

PROJECT ENG C. MEDNICK			USED ON		REVISIONS	
DATE	REV	HEAT TREAT	NO REQ'D	PER	Bally / MIDWAY MFG. CO. FRANKLIN PK ILL	
10/27/83	1				PART NO M051 - 00304 - D017	
CHEAP SQUEAK DELUXE						
A080 - 91671 - D000						

DESIGNATION LIST

<u>DESIGNATION NO.</u>	<u>DESCRIPTION</u>	<u>DESIGNATION NO.</u>	<u>DESCRIPTION</u>	<u>DESIGNATION NO.</u>	<u>DESCRIPTION</u>
C101-C103	10 MF 25V AX. TANT.	R173-R178	5.6K OHM 1/4W 5% CRBN.	IC14C	74LS367
C104-C127	.1 MF 50V AX. CER.	R179	24K OHM 1/4W 5% CRBN.	IC3D	LM3900
C128,C129	47 PF 50V AX. CER.	R180-R186	4.7K OHM 1/4W 5% CRBN.	IC5D	MC14051
C131	10 MF 25V AX. TANT.	R187,R188	24K OHM 1/4W 5% CRBN.	IC6D	74LS02
C134-C137	1 MF 20V AX. TANT.	R189-R195	4.7K OHM 1/4W 5% CRBN.	IC7D-9D	MC14016
C138	10 MF 25V AX. TANT.	R196	24K OHM 1/4W 5% CRBN.	IC11D	74190
C139	.047 MF 100V MYLAR	R197-R202	5.6K OHM 1/4W 5% CRBN.	IC12D	PROMSB2A
C140,C141	.01 MF 50V AX. CER.	R203-R208	33K OHM 1/4W 5% CRBN.	IC13D	74166
C142	100 PF 50V AX. CER.	R209-R211	13K OHM 1/4W 5% CRBN.	IC2E	74LS244
C143	.1 MF 50V AX. CER.	R213	27K OHM 1/4W 5% CRBN.	IC3E	MC14051
C144	33 PF 50V AX. CER.	R214-R219	33K OHM 1/4W 5% CRBN.	IC5E	7407
C145-C156	.0022 MF 100V 10% MYLAR	R220-R222	13K OHM 1/4W 5% CRBN.	IC10E	MC3403
C157-C159	1 MF 20V AX. TANT.	R223	27K OHM 1/4W 5% CRBN.	IC11E	74161
C161	330 PF 50V AX. CER.	R224	27K OHM 1/4W 5% CRBN.	IC12E	74126
C162-C164	1 MF 20V AX. TANT.	R225,R226	4.7K OHM 1/4W 5% CRBN.	IC2F	74LS244
C165	330 PF 50V AX. CER.	R227	1K OHM 1/4W 5% CRBN.	IC3F-5F	74LS191
C166-C168	10 MF 25V AX. TANT.	R228	4.7K OHM 1/4W 5% CRBN.	IC6F,7F	AY-3-8910
C172	10 MF 25V AX. TANT.	R231	300 OHM 1/4W 5% CRBN.	IC8F-10F	74LS191
C173	.01 MF 50V AX. CER.	R232	4.7K OHM 1/4W 5% CRBN.	IC11F	7474
CP1	470 MF 16V AX. ELECT.	R233	3K OHM 1/4W 5% CRBN.	IC12F	74S04
CP2-CP12	.01 MF 50V AX. CER.	R234,R235	4.7K OHM 1/4W 5% CRBN.	ICS6A-ICS10A	24 PIN IC SOCKE
CP13	470 MF 16V AX. ELECT.	R239	100 OHM 1/4W 5% CRBN.	ICS12A	40 PIN IC SOCKE
CP14-CP33	.01 MF 50V AX. CER.	R301-R306	2.7K OHM 1/4W 5% CRBN.	ICS12D	16 PIN IC SOCKE
CP34	10 MF 25V AX. TANT.	R401	1K OHM 1/4W 5% CRBN.	ICS6F,7F	40 PIN IC SOCKE
CP35-CP46	.01 MF 50V AX. CER.	R402	4.7K OHM 1/4W 5% CRBN.	J1,J2	24 PIN KK100 R
CP47	470 MF 16V AX. ELECT.	R405-R407	4.7K OHM 1/4W 5% CRBN.	J3	ANGLE
CP48-CP51	.01 MF 50V AX. CER.	RM1	4.7K OHM 10 PIN S.I.P.	J4	10 PIN KK100 RT.
CP52,CP53	10 MF 25V AX. TANT.	RM3-RM5	2.7K OHM 10 PIN S.I.P.	J5	ANGLE OMIT 4
CP54	470 MF 16V AX. ELECT.	RM7	4.7K OHM 8 PIN S.I.P.	JW1,JW2	19 PIN KK100 R
CP201-CP204	10 MF 25V AX. TANT.	RM8	820 OHM 8 PIN S.I.P.	LED 3	ANGLE OMIT 14
R101-R107	4.7K OHM 1/4W 5% CRBN.	RM9	1.8K OHM 10 PIN S.I.P.	SW1	23 PIN KK100 R
R108-R131	220 OHM 1/4W 5% CRBN.	RM10	22K OHM 10 PIN S.I.P.	SW3	ANGLE OMIT 19
R135	33K OHM 1/4W 5% CRBN.	RM14	4.7K OHM 10 PIN S.I.P.	SW4	JUMPER WIRE
R138,R141	180K OHM 1/4W 5% CRBN.	D101-D103	1N4148	XTAL 1	
R142,R143	100K OHM 1/4W 5% CRBN.	D105-D107	1N4148	MHQ101-MHQ103	SNAP
R144,R145	620K OHM 1/4W 5% CRBN.	Q101-Q103	T1P110	A080-91657-A000	SOUND I/O BD. V
R146	10K OHM 1/4W 5% CRBN.	Q104	2N4403		
R147,R148	100K OHM 1/4W 5% CRBN.	IC1A	7406		
R149,R150	620K OHM 1/4W 5% CRBN.	IC3A,4A	74LS273		
R151	10K OHM 1/4W 5% CRBN.	IC5A	74LS374		
R152	1MEG. OHM 1/4W 5% CRBN.	IC6A	1K X 8 RAM		
R153	1K OHM 1/4W 5% CRBN.	IC7A	ROM/EPROM 0		
R154	1MEG. OHM 1/4W 5% CRBN.	IC8A	ROM/EPROM 1		
R155,R156	10K OHM 1/4W 5% CRBN.	IC9A	ROM/EPROM 2		
R157,R158	1.2K OHM 1/4W 5% CRBN.	IC10A	ROM/EPROM 3		
R160,R161	330 OHM 1/4W 5% CRBN.	IC11A	74LS245		
R162	220 OHM 1/4W 5% CRBN.	IC12A	Z-80 CPU		
R163	1.2K OHM 1/4W 5% CRBN.	IC13A	74LS08		
R164	22 OHM 1/4W 5% CRBN.	IC2B,4B	74LS244		
R165,R166	4.7K OHM 1/4W 5% CRBN.	IC7B,8B	74LS138		
		IC9B	74LS670		
		IC10B	74LS32		
		IC11B	74LS670		
		IC12B,13B	74LS138		
		IC14B	74LS174		
		IC6C	7407		
		IC10C	MC3403		
		IC11C	74LS04		
		IC12C	74LS04		
		IC13C	MC14024		
			7427		

PROJECT ENG: C. MEI	
DO NOT SCALE DRAWING	
DIM TOLERANCES UNLESS SPECIFIED	DRW.
DATE	DATE

DESCRIPTION

4LS367
M3900
C14051
4LS02
C14016
4190
ROMSB2A
4166
4LS244
C14051
407
C3403
4161
4126
4LS244
4LS191
Y-3-8910
4LS191
474
4S04

4 PIN IC SOCKET
D PIN IC SOCKET
S PIN IC SOCKET
D PIN IC SOCKET

4 PIN KK100 RT.
ANGLE
4 PIN KK100 RT.
ANGLE OMIT 4
9 PIN KK100 RT.
ANGLE OMIT 14
3 PIN KK100 RT.
ANGLE OMIT 19

JUMPER WIRE

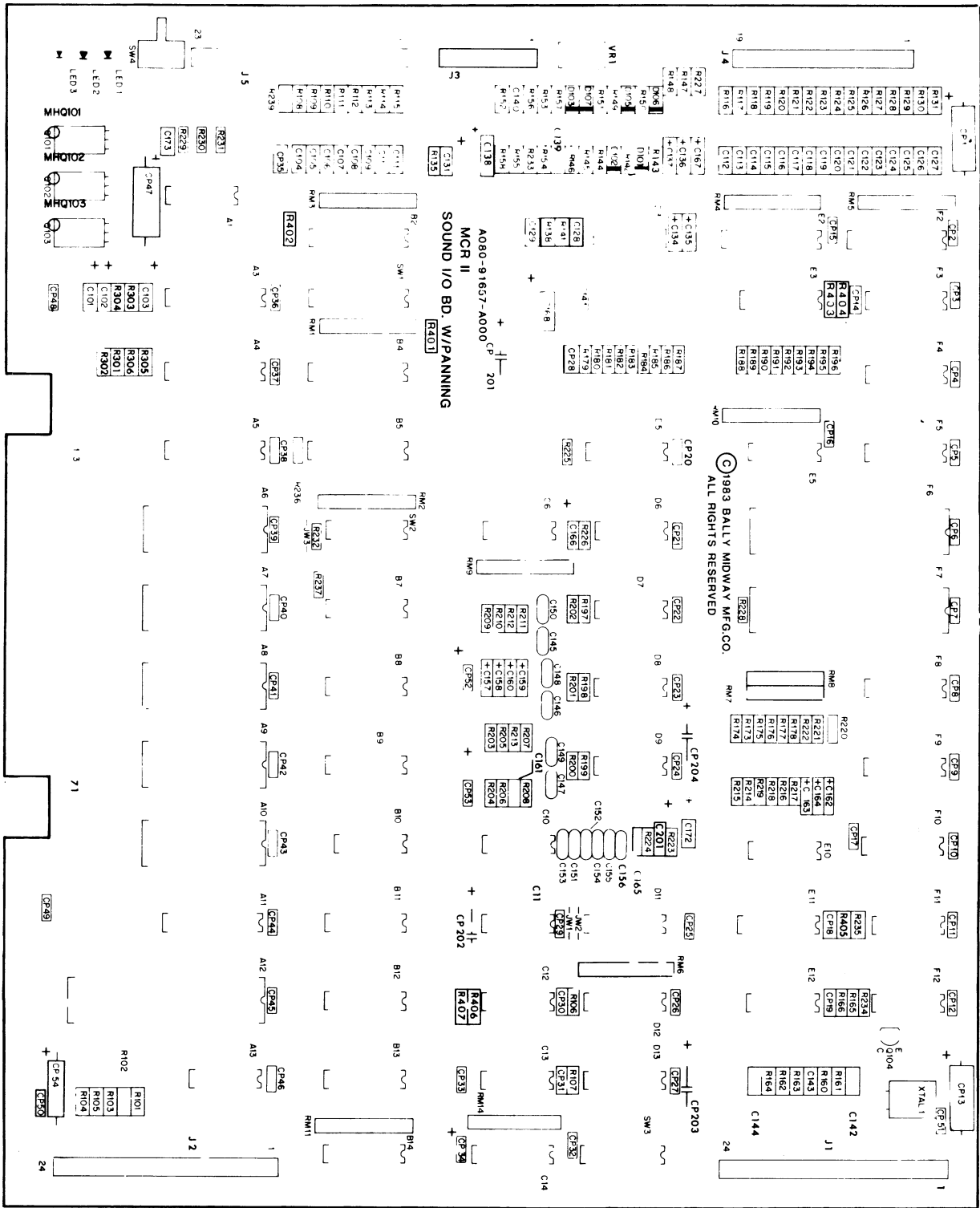
YELLOW LED

D POSITION DIP
D POSITION DIP
PUSHBUTTON S.W.

1 MHZ XTAL

DIAP

SOUND I/O BD. W/PANNING



DESCRIPTI

33 PF 50V
CER.
47 PF 50V
CER.
100 PF 50V
CER.
330 PF 50V
CER.
.0022 MF
MYLAR
.047 MF 1
MYLAR
.01 MF 50V
CER.

.1 MF 50V
1 MF 20V

10 MF 25V
TANT.

470 MF 16V
ELECT.

22 OHM 1/4
CRBN.

100 OHM 1/4
CRBN.

220 OHM 1/4
CRBN.

300 OHM 1/4
CRBN.

330 OHM 1/4
CRBN.

1K OHM 1/4
CRBN.

1.2K OHM
CRBN.

2.7K OHM
CRBN.

3K OHM 1/4
CRBN.

4.7K OHM
CRBN.

5.6K OHM
CRBN.

10K OHM 1/4
CRBN.

13K OHM 1/4
CRBN.

24K OHM 1/4
CRBN.

27K OHM 1/4
CRBN.

33K OHM 1/4
CRBN.

100K OHM
CRBN.

180K OHM
CRBN.

620K OHM
CRBN.

1 MEG. OHM
5% CRBN.

820 OHM 8
S.I.P.

1.8K OHM
S.I.P.

2.7K OHM
S.I.P.

4.7K OHM
S.I.P.

4.7K OHM
S.I.P.

22K OHM 1/4
S.I.P.

1N4148

DESIGN: C. MEDNICK		USED ON: SPY HUNTER SD		Bally / MIDWAY MFG. CO. FRANKLIN PARK, ILL.	
DO NOT SCALE DRAWING	HEAT TREAT	SCALE: FULL	NO. REQ'D PER	PART NO: M051 - 00307 - A008	
TOLERANCES UNLESS SPECIFIED	MAT'L	ASSEMBLY DWG. SOUND I/O BD. W/PANNING A084 - 91657 - A307			
DATE: 11/08/83	FINISH				

CROSS REFERENCE LIST

DESCRIPTION	QTY	DESIGNATION NO.	PART NOS.	DESCRIPTION	QTY	DESIGNATION NO.	PART NOS.
3 PF 50V 5% AX. ER.	1	C144	0986-00800-0300	2N4403	1	Q104	0986-00802-0500
7 PF 50V AX. ER.	2	C128,C129	0986-00800-2800	T1P110	3	Q101-Q103	0986-00802-0400
00 PF 50V 5% AX. ER.	1	C142	0986-00800-1000	74LS02	1	IC 6D	0986-00803-7400
30 PF 50V AX. ER.	2	C161,C165	0986-00800-1300	74LS04	1	IC 11C	0986-00803-6900
0022 MF 100V 10% YLLAR	12	C145-C156	0986-00800-1200	74S04	1	IC 12F	0986-00803-6600
047 MF 100V YLLAR	1	C139	0986-00800-2600	740C	1	IC 1A	0986-00803-7600
01 MF 50V AX. ER.	50	CP2-CP12,CP14- CP33,CP35-CP46, CP48-CP51,C140, C141,C173	0986-00800-2000	7407	2	IC 5E,6C	0986-00803-5900
1 MF 50V AX. CER. MF 20V AX. TANT.	25 10	C104-C127,C143 C134-C137,C157- C159,C162-C164	0986-00800-1100 0986-00800-1400	74LS08	1	IC 13A	0986-00803-7300
0 MF 25V AX. TANT.	16	CP34,CP52,CP53, CP201-CP204, C101-C103,C131, C138,C166-C168, C172	0986-00800-0700	7427	1	IC 13C	0986-00803-7200
70 MF 16V AX. ELECT.	4	CP1,CP13,CP47, CP54	0986-00800-2700	74LS32	1	IC 10B	0986-00803-6100
22 OHM 1/4W 5% CRBN.	1	R164	0062-063B3-1XXX	7474	1	IC 11F	0986-00803-6700
100 OHM 1/4W 5% CRBN.	1	R239	0062-110B3-1XXX	74126	1	IC 12E	0986-00803-6800
220 OHM 1/4W 5% CRBN.	25	R108-R131,R162	0062-133B3-1XXX	74LS138	4	IC 7B,8B,12B, 13B	0986-00803-6500
600 OHM 1/4W 5% CRBN.	1	R231	0062-141B3-1XXX	74161	1	IC 11E	0986-00803-5100
330 OHM 1/4W 5% CRBN.	2	R160,R161	0062-144B3-1XXX	74166	1	IC 13D	0986-00803-5300
1K OHM 1/4W 5% CRBN.	3	R153,R227,R401	0062-179B3-1XXX	74LS174	1	IC 14B	0986-00803-7500
1.2K OHM 1/4W 5% CRBN.	3	R157,R158,R163	0062-183B3-1XXX	74190	1	IC 11D	0986-00803-9400
2.7K OHM 1/4W 5% CRBN.	6	R301-R306	0062-199B3-1XXX	74LS191	6	IC 3F-5F,8F- 10F	0986-00803-5600
5K OHM 1/4W 5% CRBN.	1	R233	0062-201B3-1XXX	74LS244	4	IC 2B,4B,2E, 2F	0986-00803-4800
4.7K OHM 1/4W 5% CRBN.	33	R101-R107,R165, R166,R180-R186, R189-R195,R225, R226,R228,R232, R234,R235,R402, R405-R407	0062-211B3-1XXX	74LS245	1	IC 11A	0986-00803-6400
5.6K OHM 1/4W 5% CRBN.	12	R173-R178,R197- R202	0062-215B3-1XXX	74LS273	2	IC 3A,4A	0986-00803-4700
10K OHM 1/4W 5% CRBN.	4	R146,R151,R155, R156	0062-227B3-1XXX	74LS367	1	IC 14C	0986-00803-7000
13K OHM 1/4W 5% CRBN.	6	R209-R211,R220- R222	0062-233B3-1XXX	74LS374	1	IC 5A	0986-00803-4600
24K OHM 1/4W 5% CRBN.	4	R179,R187,R188, R196	0062-245B3-1XXX	74LS670	2	IC 9B,11B	0986-00803-6300
27K OHM 1/4W 5% CRBN.	2	R213,R224	0062-247B3-1XXX	AY-3-8910	2	IC 6F,7F	0986-00803-8500
33K OHM 1/4W 5% CRBN.	13	R135,R203-R208, R214-R219	0062-251B3-1XXX	LM3900	1	IC 3D	0986-00803-4900
100K OHM 1/4W 5% CRBN.	4	R142,R143,R147, R148	0062-275B3-1XXX	MC3403	2	IC 10C,10E	0986-00803-5000
180K OHM 1/4W 5% CRBN.	2	R138,R141	0062-287B3-1XXX	MC14016	3	IC 7D-9D	0986-00803-6200
20K OHM 1/4W 5% CRBN.	4	R144,R145,R149, R150	0062-313B3-1XXX	MC14024	1	IC 12C	0986-00803-7100
1 MEG. OHM 1/4W 5% CRBN.	2	R152,R154	0062-323B3-1XXX	MC14051	2	IC 3E,5D	0986-00803-5400
320 OHM 8 PIN S.I.P.	1	RM8	0986-00805-0800	PROMSB2-A	1	IC 12D	0986-00803-8200
1.8K OHM 10 PIN S.I.P.	1	RM9	0986-00805-0600	RAM 1K X 8	1	IC 6A	0986-00803-8000
2.7K OHM 10 PIN S.I.P.	3	RM3-RM5	0986-00805-0500	ROM/EPROM 0	1	IC 7A	0307-00803-0006
4.7K OHM 8 PIN S.I.P.	1	RM7	0986-00805-0400	ROM/EPROM 1	1	IC 8A	0307-00803-0007
4.7K OHM 10 PIN S.I.P.	2	RM1,RM14	0986-00805-0300	ROM/EPROM 2	1	IC 9A	NOT USED
22K OHM 10 PIN S.I.P.	1	RM10	0986-00805-0700	ROM/EPROM 3	1	IC 10A	NOT USED
1N4148	6	D101-D103,D105- D107	0986-00801-0200	Z-80(3880)	1	IC 12A	0986-00803-5500
				16 PIN IC SOCKET	1	ICS 12D	0986-00804-1400
				24 PIN IC SOCKET	5	ICS 6A-ICS 10A	0986-00804-1600
				40 PIN IC SOCKET	3	ICS 12A,ICS 6F, ICS 7F	0986-00804-1500
				10 PIN KK 100 RT. ANGLE OMIT 4	1	J3	3000-16366-1002
				19 PIN KK 100 RT. ANGLE OMIT 14	1	J4	3000-16366-1901
				23 PIN KK 100 RT. ANGLE OMIT 19	1	J5	3000-16366-2301
				24 PIN KK 100 RT. ANGLE	2	J1,J2	0986-00804-4700
				JUMPER WIRE	2	JW1,JW2	0986-00804-4000
				YELLOW LED	1	LED 3	0986-00804-2000
				8 POSITION DIP SW.	1	SW3	0986-00805-0900
				10 POSITION DIP SW.	1	SW1	0986-00805-1000
				PB SWITCH	1	SW4	0986-00804-1700
				16 MHZ XTAL W/3RD LEAD	1	XTAL 1	0986-00805-1100
				SNAPS	3	MHQ101-MHQ103	0017-00007-0134
				SOUND I/O BD. W/PANNING	1		A08G-91657-A000