

RCSL: 52-AA46/ 2 pages

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Edited: Feb. 1969

RC STANDARD
FOR SYMBOLS USED IN
PCBA CIRCUIT DIAGRAMS

ABSTRACT:

This standard presents the symbols
used in PCBA circuit Diagrams.

A/S REGNECENTRALEN
Falkoner Alle 1,
Copenhagen F.

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This standard replaces: RCSL: 52-AA9

1. REMARKS

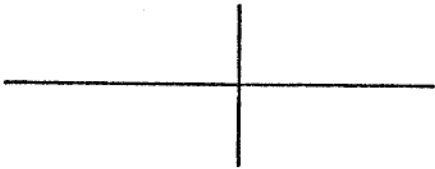
In symbols for Integrated circuits the position of the identification reference is shown with ICx. In the PCBA Circuit Diagrams the x will be replaced by the number of the Integrated circuit package on the PCBA.

1.1



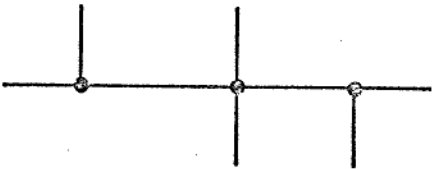
WIRE

1.2



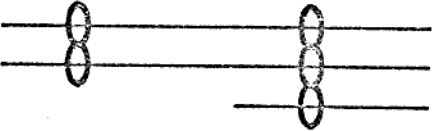
CROSSED WIRE
WITHOUT CONNECTION

1.3



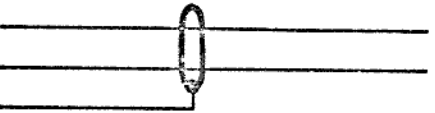
WIRES WITH ELECTRICAL
CONNECTION

1.4



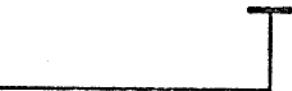
TWISTED WIRES

1.5



SCREENED WIRES

1.6



VOLTAGE SUPPLY LEVEL

130968LLM

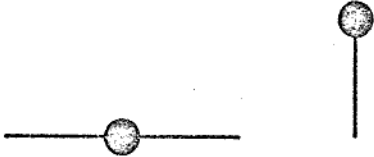
AA GR

1.7



GROUND POINT

1.8



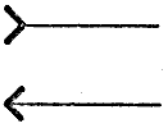
TEST POINT

1.9



CONNECTOR PIN

1.10



JACK (SOCKET)
FEMALE PART
PLUG
MALE PART

1.11



CHASSIS (NOT NECESSARILY
GROUND)

130968LLM

AAGR

2.1



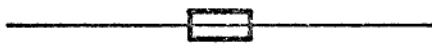
RESISTOR

2.2



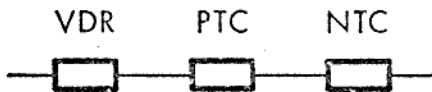
POTENTIOMETER

2.3



FUSE

2.4

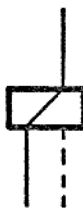


VOLTAGE DEPENDENT RESISTOR

POSITIVE TEMPERATURE COEF -
FICIENT RESISTOR

NEGATIVE TEMPERATURE COEF -
FICIENT RESISTOR

2.5



RELAY- OR
CONTACTOR COIL

2.6



CAPACITOR

130968LLM

AA GR

2.7



ELECTROLYTIC CAPACITOR

2.8



COIL

2.9



COIL WITH AN IRON CORE

2.10



CONTACT NORMALLY OPEN

CONTACT NORMALLY CLOSED

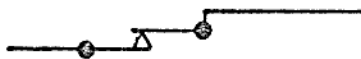
2.11



CHANGE OVER CONTACT

130768LLM

2.12



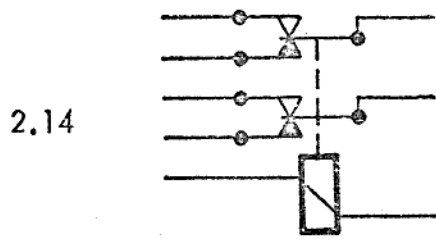
MAKE CONTACT (NO)

AAGR

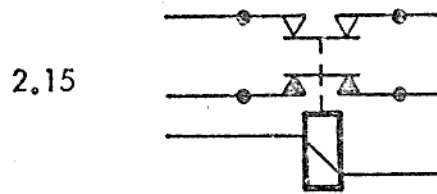
2.13



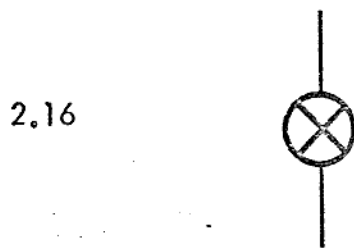
BREAK CONTACT (NC)



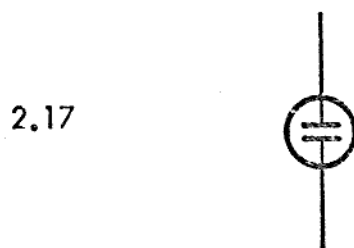
RELAY



CONTACTOR

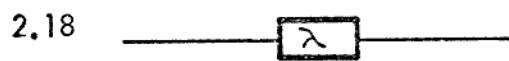


BULB



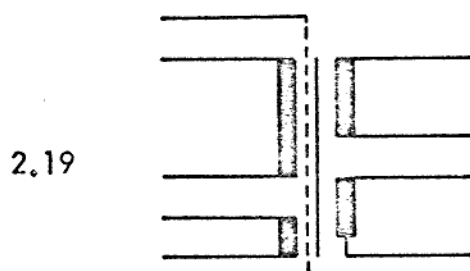
NEON LAMP

130968LLM



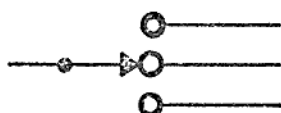
PHOTORESISTOR

AA GR



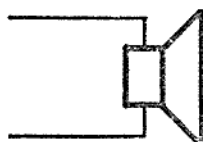
TRANSFORMER WITH SHIELD

2.20



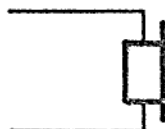
SWITCH

2.21



LOUDSPEAKER

2.22



TELEPHONE

2.23



CRYSTAL

130968LLM

AA GR

3.1



DIODE

3.2



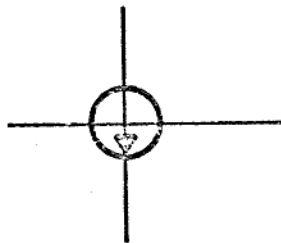
ZENERDIODE

3.3



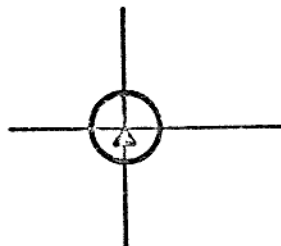
SILICON CONTROLLED RECTIFIER
(THYRISTOR)

3.4



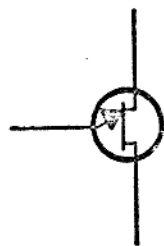
TRANSISTOR NPN

3.5



TRANSISTOR PNP

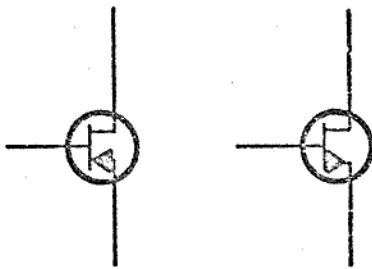
3.6



UNI-JUNCTION TRANSISTOR

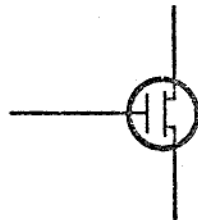
130968LLM
AAGR

3.7



FIELD EFFECT TRANSISTOR
JUNCTION

3.8



FIELD EFFECT TRANSISTOR
ISOLATED GATE

3.9

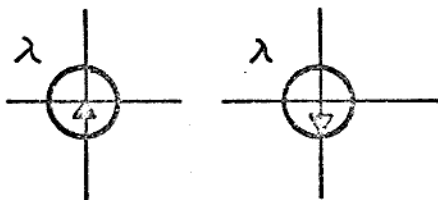
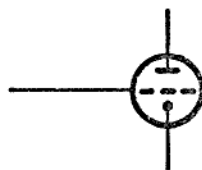


PHOTO TRANSISTOR

3.10



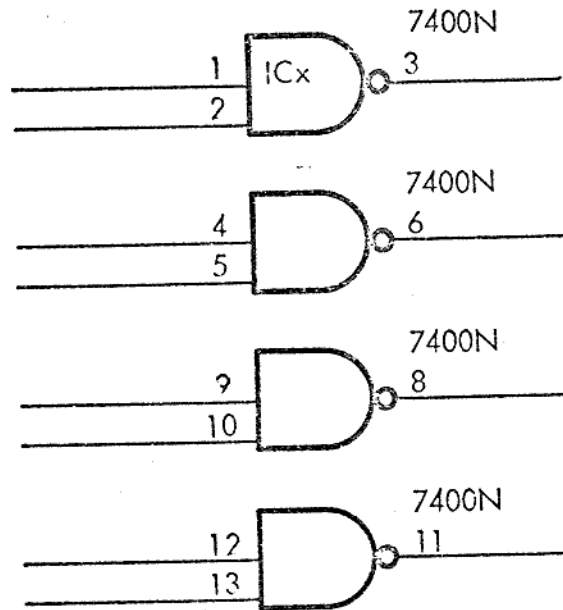
PHOTO DIODE



TRIODE, GAS FILLED

130968LLM

AA GR



Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

I30968LLM

AAGR

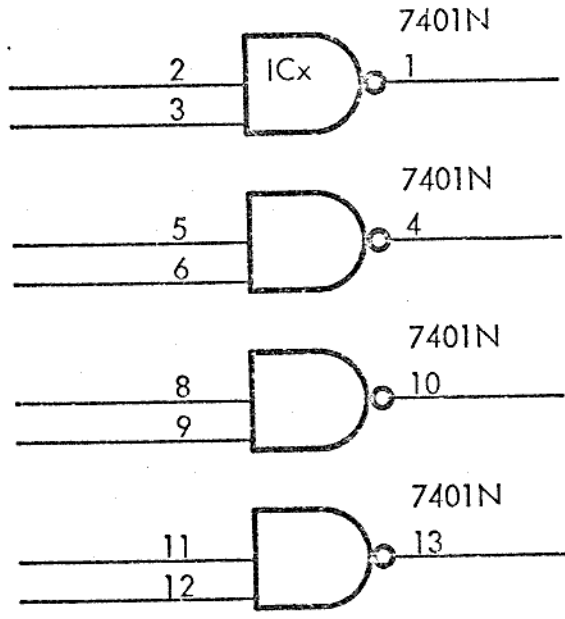
Quadruple 2 - input NAND gate

SN7400N

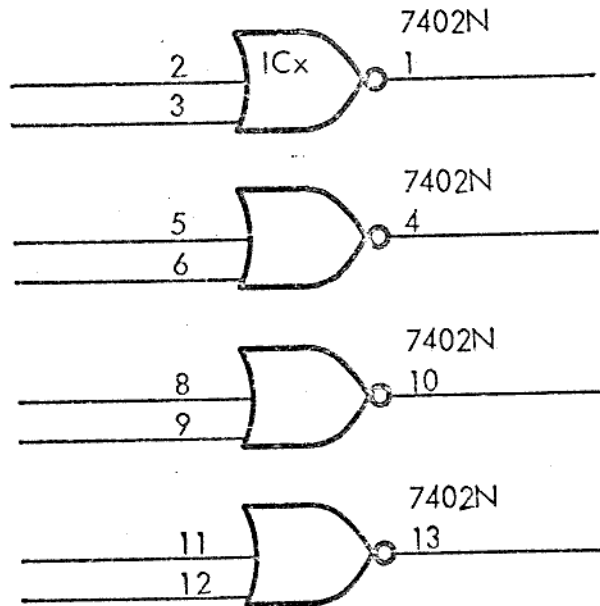
A200072

Symbols for Integrated Circuits

AAGR 050269CEM



Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7



Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

130968LLM

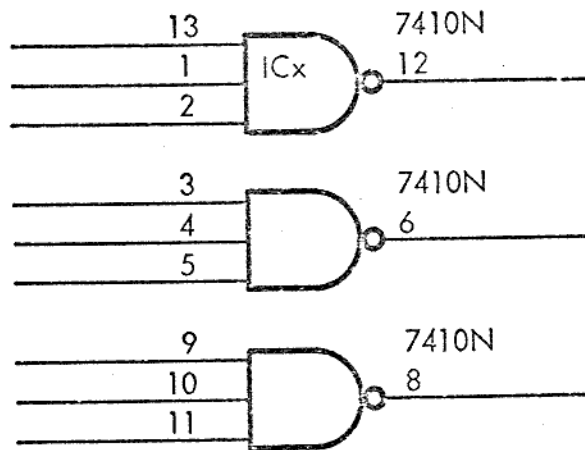
AAGR

Quadruple 2 - input NOR gate

SN7402N

A20073

Symbols for Integrated Circuits



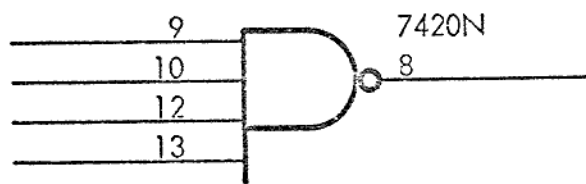
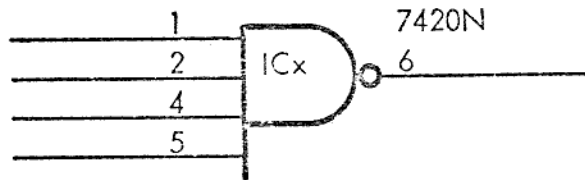
Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

050269CEM

AAGR

Triple 3 - input NAND gate

SN7410N



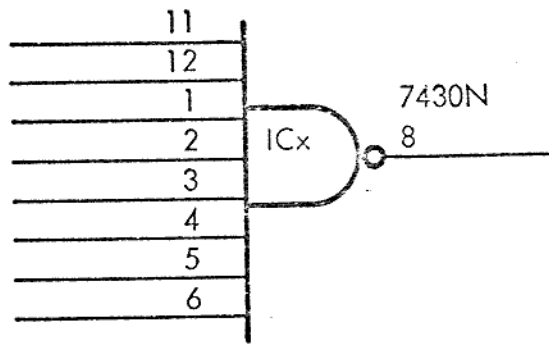
Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

130968LLM

AAGR

Dual 4 - input NAND gate

SN7420N



Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7

130968LLM

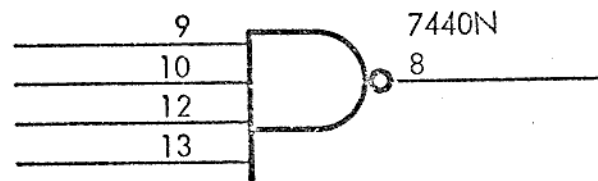
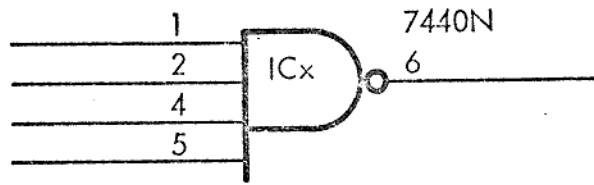
AAGR

8 - input NAND gate

SN7430N

A20075

Symbols for Integrated Circuits



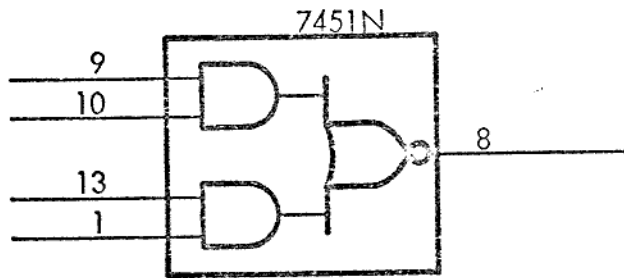
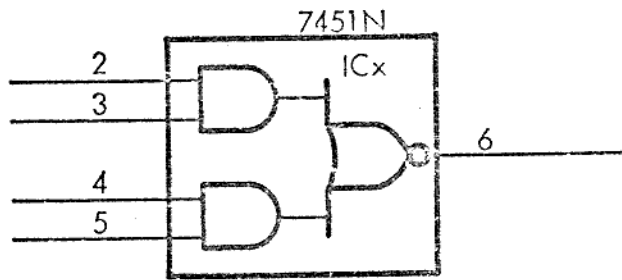
Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7

130968LLM

AAGR

Dual 4 - input NAND Power gate

SN7440N



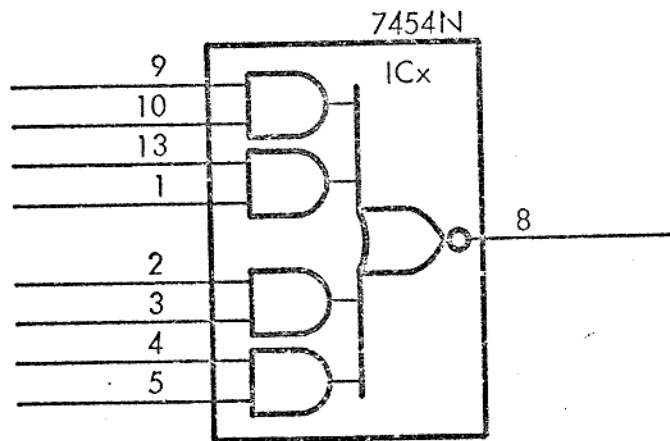
Dual - in - line package
DIP 14
+Vcc pin 14
0V pin 7

130968LLM

AA GR

Dual 2-wide 2-input AND-OR-INVERT gates
(Dual EXCLUSIVE OR-INVERT gates)
Symbols for Integrated Circuits

SN7451N



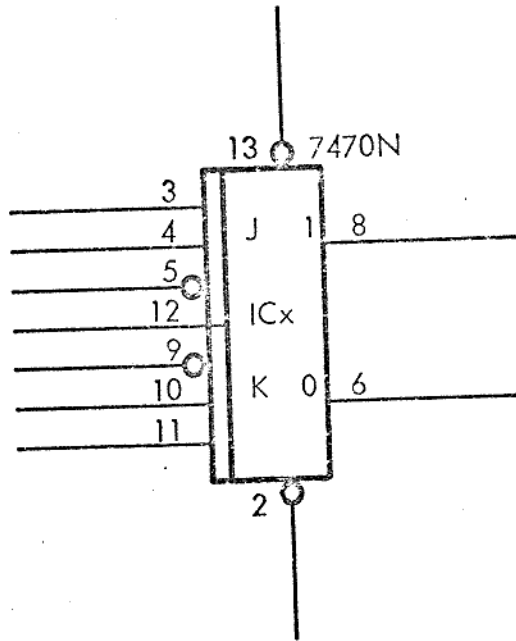
Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

130968LLM

AA GR

4 - wide 2 - input AND-OR-INVERT gate

SN7454N



Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

130968LLM

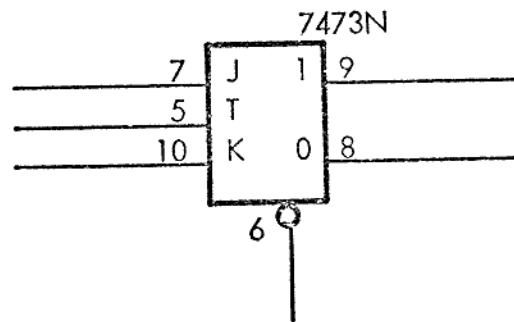
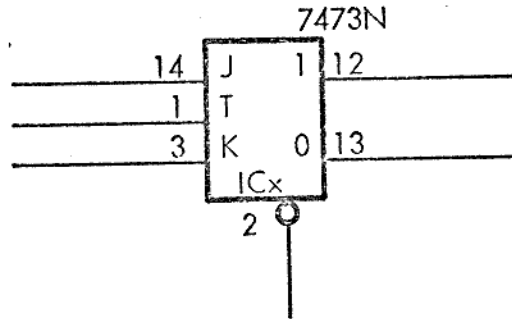
AA GR

Single-phase J-K Flip-flop

SN7470N

Symbols for Integrated Circuits

A20079



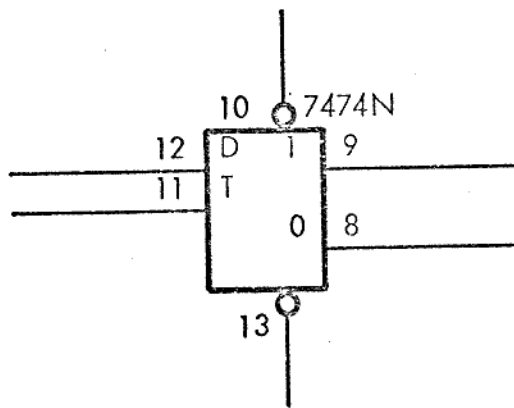
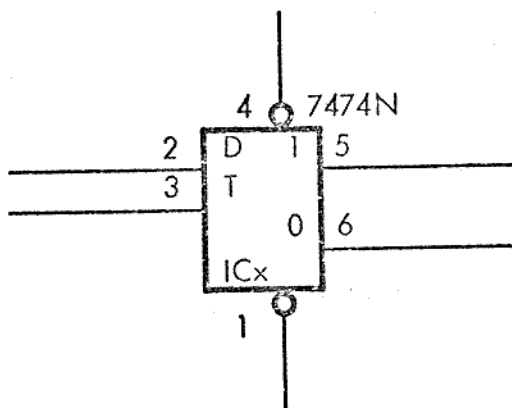
Dual - in - line package
 DIP 14
 +Vcc pin 4
 0V pin 11

050269CEM

AAGR

Dual Master-Slave J-K Flip-flop

SN7473N



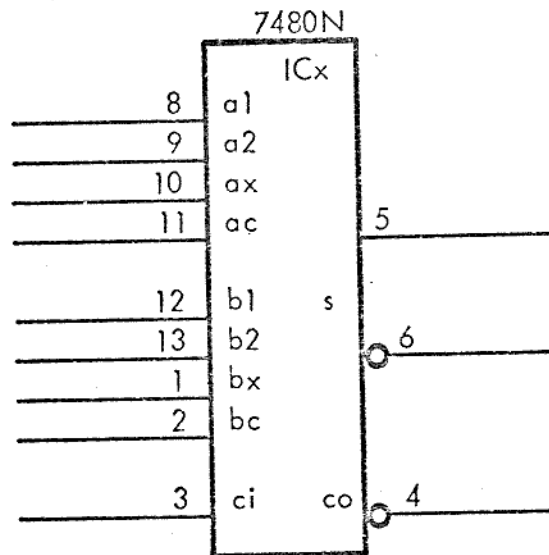
Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

130968LLM

AAGR

Dual Type D Flip-flop

SN7474N



Dual - in - line package
 DIP 14
 +Vcc pin 14
 0V pin 7

130968LLM

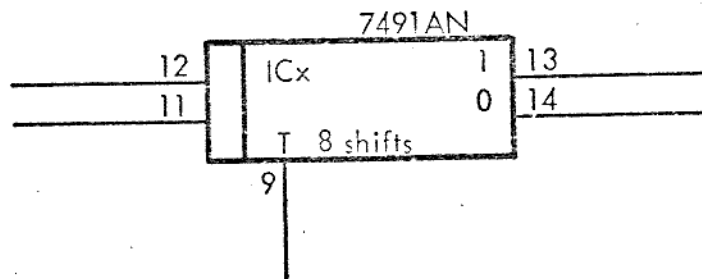
AA GR

Gated Full Adder

SN7480N

A20081

Symbols for Integrated Circuits



Dual - in - line package
 DIP14
 +Vcc pin 5
 0V pin 10

130968LLM

AA GR

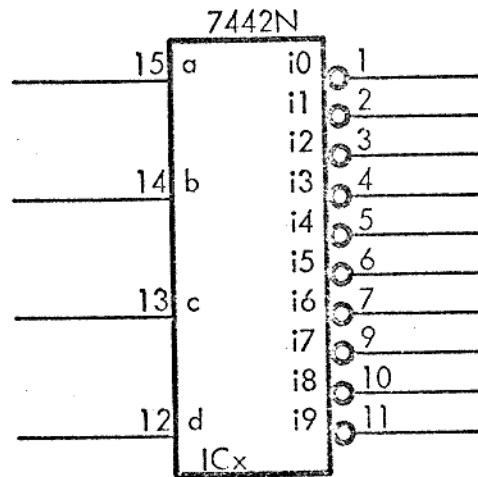
8 bit Shift Register

• SN7491AN

140369AAGR

140369JA

140269AAGR 140369CEM



Dual-in-line Package

DIP 16

+Vcc pin 16

0V pin 8

BCD-to-Decimal Decoder

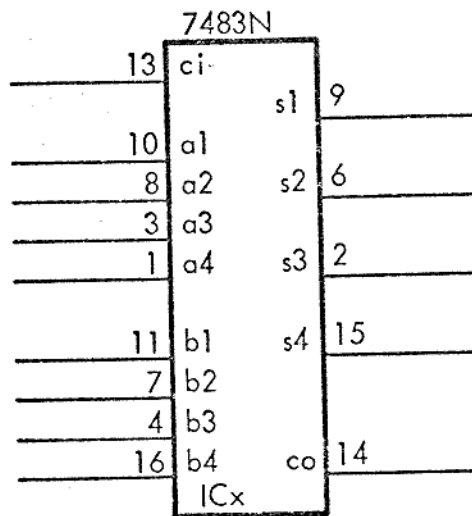
SN7442N

140369AAGR

140369JA

140369CEM

140269AAGR



Dual-in-line Package

DIP 16

+Vcc pin 5

0V pin 12

4-Bit Binary Full Adder

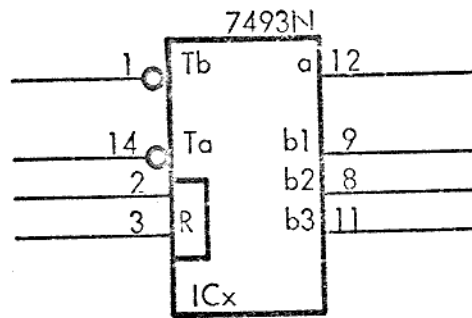
SN7483N

140369AAGR

140369JA

140369CEM

140269AAGR



Dual-in-line Package

DIP 14

+Vcc pin 5

0V pin 10

(1+3)-Bit Binary Counter

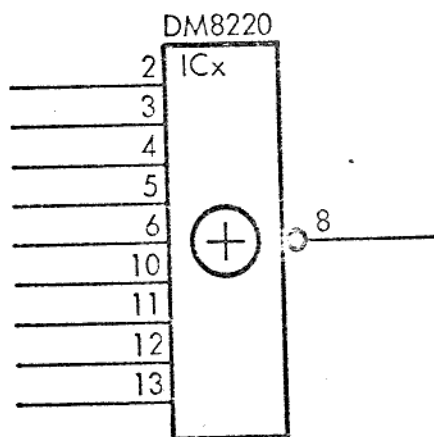
SN7493N

140369AAGR

140369JA

140369CEM

140269AAGR



Dual-in-line Package
DIP 14
+Vcc pin 14
0V pin 7

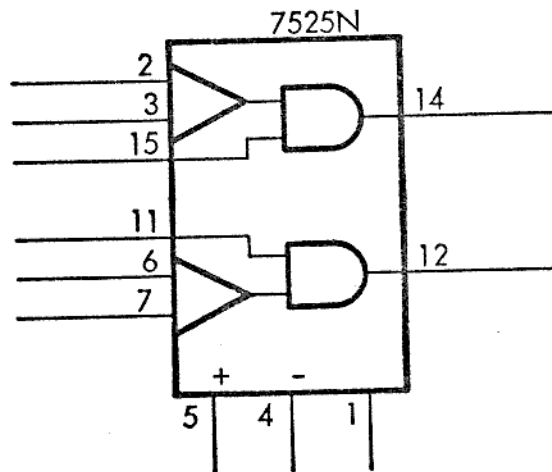
9 - Bit Parity Generator and Checker

DM8220

140869AAGR

140869JA

160769AAGR 160769HM



Dual-in-line Package
DIP 16
+Vcc pin 16
0V pin 9, 13
-Vcc pin 8

Dual Sense Amplifier

SN7525N

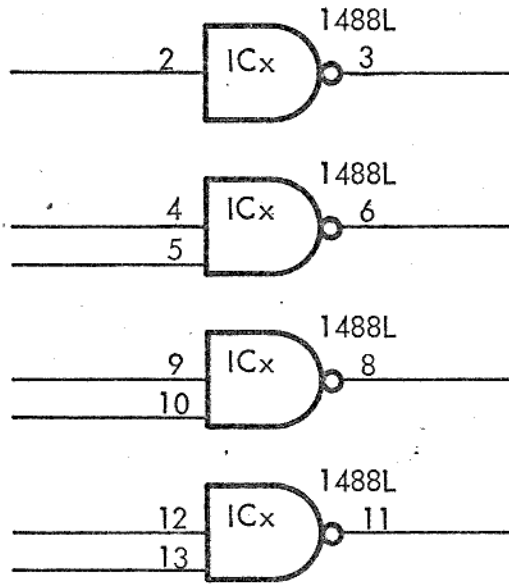
SUPPLEMENT TIL :
RC STANDARD
Symbols for integrated Circuits
RCSL : 52-AA194

LM 305	Dwg. No. A20998
SN7482N	A21067
SN75451P	A21088
MC1488L	A21064
MC1489L	A21065

010770 BN

010770 JA

260670 KNEH 290670 JN



Dual-in-line Package
DIP 14
+Vcc pin 14
0V pin 7
-Vcc pin 1

Quadruple Line Driver

MC1488L

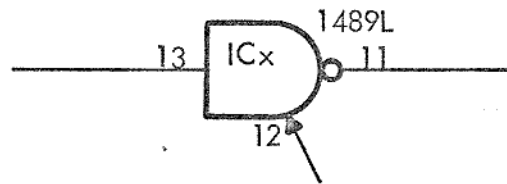
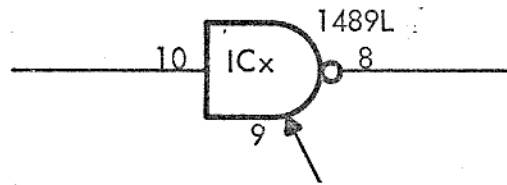
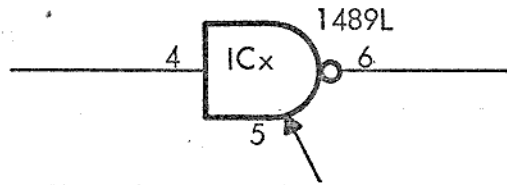
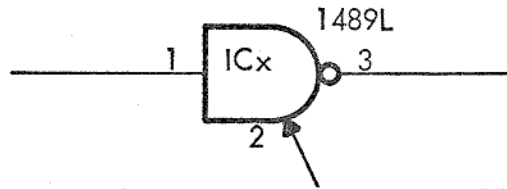
010770 BN

010770 JA

JN

290670

KNEH

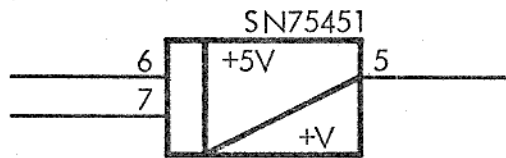
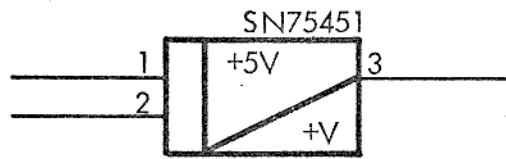


Dual-in-line Package
DIP 14
+Vcc pin 14
0V pin 7

Quadruple Line Receiver

MC1489L

10070 KNEH 310870 LP 010970 JA 010970 BN



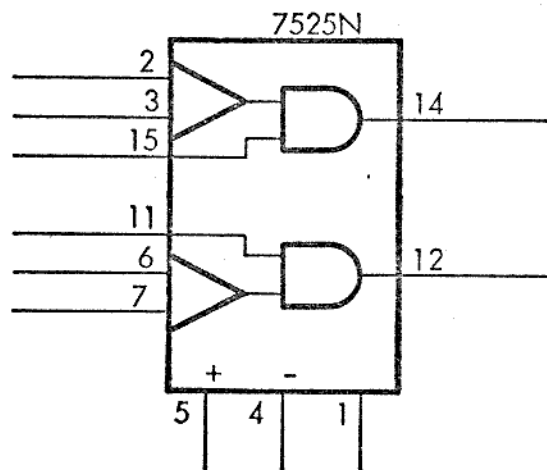
Dual-in-line Package
DIP 8
+V_{cc} pin 8
0V pin 4

140869AAGR

140869JA

160769HM

160769AAGR



Dual-in-line Package
DIP 16
+Vcc pin 16
0V pin 9, 13
-Vcc pin 8

Dual Sense Amplifier

SN7525N