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53A-123 DIFFERENTIAL COMMUNICATIONS CARD

SERVICE MANUAL

BFGoodrich
Aerospace

JcAIR Test Systems

WARRANTY

BFGoodrich Aerospace JcAir Test Systems (TSD) warrants its CDSbus products (hardware and firmware) against defects in materials and workmanship, and are warranted to meet the performance specifications as listed in the current catalog and/or data sheet for the specific product being warranted. This warranty applies for three (3) years following the date of shipment. TSD will, at its option, repair or replace, at no cost to the customer, products which prove to be defective during the warranty period, provided the defect or failure is not due to misuse or abuse of the product. The customer is responsible for shipment of the defective product to the TSD factory. Software products are supplied on a site license basis subject to the same performance warranty provisions; the materials and distribution provision applies to the distribution media only. NO OTHER WARRANTY IS EXPRESSED OR IMPLIED, INCLUDING WARRANTY FOR FITNESS OF PURPOSE. TSD SHALL, IN NO CASE, BE LIABLE FOR CONSEQUENTIAL DAMAGES.

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http:\\www.jcair.com

12/12/00 7812-01-A
through
8701-03-D

JcAIR INC.

NAME: COMMUNICATIONS CARD CCX/HAX 8701-03-D ASSY NO: 53A-123

REVISION: 01 DATE: 05/08/1996

ITEM/ SYMBOL	JcAIR P/N	DESCRIPTION	U/M	QTY	MFG	MFG'S P/N
1	41530-12300	P.C. BOARD VERSION 2S 8701	EA	1.00	HARMON	41530-12300 REV 8701
					SAE CIRCUITS CO	41530-12300
					TEKTRONIX INC.	41530-12300
					UNICIRCUITS	41530-12300
C06	22018-10007	CAP FXD TA 1UF 10% 50VDCW	EA	1.00	MALLORY CAPACIT	TAS105K050PIA
					SPRAGUE/VISHAY	173D105X9050V
C07	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	16.00	AVX/KYOCERA	SR215E104MAA50VDCW
					KEMET-UNION CAR	C322C104M5U5CA
					SPRAGUE/VISHAY	1C20Z5U104M050B
C23	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C25	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C26	21018-40007	CAP FXD ELECT 4UF 75% -10% 12VDCW	EA	1.00	CORNELL-DUBILIE	NLW4-16
					CORNELL-DUBILIE	NLW4-50
					SPRAGUE/VISHAY	30D405G050BA2
					SPRAGUE/VISHAY	TE1302.1
C27	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C42	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C43	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C45	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C47	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C56	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C57	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C61	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C62	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C63	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C65	21018-10008	CAP FXD ELECT 10UF 75% -10% 16VDCW	EA	1.00	CORNELL-DUBILIE	NLW10-16
					SPRAGUE/VISHAY	TE1155
C66	21018-15009	CAP FXD ELECT 150UF 75% -10% 16VDCW	EA	1.00	CORNELL-DUBILIE	NLW150-16
					MALLORY CAPACIT	TT16M150A
C71	21528-10003	CAP FXD MICA 100PF 5% 500VDCW	EA	1.00	ARCO ELEC INC.	CM04FD101J03
					CORNELL-DUBILIE	CD10FD101J03
C76	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C77	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C86	20128-10006	CAP FXD CER .1UF 20% 50VDCW	EA	-		
C87	21528-10004	CAP FXD MICA 1000PF 5% 100VDCW	EA	1.00	ARCO ELEC INC.	DM15-102J
					CORNELL-DUBILIE	CD15FA102J03
C161	20128-10005	CAP FXD CER .01UF 20% 50VDCW	EA	2.00	AVX/KYOCERA	SR201E103MAA
					KEMET-UNION CAR	C322C103M5U5CA
					SPRAGUE/VISHAY	1C25Z5U103M050B
C162	20128-10005	CAP FXD CER .01UF 20% 50VDCW	EA	-		
DS01	32000-00103	DIODE LED RED 50MA	EA	1.00	DIALIGHT	550-0103
					DIALIGHT	550-0406
					QUALITY TECHNOL	MV60538.MP7
DS010	32000-02003	DIODE LED RED W/RES	EA	9.00	DIALIGHT	547-2003
					EATON CORPORATI	134LIC
					QUALITY TECHNOL	MR5010.MP1
DS110	32000-02003	DIODE LED RED W/RES	EA	-		
DS111	32000-02003	DIODE LED RED W/RES	EA	-		

JcAIR INC.

NAME: COMMUNICATIONS CARD CCX/HAX 8701-03-D ASSY NO: 53A-123

REVISION: 01 DATE: 05/08/1996

ITEM/ SYMBOL	JcAIR P/N	DESCRIPTION	U/M	QTY	MFG	MFG'S P/N
DS112	32000-02003	DIODE LED RED W/RES	EA	-		
DS113	32000-02003	DIODE LED RED W/RES	EA	-		
DS114	32000-02003	DIODE LED RED W/RES	EA	-		
DS115	32000-02003	DIODE LED RED W/RES	EA	-		
DS116	32000-02003	DIODE LED RED W/RES	EA	-		
DS117	32000-02003	DIODE LED RED W/RES	EA	-		
E1	40401-00123	STAMP 53A-123 STYLE B GREEN	EA	1.00	STU PHILLIPS CO	53A-123
E2	40401-10008	STAMP COMMO STYLE D GREEN	EA	1.00	STU PHILLIPS CO	COMMO
E3	45050-03233	DCL LED 10POS DRW 00000 -00465	EA	1.00	GOOD DECAL	45050-03233
E4	45050-03218	DCL LED 10 POS	EA	1.00		
F07	42202-52001	FUSE SUB-MIN 2AMP	EA	1.00	LITTLEFUSE INC.	251002
					SAN-O	SP5-2A
Q71	51100-03646	TRANSISTOR NPN HIGH SPEED SWITCH	EA	1.00	MOTOROLA SEMICO	MPS3646
					NATIONAL SEMI /	MPS3646
					SEMICONDUCTORS,	MPS3646
R05	10117-33003	RES COMP 330 1-4W 5%	EA	1.00	ALLEN-BRADLEY C	RC07GF331J
					NIC	NIC-NCF25-330
					ROHM CORP.	R25JE-330-5%
R06	10117-47004	RES COMP 4.7K 1-4W 5%	EA	5.00	ALLEN-BRADLEY C	RC07GF472J
					ROHM CORP.	R25JE-4.7K-5%
R07	10117-10004	RES COMP 1K 1-4W 5%	EA	3.00	ALLEN-BRADLEY C	RC07GF102J
					ROHM CORP.	R25JE-1K-5%
R16	10117-47005	RES COMP 47K 1-4W 5%	EA	1.00	ALLEN-BRADLEY C	RC07GF473J
					ROHM CORP.	R25JE-47K-5%
R26	10117-33005	RES COMP 33K 1-4W 5%	EA	1.00	ALLEN-BRADLEY C	RC07GF333J
					ROHM CORP.	R25JE-33K-5%
R41	12001-13004	RES NETWORK 130 1-4W 5% 8PKG	EA	2.00	ALLEN-BRADLEY C	316B131
					BOURNS INC.	4116R-1-131
R54	10117-47004	RES COMP 4.7K 1-4W 5%	EA	-		
R55	10117-10005	RES COMP 10K 1-4W 5%	EA	2.00	ALLEN-BRADLEY C	RC07GF103J
					ROHM CORP.	R25JE-10K-5%
R57	10117-30004	RES COMP 3K 1-4W 5%	EA	2.00	ALLEN-BRADLEY C	RC07GF302J
					ROHM CORP.	R25JE-3K-5%
R61	12001-13004	RES NETWORK 130 1-4W 5% 8PKG	EA	-		
R63	10117-47004	RES COMP 4.7K 1-4W 5%	EA	-		
R64	10117-47004	RES COMP 4.7K 1-4W 5%	EA	-		
R67	10117-30004	RES COMP 3K 1-4W 5%	EA	-		
R71	10117-51003	RES COMP 510 1-4W 5%	EA	1.00	ALLEN-BRADLEY C	RC07GF511J
R73	10117-10004	RES COMP 1K 1-4W 5%	EA	-		
R77	10117-10005	RES COMP 10K 1-4W 5%	EA	-		
R84	10117-47004	RES COMP 4.7K 1-4W 5%	EA	-		
R86	10117-10004	RES COMP 1K 1-4W 5%	EA	-		
U12	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	16.00	TEXAS INSTR. IN	75119 TI ONLY
U13	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		

JcAIR INC.

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REVISION: 01 DATE: 05/08/1996

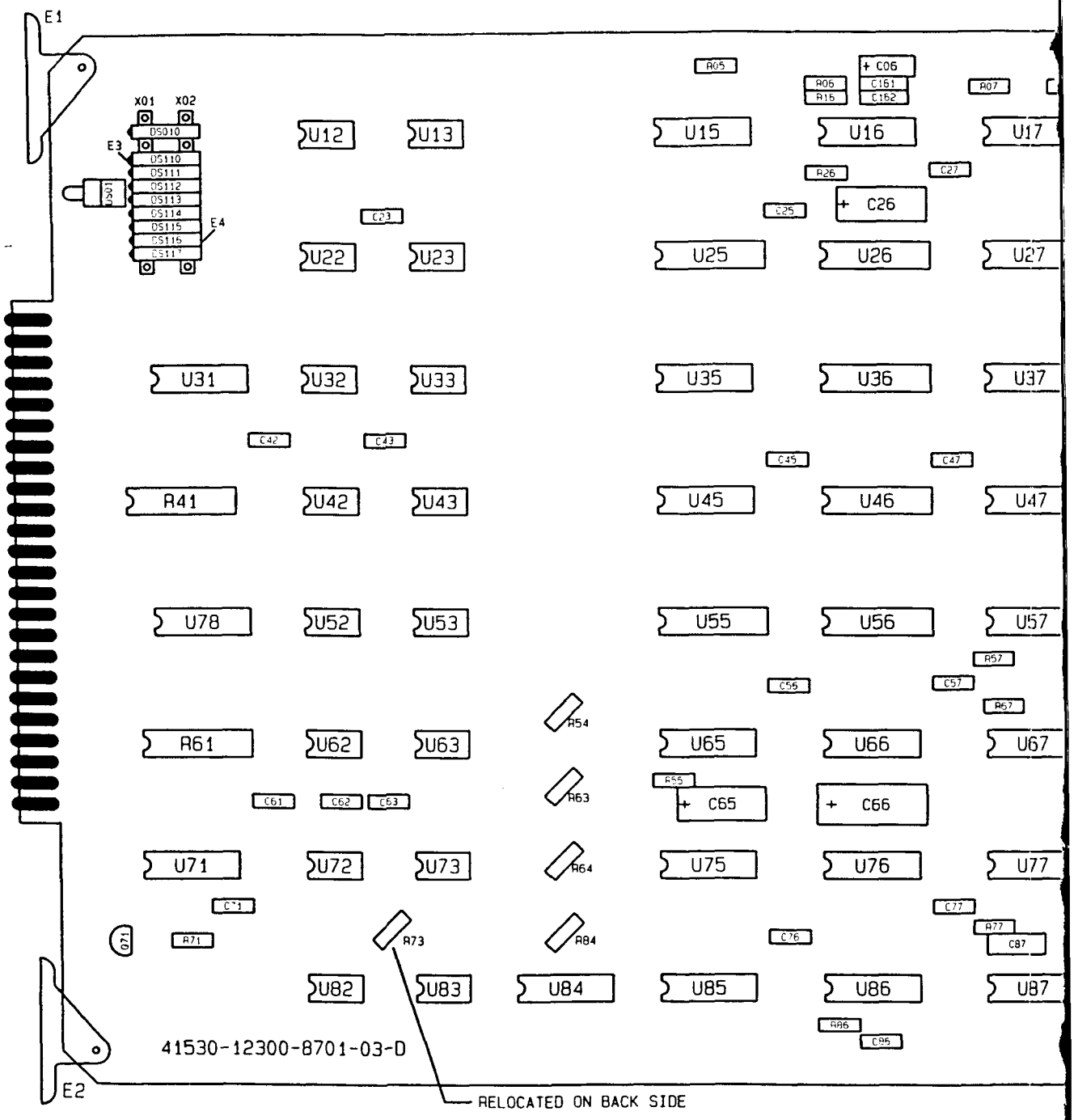
ITEM/ SYMBOL	JcAIR P/N	DESCRIPTION	U/M	QTY	MFG	MFG'S P/N
U15	73302-07404	IC TTL ALS HEX INVERTER	EA	3.00	NATIONAL SEMI /	DM74ALS04
					TEXAS INSTR. IN	74ALS04
U16	79606-00556	IC TTL DUAL TIMER	EA	1.00	MOTOROLA SEMICO	MC3456P
					TEXAS INSTR. IN	NE556A
U17	76601-07438	IC TTL QUAD 2-INPUT NAND BUFFER W-OC	EA	3.00	NATIONAL SEMI /	DM7438
					TEXAS INSTR. IN	7438
U22	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U23	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U25	79911-74157	IC TTL LS QUAD 2-TO-1 LINE DATA SEL-MUX	EA	2.00	NATIONAL SEMI /	DM74LS157
					TEXAS INSTR. IN	74LS157
U26	73005-74174	IC HCT HEX FLIP-FLOP D-TYPE	EA	4.00	MOTOROLA SEMICO	MC74HCT174AN
					RCA CORP. (HARR	CD74HCT174
U27	78403-07414	IC HCT HEX SCHMITT INVERTING BUFFER	EA	4.00	HARRIS	CD74HCT14N
					RCA CORP. (HARR	CD74HCT14
					SIGNETICS/PHILL	74HCT14
U31	00000-00000	NOT INSTALLED PART 53A-123	EA	1.00		
U32	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U33	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U35	73302-07404	IC TTL ALS HEX INVERTER	EA	-		
U36	73005-74174	IC HCT HEX FLIP-FLOP D-TYPE	EA	-		
U37	76601-07438	IC TTL QUAD 2-INPUT NAND BUFFER W-OC	EA	-		
U42	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U43	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U45	73302-07404	IC TTL ALS HEX INVERTER	EA	-		
U46	73005-74174	IC HCT HEX FLIP-FLOP D-TYPE	EA	-		
U47	76601-07438	IC TTL QUAD 2-INPUT NAND BUFFER W-OC	EA	-		
U52	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U53	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U55	79911-74157	IC TTL LS QUAD 2-TO-1 LINE DATA SEL-MUX	EA	-		
U56	73005-74174	IC HCT HEX FLIP-FLOP D-TYPE	EA	-		
U57	78403-07414	IC HCT HEX SCHMITT INVERTING BUFFER	EA	-		
U62	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U63	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U65	78403-07414	IC HCT HEX SCHMITT INVERTING BUFFER	EA	-		
U66	76606-07400	IC HCT QUAD 2-INPUT NAND GATE	EA	2.00	NATIONAL SEMI /	DM74HCT00N
					RCA CORP. (HARR	CD74HCT00E
					SIGNETICS/PHILL	74HCT00N
U67	78403-07414	IC HCT HEX SCHMITT INVERTING BUFFER	EA	-		
U71	76900-04001	IC CMOS QUAD 2-INPUT NOR GATE	EA	2.00	MOTOROLA SEMICO	MC14001UBCP
					NATIONAL SEMI /	CD4001BCN
					TEXAS INSTR. IN	CD4001AE
U72	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U73	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U75	73005-07474	IC HCT DUAL FLIP-FLOP D-TYPE	EA	4.00	RCA CORP. (HARR	CD74HCT74N
					SIGNETICS/PHILL	74HCT74N
					TEXAS INSTR. IN	74HCT74N
U76	73005-07474	IC HCT DUAL FLIP-FLOP D-TYPE	EA	-		

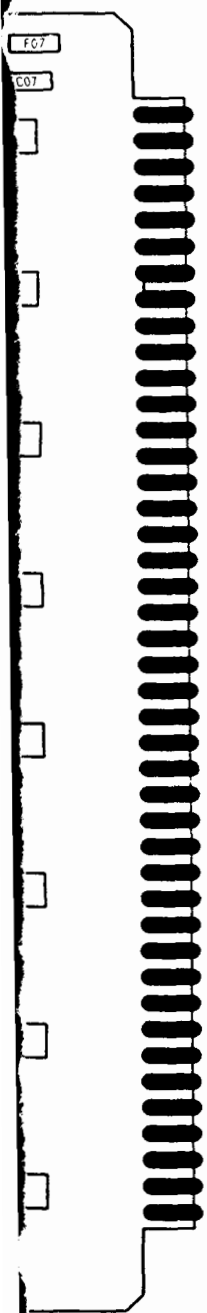
JcAIR INC.

NAME: COMMUNICATIONS CARD CCX/HAX 8701-03-D ASSY NO: 53A-123

REVISION: 01 DATE: 05/08/1996

ITEM/ SYMBOL	JcAIR P/N	DESCRIPTION	U/M	QTY	MFG	MFG'S P/N
U77	76905-07402	IC HCT QUAD 2-INPUT NOR GATE	EA	1.00	RCA CORP. (HARR	CD74HCT02
U78	76606-07400	IC HCT QUAD 2-INPUT NAND GATE	EA	-		
U82	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U83	73303-75119	IC TTL DIFFERENTIAL LINE TRANSCEIVER	EA	-		
U84	76900-04001	IC CMOS QUAD 2-INPUT NOR GATE	EA	-		
U85	73005-07474	IC HCT DUAL FLIP-FLOP D-TYPE	EA	-		
U86	73005-07474	IC HCT DUAL FLIP-FLOP D-TYPE	EA	-		
U87	74200-09601	IC TTL RETRIGGERABLE MONOSTABLE	EA	1.00	NATIONAL SEMI /	DM8601N
					NATIONAL SEMI /	DM9601
X01	45001-12100	CONNECTOR SIP 12 PIN	EA	2.00	CIRCUIT ASSEMBL	CAS-12VSC-12B
					STANFORD APPLIE	CSA3000-12BC
X02	45001-12100	CONNECTOR SIP 12 PIN	EA	-		
REF0	53A-123	COMMUNICATIONS CARD CCX/HAX 8701-03-D	EA	-		


E1
X01
X02
DS010
E3
DS110
DS111
DS112
DS113
DS114
DS115
DS116
DS117
E4
U12
U13
U15
U16
U17
C06
C161
C162
R05
R06
R15
R07
R26
C27
C25
C26
C23
U22
U23
U25
U26
U27
U31
U32
U33
U35
U36
U37
C42
C43
C45
C47
R41
U42
U43
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U46
U47
U78
U52
U53
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C56
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C71
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R77
C76
C87
R71
Q71
R73
R84
U82
U83
U84
U85
U86
U87
RA6
C86
41530-12300-8701-03-D
E2
RELOCATED ON BACK SIDE



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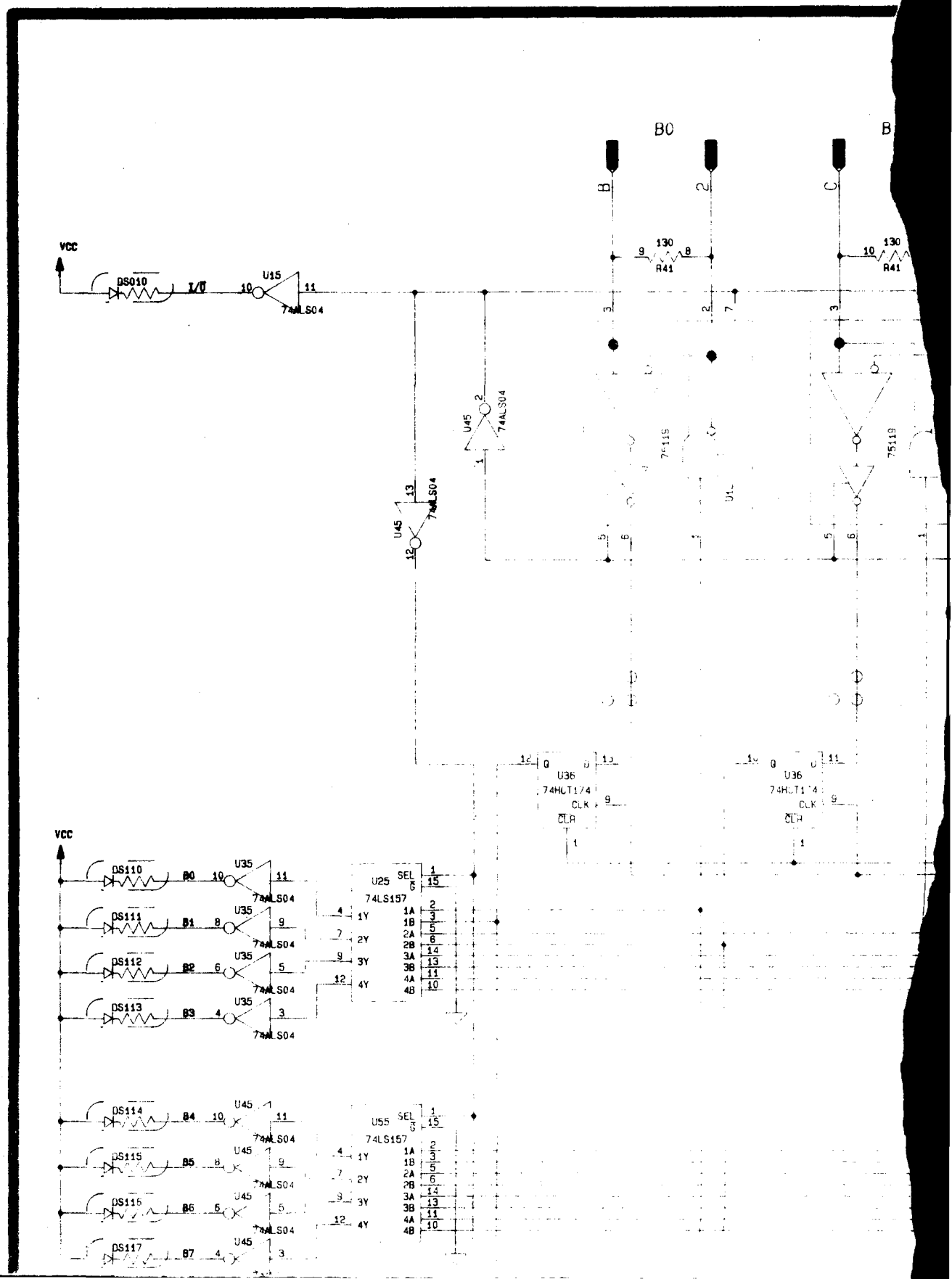
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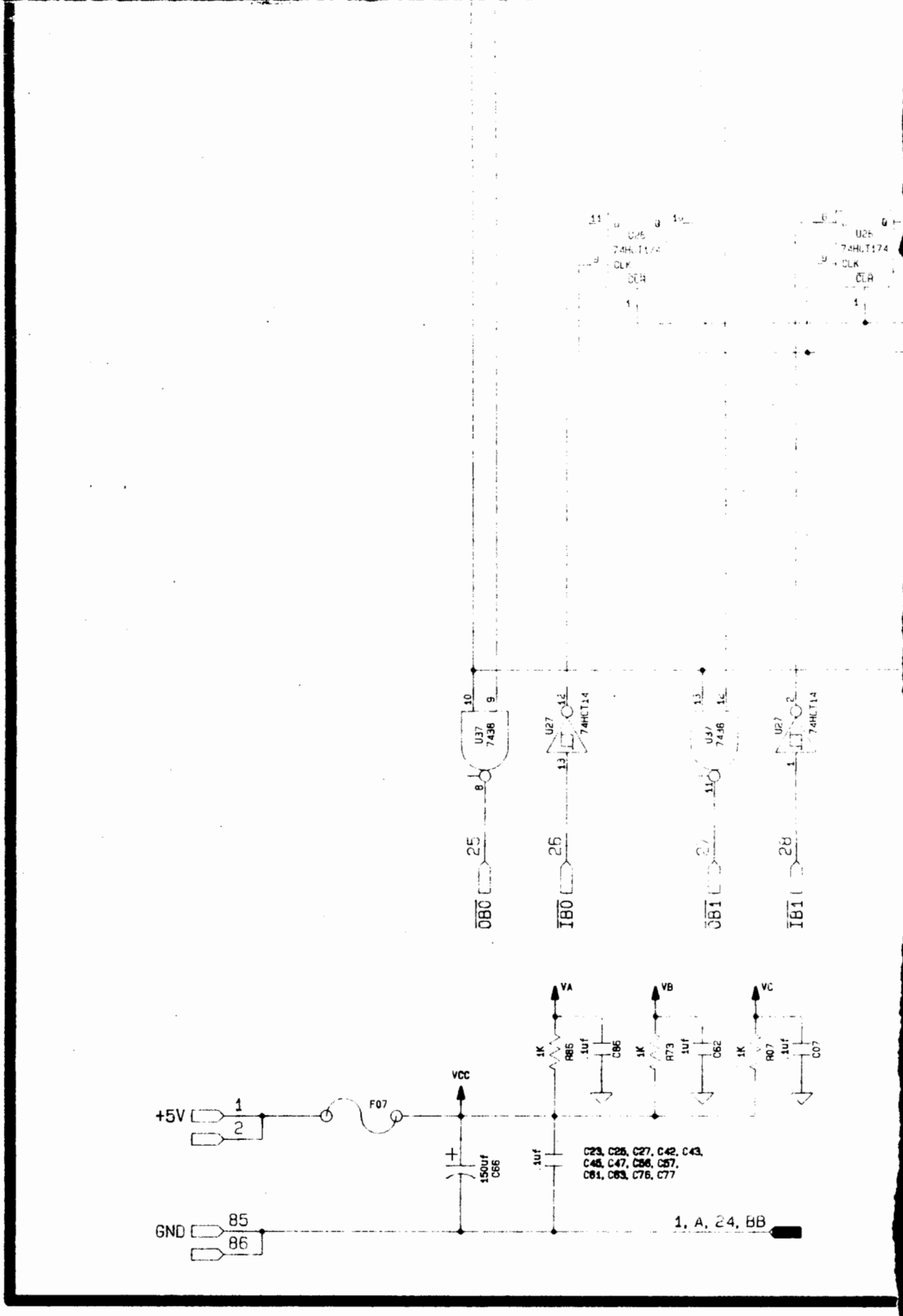
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400 NEW CENTURY PARKWAY
NEW CENTURY, KS USA 66031

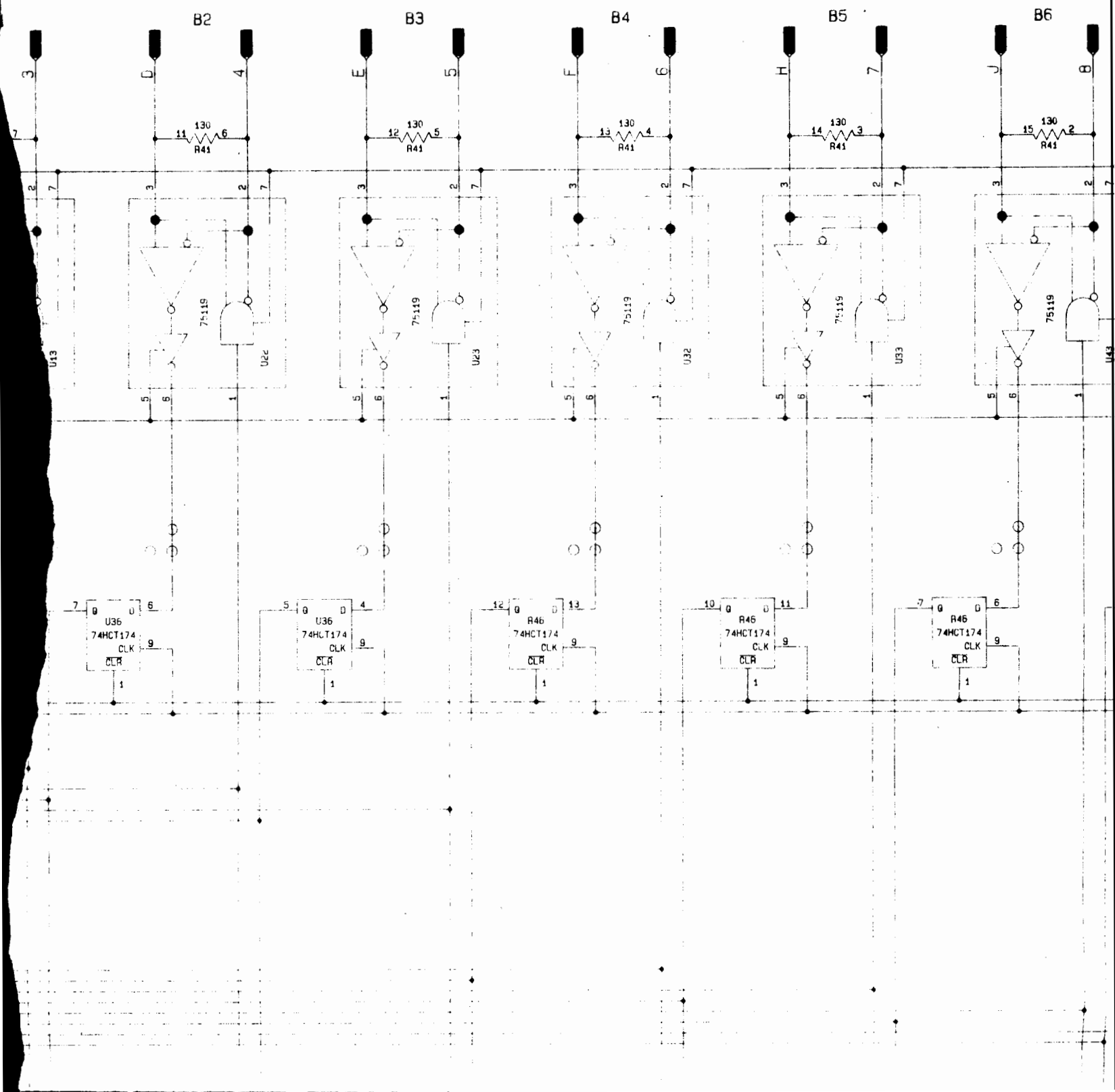
COMMUNICATIONS CARD

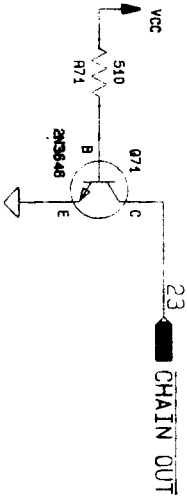
SIZE	FSCM NO.	DWG. NO.	REV.
B	41364	41530-12300 ASSY	8701-03-D

SCALE	N/A	UNIT:	53A-123	SHEET	1 OF 1


B0
VCC
DS10
I/O
U15
74ALS04
R41
130
U45
74ALS04
U36
74HCT174
CLK
CLR
VCC
DS110
DS111
DS112
DS113
B0
B1
B2
B3
U35
74ALS04
U25
SEL
74LS157
1A
1B
2A
2B
3A
3B
4A
4B
1Y
2Y
3Y
4Y
DS114
DS115
DS116
DS117
B4
B5
B6
B7
U55
74LS157


U26
74HCT174
CLK
CLR
U37
7438
U27
74HCT14
25
26
OB0
IB0
OB1
IB1
VA
VB
VC
1K
R85
R73
R07
.1uf
C86
C62
C07
VCC
+5V
1
2
F07
150uf
C66
1uf
C23, C25, C27, C42, C43,
C45, C47, C56, C57,
C61, C63, C76, C77
GND
85
86
1, A, 24, BB


B2
B3
B4
B5
B6
3
D
4
E
5
F
6
H
7
J
8
130
R41
75119
U13
U22
U23
U32
U33
U36
74HCT174
CLK
CLR
R46



$\overline{OB2}$ 29

$\overline{IB2}$ 30

$\overline{OB3}$ 31

$\overline{IB3}$ 32

$\overline{OB4}$ 33

$\overline{IB4}$ 34

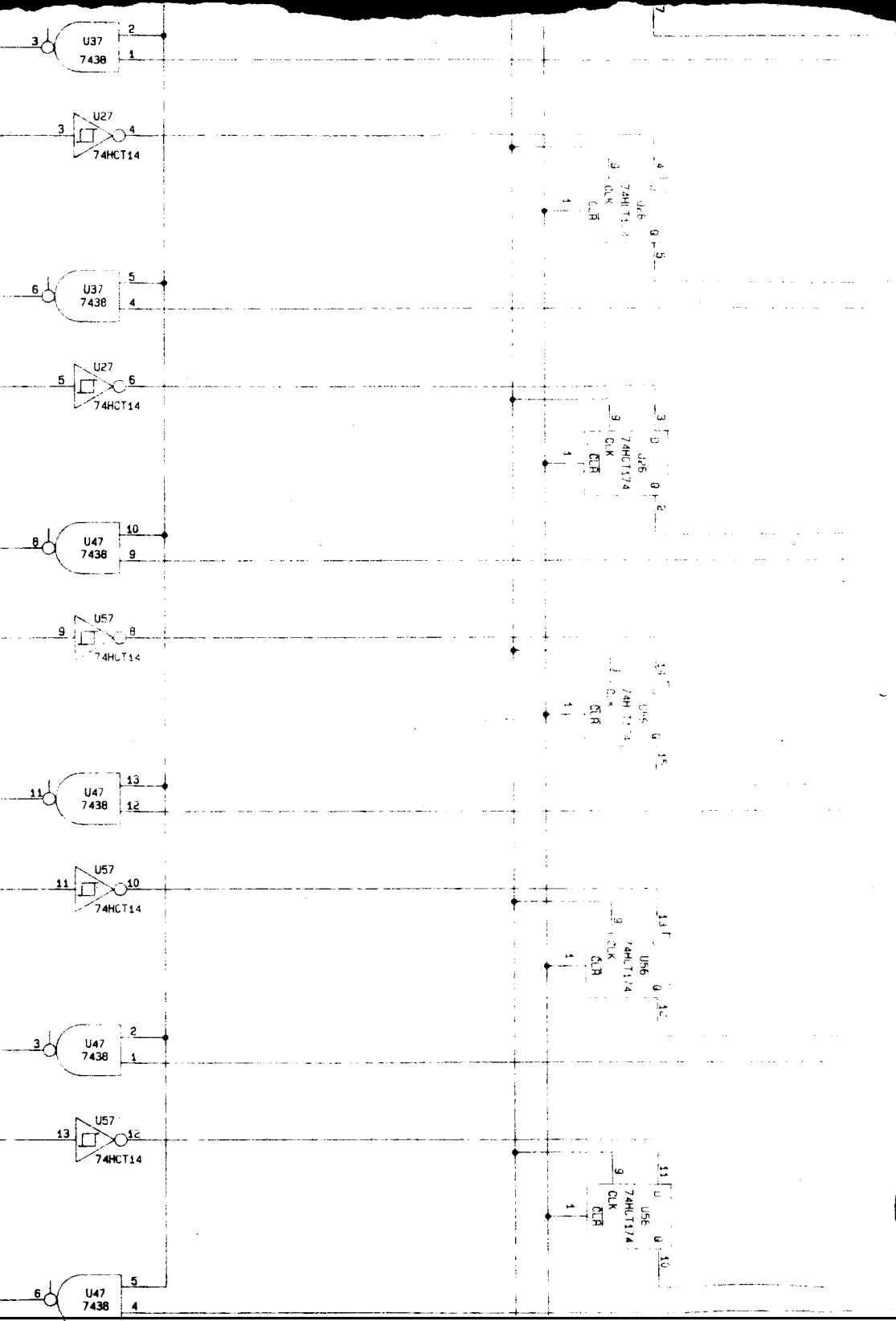
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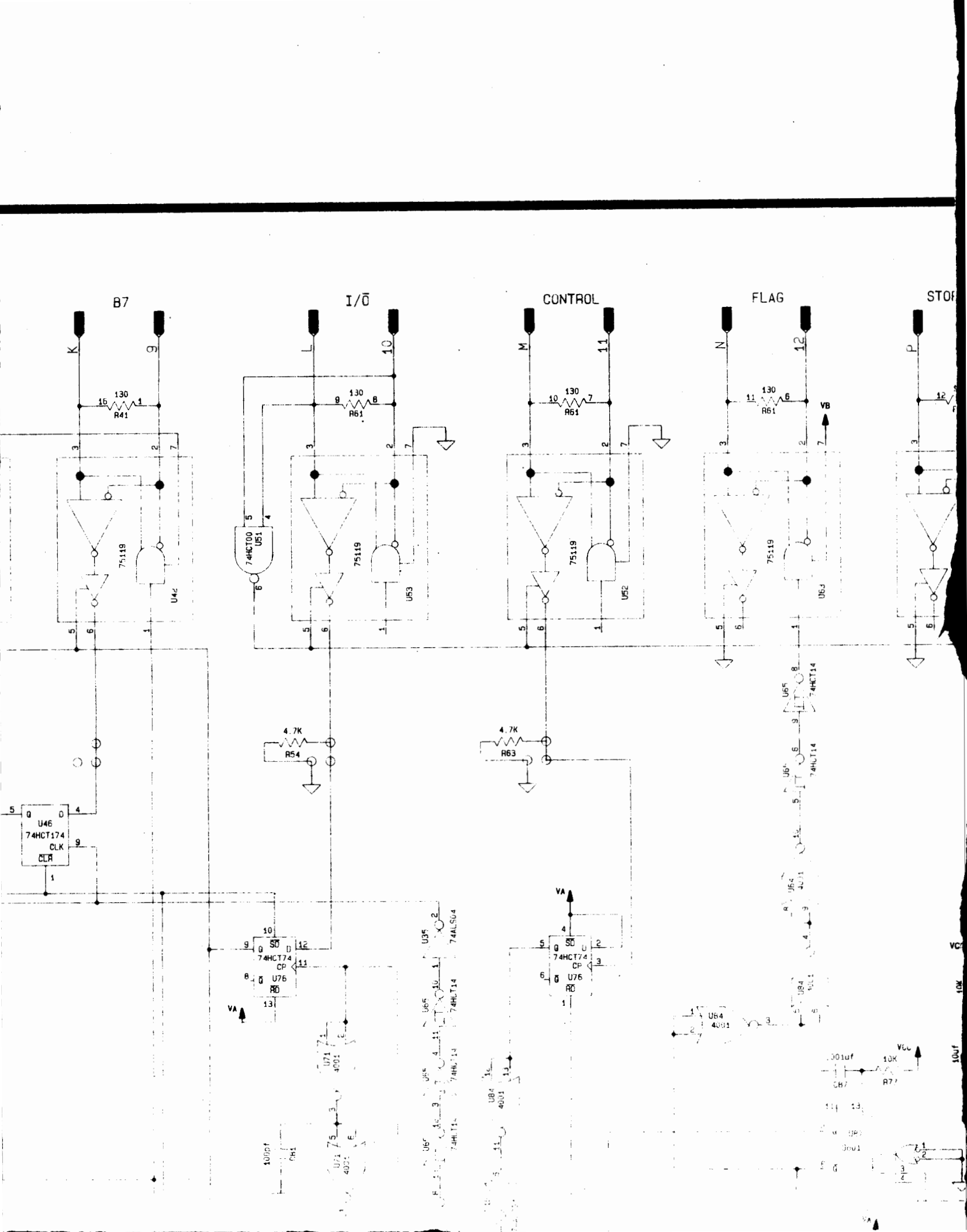
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$\overline{OB6}$ 37

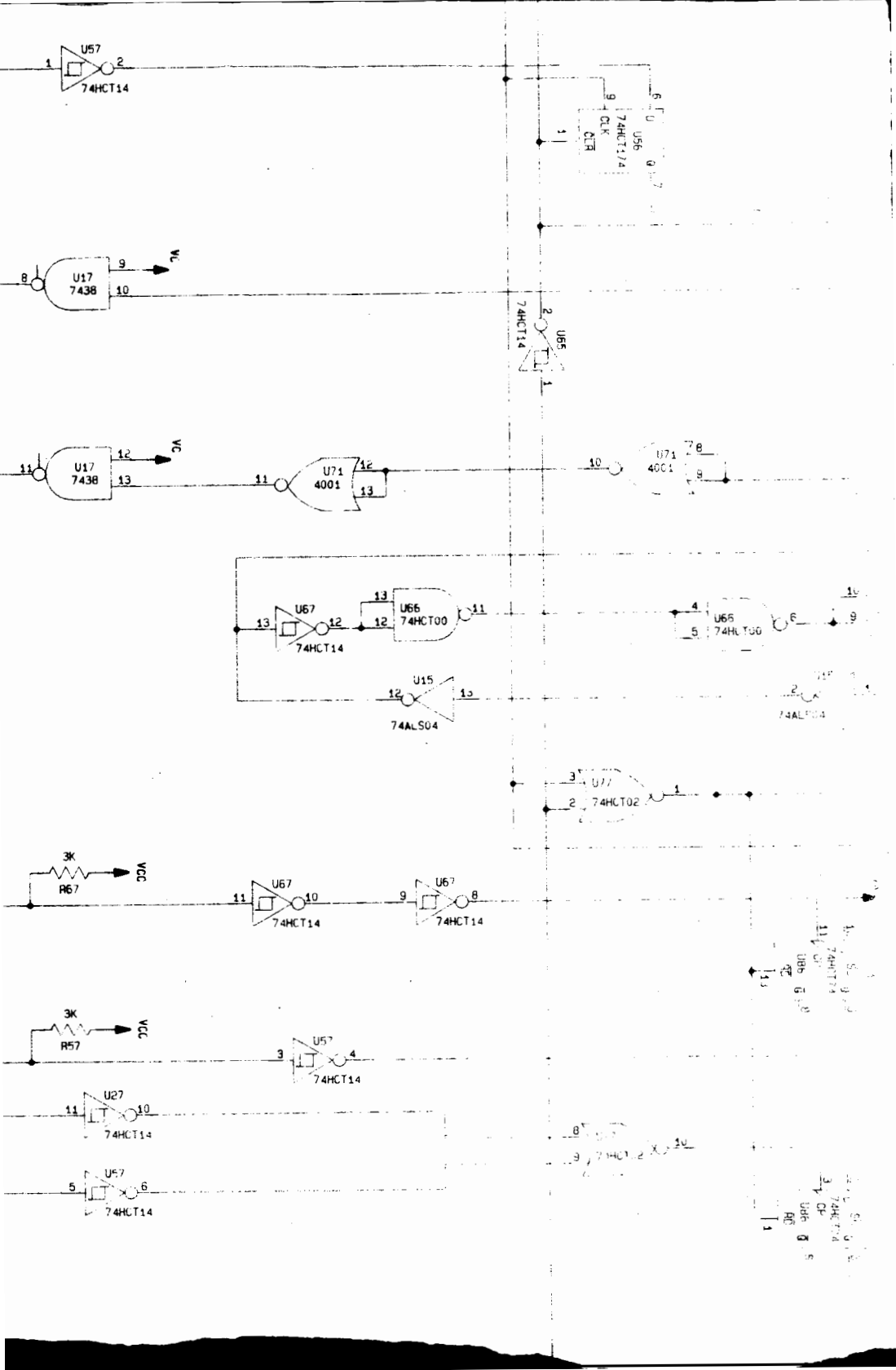
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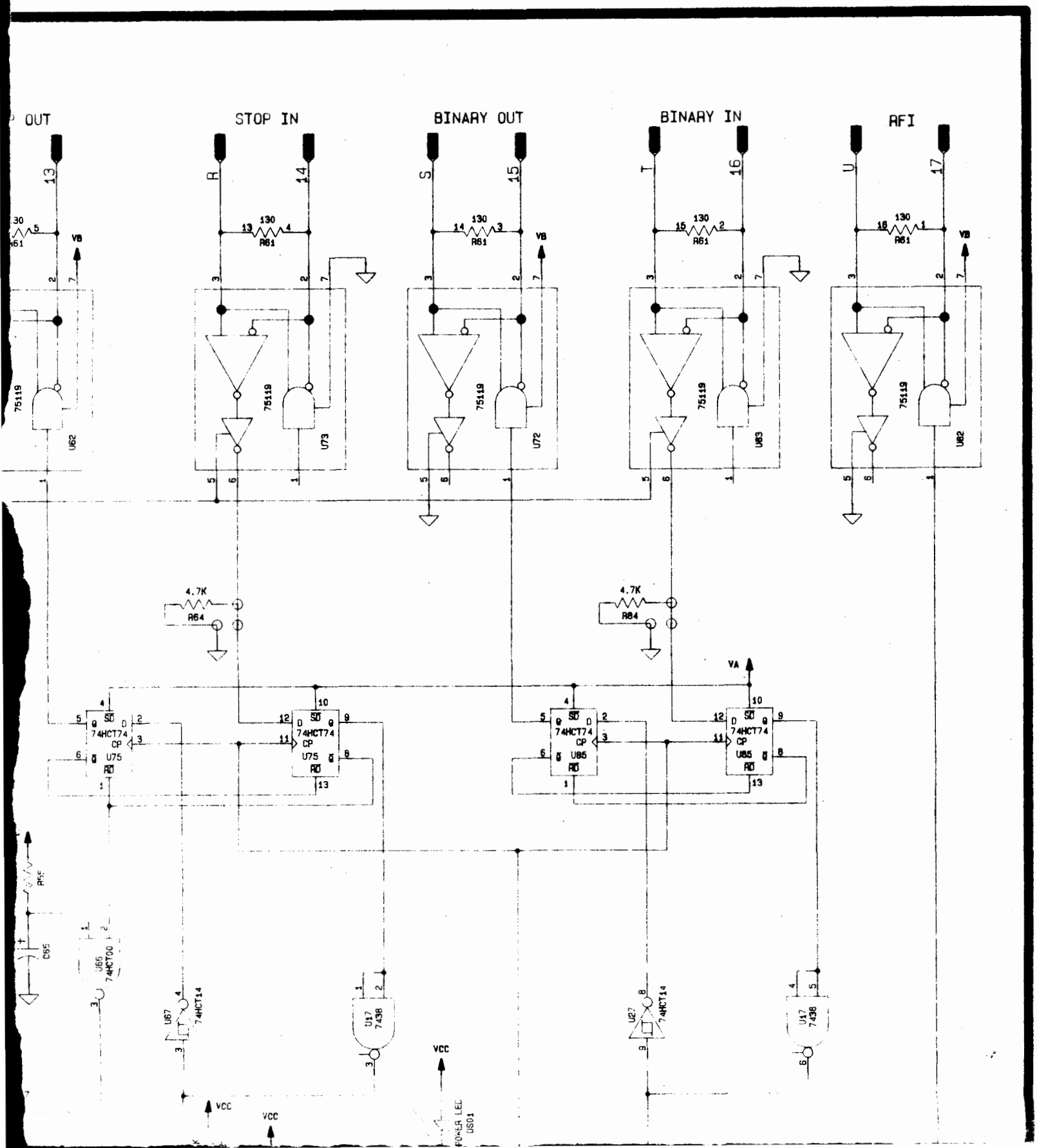
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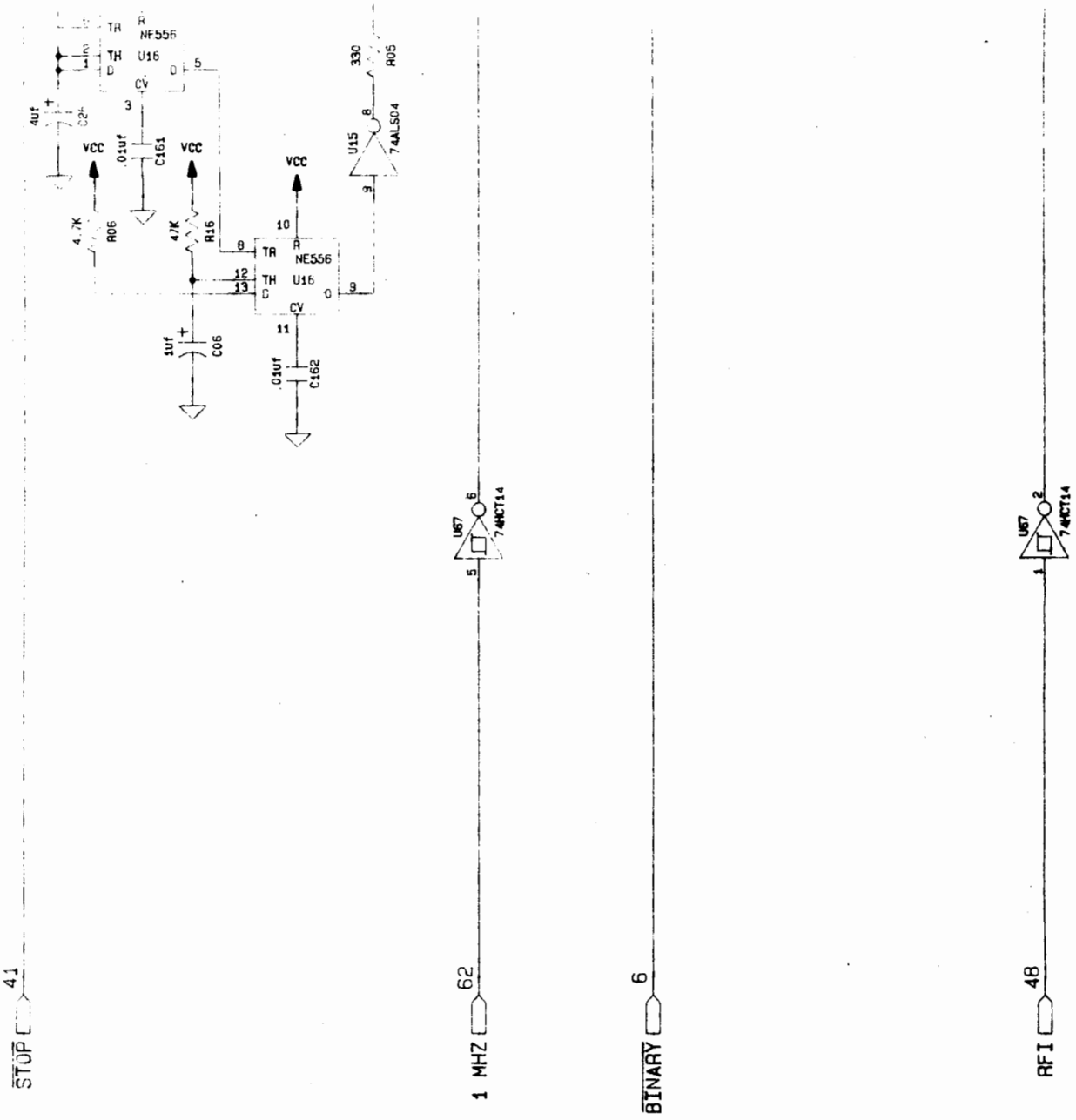

U37
7438
U27
74HCT14
U37
7438
U27
74HCT14
U47
7438
U57
74HCT14
U47
7438
U57
74HCT14
U47
7438
U57
74HCT14
U47
7438
74HCT174
CLK
CLR


B7
I/O
CONTROL
FLAG
STOP
K
L
M
N
P
9
10
11
12
130
R41
R61
4.7K
R54
R63
75119
U42
U53
U52
U63
74HCT00
U51
U46
74HCT174
CLK
CLR
U76
74HCT74
CP
SD
RD
74ALS04
U35
74HCT14
U65
U64
4001
VA
VB
VCC
10K
R77
.001uf
C67
10uf


IB7
40
I/O
4
CONTROL
5
CH FLAG
56
CHAIN IN
42
FLAG
24
CNT FLG
45


U57
74HCT14
U17
7438
U71
4001
U67
74HCT14
U66
74HCT00
U15
74ALS04
U65
74HCT14
U56
74HCT174
CLK
CLR
U77
74HCT02
3K
R67
VCC
3K
R57
VCC
U27
74HCT14


OUT
STOP IN
BINARY OUT
BINARY IN
RFI
R61
U62
U73
U72
U83
U82
75119
4.7K
R64
R84
VB
VA
VCC
74HCT74
U75
U85
74HCT00
74HCT14
7438
U66
U67
U27
U17
C65
R65



8701-03-D-1

JcAIR Inc. 400 NEW CENTURY PKWY NEW CENTURY, KS 66031	PART NO.: 53A-123
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