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53A-145 DIFFERENTIAL CHAINING CARD

OPERATING MANUAL

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53A-145 DIFFERENTIAL CHAINING CARD

OPERATING MANUAL

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53A-145 DIFFERENTIAL CHAINING CARD

DESCRIPTION

The 53A-145 Differential Chaining Card is a printed circuit board assembly for use in a CDS 53A system. This card provides a differential communication link between the card cage it is plugged into, and the next card cage in a chained system.

The Chaining Card allows data transfer rates of 500,000 ASCII characters (8-bit parallel) per second up to a distance of 1,000 feet.

CONTROLS AND INDICATORS

The following controls and indicators are provided to select and display the functions of the 53A-145 Card's operating environment.

Power LED

The Power LED provides a valuable diagnostic tool by giving the system programmer a visual indication of the action which the system is currently taking. Whenever the 53A-145 Card is addressed by the system controller, the Power LED goes out. The LED remains out until another function card is addressed. Since only one function card can be addressed at a time, an unlit Power LED indicates the function card with which the system controller is currently communicating. The Power LED being lit not only indicates that the 53A-145 Card is unaddressed, but that all required dc power (5V dc, ±15V dc) is being supplied.

Fuse

The 5 Volt dc power bus has a fuse that protects the system from overloads. If the fuse has blown, the Power LED will not light.

I/O LED

The I/O LED will be lit when the system is in input and out when in output. As a matter of convention input means data being input by the system controller.

Data LEDs (B0 - B7)

Below the I/O LED is a column of eight LED's, labeled from top to bottom B0 through B7. These LED's display the current data word that is being either received or transmitted by the Chaining Card. The least significant bit is B0.

SPECIFICATIONS

Differential Drivers/Receivers:	TI 75119
Differential Impedance:	130 ohms.
Protocol:	ASCII 8-bit parallel.
Chaining Distance:	300 meters.
Data Rate:	500,000 ASCII characters per second.
Power Requirements:	The 5V power is provided by a 53A-060 power supply located in the 53A-002 Card Cage. Voltage: 4.75V to 5.25V DC. Current: 0.95 amperes, maximum quiescent. 0.98 amperes, peak.
Cooling:	Provided by the fan in the 53A-002 Card Cage.
Temperature:	-10°C to +65°C, operating (assumes ambient temperature of 55° and airflow to assure less than 10°C temperature rise). -40°C to +85°C, storage.
Humidity:	Less than 95% R.H. non-condensing, -10°C to +30°C. Less than 75% R.H. non-condensing, +31°C to +40°C. Less than 45% R.H. non-condensing, +41°C to +55°C.
Dimensions:	197mm High, 220mm Deep, 13mm Wide. (7.75" X 8.66" X 0.5")
Dimensions, Shipping:	When ordered with a 53A-002 Card Cage this card will be plugged into the Card Cage Chaining slot. When ordered alone the shipping dimensions are: 254mm X 254mm X 127mm. (10" X 10" X 5")
Weight:	0.23 Kg. (0.5 lbs.)
Weight, Shipping:	When ordered with a 53A-002 Card Cage this card will be plugged into the Card Cage Chaining slot. When ordered alone the shipping weight is: 0.64 Kg. (1.4 lbs.)

Mounting Position:	Any orientation.
Mounting Location:	Plugs into the Chaining slot of the 53A-002 Card Cage.
Output Connections:	53A-743 cable.
Equipment Required:	Communications Card, Control Card and mainframe.
Equipment Supplied:	53A-145 Chaining Card. Spare fuse, (part #42202-54001). Operating manual, (part #00000-11450). Service manual, (part #00000-21450).

INSTALLATION

The 53A-145 Chaining Card must be installed in the red chaining slot.

CAUTION:

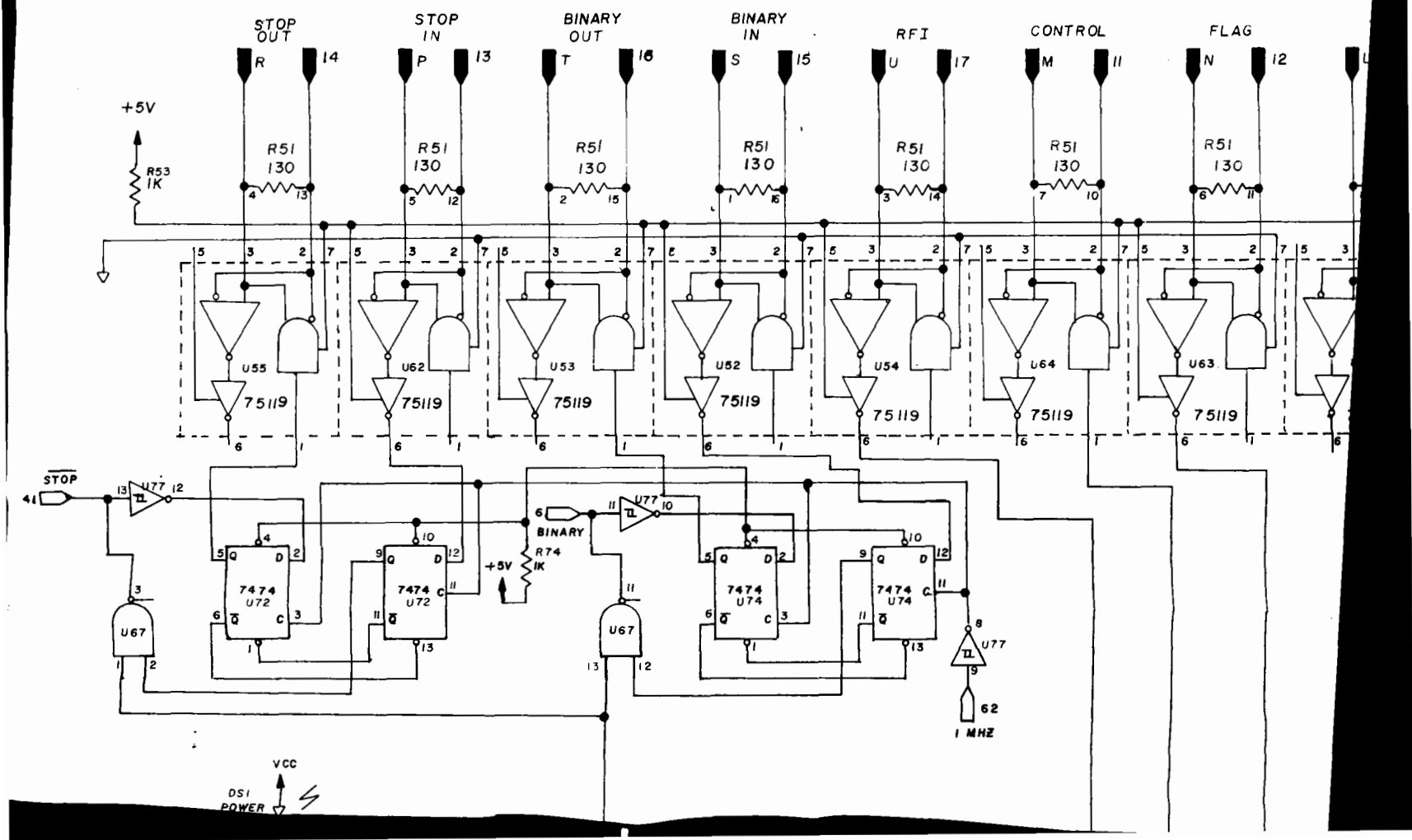
To avoid plugging the card in backwards, observe the following:

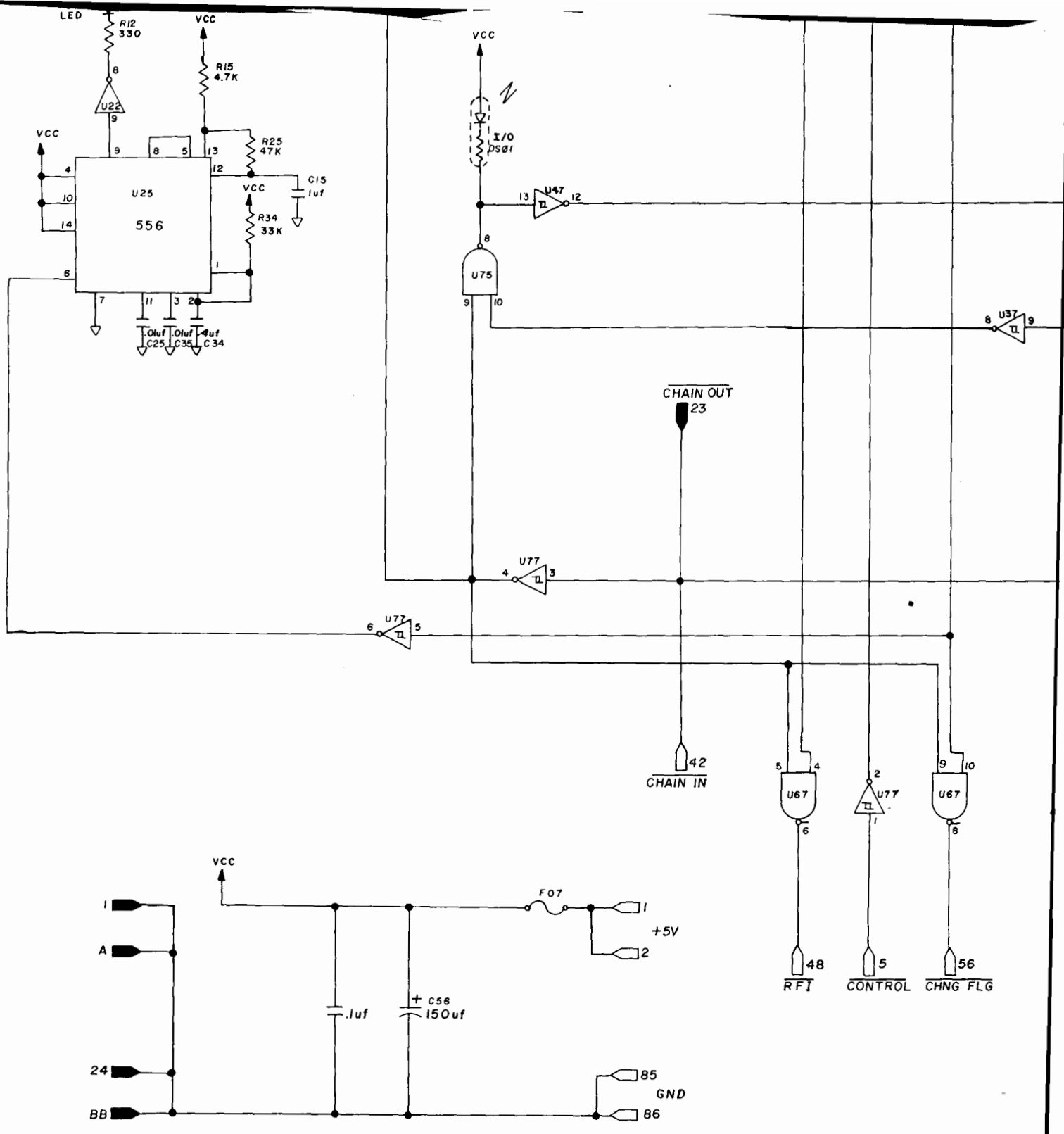
a. Match the keyed slot on the card to the key in the backplane connector. The component side should be to the right for a 53 Series Chassis and to the top for a 63 Series Chassis.

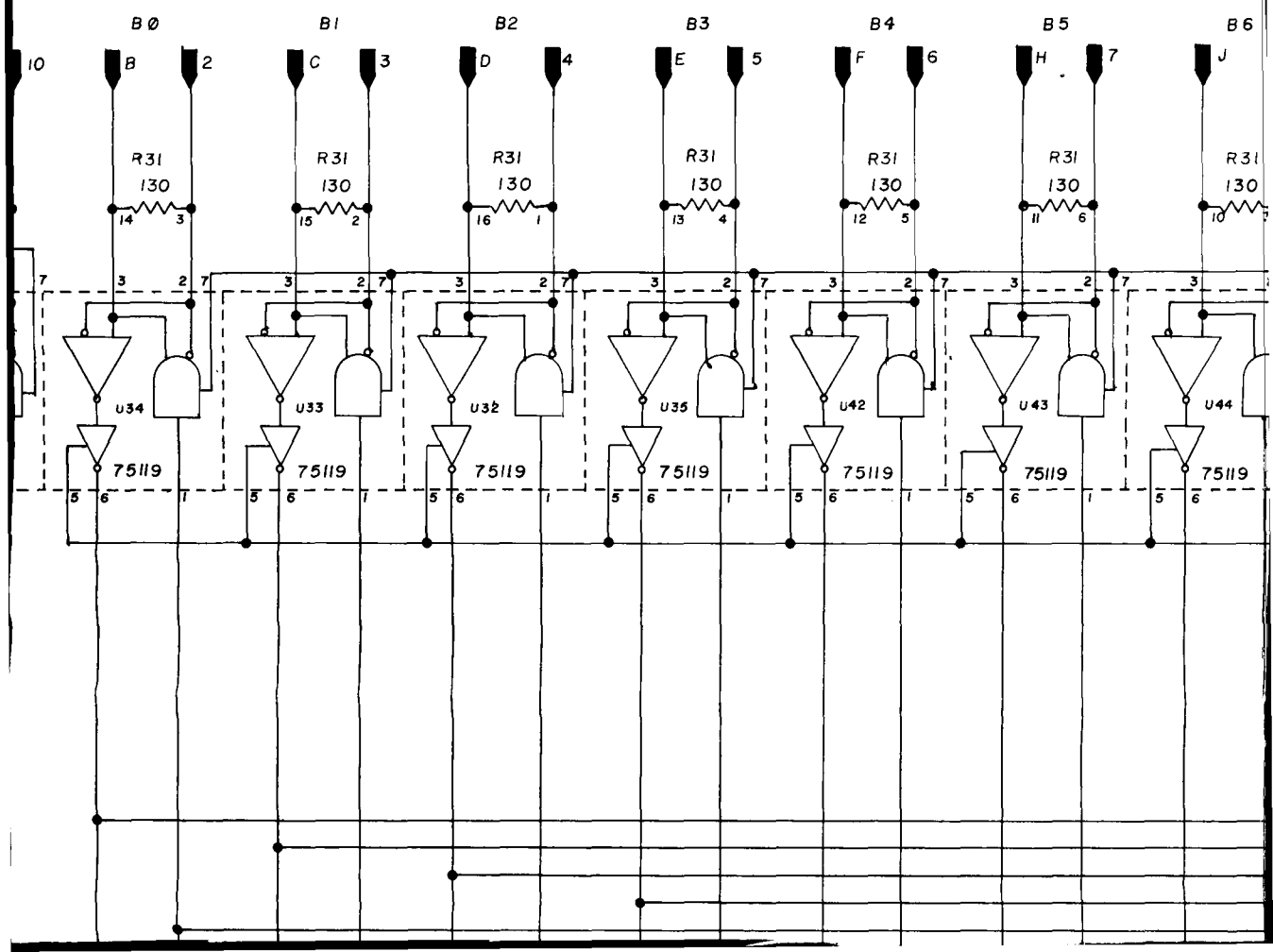
b. There are two ejectors on the card. Make sure the ejector marked "53A-145" is at the top for a 53 Series Chassis and to the left for a 63 Series Chassis.

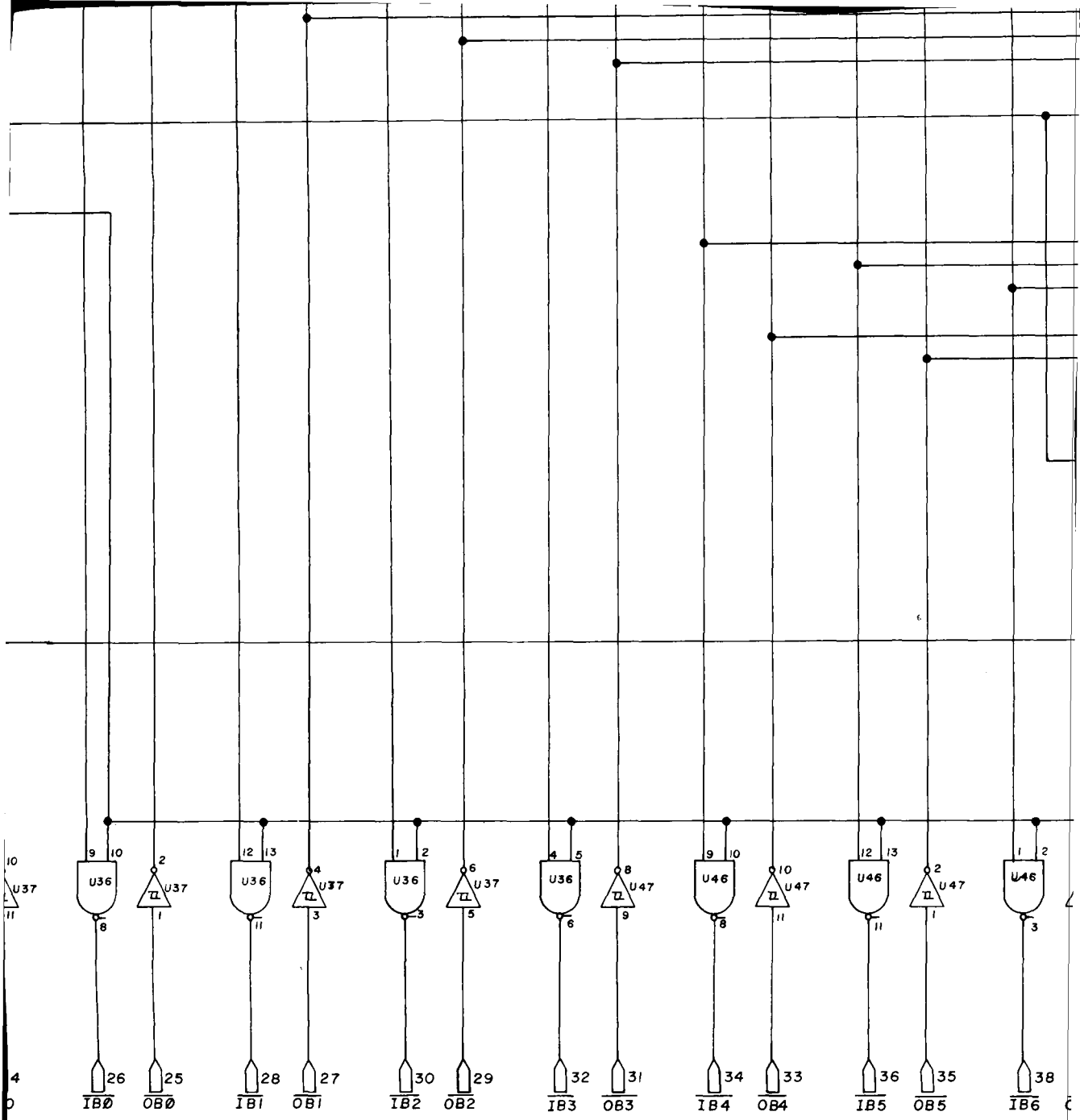
CAUTION:

The 53A-145 Card is a piece of electronic equipment and therefore has some susceptibility to electrostatic damage (ESD). ESD precautions must be taken whenever the module is handled.

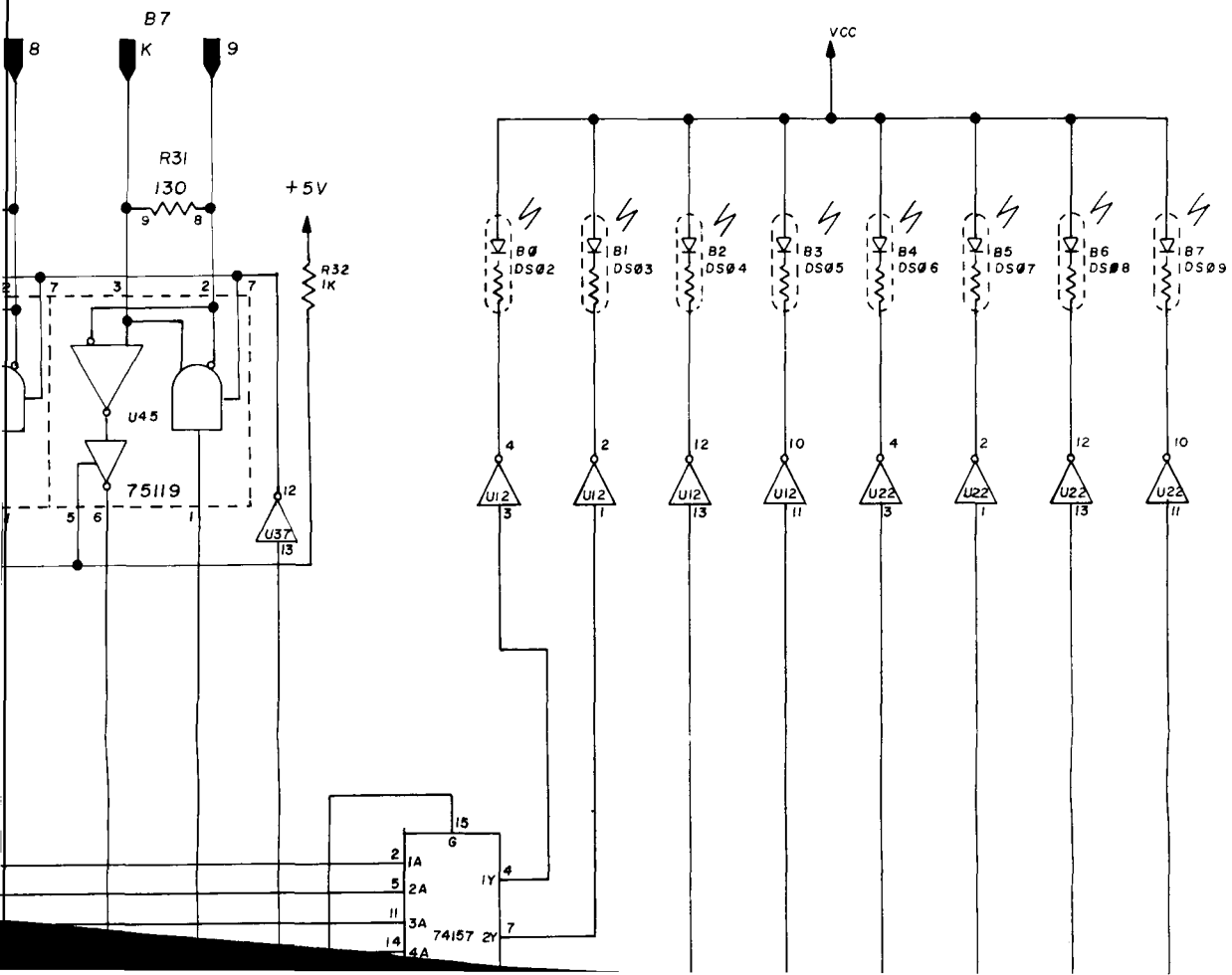

STOP OUT
STOP IN
BINARY OUT
BINARY IN
RFI
CONTROL
FLAG
R
P
T
S
U
M
N
14
13
16
15
17
11
12
+5V
R53
1K
R51
130
U55
U62
U53
U52
U54
U64
U63
75119
STOP
41
U77
BINARY
R74
1K
7474
U72
U74
U67
62
1 MHZ
VCC
DS1
POWER

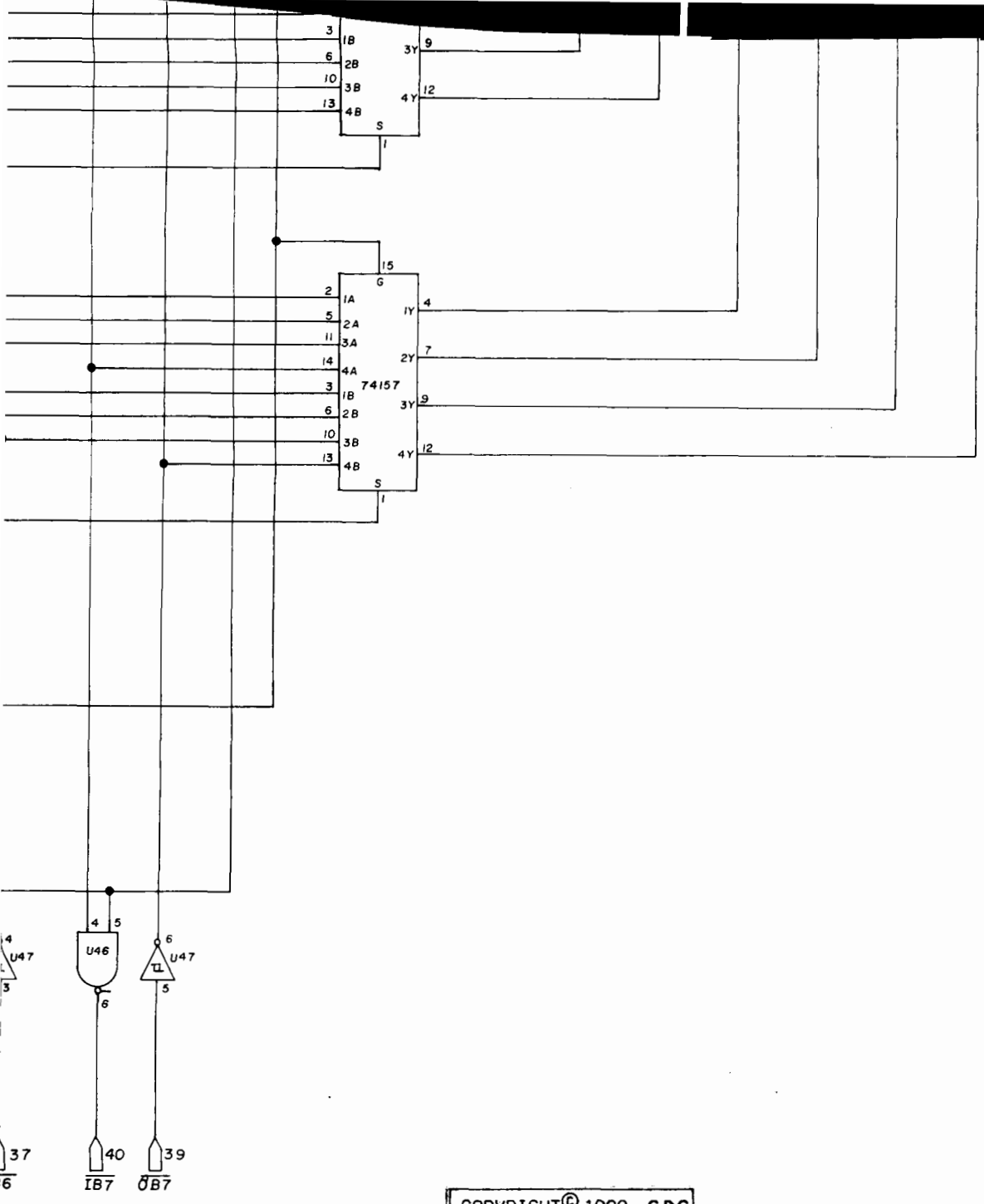

LED
R12
330
VCC
R15
4.7K
U22
VCC
R25
47K
U25
556
C15
1uf
VCC
R34
33K
.01uf
C25
.01uf
C35
.1uf
C34
VCC
I/O
DS01
U47
U75
U37
CHAIN OUT
23
U77
U77
42
CHAIN IN
U67
U77
U67
48
RFI
5
CONTROL
56
CHNG FLG
VCC
F07
+5V
.1uf
C56
150uf
GND
A
24
BB
85
86


B Ø
B1
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B3
B4
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DS03
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DS09
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53A-145
CHAINNING CARD

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