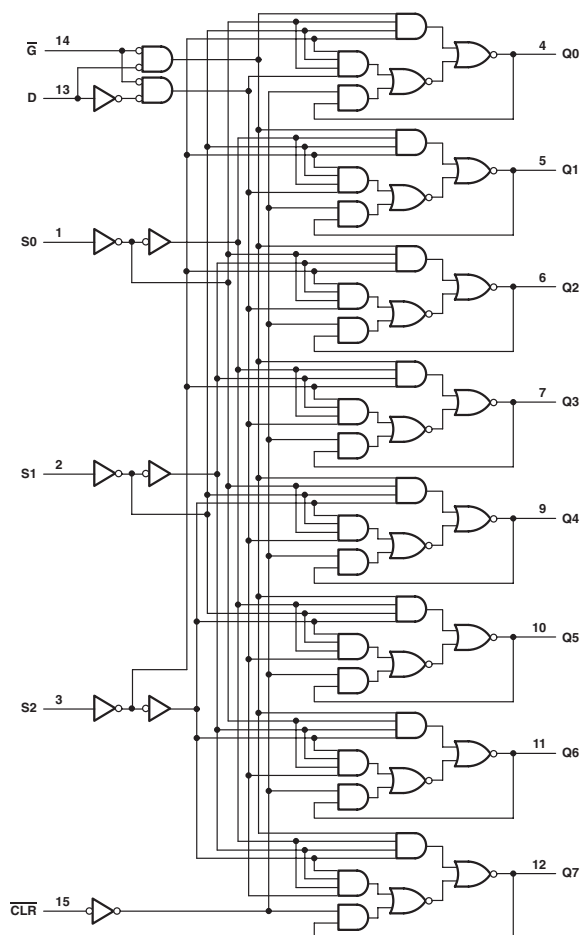


8-BIT ADDRESSABLE LATCHES

- 8-Bit Parallel-Out Storage Register Performs Serial-to-Parallel Conversion with Storage
- Asynchronous Parallel Clear
- Active-High Decoder
- Enable/Disable Input Simplifies Expansion
- Expandable for n-Bit Applications
- Four Distinct Functional Modes

Logic Diagram (SN74ALS)



LATCH SELECTION

| SELECT INPUTS | | | LATCH ADDRESSED |
|---------------|---|---|-----------------|
| C | B | A | |
| L | L | L | 0 |
| L | L | H | 1 |
| L | H | L | 2 |
| L | H | H | 3 |
| H | L | L | 4 |
| H | L | H | 5 |
| H | H | L | 6 |
| H | H | H | 7 |

FUNCTION TABLE (SN74)

| INPUTS | | OUTPUT OF ADDRESSED LATCH | EACH OTHER OUTPUT | FUNCTION |
|--------|---|---------------------------|-------------------|---|
| CLEAR | G | | | |
| H | L | D | Q ₁₀ | Addressable latch Memory 8-line demultiplexer Clear |
| H | H | Q ₁₀ | Q ₁₀ | |
| L | L | D | L | |
| L | H | L | L | |

ELECTRICAL CHARACTERISTICS AND RECOMMENDED OPERATING CONDITIONS

| PARAMETER | MAX or MIN | TTL | LS | ALS | SN74 HC | CD74 HC | CD74 HCT | UNIT |
|-----------------|------------|------|------|------|---------|---------|----------|------|
| I _{CC} | MAX | 90 | 36 | 22 | 0.08 | 0.16 | 0.16 | mA |
| I _{OH} | MAX | 16 | 8 | 8 | 4 | 4 | 4 | mA |
| I _{OL} | MAX | -0.8 | -0.4 | -0.4 | -4 | -4 | -4 | mA |

TIMING REQUIREMENTS AND SWITCHING CHARACTERISTICS

| PARAMETER | | INPUT | OUTPUT | MAX or MIN | TTL | LS | ALS | SN74 HC | CD74 HC | CD74 HCT |
|-----------|-------------------------------|----------------------|--------|------------|-----|----|-----|---------|---------|----------|
| tw | \overline{G} (CDHC/HCT: LE) | | | MIN | 15 | 17 | 15 | 20 | 21 | 27 |
| | CLR (CDHC/HCT: MR) | | | | 15 | 10 | 10 | 20 | 21 | 27 |
| tsu | DATA | | | MIN | 15 | 20 | 15 | 19 | 24 | 26 |
| | ADDRESS | | | | 5 | 17 | 15 | 19 | 24 | 26 |
| th | DATA | | | MIN | 0 | 0 | 0 | 5 | 0 | 0 |
| | ADDRESS | | | | 20 | 0 | 0 | 5 | 0 | 0 |
| tPLH | | CLEAR (CDHC/HCT: MR) | Any Q | MAX | 25 | 18 | 12 | 38 | 47 | 59 |
| tPHL | | DATA | Any Q | MAX | 24 | 30 | 19 | 33 | 56 | 59 |
| tPLH | | | | | 20 | 20 | 12 | 33 | - | 59 |
| tPHL | | ADDRESS | Any Q | MAX | 28 | 27 | 22 | 50 | 56 | 61 |
| tPLH | | | | | 28 | 20 | 12 | 50 | - | 61 |
| tPHL | | ENABLE | Any Q | MAX | 20 | 24 | 20 | 43 | 51 | 57 |
| tPHL | | | | | 20 | 24 | 13 | 43 | - | 57 |

UNIT: ns