

SN54HC595...J OR W PACKAGE  
SN74HC595...D, DB, DW, N, NS, OR PW PACKAGE  
(TOP VIEW)



SN54HC595...FK PACKAGE  
(TOP VIEW)

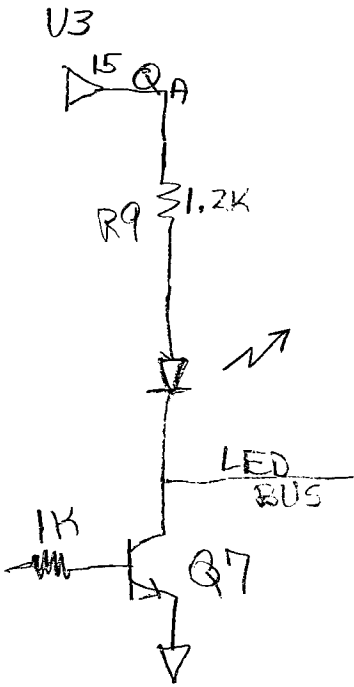
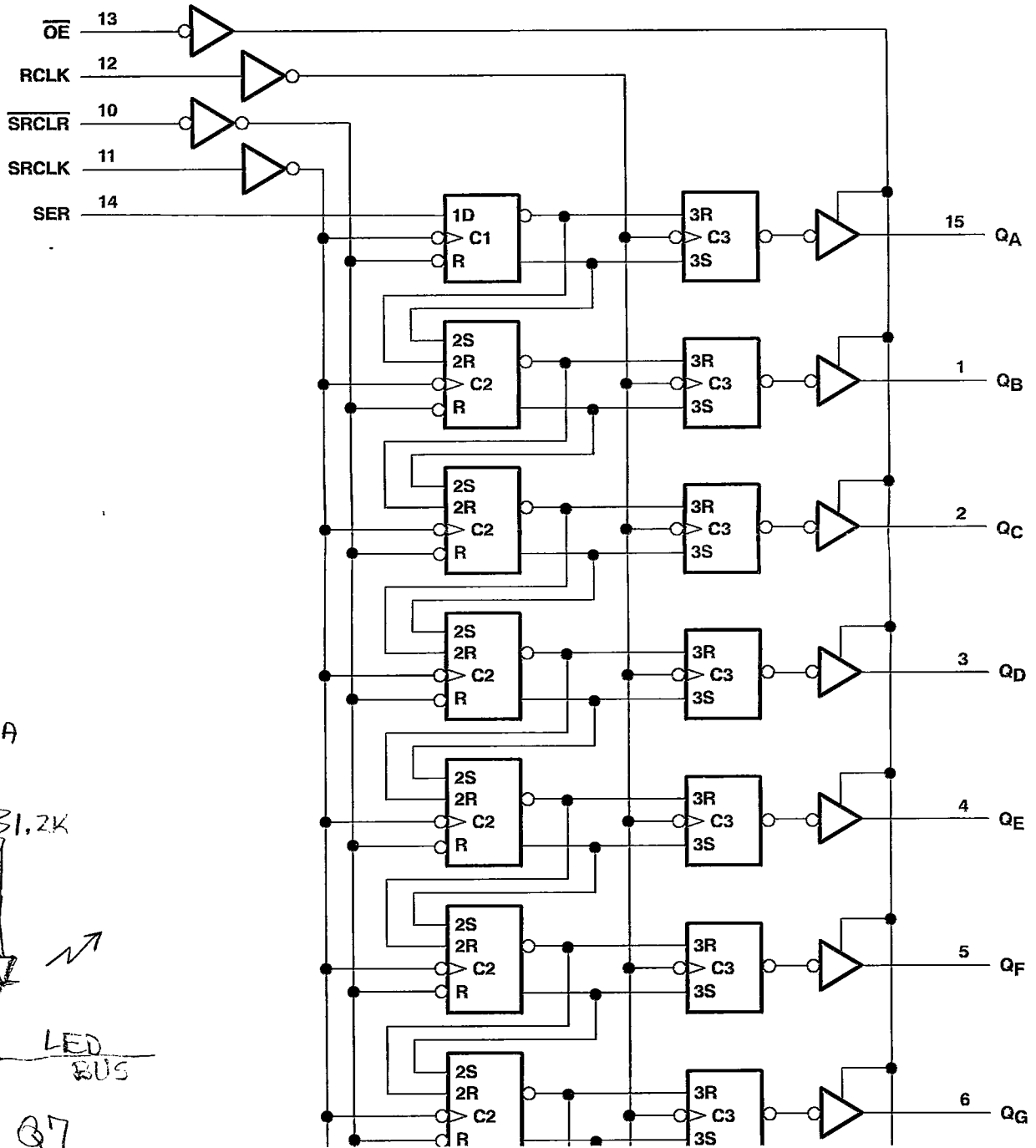


NC – No internal connection



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LOGIC DIAGRAM (POSITIVE LOGIC)



TYPICAL FRONT PANEL LED DRIVE

R/2R SHIFT REG'S.