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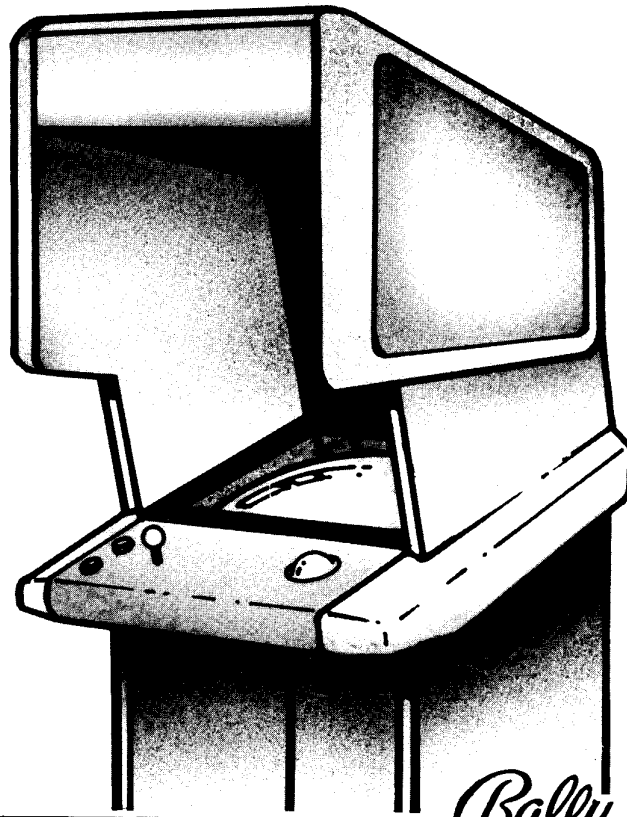


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SAC 1



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- OPERATION
- ILLUSTRATED PARTS
- SCHEMATICS

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SELF TEST

1. RAM TEST

- a. only first error encountered is reported
- b. error address is displayed on screen
- c. error is reported as 9 tones
 - i. 1st tone is address odd/even (high/low pitch)
 - ii. next 8 tones report data bits at error address, from bit 0 to bit 7 (high = ok, low = bad)

2. SOUND BOARD TEST

- a. all 0s = ok, any 1s = bad, all 1s = bad serial communications

BIT

0(LSB)	voice 1	0 = ok	1 = bad
1	voice 2	0 = ok	1 = bad
2	voice 3	0 = ok	1 = bad
3	voice 4	0 = ok	1 = bad
4	voice 5	0 = ok	1 = bad
5	voice 6	0 = ok	1 = bad

6,7

0 0	ok
0 1	ram bad
1 0	rom bad
1 1	optional ram bad

3. OPTION SWITCHES

- a. factory settings:
 - 3 lives
 - extra life every 20,000 pts
 - keep top 5 high scores
 - attract sound on
 - 1 coin 1 play

	bit 1	2	3	4	5	6	7	8
option switch H1	off	off	on	on	on	on	on	off
option switch G1	off	on	off	on	on	on	on	on

- b. reset high score table during self-test by pressing Alaron button in **OPTION SWITCH MODE**

4. ACCOUNTING

- a. reset accounting data during self-test by pressing Alaron button in **ACCOUNTING DATA MODE**

MEANING OF OPTION SWITCH SETTINGS							
Bank 0 (HI)							
1	2	3	4	5	6	7	8
off	off						1 Coin 1 Play
off	on						1 Coin 2 Plays
on	off						2 Coins 1 Play
on	on						Free Play
						on	Keep All High Scores
						off	Keep Top 5 High Scores
Bank 1 (GI)							
1	2	3	4	5	6	7	8
on	on						Extra Life Every 10,000
off	on						Extra Life Every 20,000
on	off						Extra Life Every 30,000
off	off						Extra Life Every 40,000
		on	on				2 Lives
		off	on				3 Lives
		on	off				4 Lives
		off	off				5 Lives
						off	Difficulty: Easy
						on	Difficulty: Hard
							No Sound In Attract
							Attract Sound On

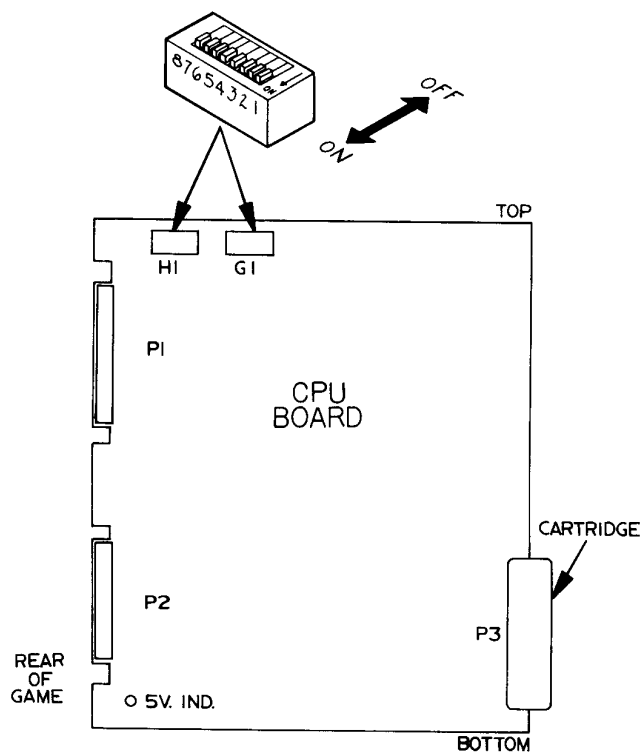


Figure 1. CPU Board/Option Switches

ILLUSTRATED PARTS LISTS

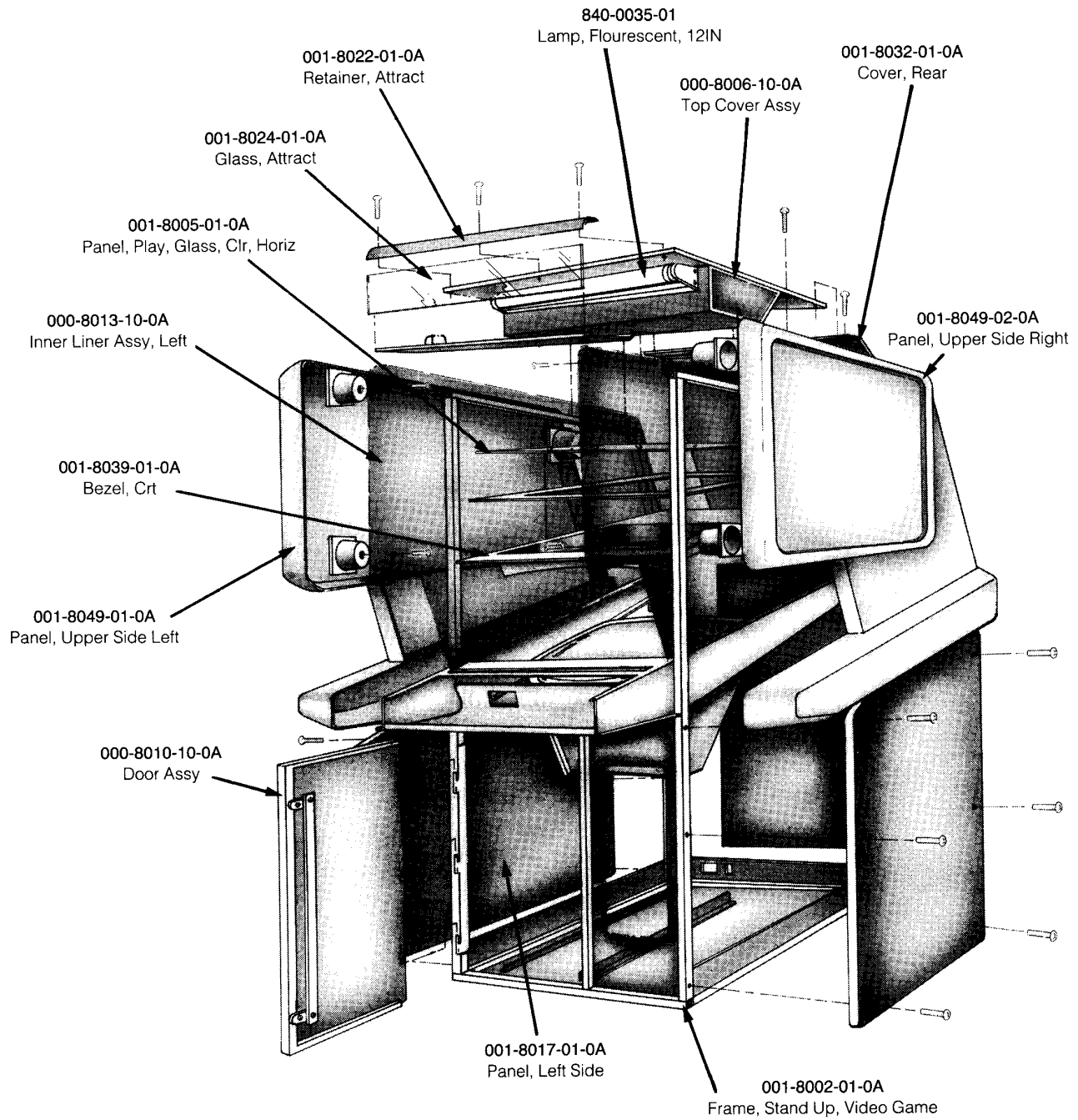


Figure 2. Chassis Assembly, SAC-1
(000-8001-10-0A)

CHASSIS ASSEMBLY, SAC I
(000-8001-10-0A)
PARTS LIST

PART NO.	DESCRIPTION	QUANTITY
000-8002-10-0A	A CONTROL PANEL ASSY, SNAKEPIT	1
000-8006-10-0A	A TOP COVER ASSY	1
000-8009-10-0A	A REAR PANEL ASSY	1
000-8010-10-0A	A DOOR ASSY	1
000-8011-10-0A	A ELECTRONIC CHASSIS ASSY	1
000-8012-10-0A	A CRT ASSY	1
000-8013-10-0A	A INNER LINER ASSY, LEFT	1
000-8006-20-0A	A INNER LINER ASSY, RIGHT	1
000-8015-10-0A	A CARTRIDGE ASSY, SNAKEPIT	1
001-8002-01-0A	FRAME, STAND UP, VIDEO GAME	1
001-8005-01-0A	PANEL, PLAY, GLASS, CLR, HORIZ	1
001-8009-01-0A	COVER, COIN DOOR BRACKET	1
001-8010-01-0A	BRACKET, COIN DOOR	1
001-8012-01-0A	HINGE	1
001-8017-01-0A	PANEL, LEFT SIDE	2
001-8022-01-0A	RETAINER, ATTRACT	1
001-8024-01-0A	GLASS, ATTRACT	2
001-8032-01-0A	COVER, REAR	1
001-8039-01-0A	BEZEL, CRT	1
001-8040-01-0A	BRACKET, CRT MTG, LEFT (VERT)	1
001-8040-02-0A	BRACKET, CRT MTG, RIGHT (VERT)	1
001-8046-01-0A	SUPPORT, PLAY GLASS, LEFT (VERT)	1
001-8046-02-0A	SUPPORT, PLAY GLASS, RIGHT (VERT)	1
001-8047-01-0A	HOLDER, PLAY GLASS, VERTICAL	1
001-8048-01-0A	RETAINER, PLAY GLASS, VERTICAL	1
001-8049-01-0A	PANEL, UPPER SIDE LEFT	1
001-8049-02-0A	PANEL, UPPER SIDE RIGHT	1
001-8051-01-0A	STOP, CRT	2
001-8053-01-0A	BRACKET, VERTICAL HARDWARE	2
042-8001-01-0A	GRAPHICS, SNAKEPIT, L SIDE PANEL	1
042-8002-01-0A	GRAPHICS, SNAKEPIT, R SIDE PANEL	1
042-8003-01-0A	GRAPHICS, SNAKEPIT, O/H ATRCK	1
042-8004-01-0A	GRAPHICS, SNAKEPIT, CRT SURRND	1
700-0164-01	COIN DOOR, OVER/UNDER, W-CASHBOX	1
760-0001-01	TIEWRAP, SMALL (BULK)	15
760-0009-01	CABLE TIE MOUNT (BULK)	15
800-0230-01	LATCH, BODY, LATCHING SPRING	2
800-0235-01	LEG LEVELER, ADJ	4
801-1420-32-02	SCREW, PH, PH, 1/4 20X2" BLK	6
802-0832-10-01	SCR, FLAT HD PHIL, 8-32X5/8, ZINC	8
803-0632-06-02	SCREW, BTN HD, 6-32X3/8"	2
803-0632-16-02	SCREW, BTN HD, 6-32X1"	10
803-1420-32-02	SCREW, SKT, HD, BTN, #1/4-20X2"L	2
805-1402-10-01	SCREW, HEX HEAD, 1/4-20X5/8 ZINC	8
807-1420-32-02	BOLT, CARRIAGE, #1/4-20X2"L	12
807-1420-40-02	BOLT, CARRIAGE, #1/4-20X2 1/2"L	12
809-0632-06-01	SCREW, PH, PH, SIMS, 6 32X3/8"	4
809-0632-16-01	SCREW, PHPH SEMS, 6X32X1"	4
809-0632-16-02	SCREW, PHPH, SEMS, 10-32X1"	6
809-1032-08-01	SCREW, PHPH, SEMS, 10-32X1/2"	10
811-1420-00-01	NUT, NYLOC, 1/4-20, ZINC	4
812-1420-00-01	NUT, HEX HD, 1/4-20, ZINC	18
815-0832-00-01	NUT, "J", TYPE	8
821-0006-00-02	WASHER, FLAT, #6 BLK OXIDE	22
821-0010-00-01	WASHER, FLAT, #10 ZINC	10
821-1004-00-02	WASHER, FLAT, 1/4" BLK OXIDE	34
822-0006-00-01	WASHER, LOCK, SPLIT, #6	16
840-0035-01	LAMP, FLOURESCENT, 12IN	1

**TOP COVER ASSEMBLY
(000-8006-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
000-8005-10-0A	A SPEAKER BOX ASSY	1
001-8006-01-0A	COVER, SPEAKER	1
700-0165-01	LIGHT FIXTURE, FLOURESCENT, 12IN	1
800-0238-01-02	SCREW, FHPP, WOOD, UNDR CUT, 6X1/2"	12
801-0008-08-01	PHPP, WOOD, #8X1/2"	1
821-008-00-01	WASHER, FLAT, #8, ZINC, SAE	2

**REAR PANEL ASSEMBLY
(000-8009-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8008-01-0A	BRACKET, DOOR CATCH	2
001-8021-01-0A	PANEL, REAR	1
801-0008-08-01	SCREW, PHPP, WOOD, #8X1/2"	4
880-0001-01	LOCK, CAM, 7/8L, LEFT, 90 DEG	1

**DOOR ASSEMBLY
(000-8010-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8007-01-0A	BAR, LOCK	1
001-8011-01-0A	PANEL, DOOR	1
001-8015-01-0A	KEEPER, DOOR	2
800-0234-01	SHOULDER BLT, 10-32X1/4, 1/4X1/8	4

**CRT ASSEMBLY
(000-8012-10-0A)
PARTS LIST**

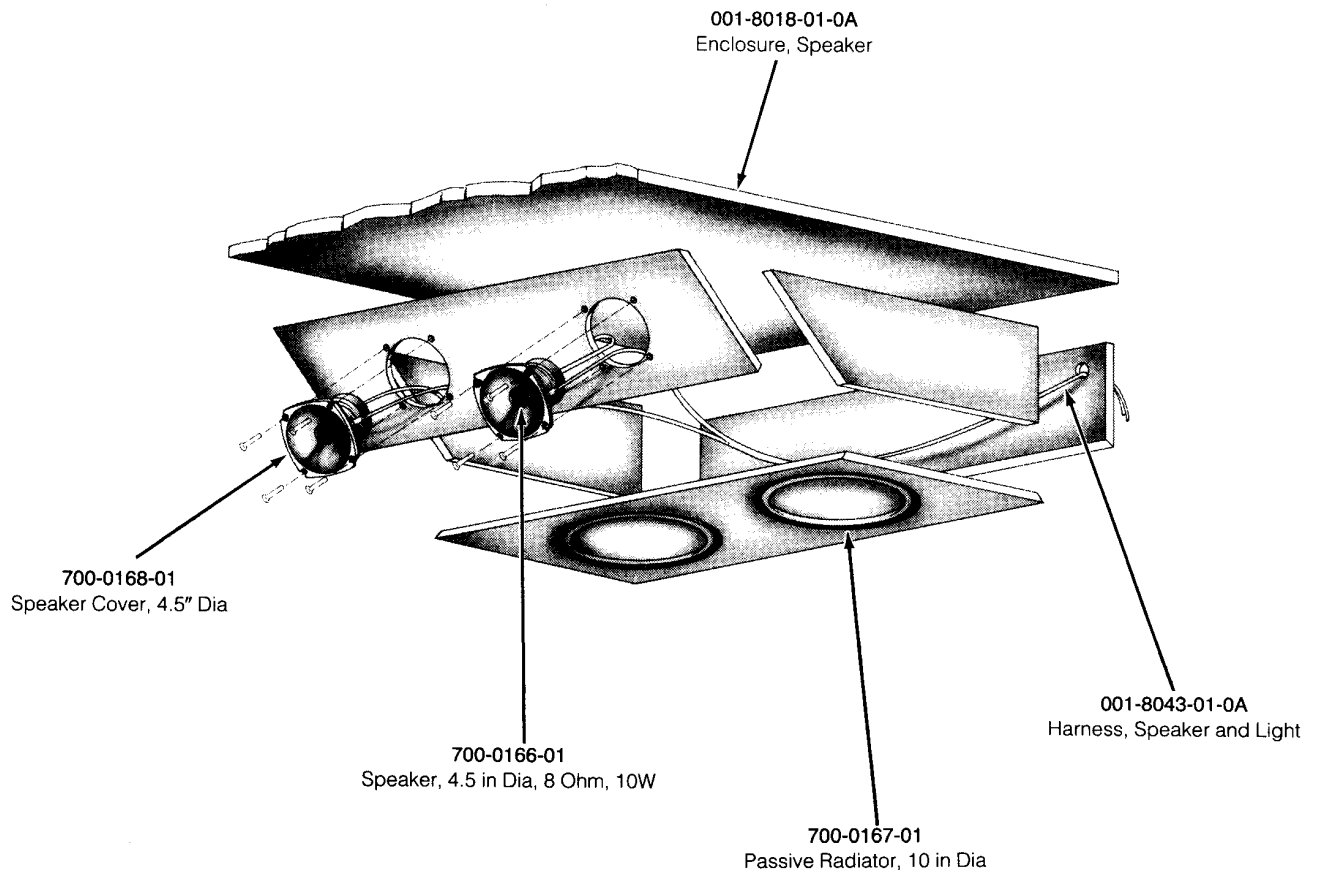
PART NO.	DESCRIPTION	QUANTITY
001-8042-01-0A	HARNESS, ELEC CHASSIS TO CRT	1
700-0160-01	MONITOR, COLOR 19" RGB IN-LINE	1
760-0001-01	TIEWRAP, SMALL (BULK)	1

**INNER LINER ASSEMBLY, LEFT
(000-8013-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8013-01-0A	BRACKET, SPEAKER SUPPORT, FRONT	1
001-8014-01-0A	BRACKET, SPEAKER SUPPORT, REAR	1
001-8027-01-0A	INNER LINER, LEFT SIDE	1
001-8052-01-0A	BRKT, REAR COVER SUPPORT	1
802-0632-16-01	SCREW, FH, PH #6-32X1"	2
809-0632-16-01	SCREW, PHPH SEMS, 6-32X1"	4
821-0006-00-01	WASHER, FLAT, #6, ZINC, (SAE)	4

**INNER LINER ASSEMBLY, RIGHT
(000-8013-20-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8013-01-0A	BRACKET, SPEAKER SUPPORT, FRONT	1
001-8014-01-0A	BRACKET, SPEAKER SUPPORT, REAR	1
001-8027-02-0A	INNER LINER, RIGHT SIDE	1
001-8052-01-0A	BRKT, REAR COVER SUPPORT	1
001-0632-16-01	SCREW, FH, PH #6-32X1"	2
809-0632-16-01	SCREW, PHPH SEMS, 6-32X1"	4
821-0006-00-01	WASHER, FLAT, #6, ZINC, (SAE)	4



**Figure 3. Speaker Box Assembly
(000-8005-10-0A)**

**SPEAKER BOX ASSEMBLY
(000-8005-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8018-01-0A	ENCLOSURE, SPEAKER	AS REQUIRED
001-8043-01-0A	HARNESS, SPEAKER AND LIGHT	1
700-0166-01	SPEAKER, 4.5 IN DIA, 8 OHM, 10W	2
700-0167-01	PASSIVE RADIATOR, 10 IN DIA	2
700-0168-01	SPEAKER COVER, 4.5" DIA	2

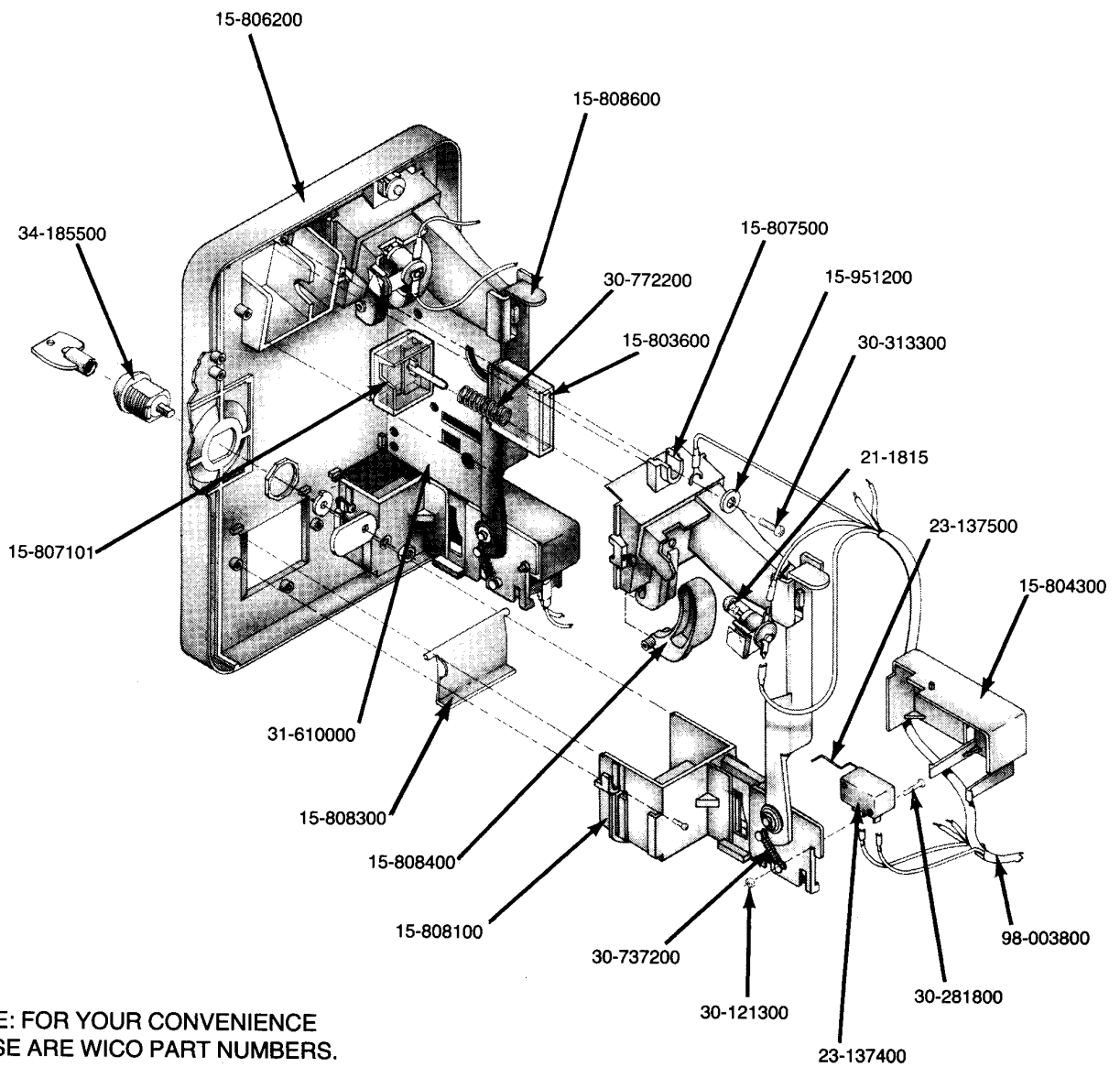


Figure 5. Coin Mechanism Assembly
(700-0164-01)

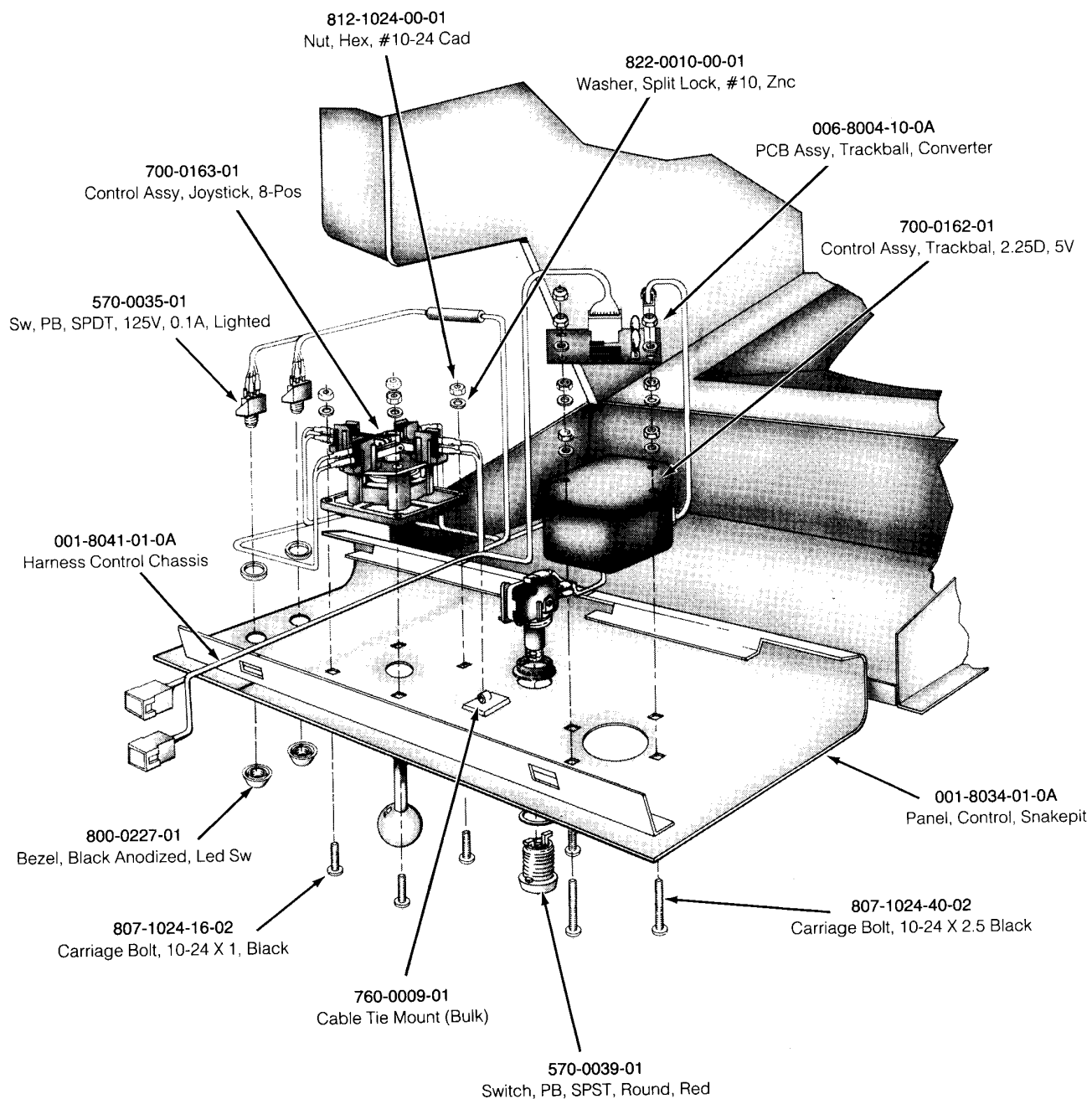


Figure 6. Control Panel Assembly, Snakepit
(000-8002-10-0A)

**CONTROL PANEL ASSEMBLY, SNAKEPIT
(000-8002-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8034-01-0A	PANEL, CONTROL, SNAKEPIT	1
001-8041-01-0A	HARNESS CONTROL CHASSIS	1
006-8004-10-0A	A PCB ASSY, TRACKBALL, CONVERTER	1
042-8004-01-0A	GRAPHICS, SNAKEPIT, CTL PNL OVRL	1
570-0035-01	SW, PB, SPDT, 125V, 0.1A, LIGHTED	2
570-0039-01	SWITCH, PB, SPST, ROUND, RED	1
700-0162-01	CONTROL ASSY, TRACKBAL, 2.25D, 5V	1
700-0163-01	CONTROL ASSY, JOYSTICK, 8-POS	1
760-0007-01	TIEWRAP, MINIATURE (BULK)	4
760-0009-01	CABLE TIE MOUNT (BULK)	4
800-0227-01	BEZEL, BLACK ANODIZED, LED SW	2
807-1024-16-02	CARRIAGE BOLT, 10-24 X 1, BLACK	4
807-1024-40-02	CARRIAGE BOLT, 10-24 X 2.5 BLACK	4
812-1024-00-01	NUT, HEX, #10-24 CAD	12
822-0010-00-01	WASHER, SPLIT LOCK, #10, ZNC	12

NOTE: FOR YOUR CONVENIENCE
THESE ARE WICO PART NUMBERS.

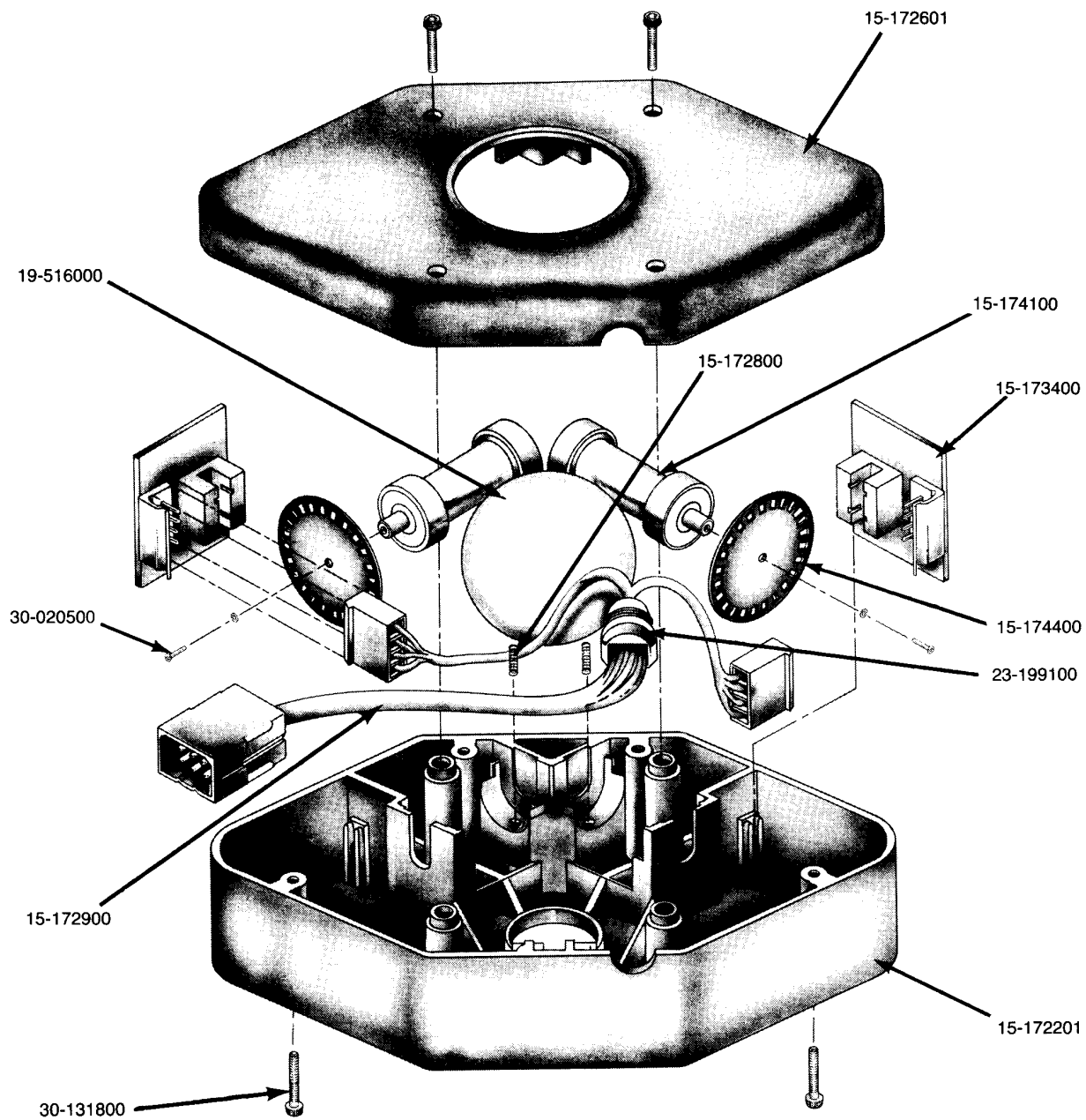


Figure 7. Track Ball Assembly
(700-0162-01)

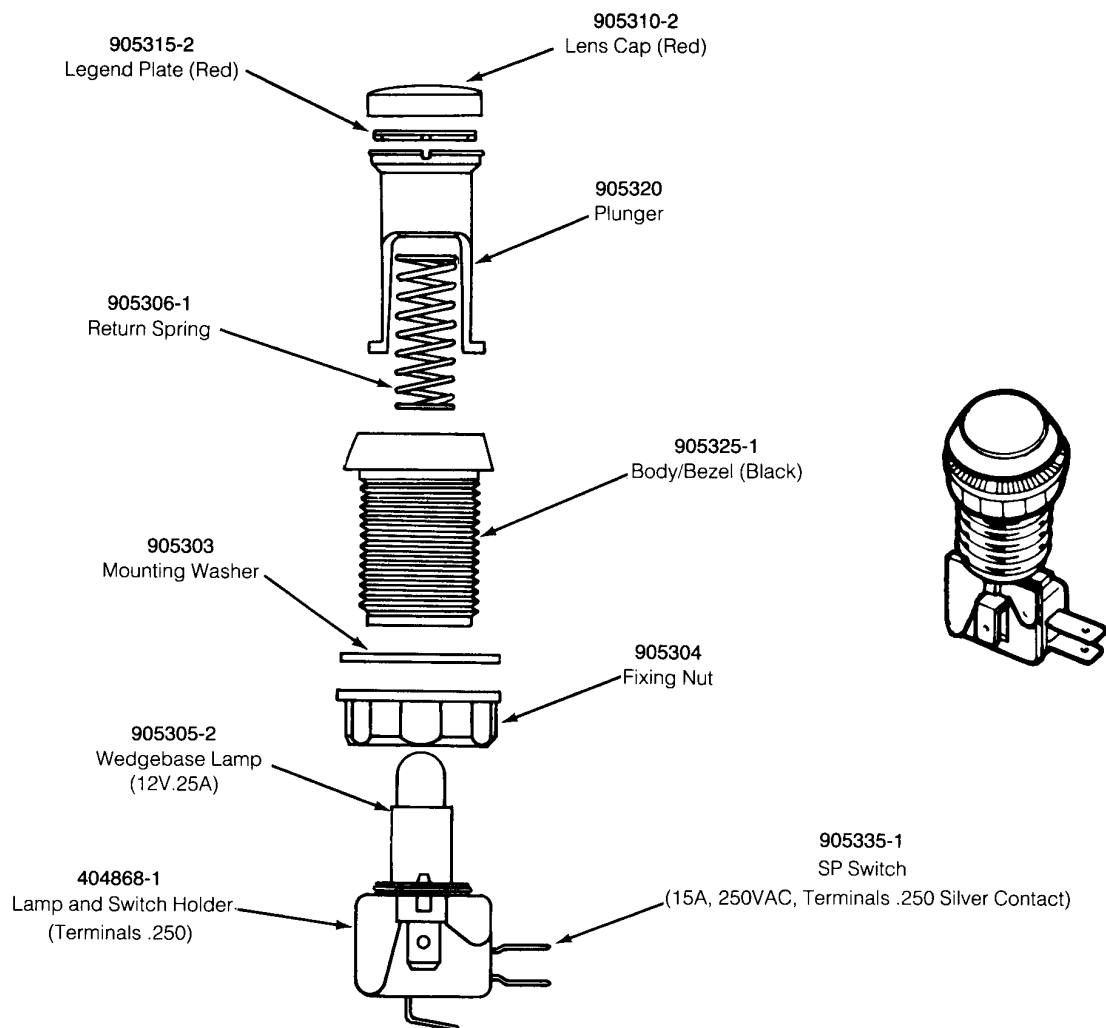


Figure 8. Coinco Switch Assembly
(570-0039-01)

COINCO SWITCH ASSEMBLY (570-0039-01) PARTS LIST

PART NO. (COINCO)	DESCRIPTION	QUANTITY
905310-2	LENS CAP (RED)	1
905315-2	LEGEND PLATE (RED)	1
905320	PLUNGER	1
905306-1	RETURN SPRING	1
905325-1	BODY/BEZEL (BLACK)	1
905303	MOUNTING WASHER	1
905304	FIXING NUT	1
905305-2	WEDGEBASE LAMP (12V.25A)	1
404868-1	LAMP AND SWITCH HOLDER (TERMINALS .250)	1
905335-1	SP SWITCH (15A, 250VAC, TERMINALS .250 SILVER CONTACT)	1

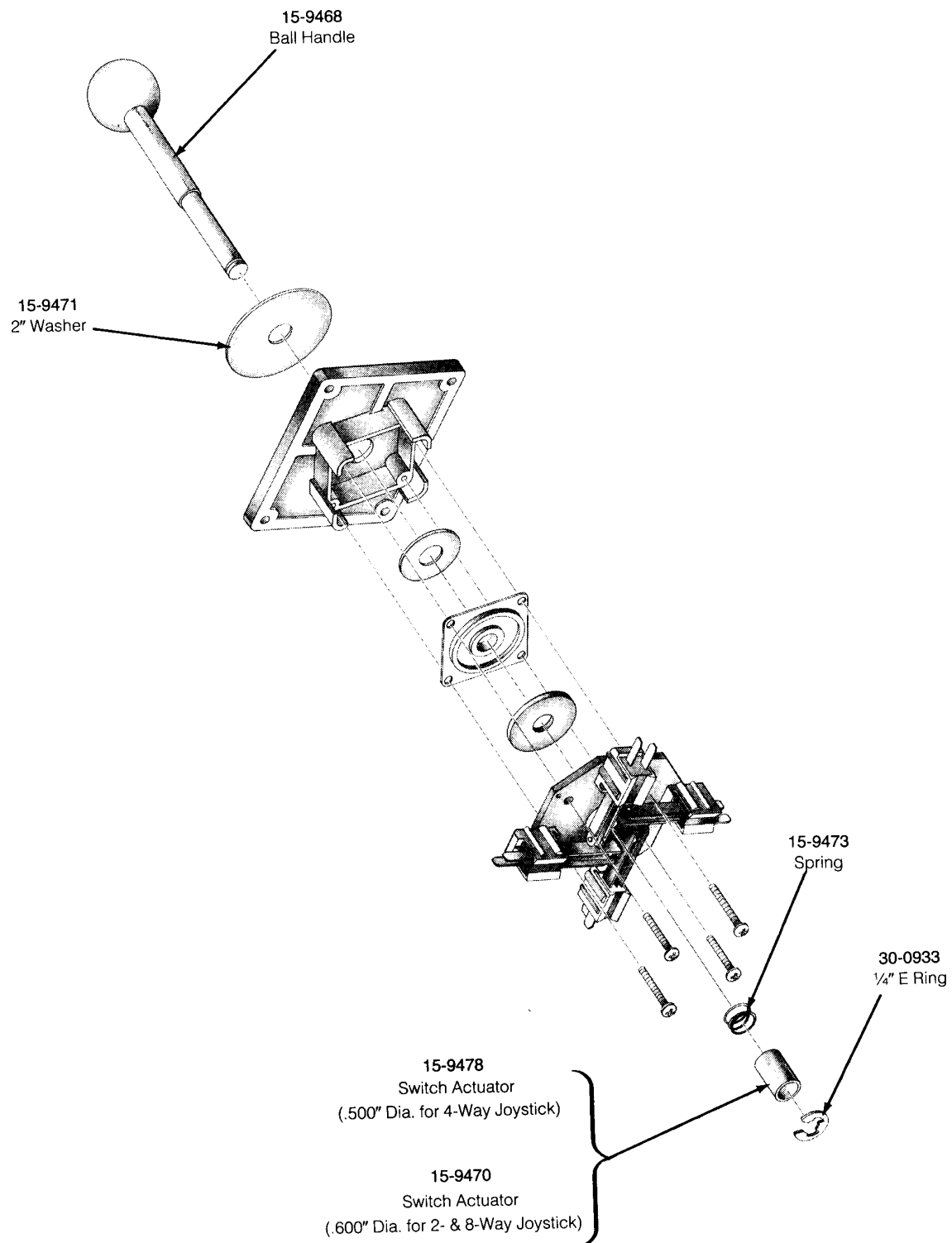


Figure 9. Wico Joystick Assembly
(700-0163-01)

**WICO JOYSTICK ASSEMBLY
(700-0163-01)
PARTS LIST**

PART NO. (WICO)	DESCRIPTION	QUANTITY
15-9468	BALL HANDLE	1
15-9471	2" WASHER	1
15-9473	SPRING	1
15-9470	SWITCH ACTUATOR (.600" DIA. FOR 2- & 8-WAY JOYSTICK)	1
15-9478	SWITCH ACTUATOR (.500" DIA. FOR 4-WAY JOYSTICK)	1
30-0933	1/4" E RING	1

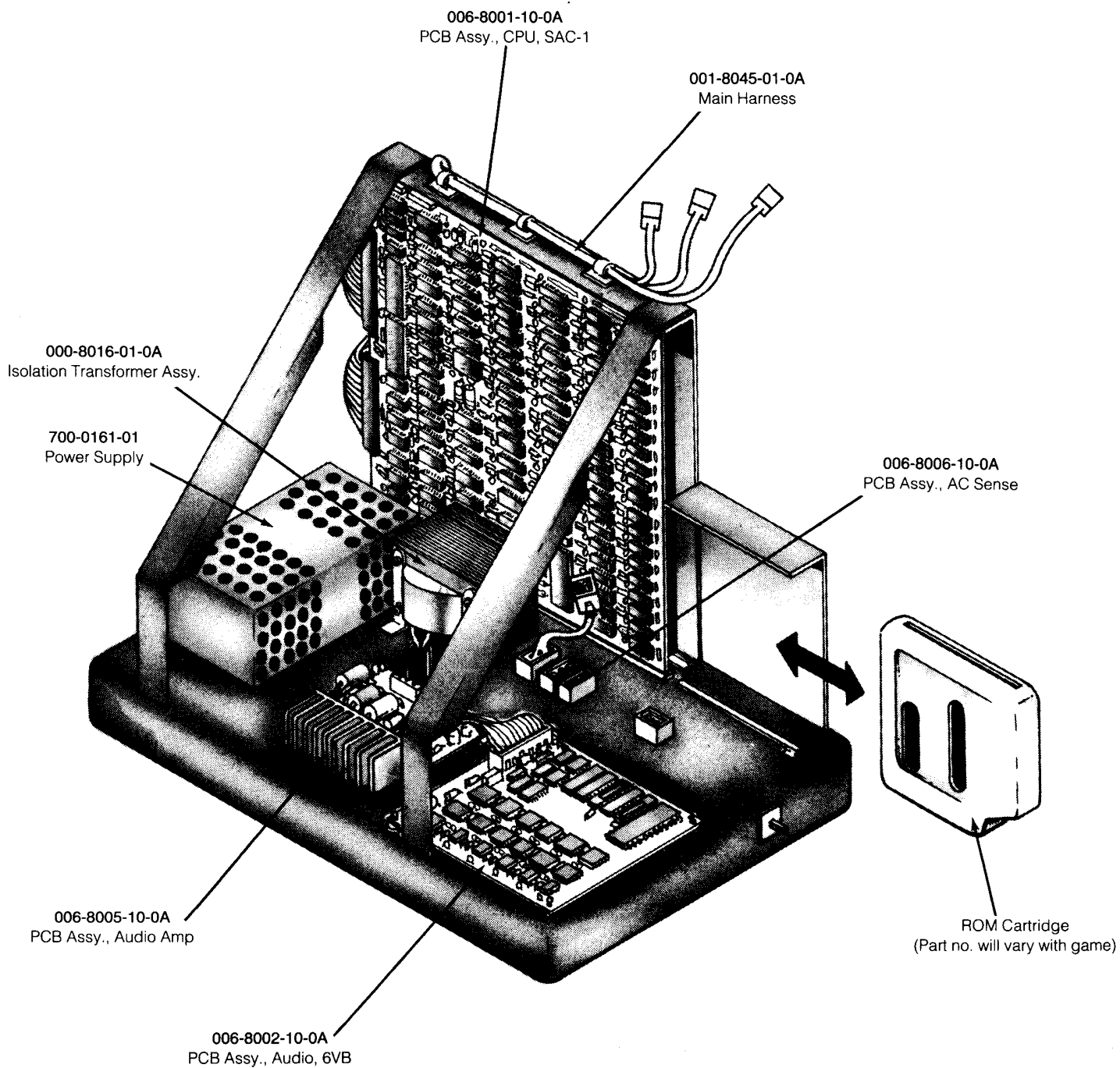


Figure 10. Electronic Chassis Assembly
(000-6011-10-0A)

ELECTRONIC CHASIS ASSEMBLY
(000-8011-10-0A)
PARTS LIST

PART NO.	DESCRIPTION	QUANTITY
000-8016-01-0A	A ISOLATION TRANSFORMER ASSY	1
001-8016-01-0A	GLIDE	6
001-8019-01-0A	COVER, INTERLOCK SWITCH	1
001-8020-01-0A	BRACKET, SUPPORT HANDLE	2
001-8023-01-0A	PLATE, LOGIC BOARD MOUNTING	1
001-8028-01-0A	PLUG, JUMPER, 6POS, 110VAC	1
001-8028-02-0A	PLUG, JUMPER, 6POS, 220VAC	1
001-8035-01-0A	BASE, ELEC CHASSIS	1
001-8036-01-0A	COVER, POWER, SUPPLY	1
001-8037-01-0A	BKT, POWER, SUPPLY, COVER, MTL	1
001-8044-01-0A	HARNESS, A.C. POWER	1
001-8045-01-0A	HARNESS, MAIN	1
006-8001-10-0A	A PCB ASSY, CPU, SAC-I	1
006-8002-10-0A	A PCB ASSY, AUDIO, 6VB	1
006-8005-10-0A	A PCB ASSY, AUDIO AMP	1
006-8006-10-0A	A PCB ASSY, AC SENSE	1
015-8002-10	A PROM, 6VB SOUND	1
550-0073-01	CONN, IEC POWER, RFI FILTER, 6A	1
570-0032-01	SW, SLD, DPDT, 125V, 6A, PNL MTG	1
570-0033-01	SW, PB, DPDT, 250V, 10A, INTERLOCK	2
570-0034-01	SW, RKR, DPST, 125V, 15A, PANEL MTG	2
580-0068-01	FUSE HOLDER, SHOCK-SAFE, 3AG, PNL	1
590-0008-01	PC CARD GUIDE, 4 IN, NYLON	1
590-0009-01	PC CARD GUIDE, 7 IN, NYLON	5
700-0080-01	DANGER LABEL 1-1/2X3-1/4 HI V	1
700-0161-01	POWER SUPPLY, SW, 85W, 4 OUTPUTS	1
760-0009-01	CABLE TIE MOUNT (BULK)	20
760-0022-01	TIEWRAP 1/16" (BULK)	21
760-0047-01	GROMMET, 1.12 OD	1
800-0231-01	BUSHING, SNAP, NYLON, BLK, 625D	2
800-0234-01	SHOULD BLT, 10-32X1/4, 1/4X1/8	6
801-0632-06-06	SCREW, 6-32X3/8, NYLON, SLOTTED	4
802-0632-06-01	SCR, FL HD, 6-32X3/8, ZINC	4
809-0440-08-01	SCREW, PHPH, SEMS, 4-40X1/2"	4
809-0632-06-01	SCREW, PH, PH, SIMS, 6-32X3/8"	21
809-1032-08-01	SCREW, PHPH, SEMS, 10-32X1/2"	4
811-0440-00-01	NUT, NYLOC, 4-40, ZINC	2
811-0632-00-01	NUT, NYLOC, 6-32, ZINC	4
811-0832-00-01	NUT, NYLOC, 8-32, ZINC	1
811-1032-00-01	NUT, NYLOCK, #10-32 CAD	6
821-0008-00-01	WASHER, FLAT, #8, ZINC, SAE	1
821-0010-00-01	WASHER, FLAT, #10, ZINC	4
830-0016-01	FUSE, 3AG, 4AMP SLO-BLO	1

**POWER SUPPLY (CONDOR #SA157) PCB ASSEMBLY
(700-0161-01)
PARTS LIST**

LOCATION	PART NO. (CONDOR)	DESCRIPTION
L1	045-22710 1	CHOKE, COMPLETE, 22710
L3	045-22711 1	CHOKE, COMPLETE, 22711, CHOKE-L2 LFM 410
L2	045-22712 1	CHOKE, COMPLETE, 22712, CHOKE,-L3 LFM 410
L6	045-14972 1	CHOKE, COMPLETE, 14972
L8,9	045-22715 2	CHOKE, COMPLETE, 22715
P.C.B., NOM	065-25516 1	P.C. BOARD, 25516, NOM. PRODUCTION IDENTIFIER
P.C.B., CLAD	065-25518 1	P.C. BOARD, 25518
P.C.B., MASK	065-25519 1	P.C. BOARD, 25519
T1	079-25521 1	TRANSFORMER, COMPLETE, 25521
C6	101-201891	CAP., ALUM., ELECT., RADIAL, 2200/16
C8,10,12,26,28,30	101- 6	CAP., ALUM., ELECT., RADIAL, 1000/35
C16	101-10111 1	CAP., ALUM., ELECT., RADIAL, 1/50
C21,22,23,24	101-10108 4	CAP., ALUM., ELECT., RADIAL, 1000/16
C50,53	101-20115 2	CAP., ALUM., ELECT., RADIAL, 10/35
C45,52	101-10110 2	CAP., ALUM., ELECT., RADIAL, 100/35
C46	101-10112 1	CAP., ALUM., ELECT., RADIAL, 47/50
C55,56	101- 2	CAP., ALUM., ELECT., RADIAL, 470/200
C49	101-10111 1	CAP., ALUM., ELECT., RADIAL, 1/50
C47	104-10094 1	CAP., MYLAR, RADIAL .1/100
C57,58	104- 2	CAP., MYLAR, RADIAL .0047/200
C59,60	10-20223 2	CAP., MYLAR, RADIAL .1/250
C33	105-20047 1	CAP., CERAMIC, RADIAL, .0022/1KV, REF. TO 0 & MTG.
C34,35,36,42,44	105-20118 5	CAP., CERAMIC, RADIAL, .001/1000
C41,61	105- 2	CAP., CERAMIC, RADIAL, 500pf/3KV
C43	105-20118 1	CAP., CERAMIC, RADIAL, .001/1KV
C48,51	107- 2	CAP., CERAMIC, AXIAL, .001/50
CR21	111-10001 1	DIODE, RECTIFIER, AXIAL, IN4007
CR30	111-10251 1	DIODE, RECTIFIER, AXIAL, IN4003
CR33,34,35,36	111-20121 4	DIODE, RECTIFIER, AXIAL, IN5404
CR1	112-10006 1	DIODE, ZENER, AXIAL, IN752A
CR23,24,25,27,29	112-20122 5	DIODE, ZENER, AXIAL, IN4148
CR28	112-10281 1	DIODE, ZENER, AXIAL, IN964B
CR31	112-10011 1	DIODE, ZENER, AXIAL, IN971B
CR11	115-20192 1	DIODE, RECTIFIER, D0-4, MBR3535, HEATSINK COMPOUND
CR22	118-20119 1	DIODE, FAST RECOVERY, AXIAL, IN4934
CR13,15,17	118-20191 3	DIODE, FAST RECOVERY, AXIAL, G1821
F1	120-10922 1	FUSE, 3AG, 4.0A.
U7	130-20131 1	I.C., 14-PIN DIP, MC14093BCP
U6	133-20130 1	I.C., 6-PIN DIP, 4N35
U1	134-20193 1	I.C., TO-92, TL431M
U4	135-10970 1	I.C., TO-220, LM7815, INSTALL NOM SIDE
R57	145-20129 1	RESISTOR-SURGE, METAL OXIDE CERAMIC, 10 OHM, 3A., AMETEK, SG220
R1,36	151-10333 2	RESISTOR, 1/2W., 5%, C.F., 47
R6,8	151-10376 2	RESISTOR, 1/2W., 5%, C.F., 3.0K
R11,12,31	151-10347 3	RESISTOR, 1/2W., 5%, C.F., 180
R13,14,15	151-10357 3	RESISTOR, 1/2W., 5%, C.F., 470
R22	151-10341 1	RESISTOR, 1/2W., 5%, C.F., 100
R23,29,48	151-10381 3	RESISTOR, 1/2W., 5%, C.F., 4.7K
R27,42	151-10356 2	RESISTOR, 1/2W., 5%, C.F., 1K
R24,30,44	151-10373 3	RESISTOR, 1/2W., 5%, C.F., 2.2K
R33,34	151-10305 2	RESISTOR, 1/2W., 5%, C.F., 2.7
R37	151-10402 1	RESISTOR, 1/2W., 5%, C.F., 36K
R38	151-10351 1	RESISTOR, 1/2W., 5%, C.F., 270
R39	151-10370 1	RESISTOR, 1/2W., 5%, C.F., 1.6K
R43	151-10379 1	RESISTOR, 1/2W., 5%, C.F., 3.9K
R50,51	151-10422 2	RESISTOR, 1/2W., 5%, C.F., 240K
R55,56	151-10418 2	RESISTOR, 1/2W., 5%, C.F., 160K
R41	151-10422 1	RESISTOR, 1/2W., 5%, C.F., 240K, 160K TO 240K, FREQ. ADJUST
R46	151-10325 1	RESISTOR, 1/2W., 5%, C.F., 22
R32,35	151- 0	RESISTOR, 1/2W., 5%, C.F.
R29	151-10329 1	RESISTOR, 1/2W., 5%, C.F., 33
R49	151-10348 1	RESISTOR, 1/2W., 5%, C.F., 200
R9	151-10341 1	RESISTOR, 1/2W., 5%, C.F., 100
R7,25,40	156-20203 3	RESISTOR, VARIABLE, 1/4W., CARBON, 1.0K
R21	158-20145 1	RESISTOR, 2W., 10%, W.W., 47

R26	158-10079	1	RESISTOR, 2W., 10%, W.W., .22
SCR1	160-10013	1	SCR, TO-220, S0508LS3
Q3	171-20124	1	TRANSISTOR, TO-3, MJ12005, DC 340 COMPOUND
Q4	175-20227	1	TRANSISTOR, TO-220, TIP 125
Q6	175-20226	1	TRANSISTOR, TO-220, TIP 100
Q1	176-20125	1	TRANSISTOR, TO-92, MPSA20
Q2	176-20126	1	TRANSISTOR, TO-92, MPSA70
Q9	176-10247	1	TRANSISTOR, TO-92, 2N2219
Q10	176-10248	1	TRANSISTOR, TO-92, 2N2905
HEATSINK-Q6,U4	300-13639	2	HEATSINK, EXTRUSION, 1.250 in.
HEATSINK-Q3	301-	1	HEATSINK, AAVID, TO-3, 5690-B
HEATSINK-CR11	301-	1	HEATSINK, AAVID, TO-3, 5690-C
F1-HOLDER	565-10226	2	FUSEHOLDER, P.C.B., MOUNTING, CLIP, 44F HO53
B1,2,4,5,7	600-	5	WIRE, JUMPER, 22 GA., 0.6 IN.
Q5 B-E,Q7 B-E	600-	2	WIRE, JUMPER, 22 GA., 0.1 IN.
R10	600-	1	WIRE, JUMPER, 22 GA., 0.6 IN.
B8	600-	1	WIRE, JUMPER, 22 GA., 0.8 IN.
B3	602-	1	WIRE, JUMPER, 20 GA., 3.5 IN.
CR7,8	604-	2	WIRE, JUMPER, 18 GA., .65 IN.
CM1	930-	1	CONNECTOR, MOLEX, 09-65-1051
CM2	930-	1	CONNECTOR, MOLEX, 09-65-1031
CM3	930-	1	CONNECTOR, MOLEX, 09-65-1101
CM4	930-	1	CONNECTOR, MOLEX, 09-65-1091
B3	933-10706	1	CONNECTOR, MOLEX, 03-09-1011
B3	935-	1	PIN, CONNECTOR, MOLEX, PREFIX 934, 02-09-1118

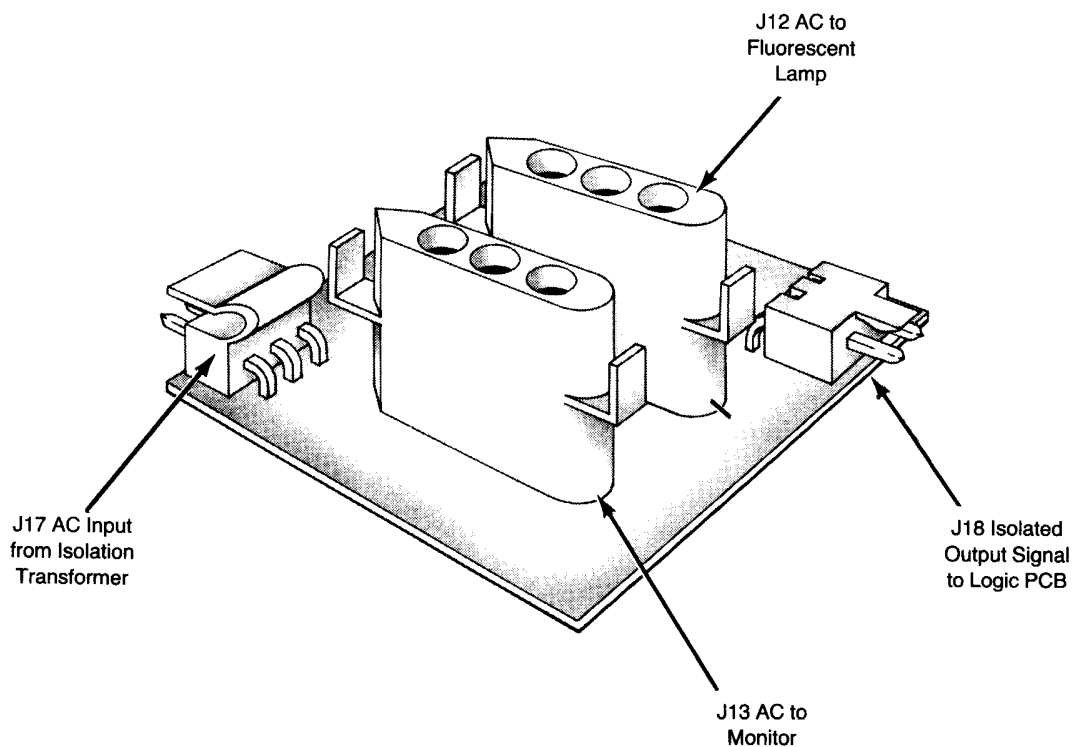
PCB ASSEMBLY, AUDIO 6VB (006-8002-10-0A)

PART NO.	DESCRIPTION	QUANTITY
007-8002-01-0A	PCB, FABRICATED, AUDIO, 6VB	1
100-0002-01	DIO, SI, 10MA, 75PIV, 1N914	1
100-0006-01	DIO, GR, 50MA, 75PIV, IN34	4
200-0039-01	IC, DIG, TTL, 74LS00, NAND GATE	1
200-0041-01	IC, DIG, TTL, 74LS04, HEX INVERTER	2
200-0043-01	IC, DIG, TTL, 74LS32, OR GATE	1
200-0044-01	IC, DIG, TTL, 74LS74, DUAL D F/F	1
200-0049-01	IC, DIG, TTL, 74LS139, 2-4 DECODER	1
200-0074-01	IC, DIG, TTL, 7493, 4 BIT COUNT	1
210-0005-01	IC, DIG, CMOS, 4049UB, HEX INVERT	1
210-0006-01	IC, DIG, CMOS, 4051B, 8 CHAN MUX	6
210-0007-01	IC, DIG, CMOS, 4174B, HEX D F/F	5
210-0008-01	IC, DIG, CMOS, 4503B, HEX TS BUFFER	1
240-0005-01	IC, DIG, RAM, 6116, 2K X8, 200NS	2
250-0007-01	IC, DIG, MPU, Z-80A	1
250-0008-01	IC, DIG, MPS, 8253-5, TIMER	1
250-0010-01	IC, DIG, MPS, 68B50, ACIA	1
260-0007-01	IC, LIN, COMP, LM311N	1
260-0008-01	IC, LIN, VR, 7805, 5V POS	1
260-0027-01	IC, LIN, VR, 337T, VARIABLE NEG	1
260-0028-01	IC, LIN, VR, 78M05CT, 5V POS	1
260-0029-01	IC, LIN, OPAMP, TL084, QUAD JFET	1
260-0031-01	IC, SP, DAC 12 VIR, 7541	1
260-0033-01	IC, SP, SOUND SYNTH, CEM3394	6
260-0037-01	IC, LIN, OPAMP, TL071, JFET INPUT	1
260-0040-01	IC, SP, NOISE SOURCE, MM5837	1
300-0002-01	CAP, CER, RAD, 0.1UF, 50V, 20%	25
300-0011-01	CAP, CER, RAD, 33PF, 50V, 10%	3
300-0012-01	CAP, CER, RAD, 680PF, 50V, 5%	7
310-0012-01	CAP, TAN, RAD, 1.0UF, 25V, 20%	3
310-0015-01	CAP, TAN, RAD, 47UF, 15V, 20%	1
330-0005-01	CAP, PES, RAD, 0.001UF, 100V, 10%	12
330-0006-01	CAP, PES, RAD, 0.01UF, 100V, 10%	48
330-0007-01	CAP, PES, RAD, 0.033UF, 100V, 10%	20
330-0009-01	CAP, PST, AXL, 0.002UF, 100V, 5%	6
340-0016-01	CAP, ELC, AXL, 2.2UF, 63V, 50/-10%	3
340-0017-01	CAP, ELC, AXL, 10UF, 35V, 50/-10%	6
400-1001-01	RES, CF, 1/4W, 5%, 1K OHM	2
400-1003-01	RES, CF, 1/4W, 5%, 100K OHM	5
400-1004-01	RES, CF, 1/4W, 5%, 1.0M OHM	12
400-2001-01	RES, CF, 1/4W, 5%, 2.0K OHM	6
400-2700-01	RES, CF, 1/4W, 5%, 270 OHM	1
400-2703-01	RES, CF, 1/4W, 5%, 270K OHM	2
400-3300-01	RES, CF, 1/4W, 5%, 330 OHM	3
400-3307-01	RES, CF, 1/4W, 5%, 33 OHM	1
400-4701-01	RES, CF, 1/4W, 5%, 4.7K OHM	3
400-4702-01	RES, CF, 1/4W, 5%, 47K OHM	2
400-6802-01	RES, CF, 1/4W, 5%, 68K OHM	1
401-1005-01	RES, CC, 1/4W, 5%, 10M OHM	1
450-1001-01	RES, MF, 1/8W, 1%, 1.00K OHM	1
450-1002-01	RES, MF, 1/8W, 1%, 10.0K OHM	1
450-1210-01	RES, MF, 1/8W, 1%, 121 OHM	1
450-1962-01	RES, MF, 1/8W, 1%, 19.6K OHM	1
450-2002-01	RES, MF, 1/8W, 1%, 20.0K OHM	1
450-3013-01	RES, MF, 1/8W, 1%, 301K OHM	6
450-4021-01	RES, MF, 1/8W, 1%, 4.02K OHM	1
450-4990-01	RES, MF, 1/8W, 1%, 499 OHM	1
510-0019-01	SOCKET, IC, 24P, LOW PROF, PC	4
510-0020-01	SOCKET, IC, 28P, LOW PROF, PC	1
510-0021-01	SOCKET, IC, 40P, LOW PROF, PC	1
550-0062-01	CONN, PC, M, MLX 09-74-1101	1
801-0632-06-01	SCREW, PH PH, 6-32 X 3/8	3
816-0632-00-01	NUT, HEX, SM PATTERN, 6-32, ZINC	3
820-0003-01	CRYSTAL, 8.000 MHZ	1
822-0006-00-01	WASHER, LOCK, SPLIT, #6	3
850-0006-01	HEATSINK, T0-220, THRM 6107	1

**PCB ASSEMBLY, CPU, SAC-I
(006-8001-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
007-8001-01-0A	PCB, FABRICATED, CPU, SAC-I	1
015-8001-10	A PAL, SAC-I	1
100-0002-01	DIO, SI, 10MA., 75PIV, 1N914	1
120-0003-01	XSTR, SI, NPN, 2N3904	4
200-0031-01	IC, DIG, TTL, 74LS157, 4 2-1 MUX	1
200-0032-01	IC, DIG, TTL, 74LS175, QUAD D F/F	4
200-0039-01	IC, DIG, TTL, 74LS00, NAND GATE	3
200-0040-01	IC, DIG, TTL, 74LS02, NOR GATE	2
200-0041-01	IC, DIG, TTL, 74LS04, HEX INVERTER	1
200-0042-01	IC, DIG, TTL, 74LS20, 4-IN NAND	1
200-0043-01	IC, DIG, TTL, 74LS32, OR GATE	3
200-0044-01	IC, DIG, TTL, 74LS74, DUAL D F/F	1
200-0045-01	IC, DIG, TTL, 74LS96, 5 BIT SHIFT	1
200-0046-01	IC, DIG, TTL, 74LS109, DUAL JK F/F	2
200-0047-01	IC, DIG, TTL, 74LS125, QUAD BUFFER	1
200-0048-01	IC, DIG, TTL, 74LS138, 3-8 DECODER	2
200-0052-01	IC, DIG, TTL, 74LS163, 4 BIT COUNT	2
200-0053-01	IC, DIG, TTL, 74LS174, HEX D F/F	4
200-0055-01	IC, DIG, TTL, 74LS244, 8 TS BUFFER	7
200-0056-01	IC, DIG, TTL, 74LS245, 8 BUS XCVR	1
200-0057-01	IC, DIG, TTL, 74LS253, DATA SELECT	6
200-0058-01	IC, DIG, TTL, 74LS259, 8 BIT LATCH	1
200-0059-01	IC, DIG, TTL, 74LS273, OCTAL D F/F	1
200-0060-01	IC, DIG, TTL, 74LS374, OCTAL D F/F	5
200-0061-01	IC, DIG, TTL, 74S00, NAND GATE	2
200-0062-01	IC, DIG, TTL, 74S02, NOR GATE	1
200-0063-01	IC, DIG, TTL, 74S04, HEX INVERTER	2
200-0064-01	IC, DIG, TTL, 74S08, AND GATE	1
200-0065-01	IC, DIG, TTL, 74S32, OR GATE	1
200-0066-01	IC, DIG, TTL, 74S74, DUAL D F/F	1
200-0067-01	IC, DIG, TTL, 74S151, 8-1 MUX	7
200-0068-01	IC, DIG, TTL, 74S157, 4 2-1 MUX	2
200-0069-01	IC, DIG, TTL, 74S163, 4 BIT COUNT	6
200-0070-01	IC, DIG, TTL, 74S174, HEX D F/F	3
200-0071-01	IC, DIG, TTL, 74S175, QUAD D F/F	2
200-0072-01	IC, DIG, TTL, 74S273, OCTAL D F/F	2
200-0075-01	IC, DIG, TTL, 74LS86, QUAD X-OR	1
200-0076-01	IC, DIG, TTL, 74LS164, 8 BIT SHIFT	1
200-0077-01	IC, DIG, TTL, 74LS299, 8 BIT SHIFT	1
200-0078-01	IC, DIG, TTL, 74LS257, 4 2-1 MUX	1
210-0005-01	IC, DIG, CMOS, 4049UB, HEX INVERT	1
230-0007-01	IC, DIG, NOVRAM, X2212, 256 X4	1
240-0003-01	IC, DIG, RAM, 2148, 1K X4, 70NS	3
240-0004-01	IC, DIG, RAM, 4116, 16K X1, 150NS	32
250-0006-01	IC, DIG, MPU, 68A09E	1
250-0010-01	IC, DIG, MPS, 68B50, ACIA	1
260-0002-01	IC, DIG, INT, ULN2003, DRIVER	1
260-0011-01	IC, LIN, VR, 7905, 5V NEG	1
260-0030-01	IC, SP, ADC 8 BIT, ADC0809	1
300-0009-01	CAP, CER, AXL, 0.1UF, 50V, 20%	168
310-0013-01	CAP, TAN, AXL, 2.2UF, 10V, 20%	8
310-0014-01	CAP, TAN, AXL, 4.7UF, 20V, 20%	8
320-0006-01	CAP, MIC, RAD, 12PF, 500V, 5%	1
320-0007-01	CAP, MIC, RAD, 100PF, 500V, 5%	1
340-0011-01	CAP, ELC, AXL, 100UF, 16V, 50/-10%	2
340-0015-01	CAP, ELC, AXL, 1.0UF, 63V, 50/-10%	2
340-0018-01	CAP, ELC, AXL, 470UF, 6.3V, 50/-10%	1
400-1001-01	RES, CF, 1/4W, 5%, 1K OHM	37
400-1002-01	RES, CF, 1/4W, 5%, 10K OHM	2
400-1003-01	RES, CF, 1/4W, 5%, 100K OHM	2
400-1500-01	RES, CF, 1/4W, 5%, 150 OHM	1
400-2200-01	RES, CF, 1/4W, 5%, 220 OHM	1
400-2700-01	RES, CF, 1/4W, 5%, 270 OHM	1

400-2701-01	RES, CF, 1/4W, 5%, 2.7K OHM	1
400-3307-01	RES, CF, 1/4W, 5%, 33 OHM	10
400-4700-01	RES, CF, 1/4W, 5%, 470 OHM	3
400-4701-01	RES, CF, 1/4W, 5%, 4.7K OHM	6
460-0011-01	RES, PAK, DIP, 16PIN, 8X, 2.2K OHM	5
460-0012-01	RES, PAK, SIP, 10PIN, 9X, 470 OHM	2
460-0013-01	RES, PAK, SIP, 10PIN, 9X, 10K OHM	2
460-0014-01	RES, PAK, SIP, 8PIN, 7X, 1.0K OHM	1
500-0016-01	INDUCTOR, FER, AXL, 100UH, 10%	1
510-0019-01	SOCKET, IC, 24P, LOW PROF, PC	1
510-0020-01	SOCKET, IC, 28P, LOW PROF, PC	1
510-0021-01	SOCKET, IC, 40P, LOW PROF, PC	1
550-0063-01	CONN, AMP, 1-102589-7	1
570-0036-01	SW, DIP, 8PST	2
800-0237-01	SPACER, LED	1
801-0440-06-01	SCR, PAN HD PHIL, 4-40X3/8, ZINC	1
812-0440-00-01	NUT, HEX, 4-40, ZINC	1
820-0004-01	CRYSTAL, 20.000 MHZ	1
822-0004-00-01	WASHER, SPLIT LOCK, #4, ZINC	1
840-0036-01	OPT, DSP, LED, SNG, RED	1



**Figure 11. AC Sense PCB Assembly
(006-8006-10-0A)**

**PCB ASSEMBLY, AC SENSE
(006-8006-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
007-8006-01-0A	PCB, FABRICATION, AC SENSE	1
420-1502-01	RES, CC, 1W, 5%, 15K OHM	1
550-0018-01	CONN, PC, F, PINS, MLX 02-09-1134	6
550-0069-01	CONN, PC, 3P, F, MLX 03-09-1031	2
550-0086-01	CONN, PC, 2P, M, MLX 22-05-3021	1
550-0087-01	CONN, PC, 3P, M, MLX 09-75-1038	1
840-0037-01	OPT, ISO, LED, XSTR, 4N26	2

**PCB ASSEMBLY, CARTRIDGE, SAC-I
(006-8003-10-0B)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
007-8003-01-0B	PCB FAB, CARTRIDGE, SAC-I	1
200-0049-01	IC, DIG, TTL, 74LS139, 2-4 DECODER	2
230-0007-01	IC, DIG, NOVDRAM, X2212, 2567 X4	1
300-0009-01	CAP, CER, AXL, 0.1UF, 50V, 20%	18
310-0013-01	CAP, TAN, AXL, 2.2UF, 10V, 20%	2
510-0020-01	SOCKET, IC, 28P, LOW PROF, PC	10
550-0064-01	CONN, AMP, 2-102585-0	1

**PCB ASSEMBLY, TRACKBALL, CONVERTER
(006-8004-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
007-8004-01-0A	PCB, FABRICATED, TRACKBALL CONV	1
100-0002-01	DIO, SI, 10MA, 75PIV, 1N914	2
210-0003-01	IC, DIG, CMOS, 4013B, DUAL D F/F	1
210-0009-01	IC, DIG, CMOS, 4584B, HEX INVERTER	1
260-0034-01	IC, LIN, OPAMP, TL082, DUAL JFET	1
300-0009-01	CAP, CER, AXL, 0.1UF, 50V, 20%	3
310-0013-01	CAP, TAN, AXL, 2.2UF, 10V, 20%	1
330-0007-01	CAP, PES, RAD, 0.033UF, 100V, 10%	2
330-0008-01	CAP, PES, RAD, 0.10UF, 100V, 10%	2
400-1002-01	RES, CF, 1/4W, 5%, 10K OHM	2
400-2201-01	RES, CF, 1/4W, 5%, 2.2K OHM	4
400-2203-01	RES, CF, 1/4W, 5%, 220K OHM	2
400-3902-01	RES, CF, 1/4W, 5%, 39K OHM	2
550-0018-01	CONN, PC, F, PINS, MLX 02-09-1134	6
550-0061-01	CONN, CBL, 6P, RCP, MLX 03-09-1064	1
550-0065-01	CONN, PC, 8P, M, MLX 09-74-1081	1

**PCB ASSEMBLY, AUDIO AMP
(006-8005-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8004-01-0A	HEATSINK, CUT/DRILLED, IER, E310	1
007-8005-01-0A	PCB, FABRICATED, AUDIO AMP	1
260-0039-01	IC, LIN, SP, TDA2002, AUDIO AMP	2
300-0002-01	CAP, CER, RAD, 0.1UF, 50V, 20%	4
300-0010-01	CAP, CER, RAD, 0.022UF, 50V, 20%	2
340-0012-01	CAP, ELC, AXL, 1000UF, 25V, 50/-10%	3
340-0017-01	CAP, ELC, AXL, 10UF, 35V, 50/-10%	2
340-0018-01	CAP, ELC, AXL, 470UF, 6.3V, 50/-10%	2
400-1008-01	RES, CF, 1/4W, 5%, 1.0 OHM	2
400-2208-01	RES, CF, 1/4W, 5%, 2.2 OHM	2
400-4701-01	RES, CF, 1/4W, 5%, 4.7K OHM	1
400-4707-01	RES 1/4W, 5% CF 47	2
410-2200-01	RES, CC, 1/2W, 5%, 220 OHM	3
490-0011-01	RES, VAR, STR, PC, 100 OHM	1
550-0067-01	CONN, PC, 4P, M, MOLX 09-74-1041	1
550-0068-01	CONN, PC, 5P, M, MOLX 22-23-2051	1
801-0440-04-01	SCREW, PH PH, 4-40 X 1/4	4
821-0004-00-01	WASHER, FLAT, #4, ZINC, (SAE)	4

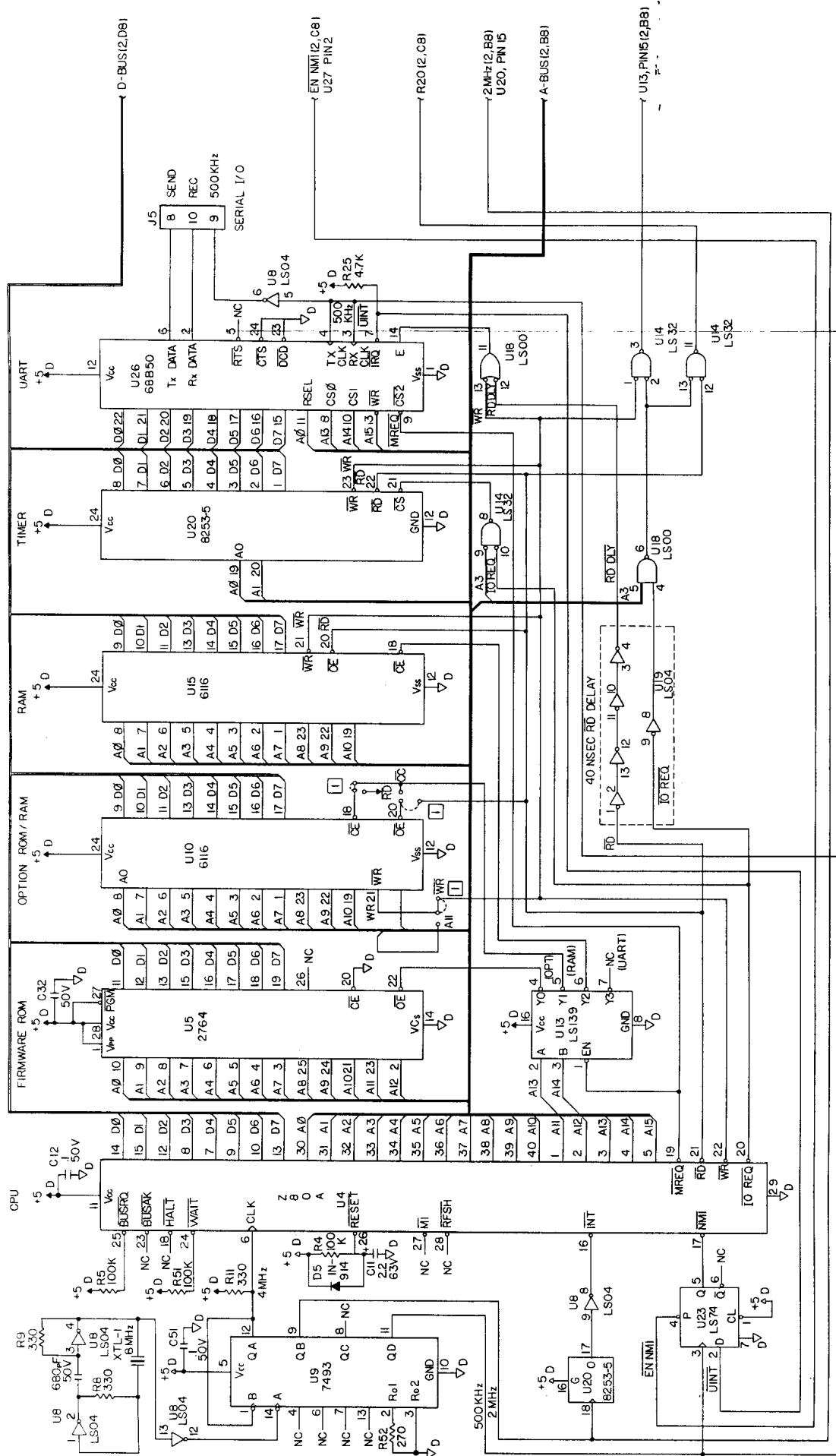
**CARTRIDGE ASSEMBLY, SNAKEPIT
(000-8015-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
001-8003-01-0A	HOUSING, GAME CARTRIDGE, LEFT	1
001-8003-02-0A	HOUSING, GAME CARTRIDGE, RIGHT	1
006-8003-01-0B	A PCB ASSY, CARTRIDGE, SAC-I	1
015-8003-10-0A	A PROM, SNAKEPIT, ROMEF	1
015-8003-11-0A	A PROM, SNAKEPIT, ROMCD	1
015-8003-12-0A	A PROM, SNAKEPIT, ROMB3	1
015-8003-13-0A	A PROM, SNAKEPIT, ROMB2	1
015-8003-14-0A	A PROM, SNAKEPIT, ROMB1	1
015-8003-15-0A	A PROM, SNAKEPIT, ROMB0	1
015-8003-16-0A	A PROM, SNAKEPIT, GR3	1
015-8003-17-0A	A PROM, SNAKEPIT, GR2	1
015-8003-18-0A	A PROM, SNAKEPIT, GR1	1
015-8003-19-0A	A PROM, SNAKEPIT, GR0	1
804-0632-04-01	SCREW, SOC. HD. FLT 6-32X1/4"	8
841-0632-06-01	STANDOFF, HEX, 1/4 F/F, 6-32X1/2	4
842-0632-08-01	STANDOFF, HEX, M/F, 6-32X1/2	4

**ISOLATION TRANSFORMER ASSEMBLY
(000-8016-10-0A)
PARTS LIST**

PART NO.	DESCRIPTION	QUANTITY
500-0015-01	XFMR, PWR, 115/230-, 115V, 1.3A	1
550-0002-01	CRIMP PIN FEMALE .093 DIA	2
550-0003-01	CRIMP PIN MALE .093 DIA	4

SCHEMATICS



NOTES: UNLESS OTHERWISE SPECIFIED

1 ALL RESISTORS ARE IN OHMS, $\frac{1}{4}W$, 5%.

2 ALL CAPACITORS ARE IN MICROFARADS, .01/100V.

3 LAST REFERENCE DESIGNATORS USED: R52, C134, U40, D5, XTL-1.

Figure 12. Audio Schematic, Sheet 1

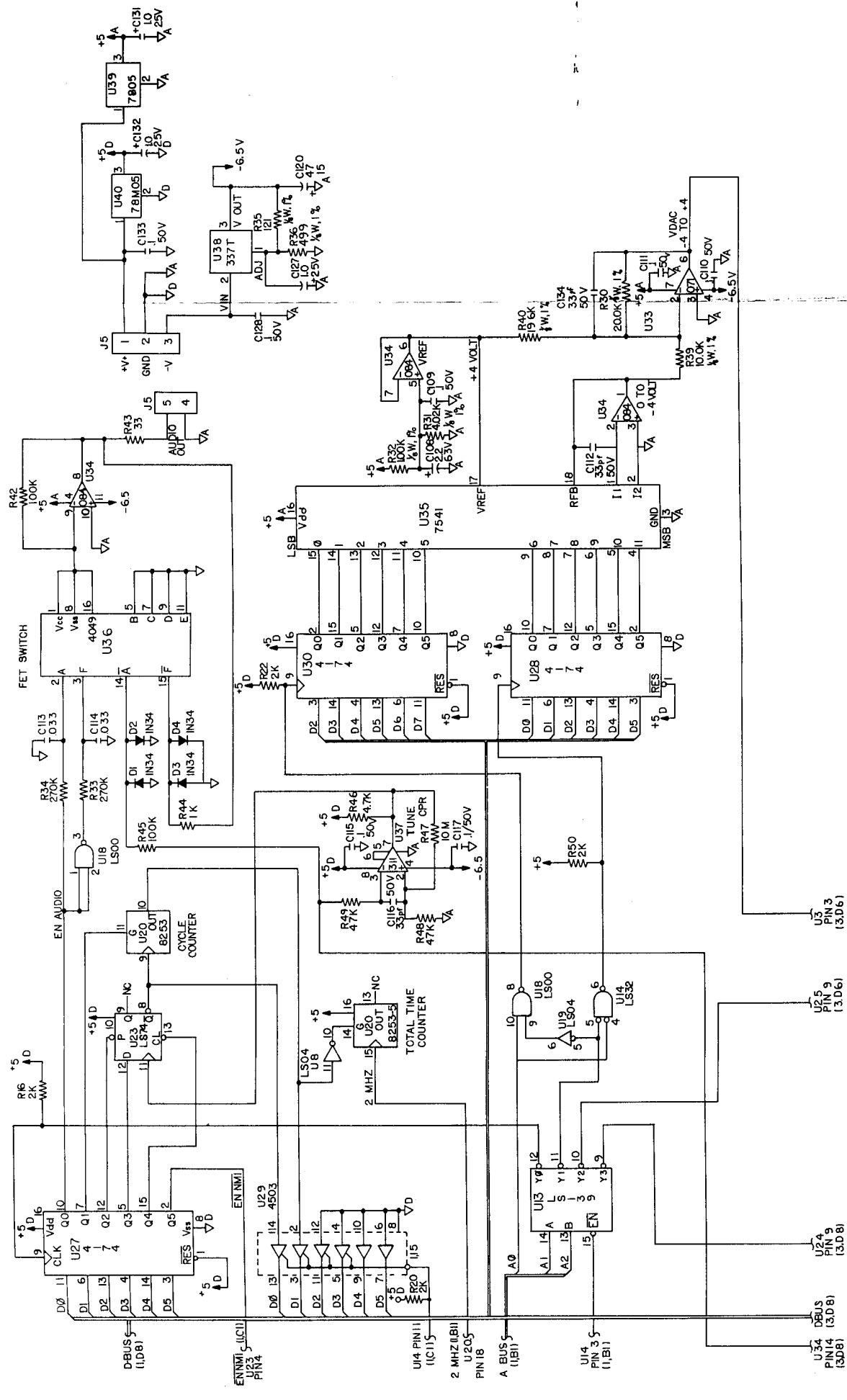


Figure 13 Audio Schematic, Sheet 2

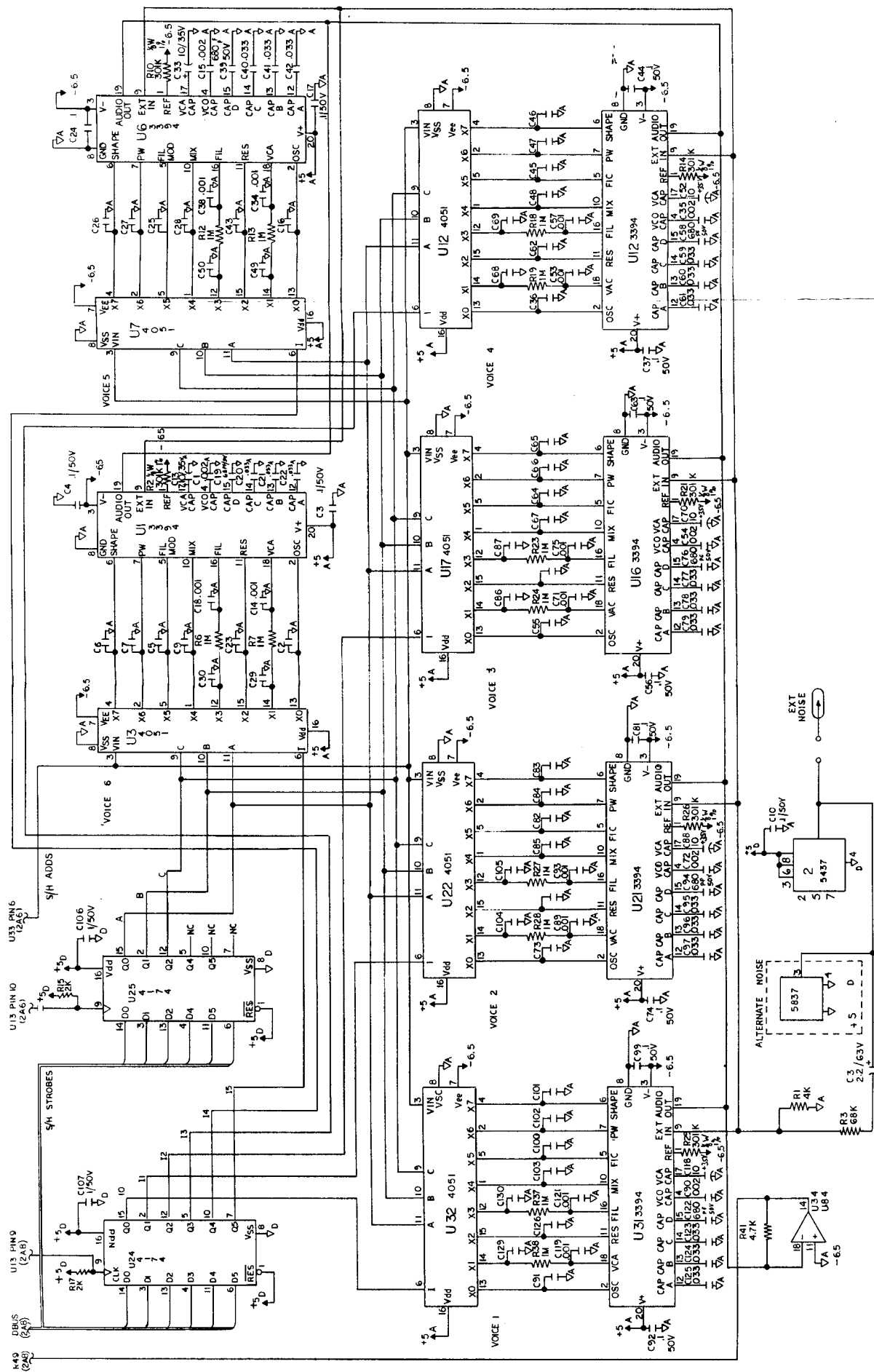


Figure 14 Audio Schematic, Sheet 3

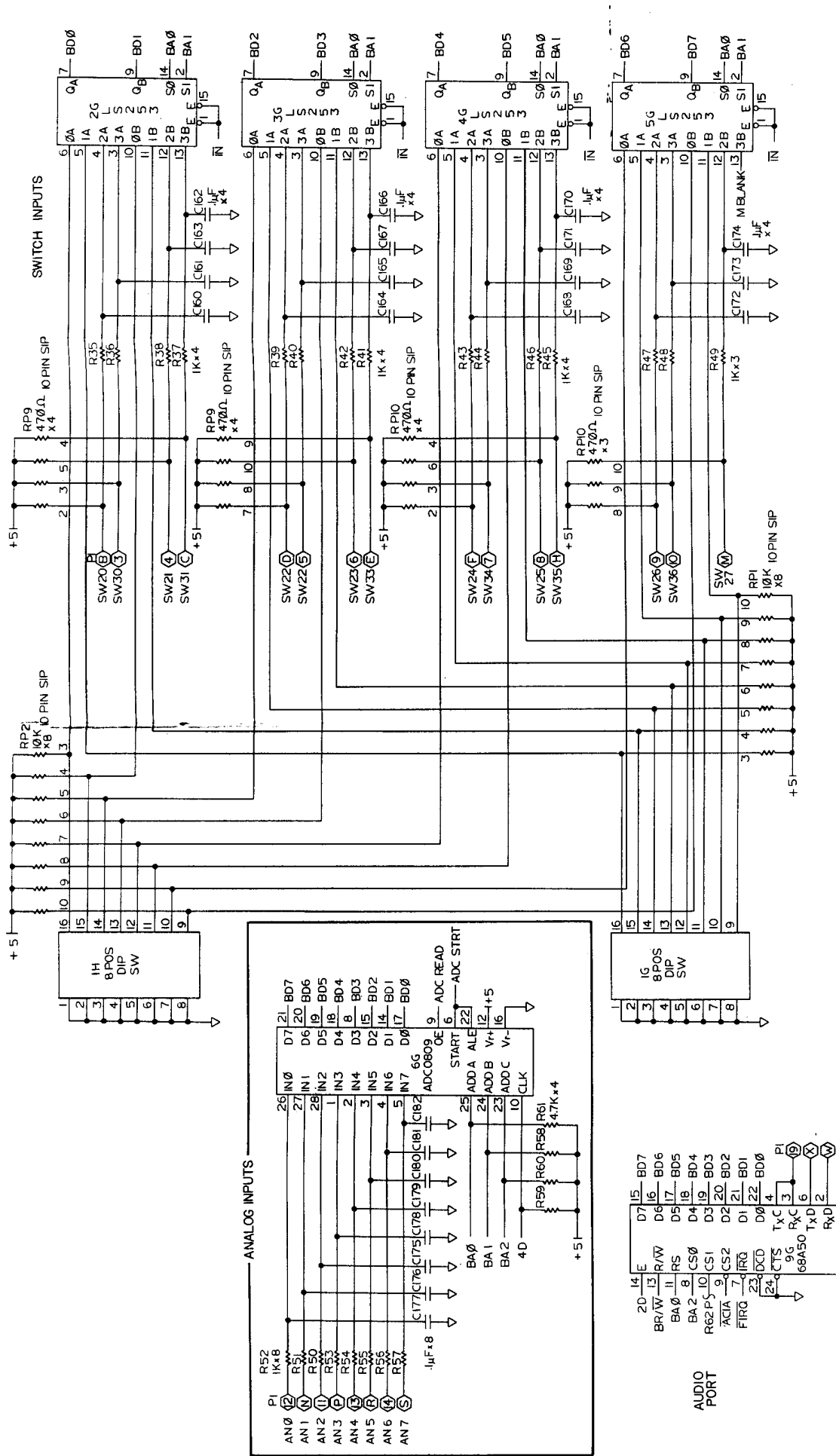
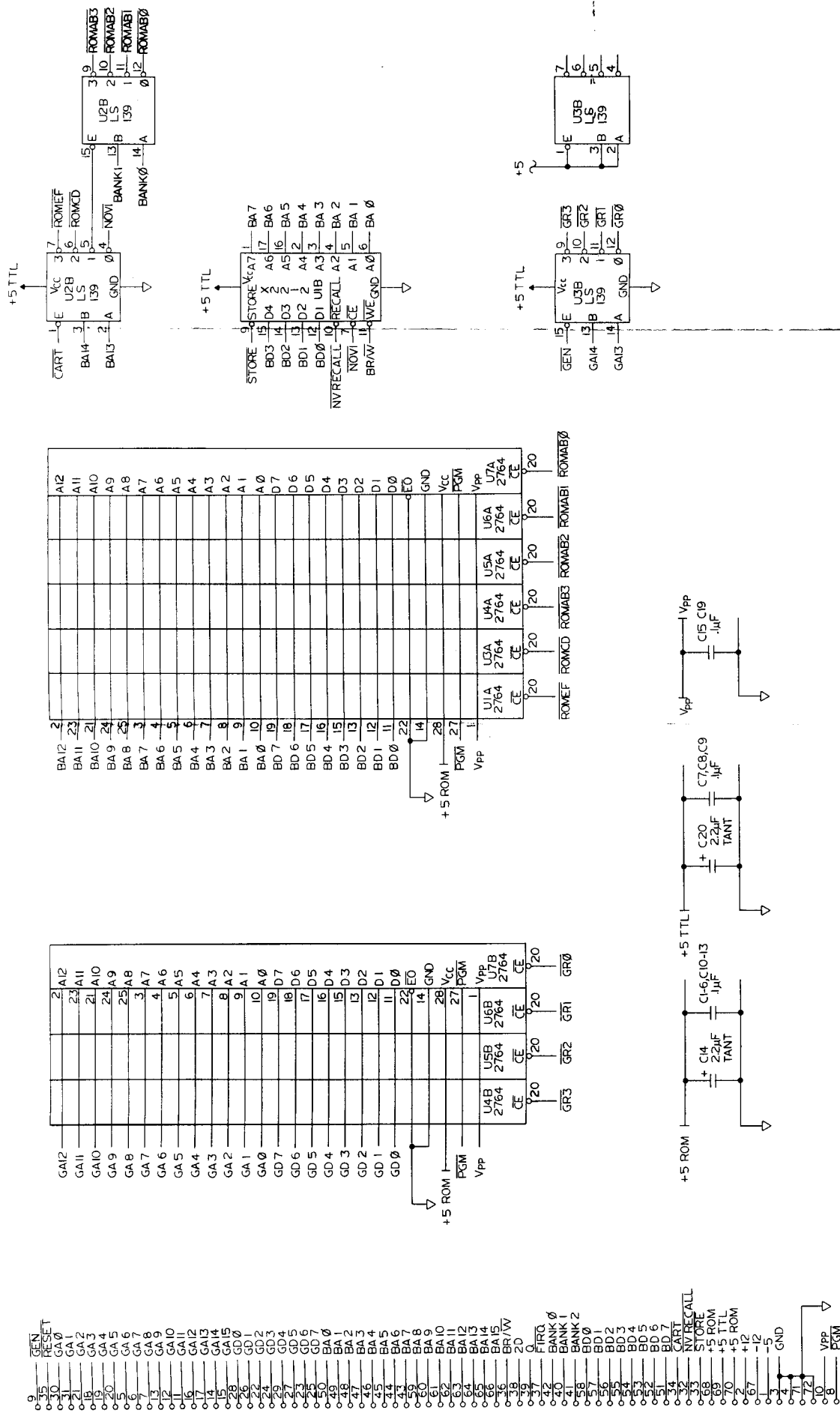


Figure 17. Switch Inputs, CPU Board



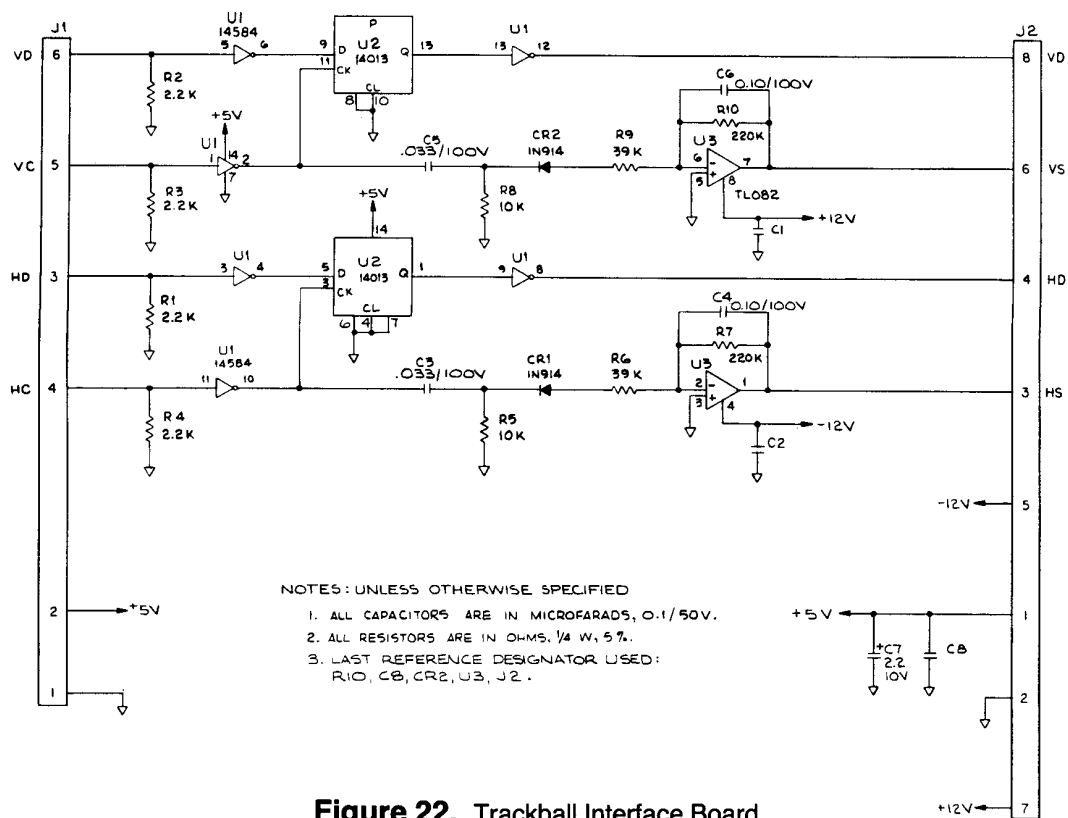


Figure 22. Trackball Interface Board

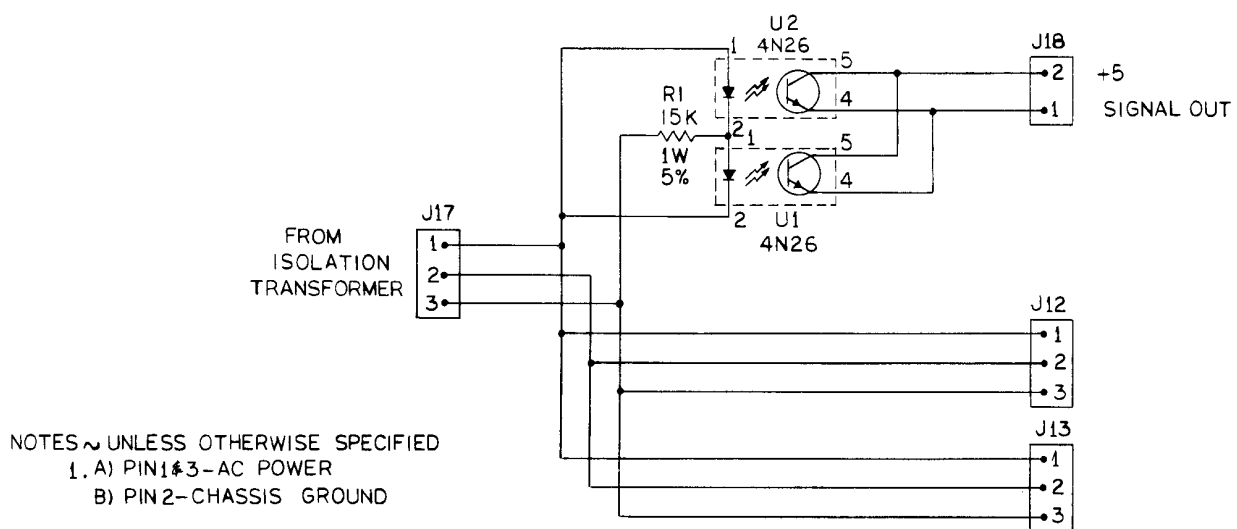
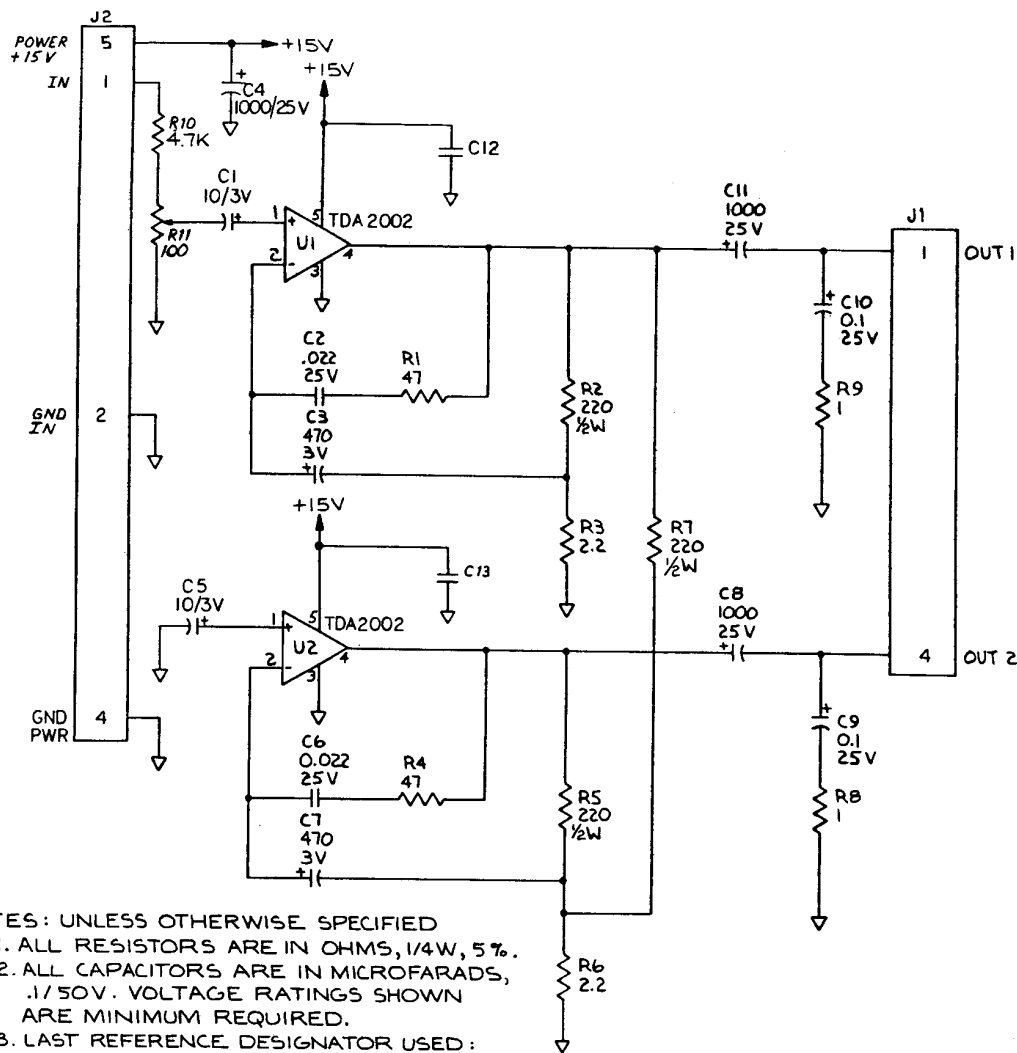


Figure 23. AC Sense PCB



- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS ARE IN OHMS, 1/4W, 5%.
 2. ALL CAPACITORS ARE IN MICROFARADS, .1/50V. VOLTAGE RATINGS SHOWN ARE MINIMUM REQUIRED.
 3. LAST REFERENCE DESIGNATOR USED: R11, C13, U2, J2

Figure 24. Audio Amp

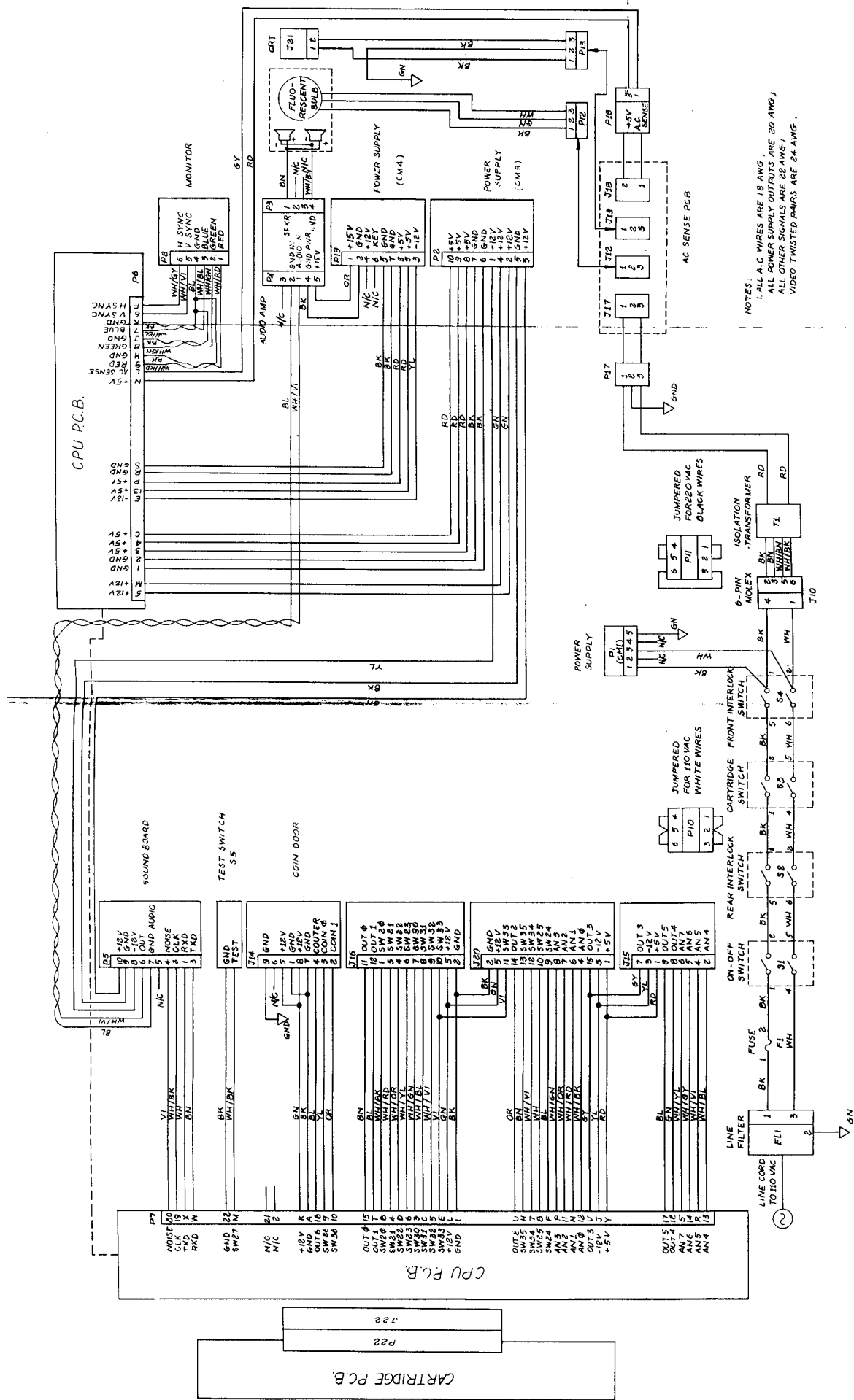
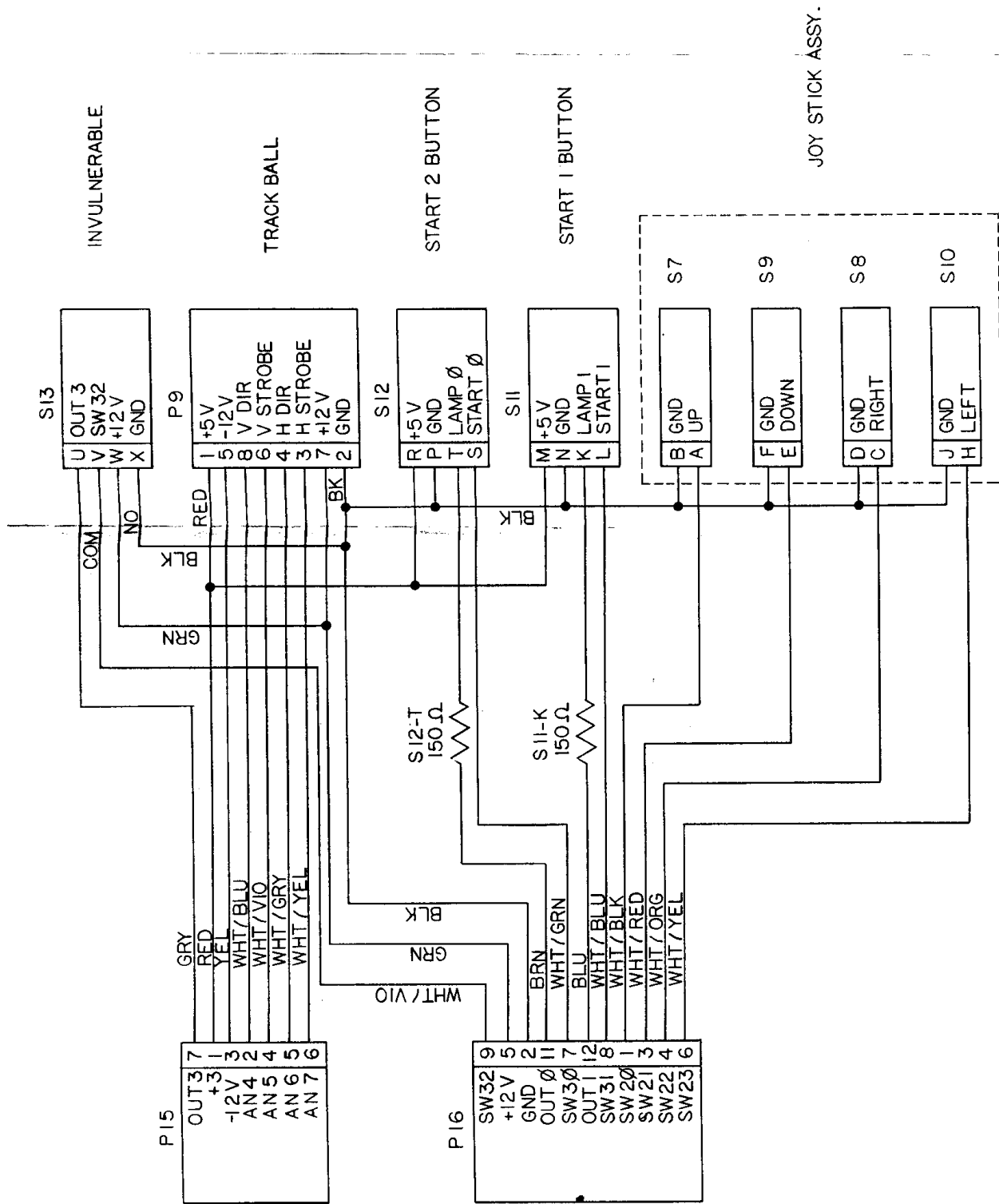


Figure 26. Wiring Harness, SAC-1



SNAKE PIT CONTROL PANEL
 WIRING DIAGRAM

Figure 27. Control Panel Wiring Diagram