

**THIS TECHNICAL DOCUMENT BROUGHT
TO YOU AT NO COST FROM:**

ARCADEDOCS.COM

**THE INTERNET'S LARGEST REFERENCE LIBRARY
SUPPORTING THE COIN-OPERATED
COLLECTOR AND OPERATOR COMMUNITIES**

Dedicated With Special Thanks To:

The Many Amusement Machine Manufacturers,

Collectors, Dealers, Designers, Distributors,

Engineers, Operators, and Players

That Have Generously Continued To Support Us

Throughout The Years

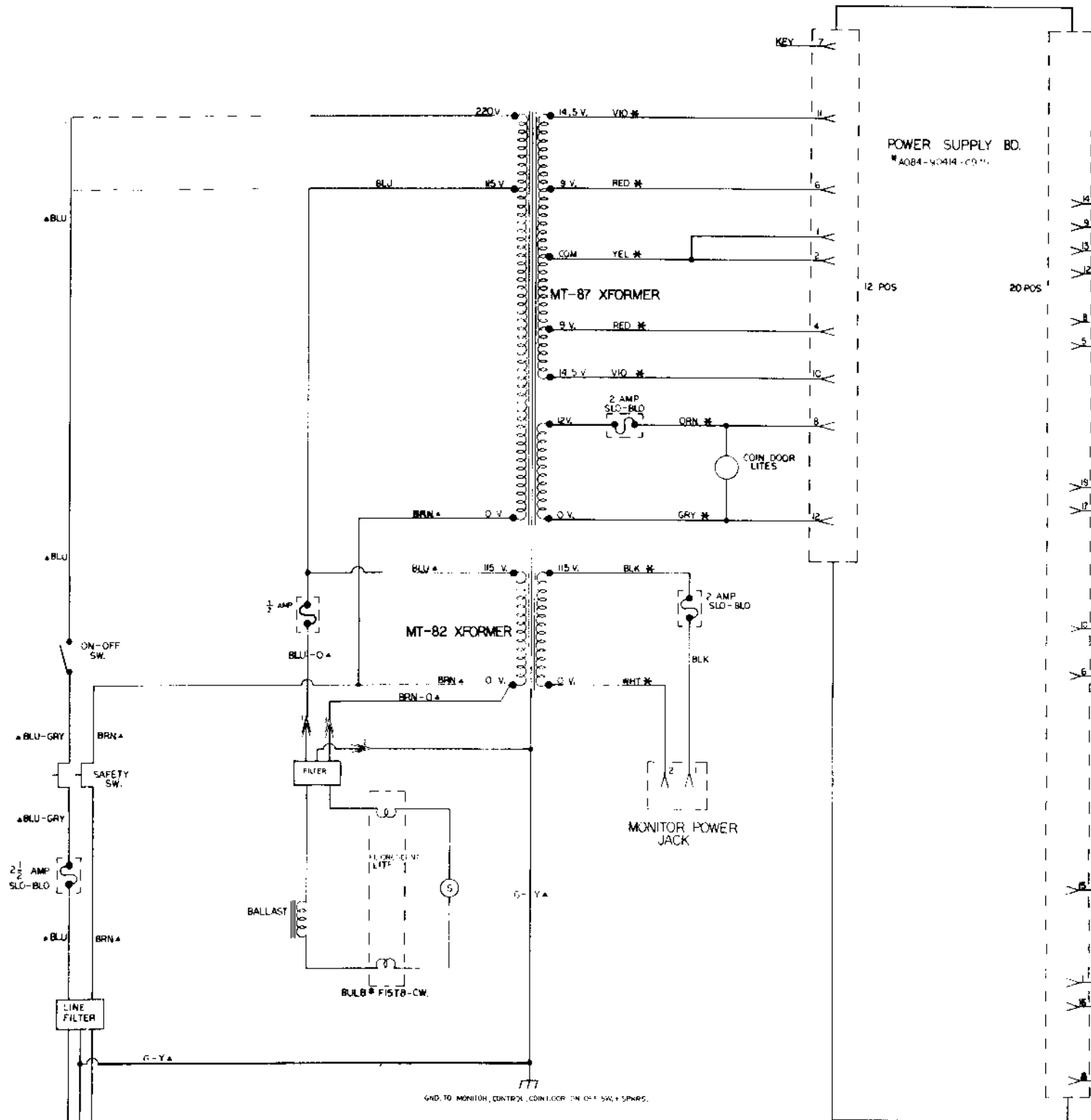
MANUALS — SCHEMATICS — TECHNICAL BULLETINS

DIP SWITCH SETTINGS — PIN-OUTS — TRAINING

DISPLAY**DESCRIPTION**

RAM	OK	All RAMs are good
RAM	OL	RAM located on Video PC board at position 1K is bad.
RAM	OH	RAM located on Video PC board at position 1K is bad.
RAM	1L	RAM located on Video PC board at position 1K is bad.
RAM	1H	RAM located on Video PC board at position 1K is bad.
RAM	2L	RAM located on Video PC board at position 3E is bad.
RAM	2H	RAM located on Video PC board at position 3F is bad.
RAM	3L	RAM located on Video PC board at position 3K is bad.
RAM	3H	RAM located on Video PC board at position 3L is bad.
RAM	4L	RAM located on Video PC board at position 3H is bad.
RAM	4H	RAM located on Video PC board at position 3J is bad.
ROM	OK	All ROMs are good.
ROM	01	ROM located on CPU PC board at position 3N is bad.
ROM	02	ROM located on CPU PC board at position 3M is bad.
ROM	03	ROM located on CPU PC board at position 3L is bad.
ROM	04	ROM located on CPU PC board at position 3K is bad.
ROM	11	ROM located on CPU PC board at position 3J is bad.
ROM	21	ROM located on CPU PC board at position 3E is bad.

Figure 4b. Board location coordinates (Self test display)

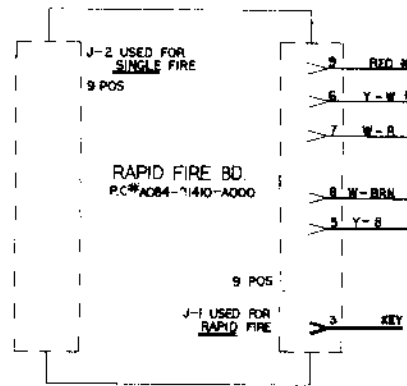


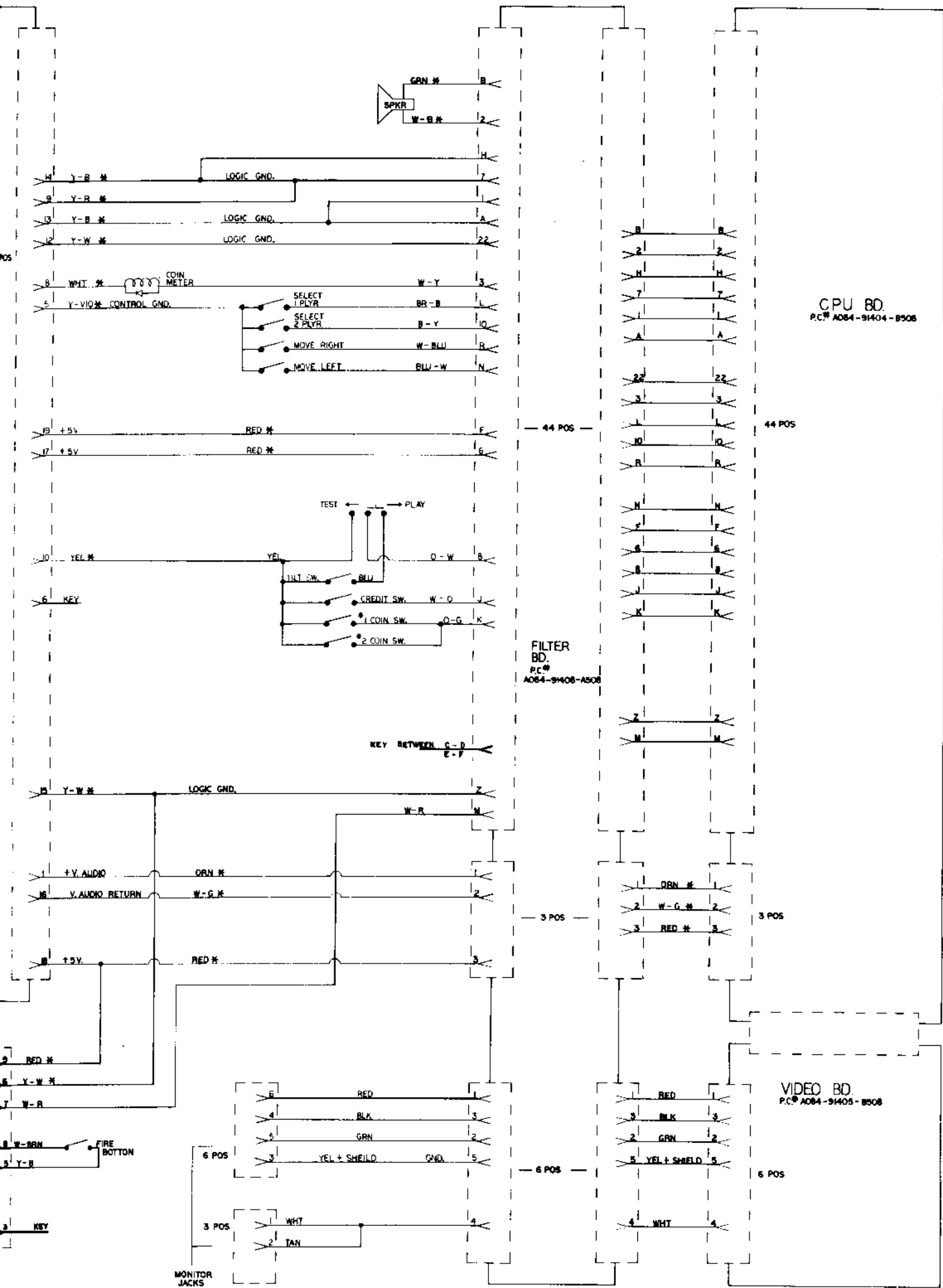
GALAGA U.R.
SCHEMATIC * MOSI-0050B-A003

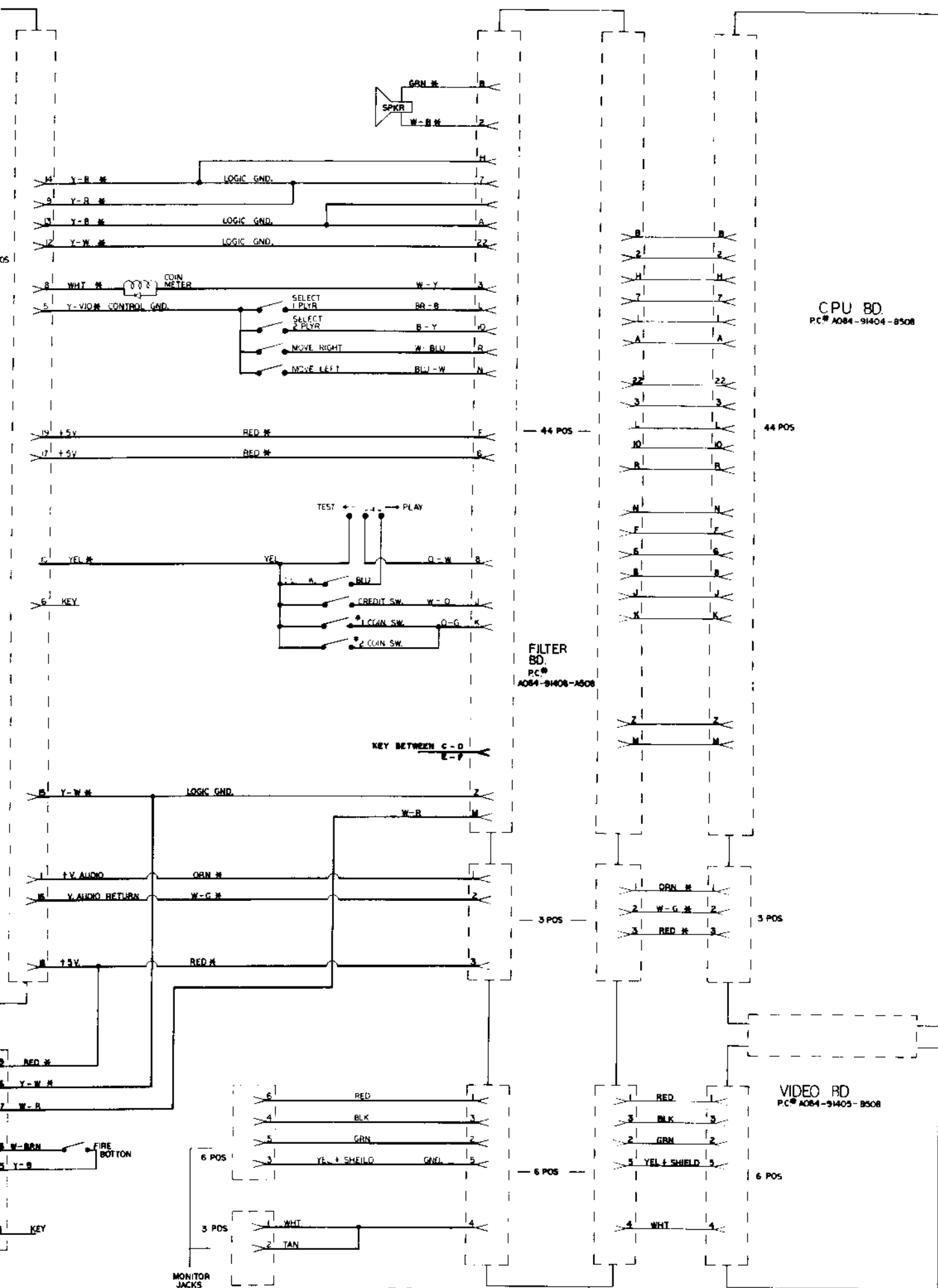
REVISIONS

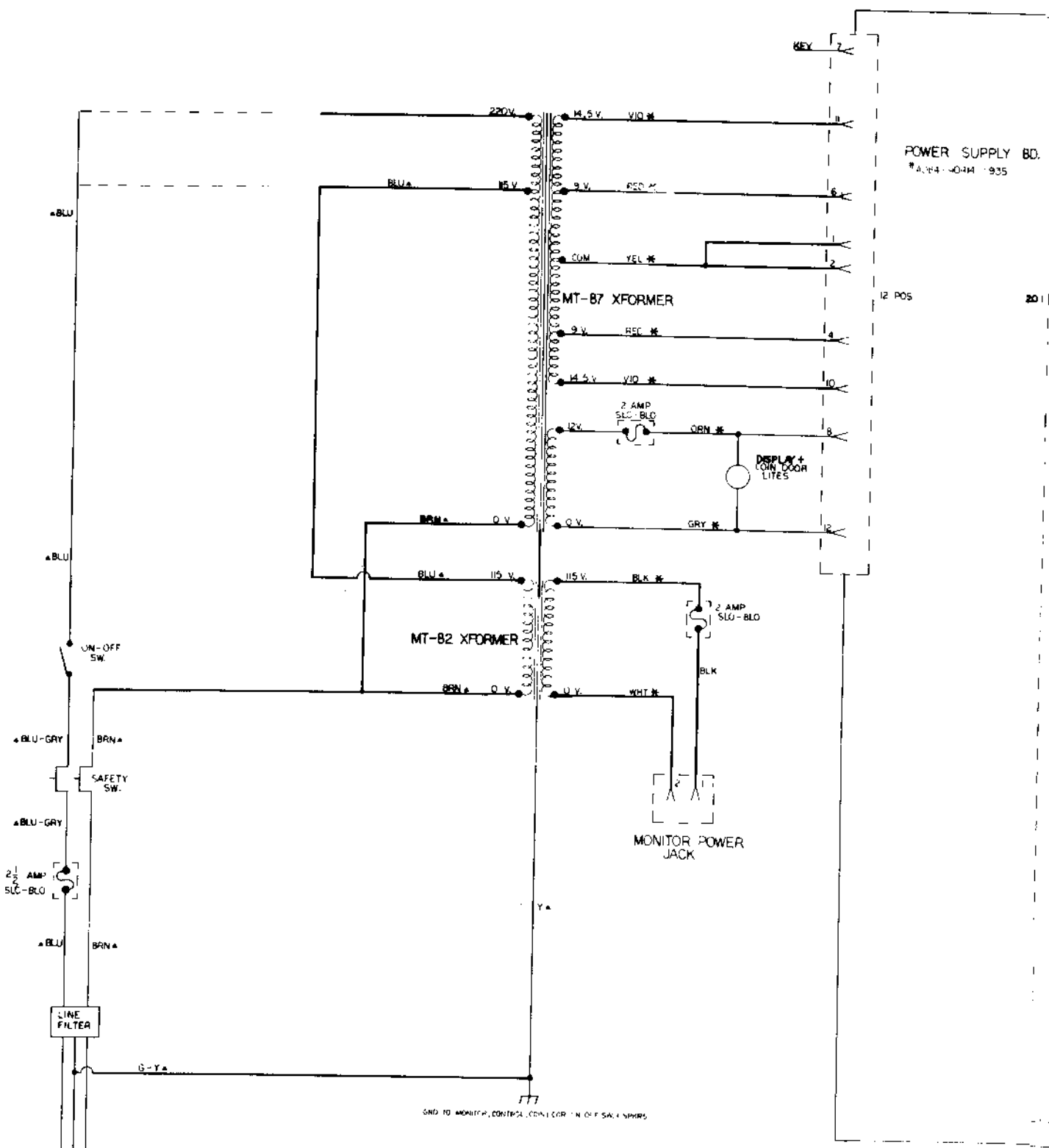
REVISIONS	DATE	BY	NAME
ADDED 1. 15W-41V LITE	11-29-81	W. Knappe	
ADDED 2. 2 AMP SLO-BLO			

NOTES: 1. * = BANG
2. A.T. = AMP. MOD. INSL.









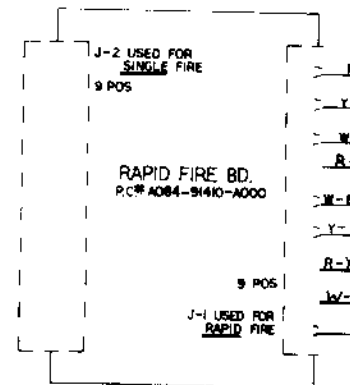
GALAGA MINI

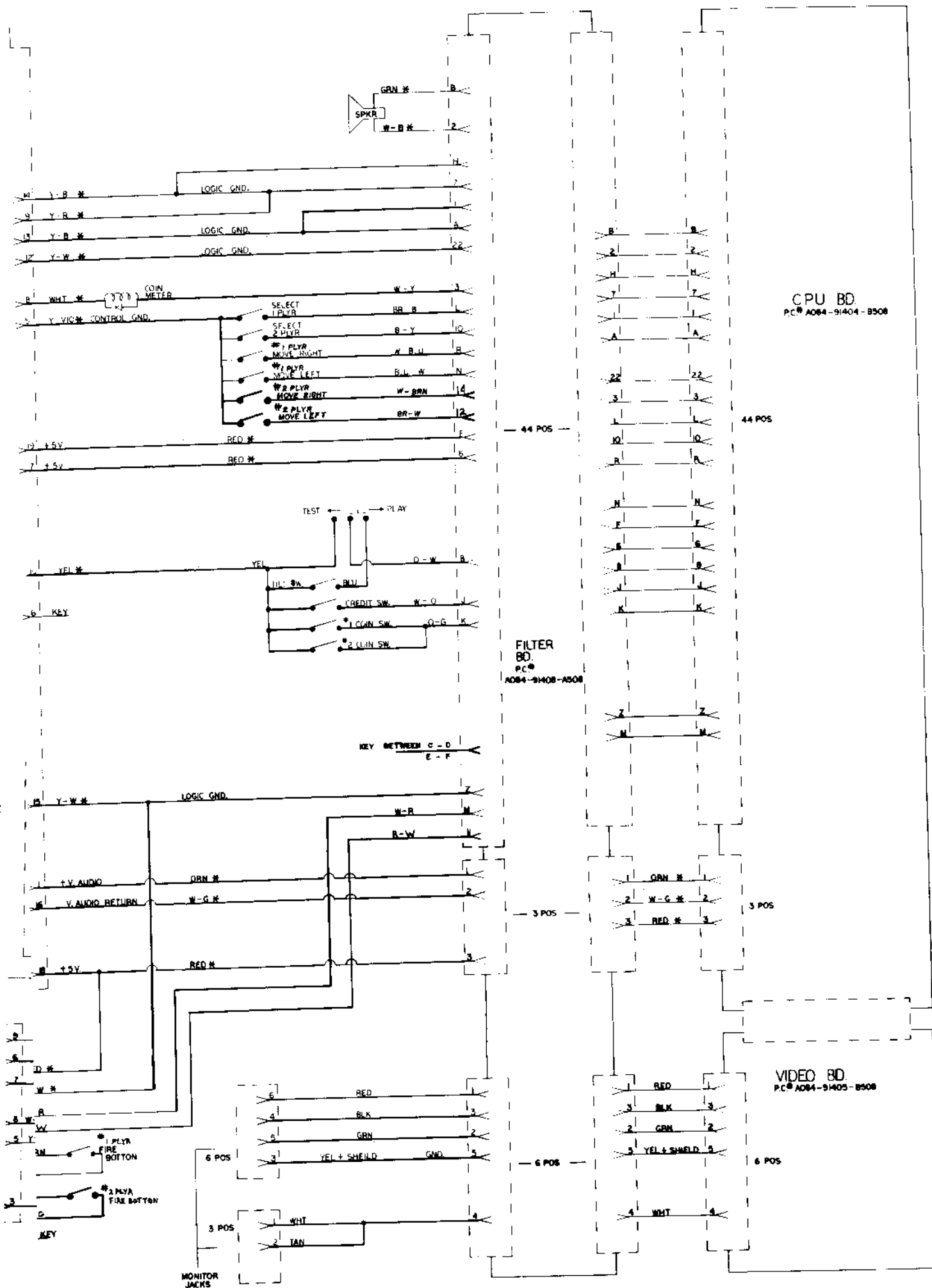
WIRING SCHEMATIC NO51-00514-A003

REVISIONS

REVISIONS	DATE	INITIALS	NAME
ADDED J-2 USED FOR SINGLE FIRE	9-19-51		
ADDED J-4 USED FOR RAPID FIRE			

NOTES: 1. SEE DRAWING
2. ALL WIRING GOOD INSIDE

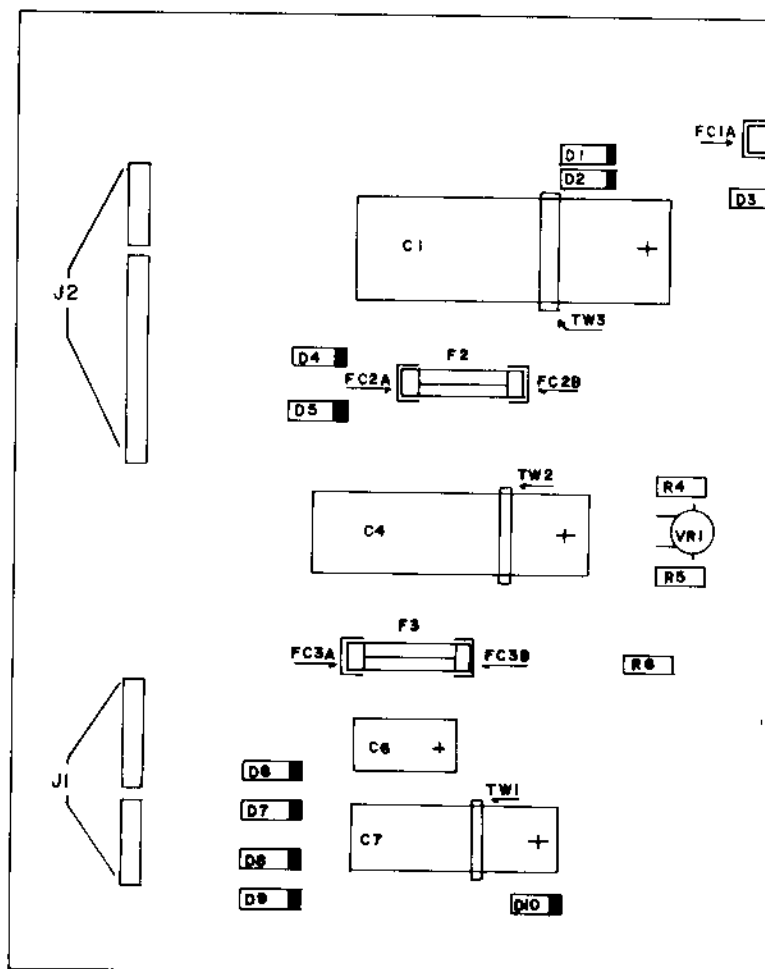


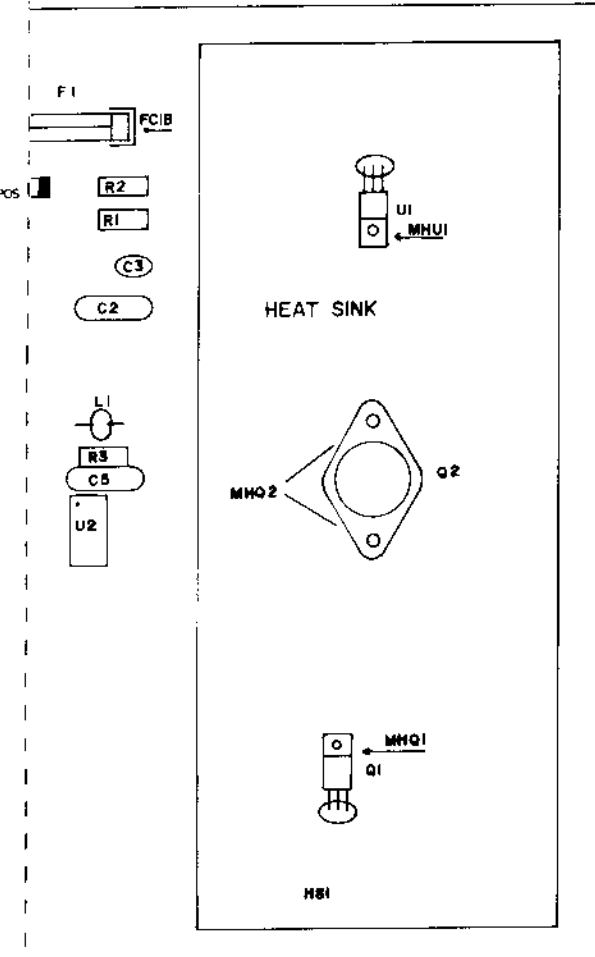


DESIGNATION

DESCRIPTION

C1	10000 MF 35V AX. ELEC.
C2	.01MF 50V AX. CER.
C3	1MF 25V TANT.
C4	20000MF 16V AX. ELEC.
C5	100PF 50V AX. CER.
C6	470 MF 16V AX. ELEC.
C7	4700 MF 25V " "
R1	470 OHM 1/4W 5% CRBN
R2	100 " " " "
R3	2.7K " " " "
R4	560 " " " "
R5	510 " " " "
R6	10 " " " "
VR1	100 OHM 1/4W CRBN. FLM.
D1, D2	A14F
D3	1N4004
D4, D5	MR750
D6-D9	A15F
D10	A14F
Q1	TIP31
Q2	2N3055
U1	LM317
U2	3632
L1	FERROXCUBE BEAD
HS1	HEAT SINK
F1	FUSE 2A
F2	" 8A
F3	" 8A
FC1A, FC1B, FC2A	FUSECLIP W/ STOP
FC2B, FC3A, FC3B	" "
J1	CONN. KK.156 (RA)(5-PIN)(6-PIN)
J2	" " (RA)(5-PIN)(13-PIN)
MHQ1	MOUNTING HARDWARE Q1
	(1) SCREW 4-40X10 SLT RND
	(1) WSH 4 120-.250-018
	(1) HEXNUT 4-40
	(1) SHOULDER WSH. 974-302
	THERMAL COMPOUND AS REQ.
	(1) TO-220 INSULATOR RT-3.5 MICA
MHQ2	MOUNTING HARDWARE Q2
	(2) SCREW 4-40X10 SLT RND
	(2) WSH 4 120-.250-018
	(2) HEXNUT 4-40
	(2) SHOULDER WSH. 974-302
	THERMAL COMPOUND AS REQ.
	(1) TO-3 RT-1.5 FILM
MHU1	MOUNTING HARDWARE U1
	(1) SCREW 4-40X10 SLT RND
	(1) WSH 4 120-.250-018
	(1) HEXNUT 4-40
	(1) SHOULDER WSH. 974-302
	THERMAL COMPOUND AS REQ.
	(1) TO-220 INSULATOR RT-3.5 MICA
TW1-TW3	TIE WRAPS



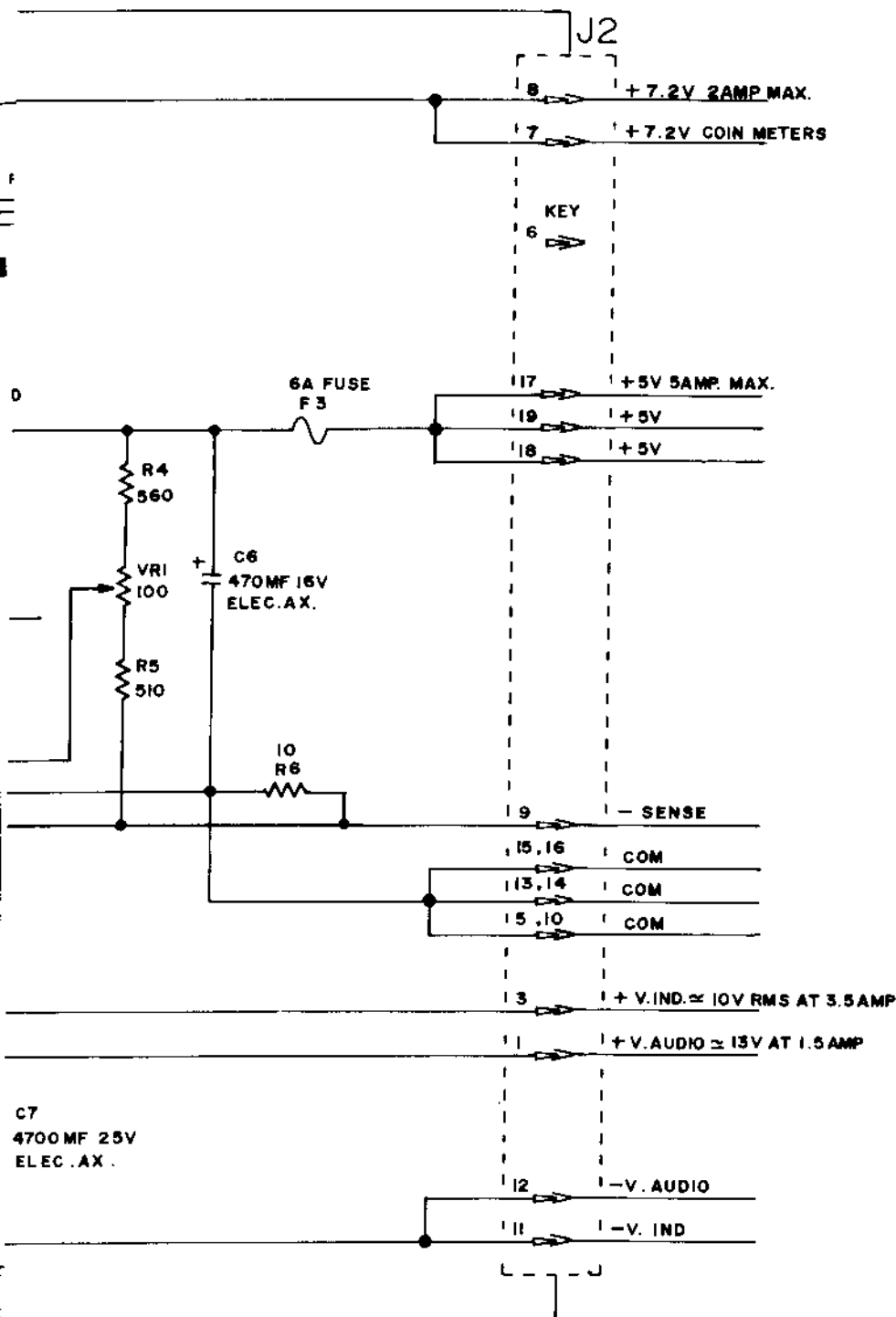


DESCRIPTION	QTY	DESIGNATION	PART NUMBER
100 PF 50v AX.CER.	1	C5	0171-043H6-JXXV
.01MF "	1	C2	0171-097H2-JXXX
1MF 25v TANT.	1	C3	0935-00814-0100
470MF " AX.ELEC.	1	C6	0175-271EX-EXXX
4700MF "	1	C7	0175-314EX-EXBX
10000MF 35v AX.ELEC.	1	C1	0175-322GX-EXBX
20000 16v MF "	1	C4	0935-00814-0800
10 OHM 1/4w 5% CBN	1	R6	0062-051B3-1XXX
100 " " " "	1	R2	0062-110B3-1XXX
470 " " " "	1	R1	0062-156B3-1XXX
510 " " " "	1	R5	0062-159B3-1XXX
560 " " " "	1	R4	0062-162B3-1XXX
2.7K " " " "	1	R3	0062-199B3-1XXX
100 " " CBN FLM	1	VR1	0063-025AX-1DEX
1N4004	1	D3	0508-00801-0200
A14F	3	D1,D2,D10	0064-168XX-XXGX
A15F	4	D6-D9	0064-169XX-XXGX
MR750	2	D4,D5	0064-303XX-XXJX
TIP31	1	Q1	0065-485XX-XXXX
2N3055	1	Q2	0935-00800-0000
3532	1	U2	0066-044BX-XXXX
LM317	1	U1	0935-00804-3600
FERROXCUBE BEAD	1	L1	0017-00009-0225
HEAT SINK	1	HS1	0068-045XX-ABDX
FUSE 2A	1	F1	0017-00003-0005
FUSE 6A	1	F3	0017-00003-0008
FUSE 8A	1	F2	0017-00003-0184
FUSECLIP	6	FC1A,FC1B,FC2A,FC2B,FC3A,FC3B	0017-00003-0214
KK 156 (RA) (5)	2	J1,J2	3000-16387-0500
KK 156 (RA) (6)	1	J1	3000-16387-0600
KK 156 (RA) (13)	1	J2	3000-16387-1300
SCREW 4-40x10	4	MHU1,MHQ1,MHQ2	0017-00101-0727
WSH 4 120-250-018	4	" " "	0017-00104-0071
HEXNUT 4-40	4	" " "	0017-00103-0002
SHOULDER WSH	4	" " "	0017-00042-0109
THERMAL COMPOUND	AS REQ.	" " "	0017-00009-0204
TO-220,INSULATOR	2	MHU1,MHQ1	0017-00003-0205
TO-3 INSULATOR	1	MHQ2	0017-00042-0108
TIE WRAPS	3	TW1-TW3	0017-00042-0105

M051-00935-C028

THIS DWG IS CONFIDENTIAL & PROPERTY OF MIDWAY MFG CO

DIN TOLERANCES UNLESS OTHERWISE SPEC		FIRST INSPECTION DATE 10-10-81		MIDWAY MFG. CO. FRANKLIN PARK, IL 60131	
CONCENTRICITY	0.002	MA	Full	REVISIONS	
FRACTIONAL	1/100	MA		PART NO	
DECIMAL	0.005	MA		A084-96414 C9.35	
HOLE DIA	0.002	MA			
ANGLE	1/12	MA			
DO NOT SCALE DWG		FINISH		POWER SUPPLY	



SCHEMATIC: M051-00935-C025

REVISIONS

USED ON GALAGA

MIDWAY MFG. CO.

FRANKLIN PK ILL

CDWG
M.M.
10-1-81

HEAT TREAT

MAT'L

FINISH

SCALE

FULL

NO REQ'D PER

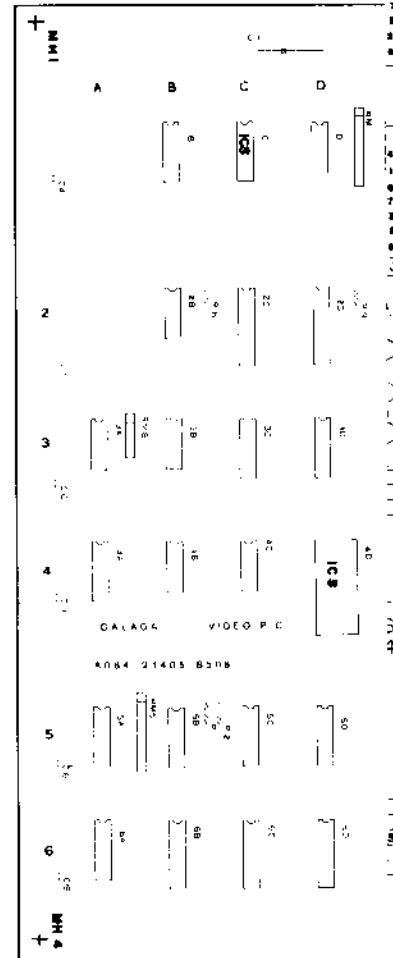
POWER SUPPLY

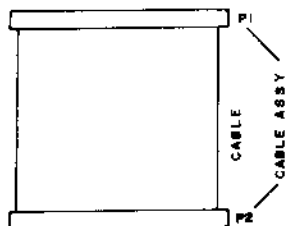
PART NO

A084-90414-C935

DESIGNATION LIST

DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION
C1	470 MF 16V AX ELEC.	IC	9C, 5D, 5E, 5F, 5H, 5J
C2	.001 MF 50V CER	"	5K
C3	220 PF 500V 5% MICA	"	5L
C4-C21	.1 MF 50V CER	"	5M
		"	5N
		"	5A
		"	5B
		"	5C, 5D, 5E, 5F
		"	5H
		"	5J, 5K, 5L, 5M
		"	5N
R1	220 OHM 1/4W 5% CRBN.	IC5 IC	16-PIN IC SOCKET
R2	470 " " " "	"	1H
R3	220 " " " "	"	1K
R4	470 " " " "	"	1L, 1N
R5	1K " " " "	"	2N
R6	220 " " " "	"	3E, 3F, 3H, 3J, 3K, 3L
R7	470 " " " "	"	4D, 4F
R8, R9	1K " " " "	"	4H
R10	100 " " " "	"	4L, 4M
R11-R14	470 " " " "	"	5N
R15, R16	1K " " " "		
R17	330 " " " "	J1	CONN - R.A. HEADER 50-PIN
R18-R22	1K " " " "	J2	CONN - PCB HEADER 6-PIN
RM1-RM4	2.2K OHM 6-UNIT 9-PIN SIP	MH1-MH4	DUAL LKG PCB SPACER
RM5	1K " " " "	PCB	A080-21405-B508
RM6-RM8	1K OHM 4-UNIT 5-PIN SIP		
		CABLE ASSY	AS BELOW
IC 18	74LS155	P1, P2	PLUG - SOCKET CONNECTOR 50-PIN
" IC	99-3 PROM (256X4)	CABLE	RISSON CABLE- 33FT 50-CONNECTOR
" ID	74LS08		28 GA STRND. RND. CONDUCTOR
" IE	74LS138		
" IF	74LS32		
" IH	04XX CUSTOM IC		
" IK	STATIC RAM (2KX8)		
" IL	00XX CUSTOM IC		
" IN	07XX " "		
" 2B	74LS20		
" 2C	74LS273		
" 2D	74LS277		
" 2E	74LS273		
" 2F, 2H, 2J, 2K	74LS245		
" 2L	74LS273		
" 2M	74LS277		
" 2N	99-4 PROM (256X4)		
" 3A	74LS20		
" 3B	74LS86		
" 3C, 3D	74LS243		
" 3E, 3F, 3H, 3J, 3K, 3L	2114-2 RAM (1KX4)		
" 3M	74LS00		
" 3N	74LS386		
" 4A	74LS157		
" 4B, 4C	74LS86		
" 4D	99-L EPROM (4096X8)		
" 4F	99-K " "		
" 4H	02XX CUSTOM IC		
" 4L	99-J EPROM (4096X8)		
" 4M	05XX CUSTOM IC		
" 5A	74LS365		
" 5B	74LS298		





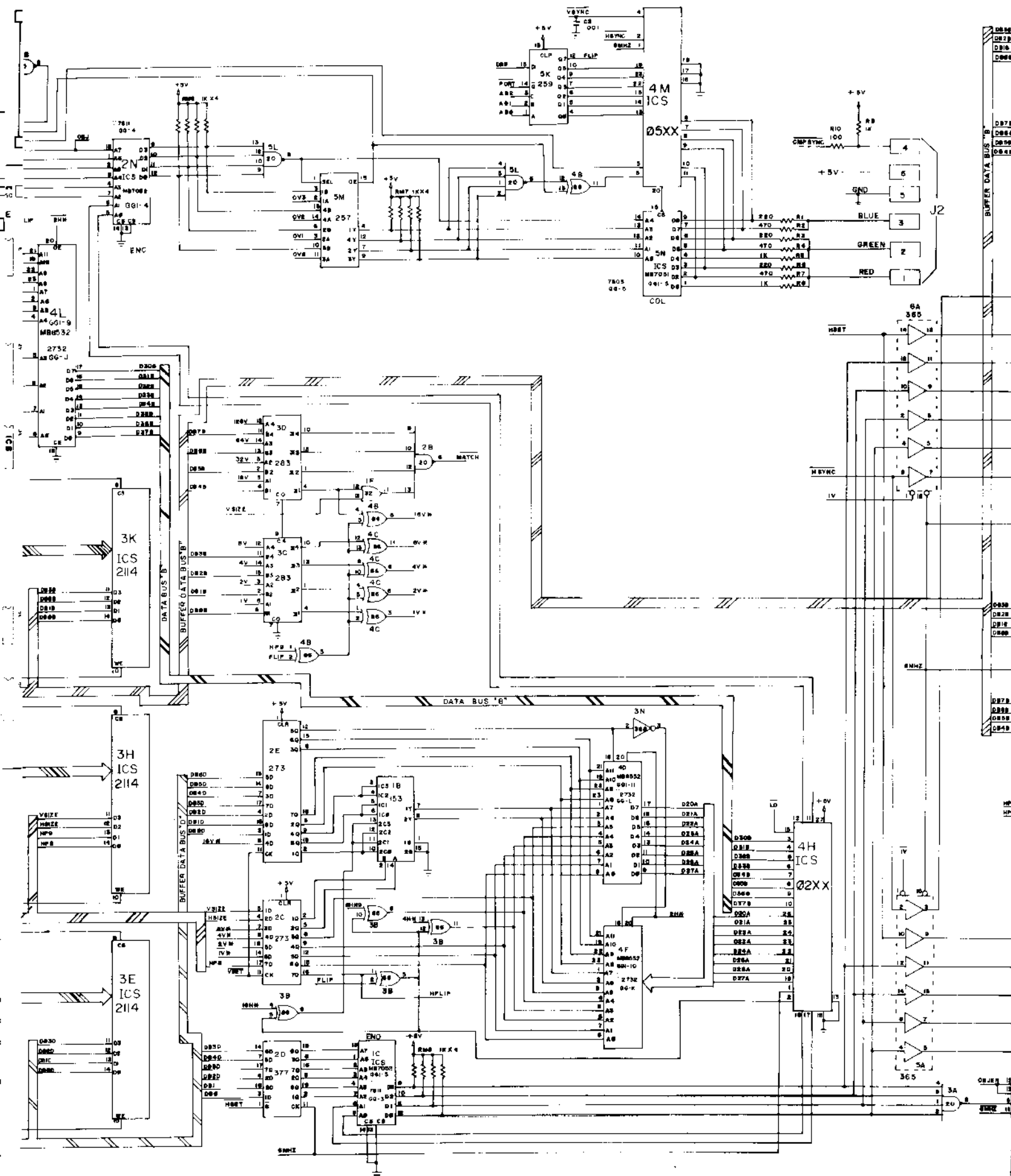
CROSS REFERENCE LIST

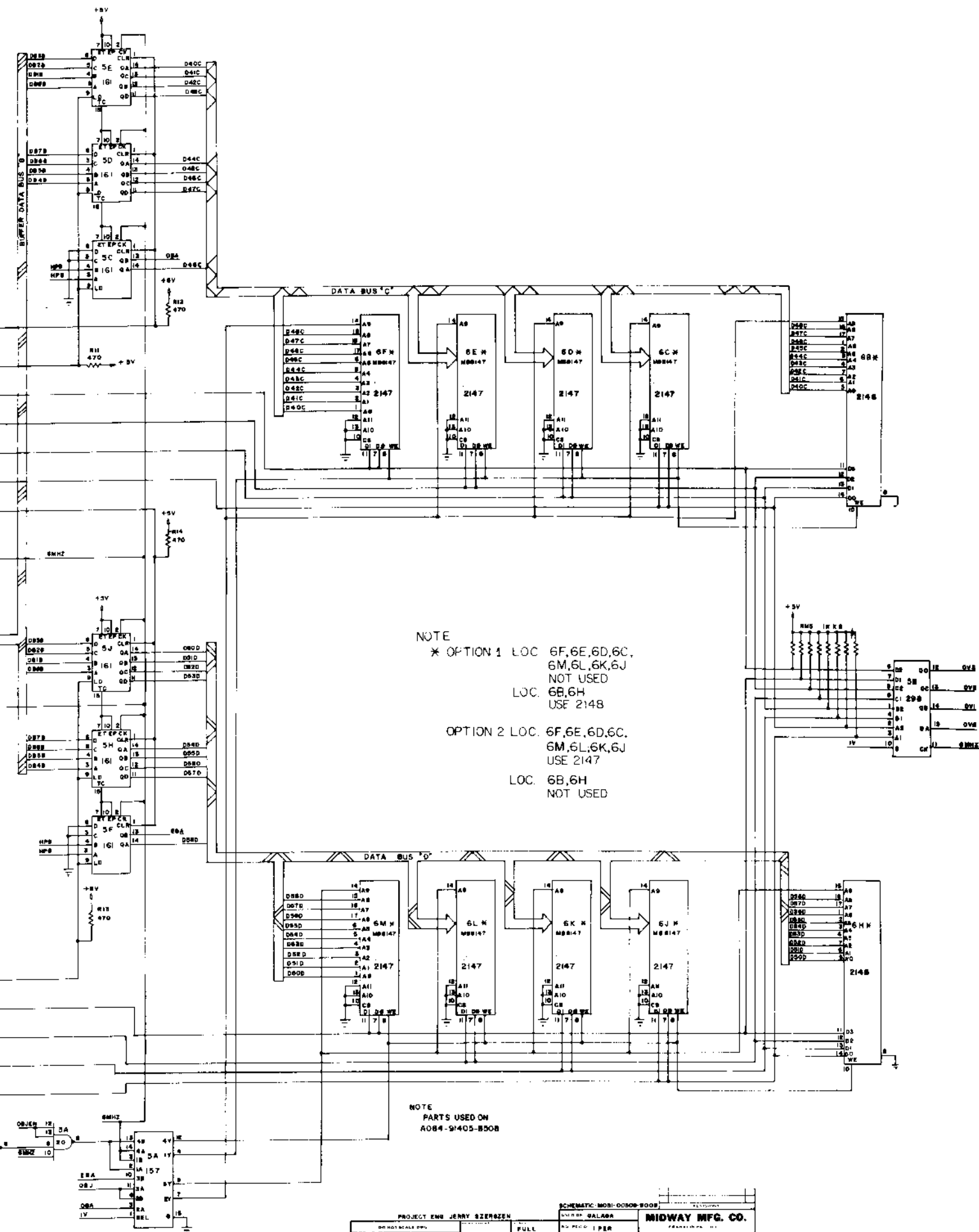
DESCRIPTION	QUANTITY	DESIGNATION	PART #
220PF 500V 15% MCA CAP	1	C3	0508-00607-0100
100MF 50V CER CAP	1	C2	0508-00800-0200
1 MF	16	C4-C21	0508-00800-0300
470MF 16V AX. ELEC	1	C1	0508-00800-0400
100 OHM 1/4 W 5% CRBN. RES.	1	R10	0062-11083-1XXXX
220 "	3	R1, R3, R6	0062-13363-1XXXX
330 "	1	R7	0062-14483-1XXXX
470 "	7	R2, R4, R7, R11-R14	0062-15683-1XXXX
1K "	10	R5, R8, R9, R15, R16, R18-R22	0062-17883-1XXXX
1K 8P (4-UNIT) 5-PIN	3	RM6-RM8	0508-00804-0100
1K 8P (8-UNIT) 9-PIN	1	RM5	0508-00804-0200
2.2K	4	RM1-RM4	0508-00804-0300
00XX CUSTOM IC	1	IC1L	0066-001CX-XAPX
02XX "	1	IC4H	0066-002CX-XAPX
04XX "	1	IC1H	0066-003CX-XAPX
08XX "	1	IC4M	0066-004CX-XAPX
07XX "	1	IC1N	0066-006CX-XAPX
2114-2 ST. RAM 200NS (1024X4)	6	IC3E, 3F, 3H, 3J, 3K, 3L	0508-00803-0300
74LS00	1	IC3M	0508-00803-0400
74LS00	1	IC1D	0508-00803-0500
74LS20	3	IC2B, 3A, 5L	0508-00803-0600
74LS32	1	IC1F	0508-00803-0700
74LS86	4	IC3B, 4B, 4C, 6N	0508-00803-0800
74LS138	1	IC1E	0508-00803-0900
74LS155	1	IC1B	0508-00803-1000
74LS157	1	IC4A	0508-00803-1100
74LS161	6	IC5C, 5D, 5E, 5F, 5H, 5J	0508-00803-1200
74LS245	4	IC2F, 2H, 2J, 2K	0508-00803-1300
74LS257	1	IC5M	0508-00803-1400
74LS259	1	IC5K	0508-00803-1500
74LS273	3	IC2C, 2E, 2L	0508-00803-1600
74LS283	2	IC3C, 3D	0508-00803-1700
74LS296	1	IC5B	0508-00803-1800
74LS365	2	IC5A, 6A	0508-00803-1900
74LS368	1	IC3N	0508-00803-2000
74LS377	2	IC2D, 2M	0508-00803-2100
GG-3 PROM (256X4)	1	IC1C	0508-00803-2300
GG-4 "	1	IC2N	0508-00803-3000
GG-5 PROM (32X8)	1	IC5N	0508-00803-3100
GG-J EPROM (4096X8)	1	IC4L	0508-00803-2600
GG-K "	1	IC4F	0508-00803-2700
GG-L "	1	IC4D	0508-00803-2800
STATIC RAM (2KX8)	1	IC1K	0508-00803-2900
" VIDEO RAM KIT "	1	MAIN PHATOM	0508-00803-4000
" OPTION1 "	1	SUB PHATOM	NOT RELEASED
- 2148 RAM (1KX4)	2	IC6B, 6H	(IN ABOVE NUMBER)
" OPTION2 "	1	SUB PHATOM	0508-00803-2200
- 2147 RAM (4KX1)	8	IC6C, 6D, 6E, 6F, 6J, 6K, 6L, 6M	(IN ABOVE NUMBER)
* NOTE: ASSEMBLY TO INCLUDE EITHER "OPTION1" OR "OPTION2" AS PER LATEST RELEASED B.O.M.			
16-PIN IC SOCKET	3	IC3K, 2N, 3N	0508-00804-0700
18-PIN "	6	IC3E, 3F, 3H, 3J, 3K, 3L	0508-00804-0800
24-PIN "	5	IC3K, 4D, 4F, 4L, 4M	0508-00804-0500
28-PIN "	4	IC3H, 1L, 1N, 4H	0508-00804-0400
CONNECTOR - R.A. HEADER 50-PIN	1	J1	0508-00804-0800
CONNECTOR - PCB HEADER 6-PIN	1	J2	0017-00021-0424
MOUNTING HARDWARE -			
DUAL LKG. PCB SPACER	4	MH1-MH4	0017-00042-0253
PCB	1	" GALAGA " VIDEO P.C.B.	A080-91405-8508
CABLE ASSEMBLY	1	CABLE ASSY	A508-00027-0000
50-PIN			
PLUG - SOCKET CONNECTOR	2	P1, P2	0508-00804-0900
RIBBON CABLE - 33 FT	1	CABLE	0017-00033-0348
50-CONDUCTOR 28GA STRND AND CONDUCTOR			

PROJECT ENG JERRY SZERSZEN

ASSEMBLY M051-00508-B007

DO NOT SCALE DWG		FULL		NO REQD IPER		REVISIONS	
DIM TOLERANCES UNLESS SPECIFIED		MATERIAL		FINISH		PART NO.	
DATE: 08-22-81		GALAGA VIDEO P.C		A084-91405-8508		MIDWAY MFG. CO.	
DRAWN: [Signature]		CHECKED: [Signature]		APPROVED: [Signature]		FRANKLIN, KY 40301	





DESIGNATION LIST

DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION
C1	470MF 16V AX. ELEC	RM1-RM3	1K OHM 4-UNIT 5-PIN SIP
C2-C17	.01MF 50V CER	RM4	1K OHM 8-UNIT 9-PIN SIP
C18	.1MF " "	RM5	1K OHM 4-UNIT 5-PIN SIP
C19	.01MF " "	RM6, RM7	1K OHM 8-UNIT 9-PIN SIP
C20	22MF 35V AX. ELEC	RM8	NOT USED
C21	220MF 16V AX. ELEC	RM9	1K OHM 4-UNIT 5-PIN SIP
C22	100MF " "	RM10-RM13	2.2K OHM 4-UNIT 8-PIN SIP
C23, C24	.15MF 25V 10% RD. TANT	RM14, RM15	NOT USED
C25	10MF 16V AX. ELEC	RM16	220 OHM 4-UNIT 8-PIN SIP
C26-C29	.01MF 100V 10% MYLAR	RM17-RM20	2.2K OHM 8-UNIT 9-PIN SIP
C30-C42	NOT USED	RM21, RM22	4.7K OHM 8-UNIT 9-PIN SIP
C43	.0022MF 50V 10% CER		
C44	10MF 16V AX. ELEC	VR1	1K OHM 1/4w CRBN. POT UP W/O KNOB ALPS "HIO51A-1K OHM
C45	100PF 50V CER		
C46-C63	.1MF 50V CER		
R1, R2	330 OHM 1/4w 5% CRBN	D1	1N914B
R3, R4	NOT USED	D2-D4	NOT USED
R5	100 OHM 1/4 5% CRBN	Q1	2N3391A
R6	1K " " " "	Q2	2N4403
R7, R8	10K " " " "	Q3, Q4	NOT USED
R9	NOT USED	Q5	TIP 110
R10	10K OHM 1/4w 5% CRBN	Q6-Q8	NOT USED
R11	22K " " " "		
R12	47K " " " "	IC 1A	74LS107
R13	100K " " " "	" 1B	74LS283
R14	NOT USED	" 1C	74LS174
R15	470 OHM 1/4w 5% CRBN	" 1D	GG-1 PROM (256 X 4)
R16	1K " " " "	" 1E, 1F, 1H, 1J, 1K, 1L	74LS367
R17	2.2K " " " "	" 1M, 1N	74LS367
R18	4.7K " " " "	" 1P	74LS138
R19	10K " " " "	" 2A, 2B	7489
R20	3.3K " " " "	" 2C	74LS157
R21-R28	NOT USED	" 2D	74LS156
R29	4.7K OHM 1/4w 5% CRBN	" 2E, 2H, 2J	08XX CUSTOM IC
R30	10K " " " "	" 2L	08XX " "
R31	22K " " " "	" 2M, 2N	NOT USED
R32, R33	47K " " " "	" 2P	74LS138
R34	10K " " " "	" 3A	4066 CMOS
R35	150K " " " "	" 3B	74LS273
R36	33K " " " "	" 3C	74LS259
R37	10K " " " "	" 3D	NOT USED
R38	3.3K " " " "	" 3E	GG-0 EPROM (4K X 8)
R39	2.2K " " " "	" 3H	NOT USED
R40	470K " " " "	" 3J	GG-E EPROM (4K X 8)
R41	22K " " " "	" 3K	GG-D " "
R42	150K " " " "	" 3L	GG-C " "
R43	4.7K " " " "	" 3M	GG-B " "
R44	10K " " " "	" 3N	GG-A " "
R45	22K " " " "	" 3P	74LS32
R46	47K " " " "	" 4B	74LS139
R47, R48	470 " " " "	" 4C	74LS32
R49, R50	NOT USED	" 4D	07XX CUSTOM IC
R51	10K OHM 1/4w 5% CRBN	" 4E	280 MICROPROCESSOR 2.5MHZ
R52-R54	1K " " " "	" 4H	51XX CUSTOM IC
R55	NOT USED	" 4J	280 MICROPROCESSOR 2.5MHZ
R56-R63	1K OHM 1/4w 5% CRBN	" 4K	74LS151
R64, R65	4.7K " " " "	" 4L	NOT USED
CX1	33PF 50V CER	" 4M	Z80A MICROPROCESSOR 4.0MHZ
CX2	100PF " "		
RX1	1K OHM 1/4w 5% CRBN		

DESIGNATION LIST

ION

AX. ELEC
Y CER

AX. ELEC
Y AX. ELEC

Y 10% RD.TANT

AX. ELEC
V 10% MYLAR

OV 10% CER

X. ELEC

CER

CER

/4w 5% CRBN

/4 5% CRBN

" " "

" " "

/4w 5% CRBN

" " "

" " "

" " "

/4w 5% CRBN

" " "

" " "

" " "

" " "

/4w 5% CRBN

" " "

" " "

" " "

" " "

" " "

" " "

" " "

" " "

" " "

" " "

" " "

" " "

" " "

" " "

/4w 5% CRBN

" " "

" " "

/4w 5% CRBN

" " "

CER

/4w 5% CRBN

DESIGNATION

DESCRIPTION

RM1-RM3
RM4
RM5
RM6, RM7
RM8
RM9
RM10-KM13
RM14, RM15
RM16
RM17-RM20
RM21, RM22

VR1

DI
D2-D4

Q1
Q2
Q3, Q4
Q5
Q6-Q8

IC1A
"1B
"1C
"1D
"1E, 1F, 1H, 1J, 1K, 1L,
"1M, 1N
"1P
"2A, 2B
"2C
"2D
"2E, 2H, 2J
"2L
"2M, 2N
"2P
"3A
"3B
"3C
"3D
"3E
"3H
"3J
"3K
"3L
"3M
"3N
"3P
"4B
"4C
"4D
"4E
"4H
"4J
"4K
"4L
"4M

1K OHM 4-UNIT 5-PIN SIP
1K OHM 8-UNIT 9-PIN SIP
1K OHM 4-UNIT 5-PIN SIP
1K OHM 8-UNIT 9-PIN SIP
NOT USED
1K OHM 4-UNIT 5-PIN SIP
2.2K OHM 4-UNIT 6-PIN SIP
NOT USED
220 OHM 4-UNIT 6-PIN SIP
2.2K OHM 8-UNIT 9-PIN SIP
4.7K OHM 8-UNIT 9-PIN SIP

1K OHM 1/4w CRBN POT UP
W/O KNOB ALPS "HIO51A-1KOHM

1N914B
NOT USED

2N3391A
2N4403
NOT USED
TIP 110
NOT USED

74LS107
74LS283
74LS174
GG-1 PROM (256X4)
74LS367
74LS367
74LS138
7499
74LS157
74LS158
08XX CUSTOM IC
08XX
NOT USED
74LS138
4066 CMOS
74LS273
74LS259
NOT USED
GG-9 EPROM (4KX8)
NOT USED
GG-E EPROM (4KX8)
GG-D " "
GG-C " "
GG-B " "
GG-A " "
74LS32
74LS139
74LS32
07XX CUSTOM IC
Z80 MICROPROCESSOR 2.5MHZ
51XX CUSTOM IC
Z80 MICROPROCESSOR 2.5MHZ
74LS151
NOT USED
Z80A MICROPROCESSOR 4.0MHZ

DESIGNATION

DESCRIPTION

IC4P
"5A
"5B
"5C
"5K
"5P
"6A
"6B
"6C
"6H
"6L
"6M
"7C

74LS139
74LS368
74LS107
GG-2 PROM (256X4)
74LS151
LM324
74LS393
74128
74LS139
NOT USED
54XX CUSTOM IC
MB3730

ICS ID
"2E, 2H, 2J, 2L
"3E, 3J, 3K, 3L, 3M, 3N
"5A
"5B
"5C
"4D
"4E
"4H
"4J, 4M
"6M

16-PIN IC SOCKET
28-PIN " "
24-PIN " "
16-PIN " "
14-PIN " "
16-PIN " "
28-PIN " "
40-PIN " "
42-PIN " "
40-PIN " "
28-PIN " "

XTALI
SW1
DIP SW 6J, 6K

J1
J2

CONN.- R.A. HEADER 50-PIN
CONN.- PCB HEADER 3-PIN

MH1C7C
MOUNTING HARDWARE
-(2) 4-40 HEX NUT
-(2) 4-40 X8 SLT. PAN M.S
-(2) W8H.4 .125-.250-.032 FLT. ST.
-(2) W8H.4 .120-.250-.018 EXT. ST.

AO80-91404-C508 GALAGA "CPU P.C.B"

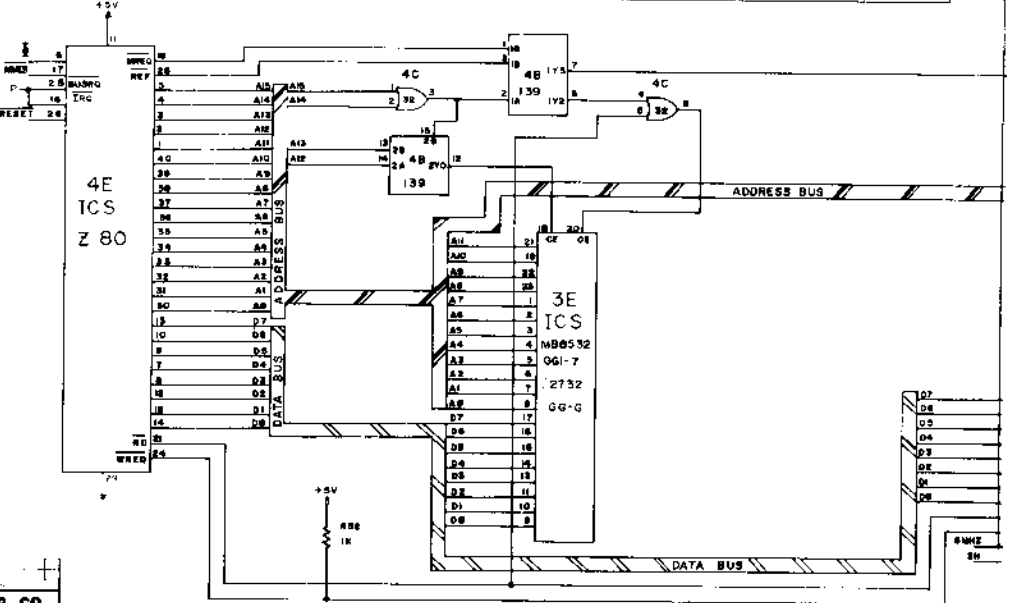
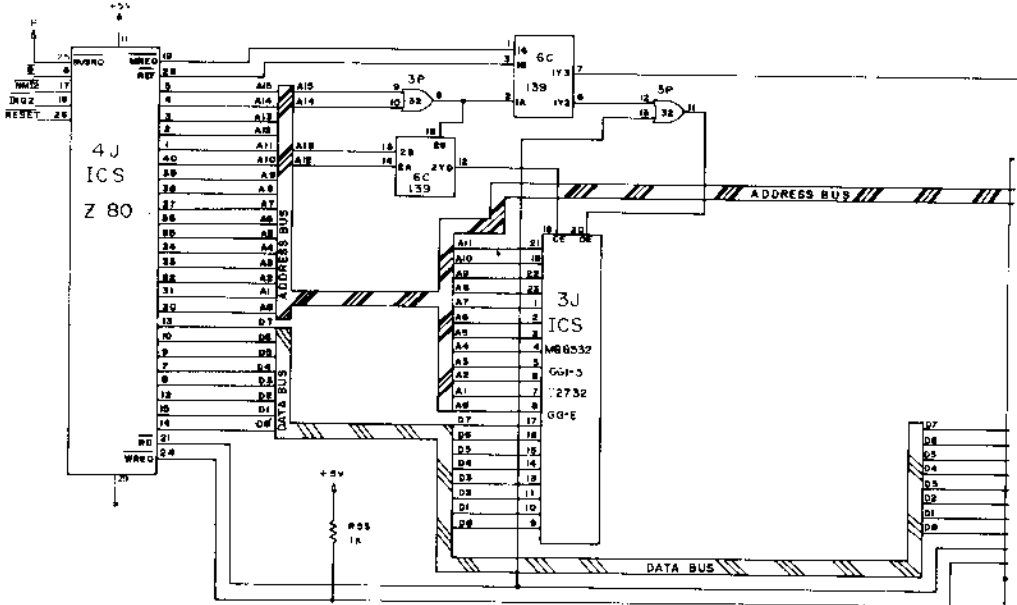
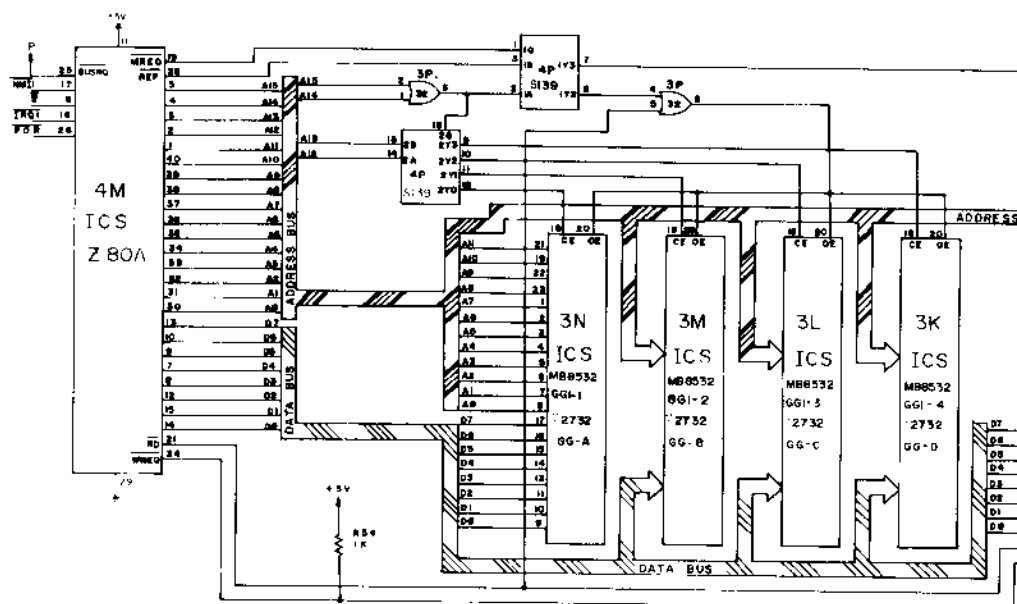
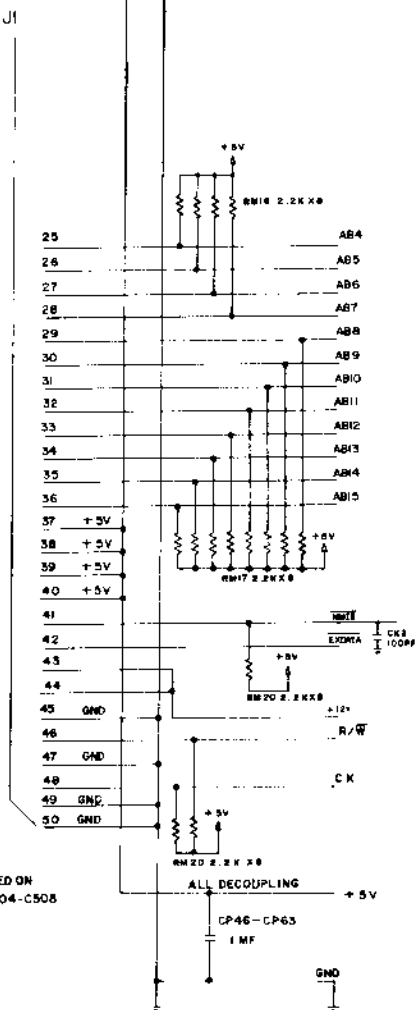
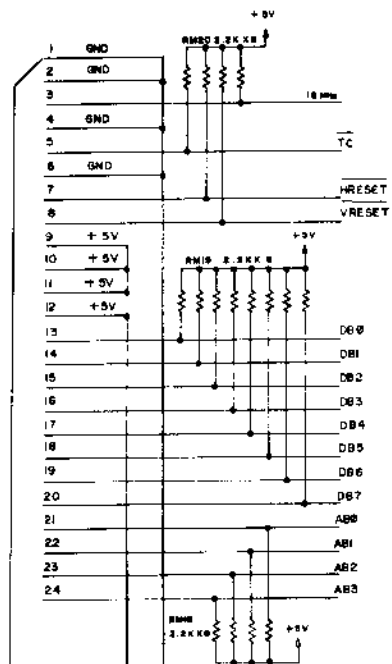
CROSS REFERENCE LIST

NTITY	DESIGNATION	PART #	DESCRIPTION	QUANTITY	DESIGNATION	PART #
	CX1*	0508-00800-2000	74LS273	1	IC3B	0508-00803-1600
	C48,CX2**	0508-00800-0500	74LS283	1	IC1B	0508-00803-1700
	C43	0508-00800-0600	74LS367	6	IC1E,IF,IH,IJ,IK,IL	0508-00803-4800
	C2-C17,C19	0508-00800-0800			IM,IN	
	C26-C29	0508-00800-0700	74LS368	1	IC5A	0508-00803-2000
	C18,C46-C63	0508-00800-0900	74LS393	1	IC6A	0508-00803-4900
	C23,C24	0508-00800-1000	GG-1 PROM (256X4)	1	IC1D	0508-00803-3800
	C25,C44	0508-00800-1100	GG-2 " "	1	IC5C	0508-00803-3900
	C20	0508-00800-1200	GG-A EPROM 2732	1	IC3N	0508-00803-3200
	C22	0508-00800-1300	GG-B " "	1	IC3M	0508-00803-3300
	C21	0508-00800-1400	GG-C " "	1	IC3L	0508-00803-3400
	C1	0508-00800-1500	GG-D " "	1	IC3K	0508-00803-3500
			GG-E " "	1	IC3J	0508-00803-3600
			GG-G " "	1	IC3E	0508-00803-3700
	R5	0062-110B3-1XXX	LM324	1	IC5P	0508-00803-5400
	R1,R2	0062-144B3-1XXX	M83730	1	IC7C	0066-186XX-XX4X
	R15,R47,R48	0062-156B3-1XXX	Z-80 (2.5MHZ)	2	IC4E#J	0508-00803-5000
	R6,R16,R52-R54	0062-179B3-1XXX	Z-80A (4.0MHZ)	1	IC4M	0508-00803-5200
	R56-R63,RX1***					
	R17,R39	0062-195B3-1XXX	14-PIN IC SOCKET	1	IC5B	0508-00804-1700
	R20,R38	0062-203B3-1XXX	16-PIN " "	3	IC5D,5A,5C	0508-00804-0700
	R18,R29,R43,R64,R65	0062-211B3-1XXX	24-PIN " "	6	IC5E,5J,5K,5L,5M,5N	0508-00804-0500
	R7,R8,R10,R19,R30	0062-227B3-1XXX	28-PIN " "	6	IC52E,2H,2J,2L,4D,6M	0508-00804-0400
	R34,R37,R44,R51		40-PIN " "	3	IC54E,4J,4M	0508-00804-1800
	R11,R31,R41,R45	0062-243B3-1XXX	42-PIN " "	1	IC54H	0508-00804-1900
	R36	0062-251B3-1XXX				
	R12,R32,R33,R46	0062-259B3-1XXX	18.432 MHZ CRYSTAL	1	XTAL I	0508-00804-1400
	R13	0062-275B3-1XXX	P.B SWITCH AKC-8	1	SW1	0508-00804-1800
	R35,R42	0062-283B3-1XXX	8-POS DIPSWITCH	2	6J,6K	0508-00804-1600
	R40	0062-307B3-1XXX	CONN-R.A. HEADER 50-PIN	1	J1	0508-00804-0800
			CONN. PCB HEADER 3-PIN	1	J2	0017-00021-0443
	RM16	0508-00804-1100	MOUNTING HARDWARE IC7C		MHC17C	
	RM1-RM3,RM5,RM9	0508-00804-0100	- 4-40 HEX NUT	2		0017-00103-0002
	RM4,RM6,RM7	0508-00804-0200	- 4-40 X8 PAN M.S	2		0017-00101-0510
	RM10-RM13	0508-00804-1200	- WASHER #4 FLT. ST.	2		0017-00104-0015
	RM17-RM20	0508-00804-0300	- WASHER #4 EXT. ST	2		0017-00104-0071
	RM21,RM22	0508-00804-1000				
	VRI	0508-00804-1300	GALAGA CPU PCB	1	A080-91404-C508	A080-91404-8508
	DI	0508-00801-0100				
	Q1	0508-00802-0200				
	Q2	0508-00802-0100				
	Q5	0508-00802-0300				
	IC2L	0066-005CX-XAPX				
	IC4D	0066-006CX-XAPX				
	IC2E,2H,2J	0066-007CX-XAPX				
	IC4H	0066-008CX-XAPX				
	IC6M	0066-009CX-XAPX				
	IC3A	0508-00803-5300				
	IC3P,4C	0508-00803-0700				
	IC2A,2B	0508-00803-4100				
	IC1A,5B	0508-00803-4200				
	IC6B	0508-00803-4300				
	IC1P,2P	0508-00803-0900				
	IC 3,6C	0508-00803-4400				
	IC4,3	0508-00803-5100				
	IC4K,5K	0508-00803-4500				
	IC2C	0508-00803-1100				
	IC2D	0508-00803-4600				
	IC1C	0508-00803-4700				
	IC3C	0508-00803-1500				

ASSEMBLY M051-00808-C005

PROJECT ENG: JERRY SZERSZEN

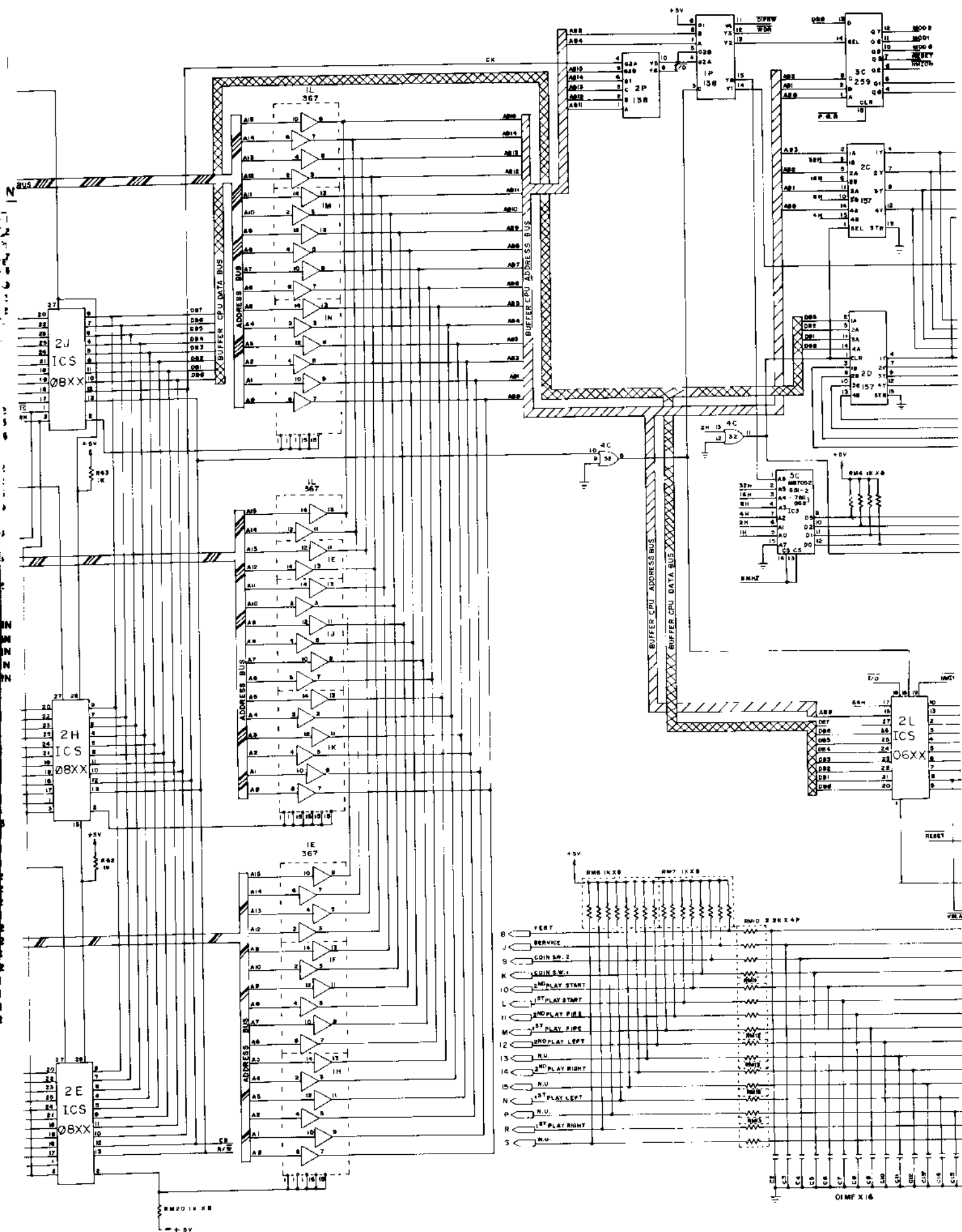
DO NOT SCALE DWG		HEAT TREAT	SCALE	USED ON GALAGA	MIDWAY MFG. CO. FRANKLIN, PA. 15035
DIM. TOLERANCES UNLESS SPECIFIED		MAT'L	FULL	NO REQ. I.P.E.R.	
FOR IDENTIFICATION ONLY DECIMAL POLY HIA		DRN <i>M.M.</i>	CWD	PART NO.	
UNIT 10-1-81		GALAGA CPU P.C.			A084-91404-C508

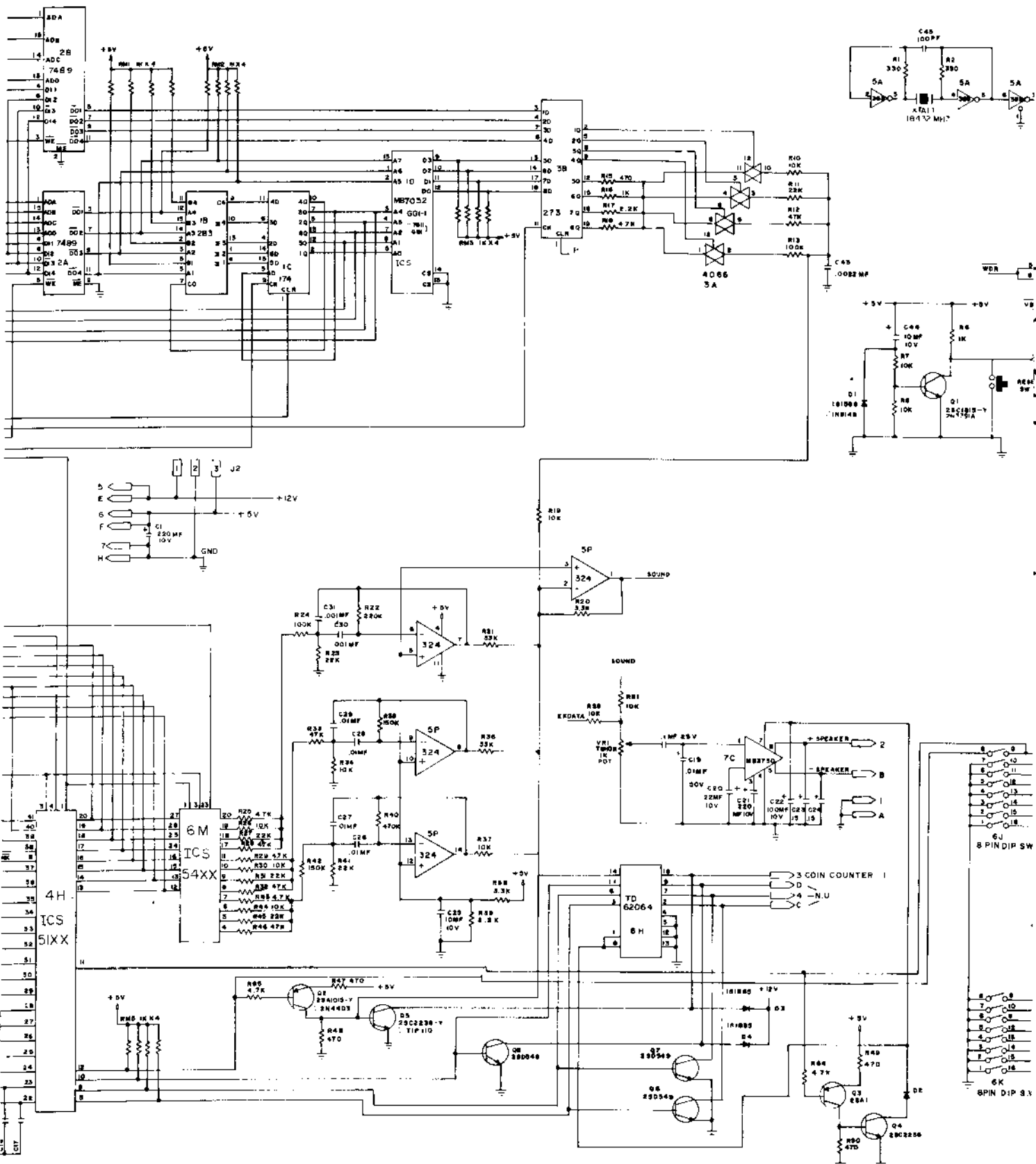


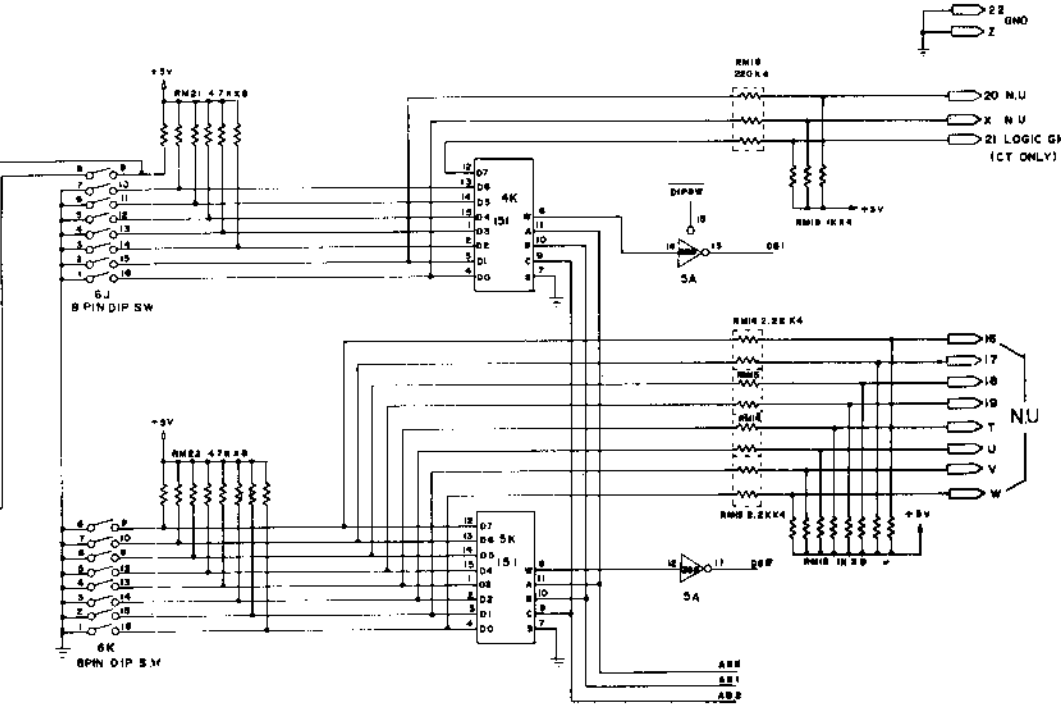
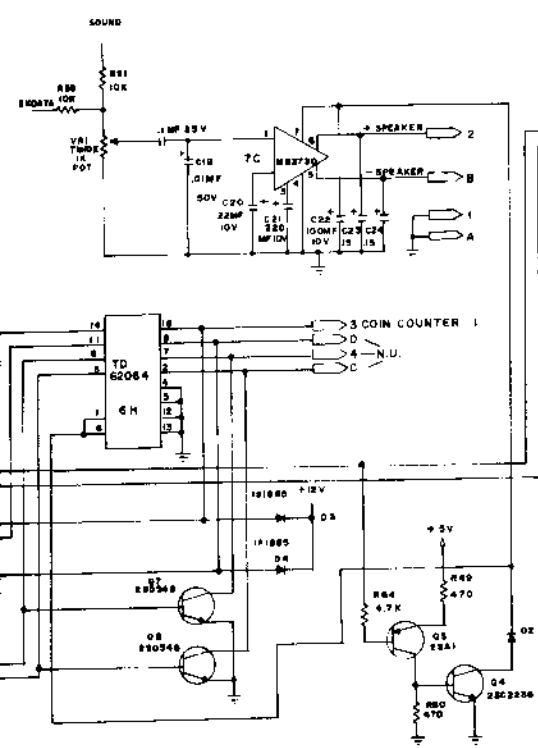
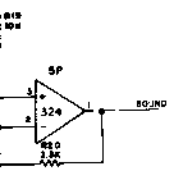
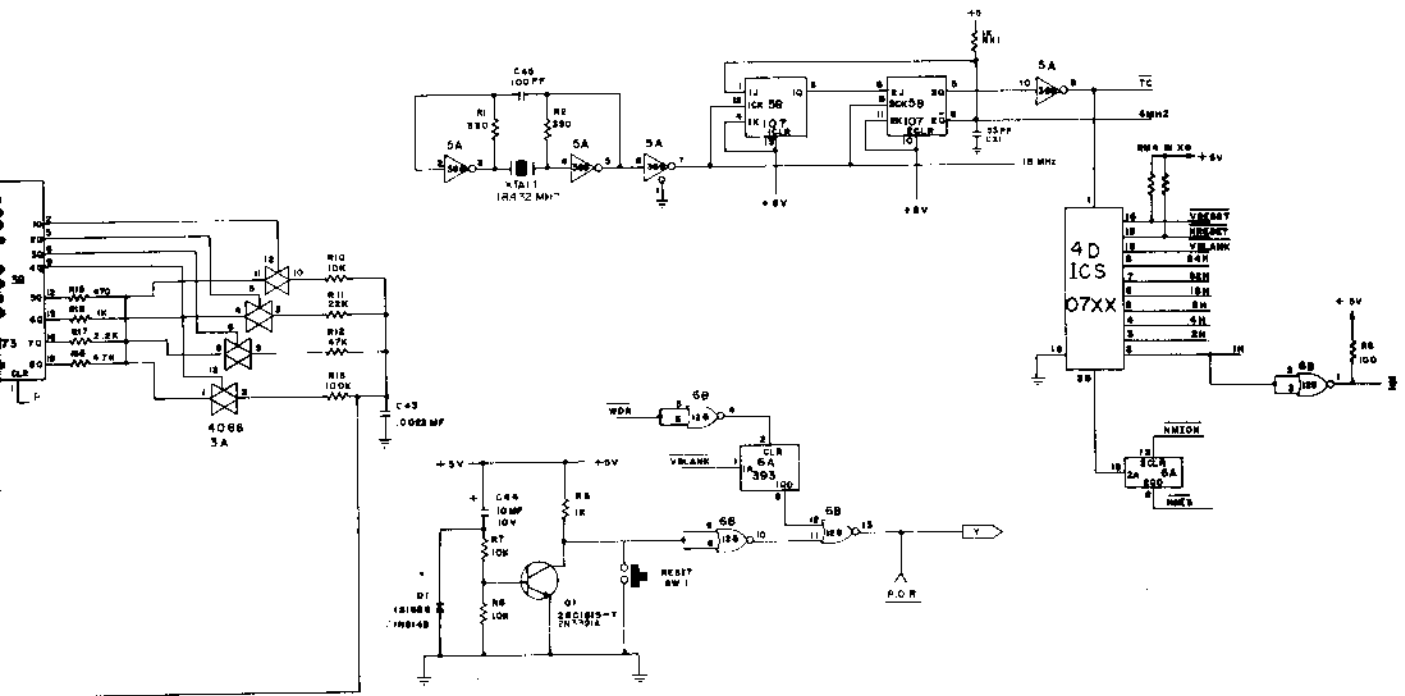
NOTE:
 PARTS USED ON
 A084-91404-C508
 P.C.B.S.

ALL DECOUPLING
 CP46-CP63
 1 MF

PROJECT ENG: JERRY BIERZEN
 SCHEMATIC M08-00008-0008
 GALAGA
 MIDWAY MFG. CO.
 FULL
 GALAGA CPU PC
 A084 91 404 C508







CROSS REFERENCE LIST

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>DESIGNATION</u>	<u>PART #</u>
.01MF 25VAX CER	5	C3-C7	0508-00800-0800
.01MF 100V 10% MYLAR	2	C1, C2	0508-00800-2300
68 OHM 1/4w 5% CRBN RES.	2	R6,R8	0062-098B3-1XXX
1K " " " " "	2	R5,R7	0062-179B3-1XXX
1MEG " " " " "	4	R1-R4	0062-323B3-1XXX
LM556	1	U1	0508-00803-5500
7400	1	U2	0508-00803-5600
KK.156 CON. (2-PIN)	2	J1,J2	3000-16335-0200
(6-PIN)	2	J1,J2	3000-16335-0600
MOUNTING HARDWARE			
SNAP BUSHING 1/4 "	4	MH1-MH4	0017-00042-0014
RAPID FIRE P.C	1	A080-91410-A000	A080-91410-A000

ASSY MO51-00114-A001

THIS DWG. IS CONFIDENTIAL & PROPERTY OF MIDWAY MFG CO

AGA

09-30 - 81

FULL



MIDWAY MFG. CO.

FRANKLIN PK., IL. 60131

A BAILLY CO

RAPID FIRE P.C.

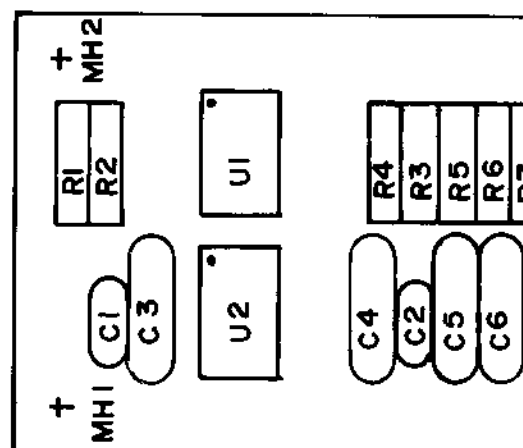
REVISIONS

PART NO

A·0·8·2 - 9·1·4·1·0 - A·00·0

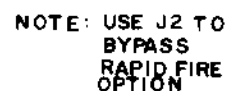
DESIGNATION LIST

<u>DESIGNATION</u>	<u>DESCRIPTION</u>
C1, C2	.1MF 100V MYLAR
C3-C7	.01MF 25V AX CER
R1-R4	1MEG OHM 1/4w 5% CRBN RES
R5	1K " " " " "
R6	68 " " " " "
R7	1K " " " " "
R8	68 " " " " "
U1	LM556
U2	7400
J1, J2	KK.156 VERT 2(6-PIN) 2(2-PIN)
MH1-MH4	SNAP BUSHING 1/4"

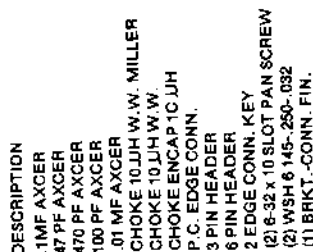


PROJECT ENG: JERRY SZERS

DIM. TOLERANCES	UNIT	GRADE
UNLESS OTHERWISE SPEC		
CONCENTRICITY T.I.R.	002	
FRACTIONAL	± 1/64	
DECIMAL	± 005	
HOLE DIA	+ 002--000	
ANGLE	± 1/2°	
DO NOT SCALE DWG		



CKD.	DO NOT SCALE DWG.		REVISIONS
DRAWN: TJK	DATE 9/30/81	USED ON GALAGA	MIDWAY MFG. CO. FRANKLIN PK., ILL.
heat treat	scale FULL	NO. REQ'D 1 PER	
mat'l.	RAPID FIRE P.C.		PART NO.
finish			A002-01410-A000



DESIGNATION
C1
C2-C5
C6, C7
C8-C13
C14-C32
L1-L4
L5-L8
L9-L12
J1
J2, J3
J4, J5
J1 M.H.

PHANTOM NUMBER
00017-00021-0443
00017-00021-0424
00017-00021-0396
00017-00101-0574
00017-00104-0002
0666-0018-00XF

DESCRIPTION	QUANTITY	DESIGNATION
3 PIN HEADER AMP 350423-1	2	J2-J3
8 PIN HEADER AMP 350431-1	2	J4-J5
PC EDGE CON KEY	2	J1MH
6-32 X 10 SLOT PAN SCREW	2	J1MH
WSH 6 145-250-032	2	J1MH
8RKT- CONN. FIN	1	J1MH

DESCRIPTION	QUANTITY	DESIGNATION	PHANTOM NUMBER
477PF 50V AXCR	4	C2-C5	0508-00800-1800
100PF 50V AXCR	4	C8-C13	0508-00800-1800
470PF 50V AXCR	6	C6, C7	0508-00800-1700
01MF 25V AXCR	19	C14-C32	0508-00800-1800
1MF 50V AXCR	1	C1	0508-00800-0900
10.0J W. W. RF CHOKE MILLER	4	L1-L4	0087-0021XX-XXAX
10.0J W. W. PF CHOKE	4	L5-L8	0508-00804-2000
10.0J ENCAP PF CHOKE	4	L9-L12	0508-00804-2100
500PF 50V CONN	1	J1	0017-00021-0418

PROJECT ENGINEER L. DEKKER

ASSY, DWG M051-00508-B014



MIDWAY MFG. CO.

REVISIONS

PART NO
A.O.B-4 - 9-1-40-8 - B-5-C-8

