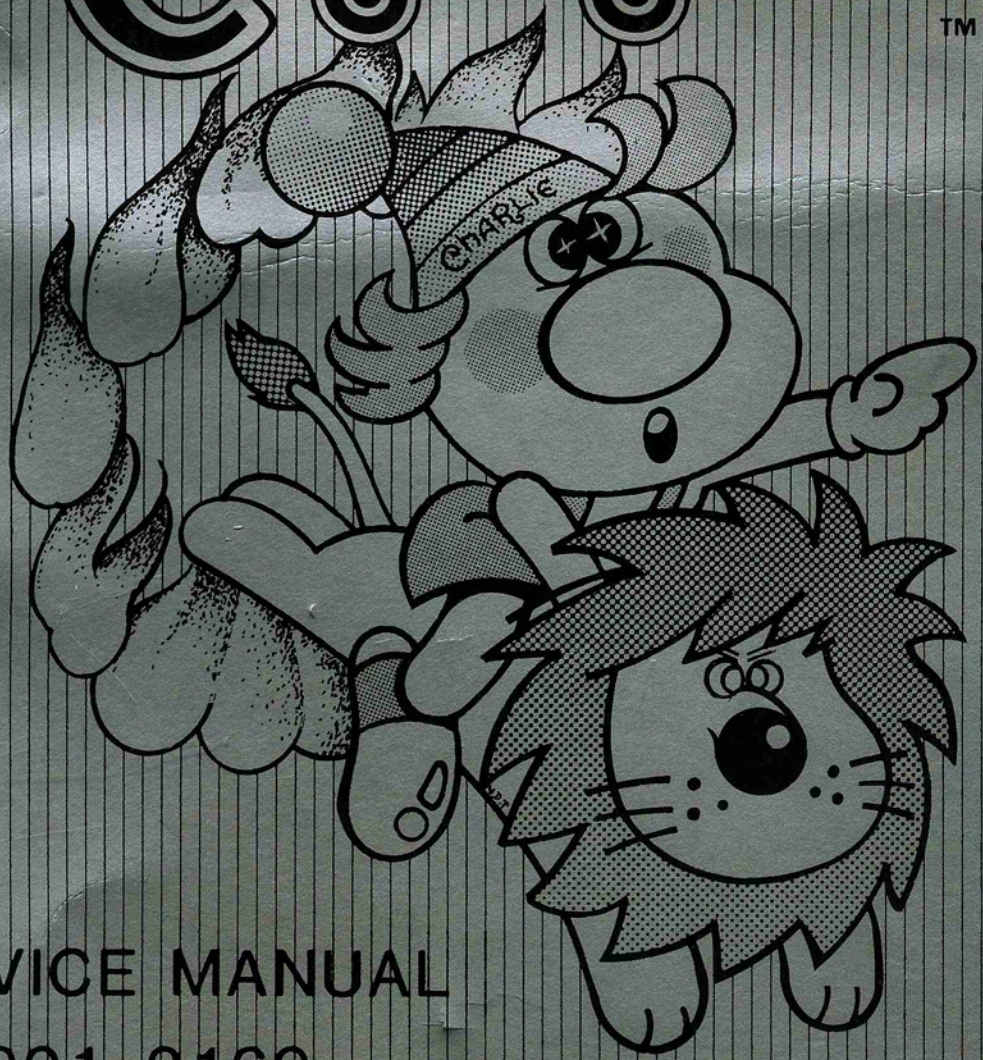
138

Konami® inc.

Centuri™ inc.

CIRCUS CHARLIE

™



SERVICE MANUAL

901-2169

CIRCUS CHARLIE

TABLE OF CONTENTS

USER INFORMATION - F.C.C.

WARNING

THIS EQUIPMENT GENERATES,USES,AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS.

IT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS "A" COMPUTING DEVICE PURSUANT TO SUBPART J OF PART 15 OF F.C.C. RULES, WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE WHEN OPERATED IN A COMMERCIAL ENVIRONMENT.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE THE USER AT HIS OWN EXPENSE WILL BE REQUIRED TO TAKE WHATEVER MEASURES MAY BE REQUIRED TO CORRECT THE INTERFERENCE.

INTRODUCTION

"CIRCUS CHARLIE" IS A MICROPROCESSOR BASED COIN-OPERATED ELECTRONIC GAME, THAT MAKES EXTENSIVE USE OF DIGITAL INTEGRATED CIRCUITRY AND TELEVISION MONITOR CONCEPTS. THIS MANUAL IS DESIGNED FOR THE USE OF MAINTENANCE TECHNICIANS WHO POSSESS A GENERAL KNOWLEDGE OF SOLID-STATE CIRCUITRY AND VIDEO MONITOR THEORY. ANY INDIVIDUAL NOT KNOWLEDGEABLE IN THESE AREAS SHOULD NOT ATTEMPT REPAIR OF THE ELECTRONIC PORTION OF THE GAME.

IN ADDITION TO THIS MANUAL AND TRAINING IN ELECTRONICS, TROUBLE-SHOOTING AND REPAIR WILL BE FACILITATED BY ACCESS TO GENERAL-TYPE HANDTOOLS, A MULTIMETER, A 50 OR 100 MHZ OSCILLOSCOPE AND A LOGIC PROBE WOULD BE HELPFUL.

TECHNICAL ASSISTANCE IS AVAILABLE BY CALLING (305) 558-5200 OR OUR TOLL FREE LINE LISTED BELOW FOR OUT OF STATE CUSTOMERS.
QUESTIONS OR COMMENTS CONCERNING "CIRCUS CHARLIE" OR ANY OF OUR GAMES ARE WELCOME AND SHOULD BE DIRECTED TO:

CENTURI, INC.
CUSTOMER SERVICE DEPARTMENT
TOLL FREE LINE # 800-327-7710

NOTES

NEVER REPLACE ANY COMPONENT WITH ANYTHING OTHER THAN THE EXACT REPLACEMENT PART.
NEVER REMOVE CIRCUIT BOARD CONNECTIONS WHILE POWER IS ON.
DO NOT REPLACE A FUSE WITH ANYTHING OTHER THAN THE PROPER VALUE. A BLOWN FUSE INDICATES AN OVERLOAD CONDITION WITHIN THE GAME. REPLACING A FUSE WITH A HIGHER VALUE CAN CAUSE SEVERE DAMAGE TO INTERNAL COMPONENTS IF AN OVERLOAD OCCURS.
ALWAYS CONSULT THE SERVICE MANUAL BEFORE ATTEMPTING REPAIRS.

CIRCUS CHARLIE

PLAY INSTRUCTIONS

* SELECT ONE OF SIX SCREENS, EACH WITH DIFFERENT LEVELS OF DIFFICULTY, USING JOYSTICK AND JUMP BUTTON.
* USE JOYSTICK TO MOVE CIRCUS CHARLIE FORWARD AND BACKWARD AND JUMP BUTTON TO MAKE HIM JUMP.
* EACH SCREEN MAY BE PLAYED A MAXIMUM OF FIVE TIMES.
* COMPLETE SCREENS AS QUICKLY AS POSSIBLE FOR MAXIMUM BONUS POINTS.
* LOSE ONE CIRCUS CHARLIE IF TIMER RUNS OUT BEFORE A SCREEN IS COMPLETED.
* BONUS POINTS FOR COMPLETING A ROUND WITHOUT LOSING CIRCUS CHARLIE.
* TIMER BONUS POINTS ARE ADDED TO SCORE AFTER EACH COMPLETED ROUND.
* LOSING CIRCUS CHARLIE BEFORE COMPLETING A ROUND REDUCES TIMER STARTING TIME FROM 5,000 TO 1,500.
* GAME IS OVER WHEN ALL CIRCUS CHARLIES ARE LOST.

SCREEN SCORING

FIRE RING-- JUMP THROUGH FIRE RINGS AND FIRE POTS.
COLLECT DOLLAR ($) BAGS FOR EXTRA POINTS.

JUMPING THROUGH	SINGLE FIRE RING	100 POINTS
	DOUBLE FIRE RINGS	200 POINTS
	RING AND FIRE POT	300 POINTS
	2 RINGS & FIRE POT	400 POINTS
	FIRE POTS	500 POINTS
	DOLLAR ($) BAGS	1,000 POINTS

TIGHT ROPE-- JUMP OVER MONKEYS.

BROWN MONKEY	200 POINTS
BLUE MONKEY	300 POINTS
BROWN & BLUE MONKEYS	1,000 POINTS
1 BROWN & 2 BLUE MONKEYS	2,000 POINTS

SCREEN SCORING CONT'ED

TRAMPOLINE-- JUMP FROM TRAMPOLINE TO TRAMPOLINE, USING JOYSTICK ONLY.
AVOID FIRE TORCHES, KNIVES AND JUMPING ON ONE TRAMPOLINE MORE THAN THREE TIMES.
FROM TRAMPOLINE TO TRAMPOLINE ---- 20 POINTS
DOLLAR ($) BAGS ---------- 300 POINTS

BALL WALK-- JUMP FROM BALL TO BALL OR EVERY OTHER BALL.
HIGHER POINTS (500, 700, OR 2,000) FOR SUCCESSFULLY JUMPING OVER A BALL AND LANDING POINT DIFFICULTY.
JUMP FROM BALL TO BALL ---------- 100 POINTS

HORSE BACK-- JUMP FROM HORSE BACK TO SPRINGBOARD AND BACK TO HORSE.
USE JOYSTICK TO CONTROL SPEED OF HORSE.
POINTS ARE GIVEN ACCORDING TO SPRINGBOARD POINT VALUE.
BOUNCING ON THE SAME SPRINGBOARD MORE THAN ONCE ADDS EXTRA POINTS PER BOUNCE.

FLYING TRAPEZE-- ADVANCE AS QUICKLY AS POSSIBLE FOR MAXIMUM POINTS.
USE JOYSTICK TO INCREASE SWING MOVEMENT OF TRAPEZE.
USE TRAMPOLINE TO BOUNCE FROM TRAPEZE TO TRAPEZE.

BONUS POINTS

* BONUS POINTS FOR COMPLETING A ROUND WITHOUT LOSING CIRCUS CHARLIE.

* TIMER BONUS POINTS ARE ADDED TO SCORE AFTER EACH COMPLETED ROUND.

* LOSING CIRCUS CHARLIE BEFORE COMPLETING A ROUND REDUCES TIMER STARTING TIME FROM 5,000 TO 1,500.

CIRCUS CHARLIE

OPTIONAL DIP SWITCH SETTINGS

A. Dip Switch No 1 (8P Dip Switch)

Credits

Coin	Plays	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
1	1	Off	Off	Off	Off	Off	Off	Off	Off
1	2	On	Off	Off	Off	On	Off	Off	Off
1	3	Off	On	Off	Off	Off	On	Off	Off
1	4	On	On	Off	Off	On	On	Off	Off
1	5	Off	Off	On	Off	Off	Off	On	Off
1	6	On	Off	On	Off	On	Off	On	Off
1	7	Off	On	On	Off	Off	On	On	Off
2	1	On	On	On	Off	On	On	On	Off
2	3	Off	Off	Off	On	Off	Off	Off	On
2	5	On	Off	Off	On	On	Off	Off	On
3	1	Off	On	Off	On	Off	On	Off	On
3	2	On	On	Off	On	On	On	Off	On
3	4	Off	Off	On	On	Off	Off	On	On
4	1	On	Off	On	On	On	Off	On	On
4	3	Off	On	On	On	Off	On	On	On
Free Play		On	On	On	On	On	On	On	On

B. Dip Switch No.2 (8P Dip Switch)

1. Number Of Clowns

Number	SW1	SW2
○ 3	Off	Off
4	On	Off
5	Off	On
7	On	On

2. Game Type

Style	SW3	Players
Table	Off	1 or 2 Players
Upright	On	Only 1 Player

3. Bonus Points Setting

First	And Every	SW4	SW5
○ 20,000	70,000	Off	Off
30,000	80,000	On	Off

B. Dip Switch No.2 (continues)

4. Play Difficulty

Option	SW6	SW7
Easy	Off	Off
○ Normal	On	Off
Hard	Off	On
Difficult	On	On

5. Audio Attraction

Sound Mode	SW8
No Sound In Attract Mode	Off
○ Sound In Attract Mode	On

○ Denotes Normal Settings

INSTALLATION

YOUR GAME WAS SHIPPED FROM THE FACTORY IN READY-TO-PLAY CONDITION.
A BRIEF INSPECTION IS SUGGESTED BEFORE THE MACHINE IS REMOVED FROM THE CARTON. IF THERE IS DAMAGE TO THE SHIPPING CARTON, CONTACT THE FREIGHT CARRIER FOR CLAIM PURPOSES. EXTERNAL DAMAGE COULD INDICATE POSSIBLE DAMAGE TO THE CABINET AND/OR ELECTRONICS COMPONENTS.

AFTER THE CARTON HAS BEEN SATISFACTORILY INSPECTED, REMOVE THE MACHINE FROM THE SHIPPING CARTON.

EXAMINE THE INTERIOR OF THE GAME FOR DISCONNECTED WIRES, CABLES OR HARNESSES. MAKE SURE THE ELECTRONIC DEVICES ARE SECURELY MOUNTED IN THEIR SOCKETS, ETC. RECORD THE GAME SERIAL NUMBER, SINCE IT WILL BE REQUIRED FOR REFERENCE AND SERVICING.

ELECTRICAL REQUIREMENTS

UNLESS OTHERWISE SPECIFIED, THIS GAME IS SET TO OPERATE AT 110 VOLTS A.C. (REFER TO 110/220 VAC CONVERSION INSTRUCTIONS).

POWER SUPPLY CHASSIS SCHEMATIC INFORMATION AND PARTS LIST ARE INCLUDED IN THIS MANUAL.

110/220 VAC CONVERSION INSTRUCTIONS

THIS GAME CONTAINS A HARNESS CONFIGURATION WHICH ALLOWS THE MACHINE TO BE OPERATED FROM EITHER A 110 VAC OR 220 VAC, 50 HZ OR 60 HZ POWER SOURCE. ALL GAMES SHIPPED FROM CENTURI, INC.,ARE IN THE 110 VAC CONFIGURATION. TO CHANGE TO THE 220 VAC CONFIGURATION FOLLOW THE PROCEDURE BELOW.

FIRST: UNPLUG THE MACHINE FROM THE WALL OUTLET TO COMPLETELY ELIMINATE SHOCK HAZARDS.

SECOND: REMOVE THE 110 VAC PLUG FROM THE AC POWER CORD AND REPLACE WITH A 220 VAC PLUG. ATTACH THE GREEN WIRE FROM THE AC CORD TO THE GREEN SCREW OF THE 220 VAC PLUG. ATTACH THE WHITE WIRE (NEUTRAL) AND THE BLACK WIRE (HOT) OF THE AC CORD TO THE 220 VAC PLUG.

THIRD: REMOVE THE SINGLE 3 AMP SLOW-BLOW FUSE FOUND IN THE A.C. DISTRIBUTION BRACKET, AND INSTALL TWO, 1.5 AMP SLOW-BLOW FUSES. NEXT, CUT THE #18 AWG, WHITE JUMPER WIRE AT BOTH ENDS OF THE FUSE HOLDER AND REPLACE THE COVER.

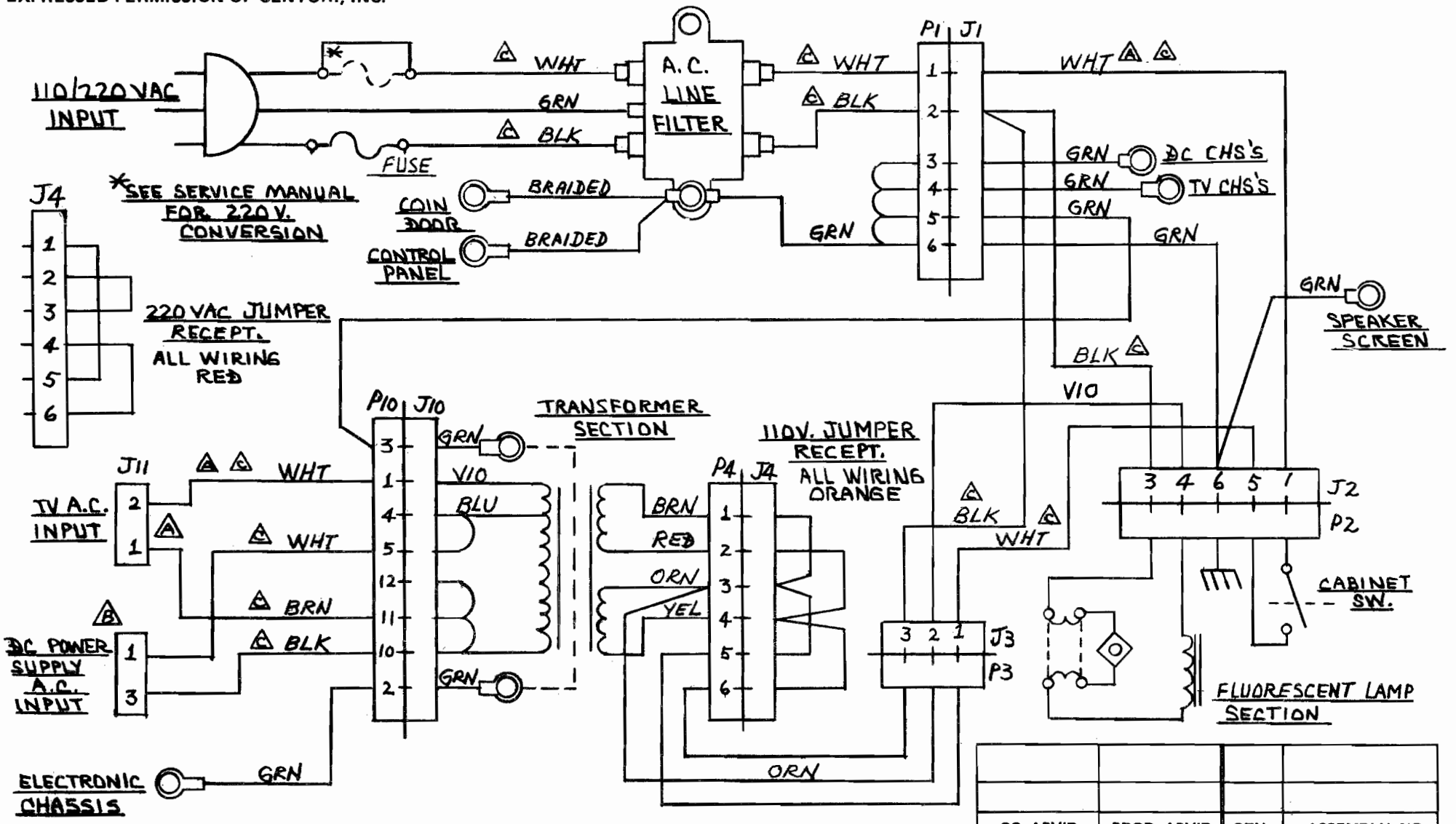
FOURTH: ON THE GAME POWER TRANSFORMER, LOCATE THE "ORANGE" JUMPER PLUG WHICH IS MARKED, 110 VAC. UNPLUG THE "ORANGE" JUMPER, AND PLUG IN THE "RED" JUMPER PLUG MARKED 220 VAC.

TO REVERT BACK TO 110 VAC, REPLACE THE COMPONENTS ORIGINALLY REMOVED FROM THE PROCEDURE STEPS ABOVE.

***NOTE: THE COMMON SIDE OF THE A.C. LINE MUST NOT BE FUSED IN THE 110 VAC CONFIGURATION, REPLACE THE #18 AWG. WHITE JUMPER WIRE.

(REFER ALSO TO THE 110/220 VAC POWER INTERCONNECT DIAGRAM)

FIGURE 1



QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY
C	015	CHG'ED WHT WIRES TO BLK, BLK TO WHT, BRN TO WHT, WHT TO BRN	MJ
B	014	REPLACED OPEN LUGS WITH A 3 PIN CONNECTOR TO DC PWR SUPPLY	CN
A	012	CHG'ED WHT/GRN WIRE TO BLK CHG'ED WHT/RED WIRE TO BRN	CN

TOLERANCES
Unless Otherwise Specified

FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	+	2°

centuri inc. HIALEAH, FLORIDA 33014

NAME: 110/220 V. POWER INTERCONNECT DIAGRAM

MATL'S.	HEAT TREAT.	FINISH

DWN	APP'D	DATE	SCALE	PART NO.	REV.
MJ		11-8-83	X	906-3129	C

AF 17899A

ROUTINE MAINTENANCE & SERVICE

BECAUSE OF THE SOLID STATE ELECTRONIC CIRCUITRY, THIS MACHINE SHOULD REQUIRE VERY LITTLE MAINTENANCE, AND ONLY OCCASSIONAL ADJUSTMENT. HOWEVER, IT IS NECESSARY TO TAKE STEPS TO INSURE THIS.

THE VOLUME CONTROL IS LOCATED ON THE PRINTED CIRCUIT BOARD AND CAN BE ACCESSED THROUGH THE REAR CABINET DOOR.

THE VIDEO MONITOR HAS BEEN PROPERLY ADJUSTED BEFORE SHIPPING. OCCASSIONALLY MINOR ADJUSTMENTS ARE NECESSARY. TECHNICAL INFORMATION, ALONG WITH SCHEMATICS, CAN BE FOUND IN THIS MANUAL. ADJUSTMENT CONTROLS FOR THE MONITOR ARE LOCATED ON THE REAR OF THE MONITOR.

"DO NOT MAKE ANY ADJUSTMENTS ON THIS MACHINE WHILE THE POWER IS ON!" THIS MACHINE SHOULD ONLY BE ADJUSTED BY A "QUALIFIED" TECHNICIAN.

FOR SERVICE INFORMATION, CONTACT:

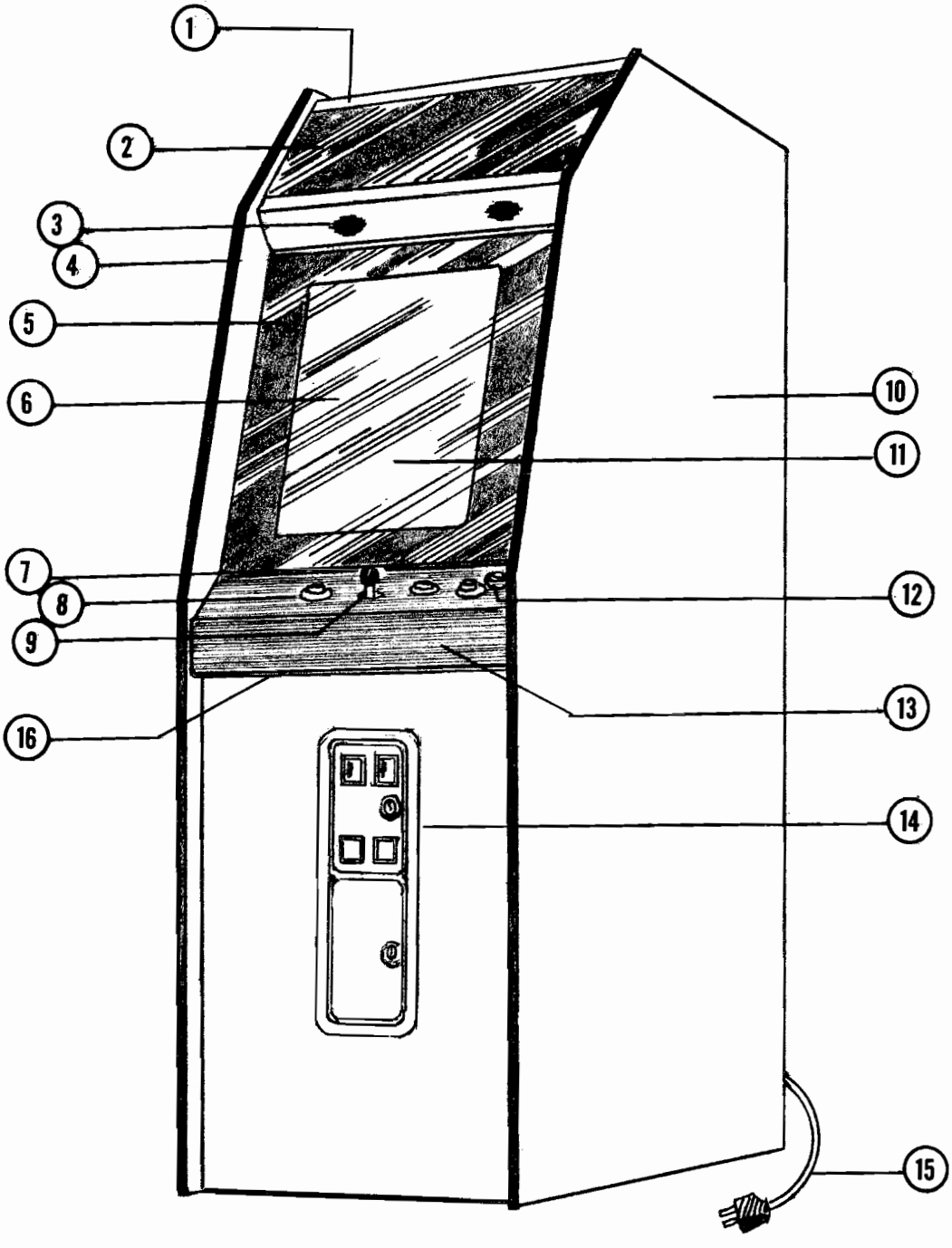
CENTURI, INC.
CUSTOMER SERVICE DEPARTMENT
#800-327-7710 (OUTSIDE THE STATE OF FLORIDA)
#(305) 558-5200 (IN FLORIDA)

POWER SUPPLY

THE COMPUTER BOARD IN THIS GAME OPERATES MOST EFFICIENTLY AND RELIABLY WHEN THE POWER SUPPLY IS SET SO THE VOLTAGE ON THE BOARD IS 5.0 VOLTS, $\pm$ 0.1 VOLT. TO CHECK THIS, PLACE A METER ACROSS 5 VOLTS AND GROUND, AT THE EDGE CONNECTOR. IF NECESSARY, ADJUST THE SCREWDRIVER CONTROL ON THE POWER SUPPLY, SO THE METER READS BETWEEN 4.9 AND 5.1 VOLTS.

CABINET FRONT VIEW

FIGURE-2



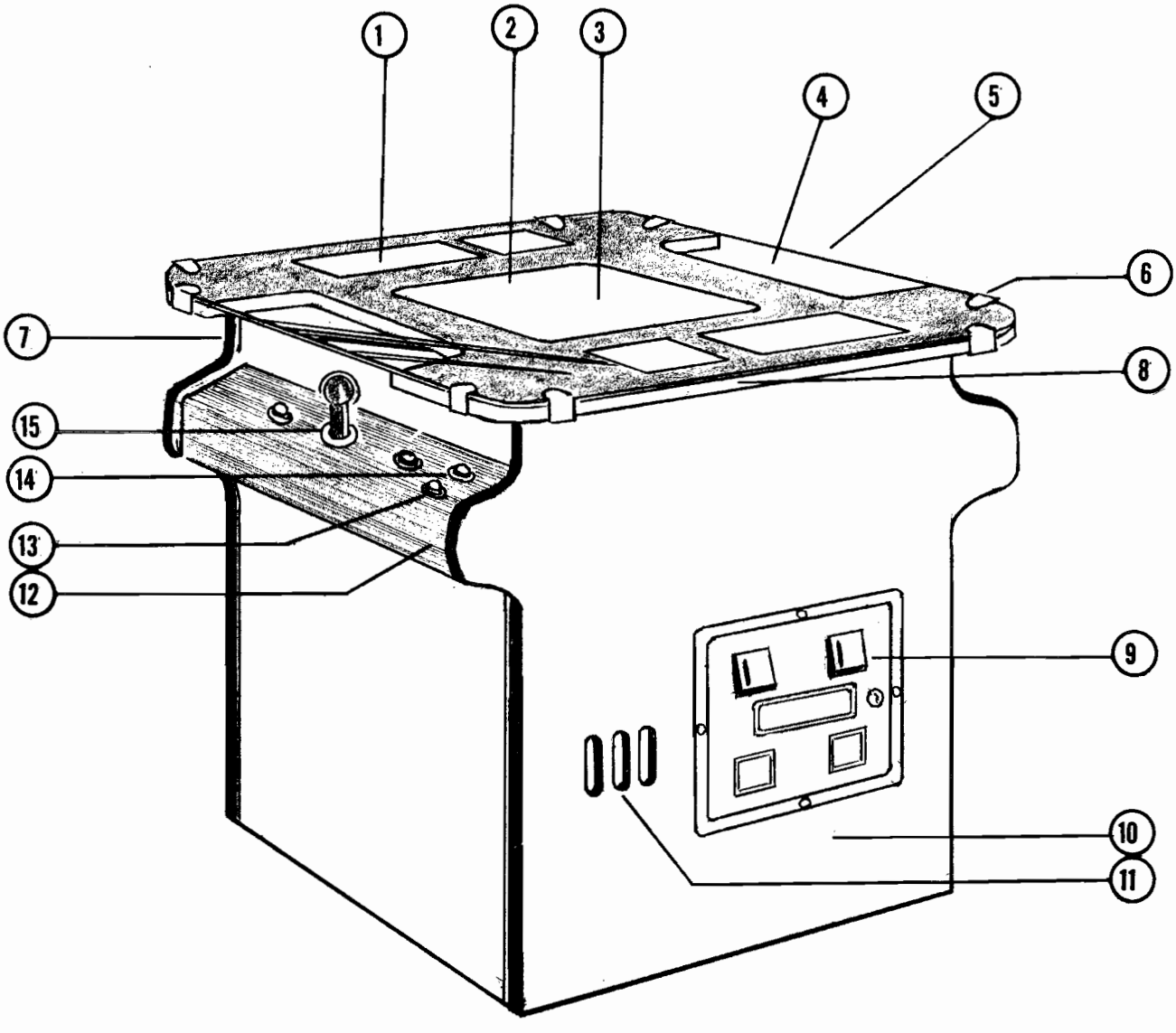
CABINET FRONT VIEW, UPRIGHT

PARTS LIST

ITEM	CENTURI P/N	DESCRIPTION
1	302-2705	MARQUEE TOP HOLDING BRACKET
2	802-3109	MARQUEE, CIRCUS CHARLIE
3	403-1171	SPEAKER, 8 OHM, 6 WATT
	305-2650	SPEAKER SCREEN
4	803-0965	VINYL TRIM
5	804-3136	MONITOR BEZEL
6	605-0957	VIEWING GLASS, #2094
7	302-2858	CONTROL PANEL ANGLE BRACKET
8	701-1171	PUSH BUTTON ASS'Y, RED
	409-1163	SWITCH & HOLDER ASS'Y
	103-0951	PAL NUT
9	702-1184	JOYSTICK ASS'Y, 2 WAY LEAF SW.,MONROE
10	801-3098	SIDE GRAPHIC DECAL, LEFT
	801-3099	SIDE GRAPHIC DECAL, RIGHT
11	406-2055	19" COLOR MONITOR, W/G 19K4951
12	701-1170	PUSH BUTTON ASS'Y, WHITE
	409-1163	SWITCH & HOLDER ASS'Y
	103-0951	PAL NUT
13	609-3178	CONTROL PANEL WITH OVERLAY
	801-3102	CONTROL PANEL OVERLAY,ONLY
14	009-4699	MINI COIN DOOR, COIN CONTROLS,INC.
15	402-1511	A.C. POWER CORD
16	306-2661	CONTROL PANEL HINGE

CABINET FRONT VIEW

FIGURE-3



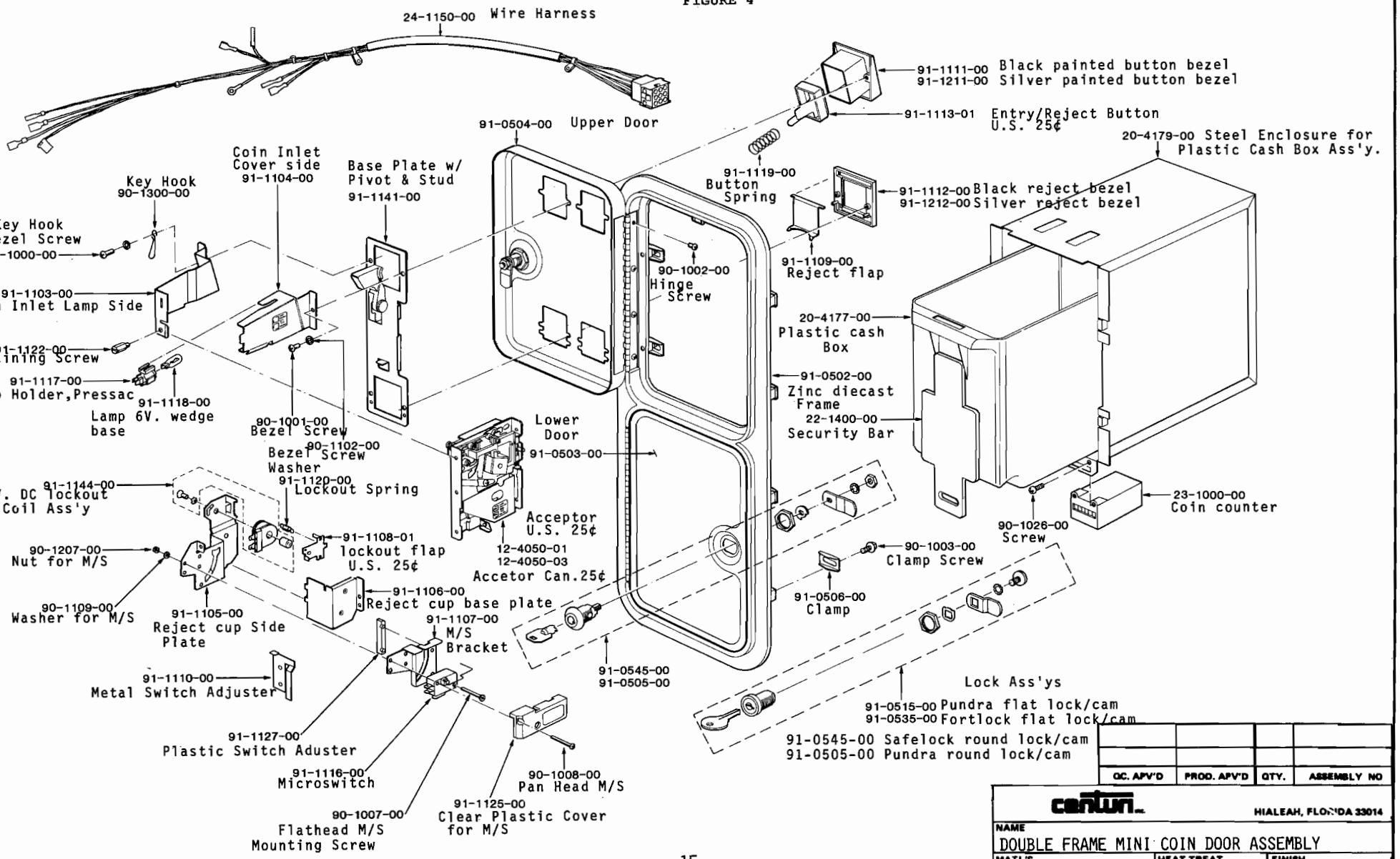
COCKTAIL TABLE

CABINET FRONT VIEW

PARTS LIST

ITEM	CENTURI P/N	DESCRIPTION
1	908-3133	GAME & PLAYER INSTRUCTION CARD
2	804-3130	MONITOR BEZEL, 19 INCH
	406-2055	19" COLOR MONITOR, W/G 19K4951
3	605-0976	TOP COVER PLEXI-GLASS
4	802-3115	TOP GLASS, SILKSCREENED
5	609-3180	CONTROL PANEL & OVERLAY, 2ND PLAYER
	801-3135	CONTROL PANEL OVERLAY,(ONLY),2ND PLAYER
6	302-2708	TOP GLASS BRACKET
7	803-0965	VINYL "T" MOLDING, 3/4 X 140 IN.
8	803-0969	VINYL "T" MOLDING, 1 X 115 IN.
9	009-4697	STD. COIN DOOR, WICO
10	017-0960	CASH BOX
	303-2646	CASH BOX COVER, WICO DOOR ONLY
11	403-1173	SPEAKER, 8 OHM, 6 WATT
	305-2650	SPEAKER SCREEN
12	609-3179	CONTROL PANEL & OVERLAY, 1ST PLAYER
	801-3134	CONTROL PANEL OVERLAY,(ONLY), 1ST PLAYER
13	701-1171	PUSH BUTTON ASS'Y, RED
14	701-1170	PUSH BUTTON ASS'Y, WHITE
	409-1163	SWITCH & HOLDER ASS'Y
	103-0951	PAL NUT
15	702-1184	JOYSTICK, 2 WAY LEAF SWITCH ASS'Y, MONROE
	607-4852	(NOT SHOWN) ISOLATION TRANSFORMER,110/220VAC

FIGURE 4



QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

centun HIALEAH, FLORIDA 33014

NAME					
DOUBLE FRAME MINI COIN DOOR ASSEMBLY					
MATL'S.		HEAT TREAT.		FINISH	
DWN.	APP'D.	DATE	SCALE NONE	PART NO. 009-4699	REV.

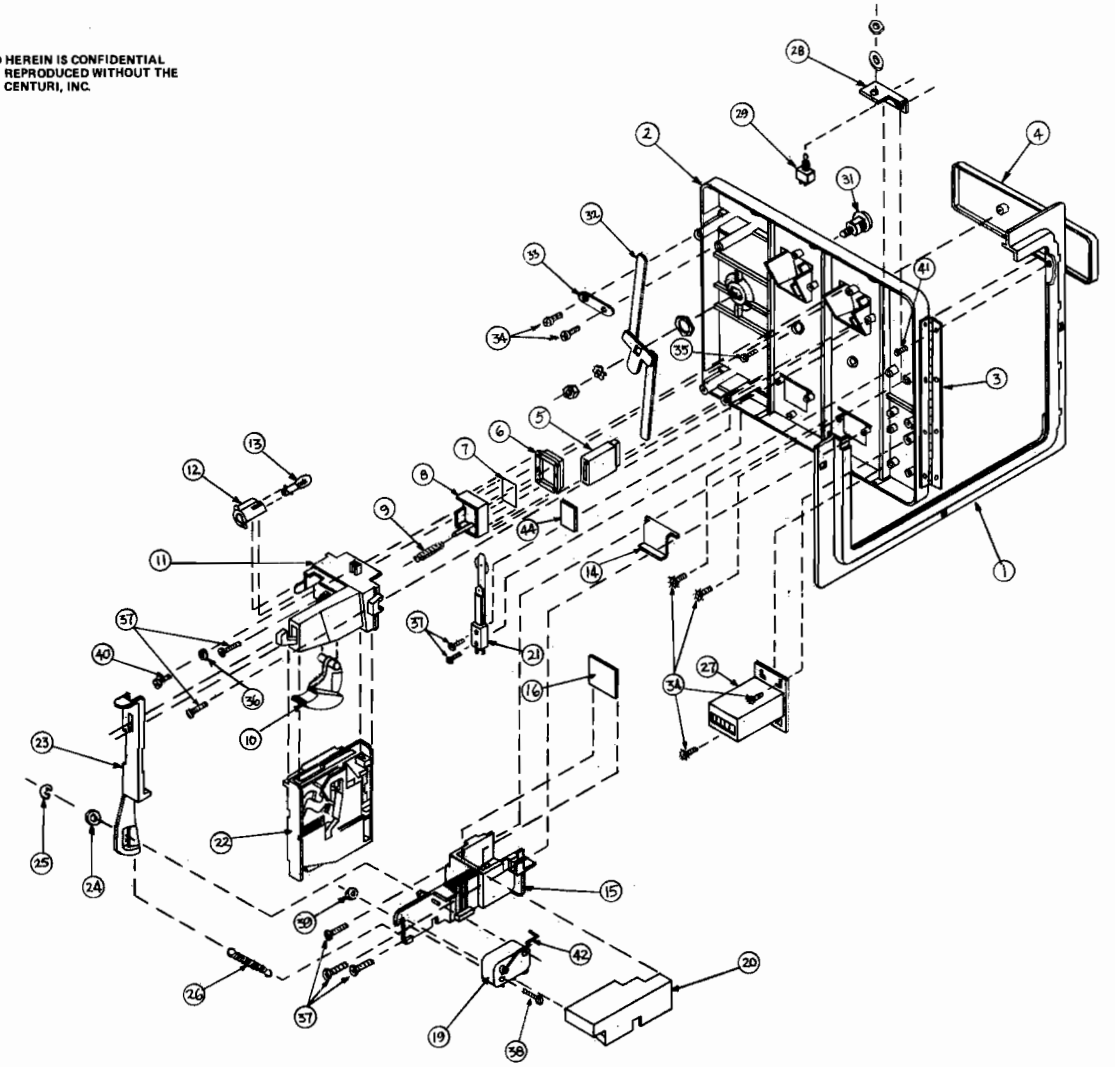


FIGURE 5

WICO P/N 15-8291-02

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES
Unless Otherwise Specified
FRACTIONS ± 1/32
DECIMALS 2 PL ± .015
DECIMALS 3 PL ± .005
HOLES + .003 − .001
ANGLES ± 1/2°
SHT. MET BENDS ± 2°

centuri. HIALEAH, FLORIDA 33014

NAME: STD SINGLE COIN DOOR W/2 COIN ENTRY

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D.	DATE	SCALE	PART NO.	REV.
MJ.		8-8-83	XL	009-4697	

STANDARD COIN DOOR

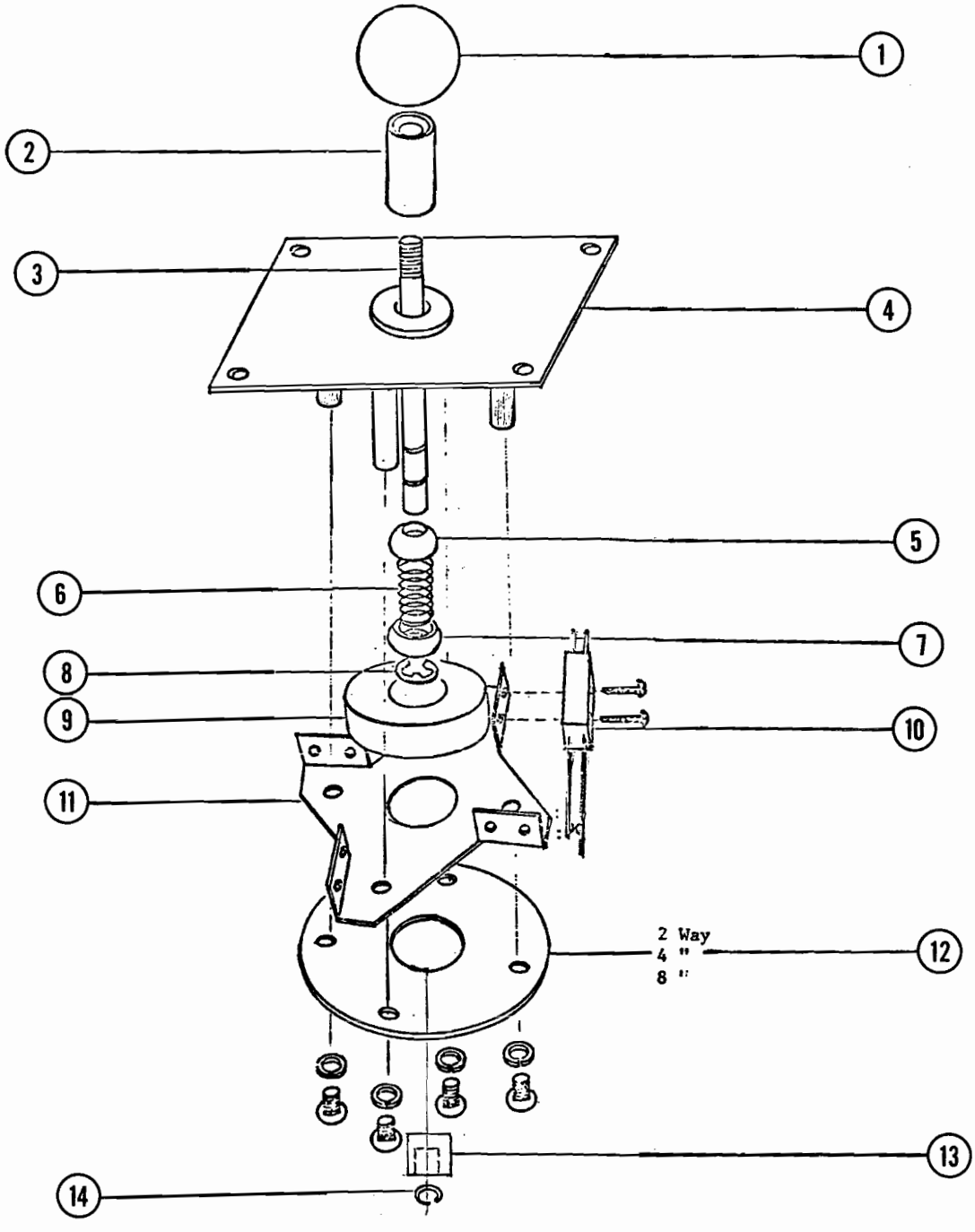
WICO P/N 15-8281-01

PARTS LIST

ITEM NO.	Wico P/N	Description	Req'd
1	15-8039	Door Frame	1
2	15-8038	Door	1
3	30-9125	Hinge	1
4	15-8117	Nameplate, Centuri	1
5	15-8074	Coin Entry Plate	2
6	15-8072	Push Button, Cover	2
7	26-0583	Label, Push to reject, 25¢	2
8	15-8071	Push Button	2
9	30-7722	Compression Spring	2
10	15-8084	Reject Lever	2
11	15-8075	Coin Chute	2
12	15-9419	Lamp Holder Ass'y	2
13	21-0044	Miniature Lamp, 6V	2
14	15-8083	Coin Return Door	2
15	15-8081	Coin Box	2
16	15-8092	Guard	2
19	23-1347	Coin Switch	2
20	15-8043	Switch Cover	2
21	15-1255	Slam Switch	1
22	31-4015	Plastic Coin Acceptor, 25¢	2
23	15-8086	Coin Acceptor Retainer	2
24	30-1790	Washer,.255 ID x .625 OD x .037" Thick	2
25	30-0931	"E" Ring, ¼"	2
26	30-7372	Extension Spring	2
27	31-4550	Coin Counter, 6VDC, W/Brkt	1
28	15-8113	Bracket	1
29	23-1370	Service Switch	1
31	34-1855	Lock Ass'y, 5/8"	1
32	55-2905	Lock Cam Ass'y	1
33	55-2909	Lock Cam Plate	2
34	30-3001	M.S. Pan Hd, Phil.#6-32 x ¼"lg	9
35	30-0164	M.S. F/Hd, Phil.#6-32 x 3/8"lg	2
36	30-1921	Washer,.165 ID x .475 OD x .032" Thick	2
37	30-2826	M.S. Fil/Hd. Phil.#6-32 x 7/16"lg	12
38	30-2818	M.S. Rd/Hd. #4-40 x 7/8" lg	2
39	30-1213	Hex. Nut, #4-40	2
40	30-2778	M.S. Fil/Hd. Phil.#6-32 x ½"lg	2
41	30-2833	M.S.Pan/Hd. Phil. #6-32 x 3/16"lg	9
42	23-1348	Wire Form (Coin Switch)	2
43	97-0007	Door Cable Ass'y	1
44	26-3125	Double Sided Tape(3M) ½"x½"	1
45	15-8107	Key Hook	1

EXPLODED VIEW OF JOYSTICK ASS'Y
2-4-8 WAY JOYSTICK

FIGURE 6

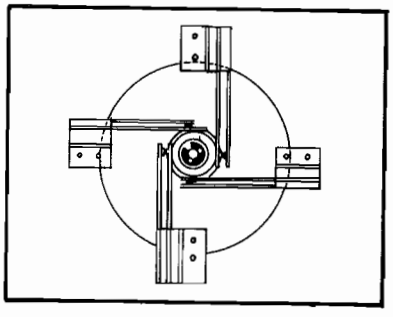


MONROE JOYSTICK

PARTS LIST

ITEM	CENTURI P/N	DESCRIPTION
1	409-1183	1 3/8 O.D. BALL
2	607-0028	SPACER
3	607-0029	SHAFT
4	409-1186	TOP PLATE WELDING ASS'Y
5	409-1187	TOP BALL
6	409-1188	SPRING
7	409-1189	BOTTOM BALL
8	409-1190	E-RING
9	409-1191	NYLON ACTUATOR
10	409-1182	MOLDED BLADE SWITCH, WICO
11	409-1195	BOTTOM SUPPORT PLATE
12	409-1192	2 WAY FUNCTION PLATE
	409-1193	4 WAY FUNCTION PLATE
	409-1194	8 WAY FUNCTION PLATE
13	702-1199	ROLLER
14	702-1200	C-RING

FIGURE 7



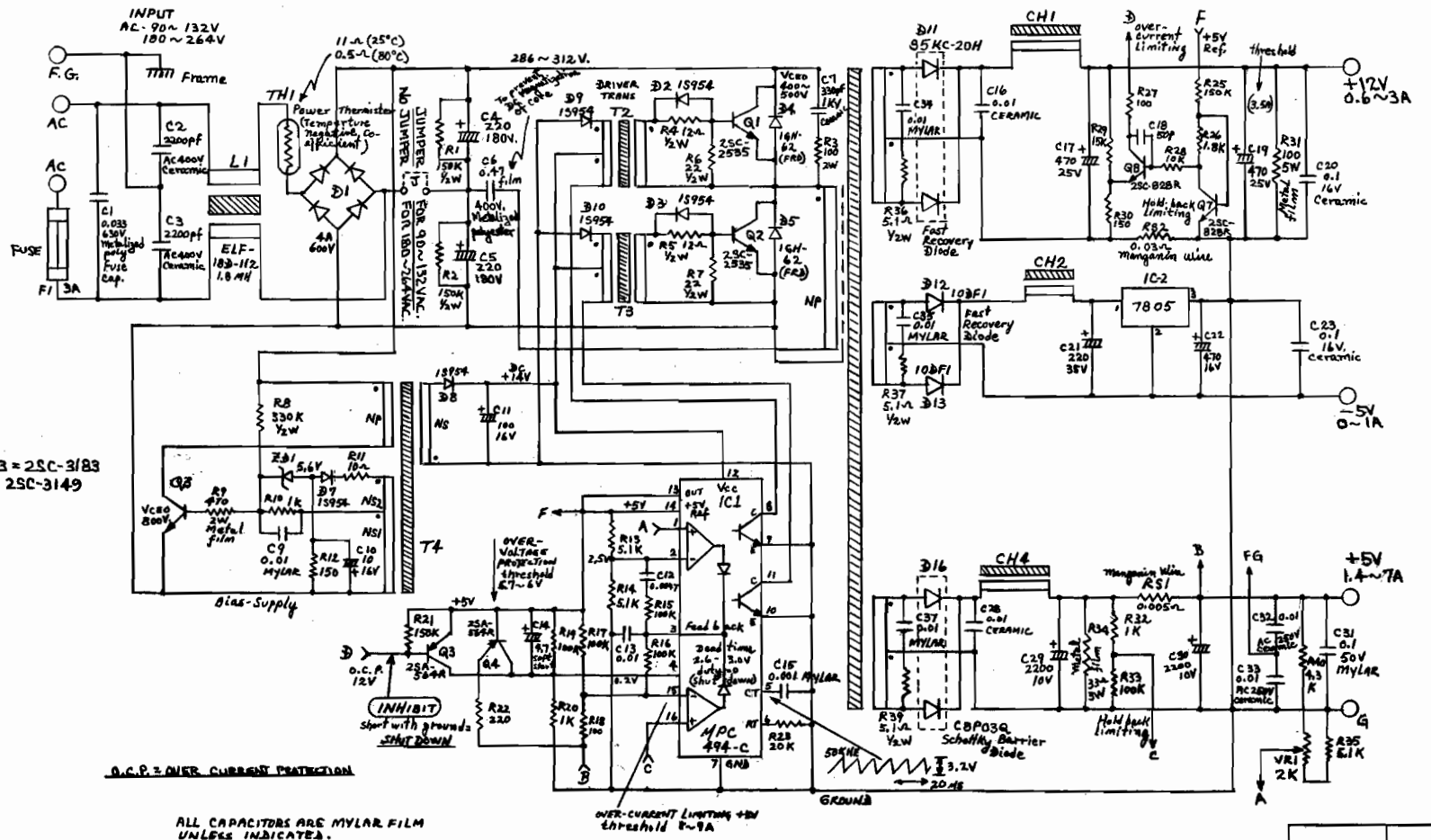
Switch Arrangement
Top View

EXPLODED VIEW OF JOY STICK ASS'Y.

WICO JOYSTICK ASS'Y P/N 409-1180

PARTS LIST

ITEM	CENTURI P/N	DESCRIPTION
1	607-0003	KNOB & SHAFT ASSEMBLY
2	607-0004	PLASTIC WASHER 2" DIAMETER
3	607-0005	TOP PLATE
4	607-0006	BOTTOM WASHER, WICO 15950501
5	607-0007	DIAPHRAGM, WICO 15952301
6	607-0008	SW. MOUNTING PLATE, WICO 15954201
7	607-0010	MOLDED BLADE SW.,WICO 15108401
8	607-0009	ACTUATOR GUARD, WICO 15954501
9	607-0011	SW. MOUNTING BRKT.,WICO 15950601



Q3 = 2SC-3183
OR 2SC-3149

O.C.P. = OVER CURRENT PROTECTION

ALL CAPACITORS ARE MYLAR FILM UNLESS INDICATED.

ALL RESISTORS ARE CARBON ¼ WATT UNLESS INDICATED.

FIGURE 8

POWER SUPPLY
P/N 414-2020

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES
Unless Otherwise Specified

FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

centuri HIALEAH, FLORIDA 33014

NAME: PAL SWITCHING POWER SUPPLY, PSR-703-AE

MAT'L'S.	HEAT TREAT.	FINISH

DWN	APPD	DATE	SCALE	PART NO.	REV.
MD.		4-30-83	½	905-4907	

AF 178898

Power Supply PSR-703AE

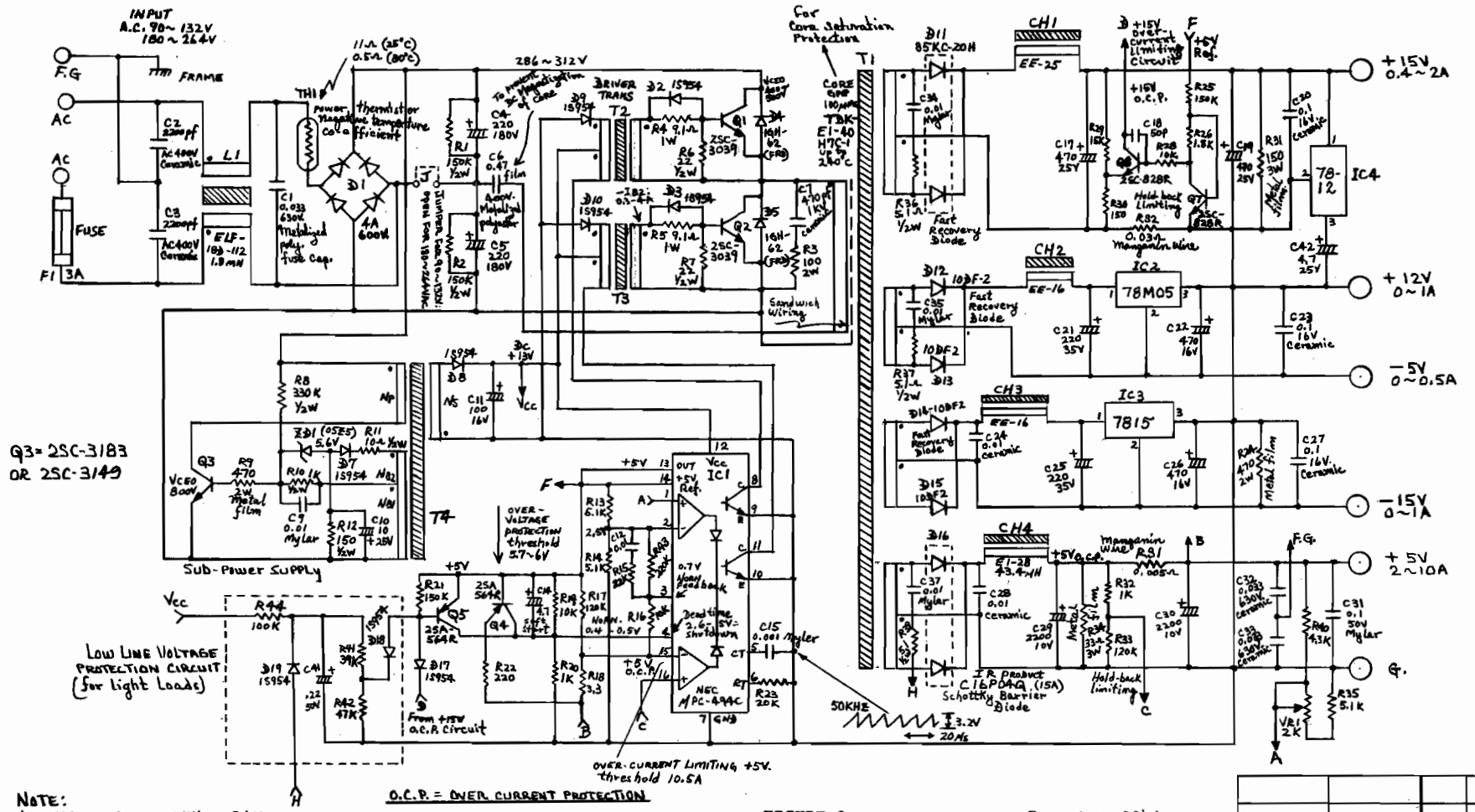
PARTS LIST (414-2020)

Symbol	Description	Qty
D1	Bridge Stack, RB-40, 600V	1
D4,D5	Fast Recovery Diode, 1GH62	2
D2,D3,D7, D8,D9,D10	Switching Diode, 1S1554	6
D11	Fast Recovery Diode, S5KC20H	1
D12,D13	Fast Recovery Diode, 10DF1	2
D16	Schotky Barrier Diode, C8P030	1
ZD1	Zener Diode, 05Z, 5.6V, 500mw	1
Q1,Q2	Power Transistor, 2SC2553	2
Q3	Power Transistor, 2SC2831	1
Q4,Q5	Transistor, 2SA564R	2
Q6,Q7	Transistor, 2SC828R	2
IC 1	Switching Control, UPC494C	1
IC 2	Regulator IC, 7805 (1A)	1
T1	Power Transformer, SM2335	1
T2,T3	Driver Transformer, SM2215B	2
T4	Power Transformer (Sub) SM2376	1
CH1	Choke Transformer, SM2219	1
CH2	Choke Transformer, SM2376B	1
CH4	Choke Transformer, SM2366	1
L1	AC Line Filter, ELF-18D-112	1
TH1	Power Thermistor, TD18-010	1
C2,C3	Ceramic Capacitor, 2200pf, AC400V	2
C1	Capacitor, Metalized, 0.033mf, 600V	1
C6	" " , 0.47mf, 50V	1
C15	" , Mylar, 0.001mf, 50V	1
C9,C13,C34, C35,C37	" " , 0.01mf	5
C12	" " , 0.0047mf	1
C31	" " , 0.1mf	1
C18	Capacitor, Ceramic, 50pf, 50V	1
C7	" " , 330pf, 1kv	1
C16,C28	" " , 0.01mf, 16V	2
C20,C23	" " , 0.1mf, 16V	2
C14	Capacitor,Electrolytic, 4.7mf, 25V	1
C10	" " , 10mf, 16V	1
C11	" " , 100mf, 16V	1
C21	" " , 220 mf, 35V	1
C22	" " , 470mf, 16V	1
C17,C19	" " , 470mf, 25V	2
C29,C30	" " , 2200mf, 10V	2
C4, C5	" " , 220mf, 180V	2
R31	Resistor,Cement, 270 ohm, 5W	1
R34	" , Oxide Metal Film, 33 ohm, 3W	1
R9	" " " " , 470 ohm,2W	1
R3	" " " " , 100 ohm,2W	1

POWER SUPPLY PSR-703AE

PART LIST (414-2020)

Symbol	Description	Qty
R36,R37,R39	Resistor, Carbon, 5.1 ohm, 1/2 W	3
R4,R5	" " , 12 ohm, 1/2 W	2
R6,R7	" " , 22 ohm, 1/2 W	2
R1,R2	" " , 150K ohm, 1/2 W	2
R8	" " , 330K ohm, 1/2 W	1
R12	" " , 150 ohm, 1/4 W	1
R10	" " , 1K ohm, 1/4 W	1
R11	" " , 10 ohm, 1/4 W	1
R40	" " , 3.9K ohm, 1/4 W	1
R35	" " , 5.1K ohm, 1/4 W	1
R18,R27	" " , 100 ohm, 1/4 W	2
R30	" " , 180 ohm, 1/4 W	1
R22	" " , 220 ohm, 1/4 W	1
R32	" " , 1K ohm, 1/4 W	1
R26	" " , 1.8K ohm, 1/4 W	1
R12,R14	" " , 5.1K ohm, 1/4 W	2
R28	" " , 10K ohm, 1/4 W	1
R29	" " , 15K ohm, 1/4 W	1
R23	" " , 20K ohm, 1/4 W	1
R19	" " , 6.8K ohm, 1/4 W	1
R15,R16,R17,R33	" " , 100K ohm, 1/4 W	4
R21	" " , 150K ohm, 1/4 W	1
R25	" " , 270K ohm, 1/4 W	1
R20	" " , 390 ohm, 1/4 W	1
VR1	Semi-fixed resistor, GFD6-B 3K	1
RS1	Manganese Metal Wire, A-2145	1
RS2	Manganese Metal Wire, 1.0 Ø x 55m/m	1
F1	Fuse, 3 amp.	1
	Fuse Holder, F-207	1



NOTE:
ALL CAPACITORS ARE MYLAR-FILM UNLESS INDICATED.
ALL RESISTORS ARE CARBON ¼ WATT UNLESS INDICATED.

FIGURE 9

POWER SUPPLY
P/N 414-2021

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES
Unless Otherwise Specified
FRACTIONS ± 1/32
DECIMALS 2 PL ± .015
DECIMALS 3 PL ± .005
HOLES + .003 − .001
ANGLES ± 1/2°
SHT. MET BENDS ± 2°

centuri inc. HIALEAH, FLORIDA 33014

NAME: PAL SWITCHING POWER SUPPLY, PSR-1105-AP

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D.	DATE	SCALE	PART NO.	REV.
M.L.		8-1-83	2/1	905-4908	

AF 17899B

Power Supply PSR-1105AP

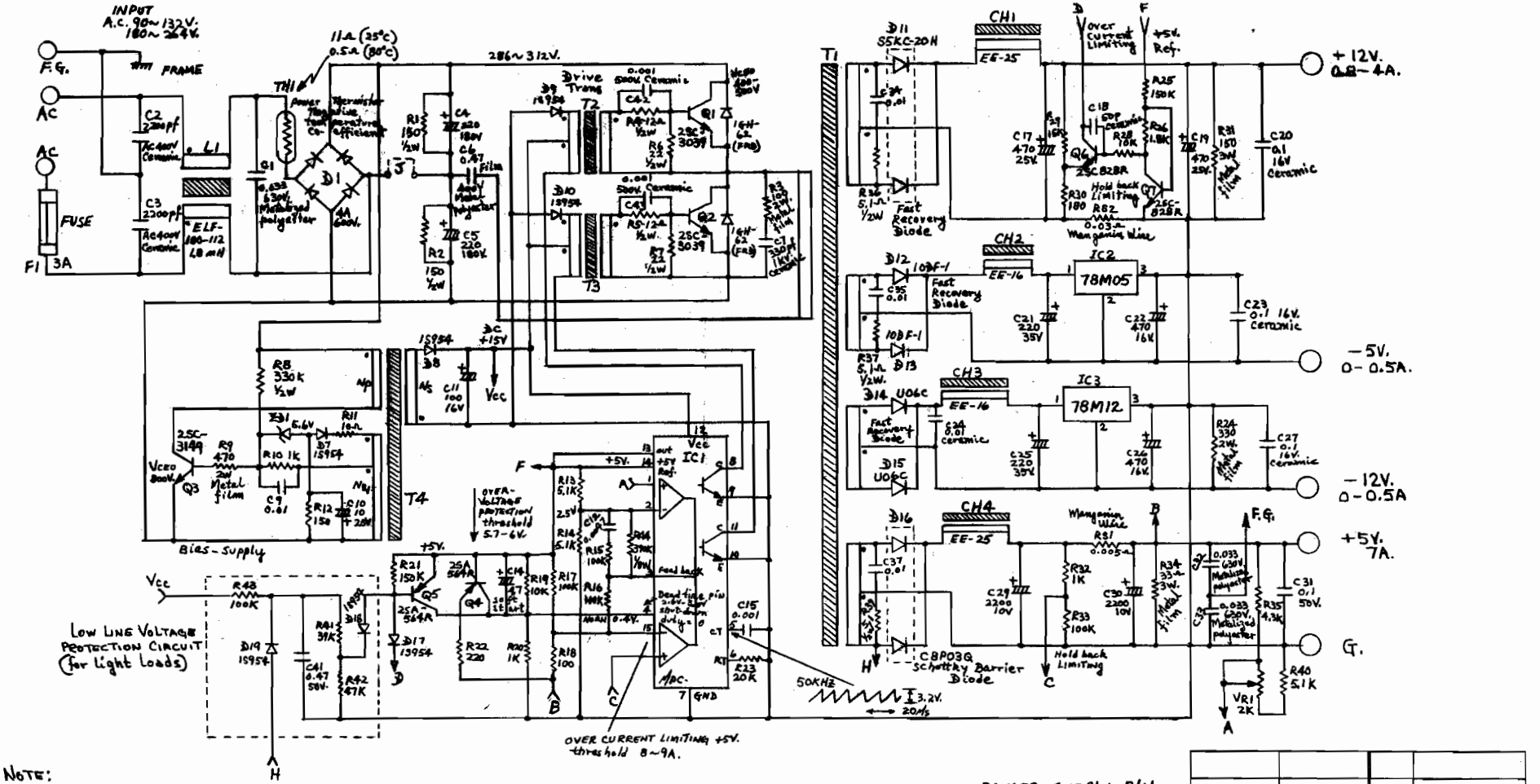
PARTS LIST (414-2021)

Symbol	Description	Qty
D1	Bridge Rectifier, S4VB-600V	1
D2,3,7,8,9, 10,17,18,19	Switching Diode, 1S954	9
D4,5	Fast Recovery Diode, 1GH62, 400V	2
D12,13,14,15	Fast Recovery Diode, 10DF-2, 200V	4
D11	Fast Recovery Diode, S5KC20H, 200V	1
D16	Schottky Barrier Diode, C16P04Q	1
ZD1	Zener Diode, 05Z5, 6A, 5.6V, 500mw	1
Q1,2	Power Transistor, 2SC3039	2
Q3	Power Transistor, 2SC3149	1
Q4,5	Transistor, 2SA564R	2
Q6,7	Transistor, 2SC828R	2
IC1	Switching Control, mPC494C, NEC	1
IC2	Regulator, 78M05	1
IC3	Regulator, 7815	1
IC4	Regulator, 7812	1
T1	Power Transformer, SM-2405	1
T2,3	Driver Transformer, SM-2215B	2
T4	Sub-Power Supply Transformer, SM-2399	1
CH1	EE-25, Choke Inductor, SM-2374	1
CH2,3	EE-16, Choke Inductor, SM-2367	2
CH4	EI-28, Choke Inductor, SM-2391	1
L1	AC Line Filter, ELF-18D-112	1
TH1	Power N.T.C. Thermistor, TD18-010	1
C1,32,33	Capacitor,Metalized Polyester,0.033mf,630V	3
C2,3	Capacitor,Ceramic,2200pf,AC 400V, ±20%	2
C4,5	Capacitor,Electrolytic, 220mf, 180V	2
C6	Capacitor,Metalized Polyester,0.47mf, 400V	1
C7	Capacitor,Ceramic, 470pf, 1KV	1
C9,12,34,35,37	Capacitor, Mylar Film, 0.01mf, 50V	5
C10	Capacitor, Electrolytic, 10mf, 25V	1
C11	Capacitor, Electrolytic, 100mf, 16V	1
C14,42	Capacitor, Electrolytic, 4.7mf, 25V	2
C15	Capacitor,Polyester Film, 0.001mf, 50V	1
C17,19	Capacitor, Electrolytic, 470mf. 25V	2
C18	Capacitor, Ceramic, 50pf, 50V	1
C20,23,27,28	Capacitor, Ceramic, 0.1mf, 16V	4
C21,25	Capacitor, Electrolytic, 220mf, 35V	2
C22,26	Capacitor, Electrolytic, 470mf, 16V	2
C24	Capacitor, Ceramic, 0.01mf, 50V	1
C29,30	Capacitor, Electrolytic, 2200mf, 10V	2
C31	Capacitor, Mylar Film, 0.1mf, 50V	1
C41	Capacitor, Electrolytic, 0.22mf, 50V	1
R1,2	Resistor,Carbon Film, 150K Ohm, ½W, ±5%	2
R3	Resistor, Metal Film, 100 Ohm, 2W, ±5%	1
R4,5	Resistor, Metal Film, 9.1 Ohm, 1W, ±5%	2
R6,7	Resistor,Carbon Film, 22 Ohm, ½W, ±5%	2

Power Supply PSR-1105AP

PARTS LIST (414-2021)

Symbol	Description	Qty
R8	Resistor,Carbon Film, 330K Ohm, ½W, ±5%	1
R9	Resistor,Metal Film, 470 Ohm, 2W, ±5%	1
R10	Resistor,Mini-Metal Film,1K Ohm, ½W, ±5%	1
R11	Resistor,Mini-Metal Film, 10 Ohm, ½W, ±5%	1
R12	Resistor,Mini-Metal Film,150 Ohm, ½W, ±5%	1
R13,14,35	Resistor,Carbon Film, 5.1K Ohm, ¼W, ±5%	3
R15	Resistor,Carbon Film, 22K Ohm, ¼W, ±5%	1
R16,19,28	Resistor,Carbon Film, 10K Ohm, ¼W, ±5%	3
R17,33	Resistor,Carbon Film, 120K Ohm, ¼W, ±5%	2
R18	Resistor,Carbon Film, 3.3 Ohm, ¼W, ±5%	1
R20	Resistor,Carbon Film, 1K Ohm, ¼W, ±5%	1
R21,25	Resistor,Carbon Film, 150K Ohm, ¼W, ±5%	2
R22	Resistor,Carbon Film, 220 Ohm, ¼W, ±5%	1
R23	Resistor,Carbon Film, 20K Ohm, ¼W, ±5%	1
R24	Resistor,Metal Film, 470 Ohm, 2W, ±5%	1
R26	Resistor,Carbon Film, 1.8K Ohm, ¼W, ±5%	1
R29	Resistor,Carbon Film, 15K Ohm, ¼W, ±5%	1
R30	Resistor,Carbon Film, 150 Ohm, ¼W, ±5%	1
R31	Resistor,Metal Film, 150 Ohm, 3W, ±5%	1
R32	Resistor,Carbon Film, 1K Ohm, ¼W, ±5%	1
R34	Resistor,Metal Film, 33 Ohm, 3W, ±5%	1
R36,39	Resistor,Metal Film, 5.1 Ohm, ½W, ±5%	2
R37	Resistor,Carbon Film, 5.1 Ohm, ½W, ±5%	1
R40	Resistor,Carbon Film, 4.3K Ohm, ¼W, ±5%	1
R41	Resistor,Carbon Film, 39K Ohm, ¼W, ±5%	1
R42	Resistor,Carbon Film, 47K Ohm, ¼W, ±5%	1
R43	Resistor,Carbon Film, 220K Ohm,1/8W, ±5%	1
R44	Resistor,Carbon Film, 100K Ohm, ¼W, ±5%	1
RS1	Resistor,Wire Manganin,A-2145,0.005 Ohm,2 Ø	1
RS2	Resistor,Wire Manganin,A-2256,0.03 Ohm, 1 Ø	1
VR1	Potentiometer, Mini Type, 2K Ohm	1
F1	Fuse, 3 Ampere	1



NOTE:
ALL CAPACITORS ARE MYLAR-FILM UNLESS INDICATED.
ALL RESISTORS ARE CARBON ¼ WATT UNLESS INDICATED.

FIGURE 10

POWER SUPPLY P/N 414-2023

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES Unless Otherwise Specified	
FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

centuri inc. HIALEAH, FLORIDA 33014

NAME: PAL SWITCHING POWER SUPPLY, PSR-804-AT

MATL'S. | HEAT TREAT. | FINISH

DWN.	APP'D.	DATE	SCALE	PART NO.	REV.
MS.		7-23-83	1	905-4914	

Power Supply PSR-804AT

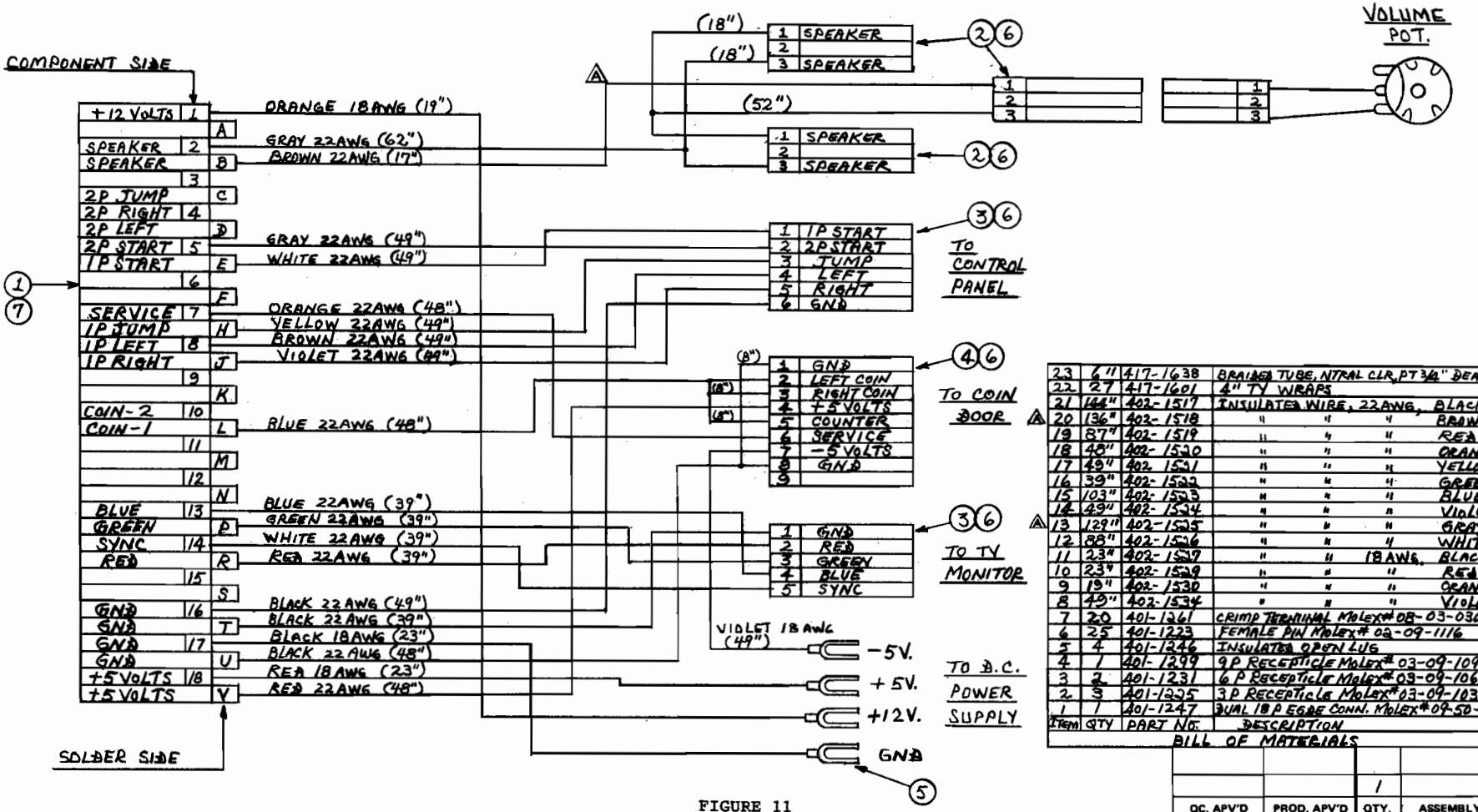
PARTS LIST (414-2023)

Symbol	Description	Qty
D1	Bridge Rectifier, RB-40, 600V	1
D4,5	Fast Recovery Diode, 1GH62	2
D7,8,9,10		
D17,18,19	Switching Diode, 1S954	7
D11	Fast Recovery Diode, S5KC20H	1
D12,13,14,15	Fast Recovery Diode, 10DF1	4
D16	Shottky Barrier Diode, C8P03Q	1
ZD1	Zener Diode, 05Z5, 5.6V, 500mW	1
Q1,2	Power Transistor, 2SC3039	2
Q3	Power Transistor, 2SC3149	1
Q4,5	Transistor, 2SA564R	2
Q6,7	Transistor, 2SC828R	2
IC1	Control I.C., PC494C	1
IC2	Regulator, 78M05	1
IC3	Regulator, 78M12	1
T1	Power Transformer, SM-2385	1
T2,3	Driver Transformer, SM-2215B	2
T4	Sub-Power Supply Transformer, SM-2399	1
CH1	EE25 Choke, SM-2374	1
CH2,3	EE16 Choke, SM-2367B	2
CH4	EE25 Choke, SM-2366	1
L1	Line Filter, ELF-18D-112	1
TH1	Power Thermistor, TD18-010	1
C1,32,33	Capacitor,Metalized polyester,0.033, 630V.	3
C2,3	Capacitor,Ceramic, 2200pf, AC400V.	2
C4,5	Capacitor,Electrolytic, 220mf, 180V.	2
C6	Capacitor,Metalized polyester,0.47mf,400V.	1
C7	Capacitor,Ceramic, 330pf, 1KV	1
C9,34,35,37	Capacitor,Mylar Film, 0.01mf, 50V.	4
C10	Capacitor,Electrolytic, 10mf, 25V.	1
C11	Capacitor,Electrolytic, 100mf, 16V.	1
C12	Cap. Mylar Film, 0.0047mf, 50V.	1
C14	Capacitor,Electrolytic, 4.7mf, 25V.	1
C15	Capacitor,Polyester, 0.001mf, 50V.	1
C17,19	Capacitor,Electrolytic, 470mf, 25V.	2
C18	Capacitor,Ceramic, 50pf	1
C20,23,27	Capacitor, Ceramic, 0.1mf, 16V.	3
C21,25	Capacitor,Electrolytic, 220mf, 35V.	2
C22,26	Capacitor,Electrolytic, 470mf, 16V.	2
C24	Capacitor,Ceramic, 0.01mf, 50V.	1
C29,30	Capacitor,Electrolytic, 2200mf, 10V.	2
C31	Capacitor,Mylar Film, 0.1mf, 50V.	1
C41	Capacitor,Electrolytic, 0.47mf, 50V.	1
C42,43	Capacitor,Ceramic, 0.001mf, 500V.	2
R1,2	Resistor,Carbon, 150K Ohm, ½W.	2
R3	Resistor,Metal Oxide, 100 Ohm, 2W	1
R4,5	Resistor,Carbon, 12 Ohm, ½W	2
R6,7	Resistor,Carbon, 22 Ohm, ½W.	2
R8	Resistor,Carbon, 330K Ohm, ½W.	1

Power Supply PSR-804AT

PARTS LIST (414-2023)

Symbol	Description	Qty
R9	Resistor, Metal Oxide, 470 Ohm, 2W.	1
R10,20,32	Resistor, Carbon, 1K Ohm, ¼W.	3
R11	Resistor, Carbon, 10 Ohm, ¼W.	1
R12	Resistor, Carbon, 150 Ohm, ¼W.	1
R13,14,40	Resistor, Carbon, 5.1K Ohm, ¼W.	3
R15,16,17,33	Resistor, Carbon, 100K Ohm, ¼W.	4
R18	Resistor, Carbon, 100 Ohm, ¼W.	1
R19,28	Resistor, Carbon, 10K Ohm, ¼W.	2
R21,25	Resistor, Carbon, 150K Ohm, ¼W.	2
R22	Resistor, Carbon, 220 Ohm, ¼W.	1
R23	Resistor, Carbon, 20K Ohm, ¼W.	1
R24	Resistor, Metal Oxide, 330 Ohm, 2W.	1
R26	Resistor, Carbon, 1.8K Ohm, ¼W.	1
R29	Resistor, Carbon, 15K Ohm, ¼W.	1
R30	Resistor, Carbon, 180 Ohm, ¼W.	1
R31	Resistor, Metal Oxide, 150 Ohm, 3W.	1
R34	Resistor, Metal Oxide, 33 Ohm, 3W.	1
R35	Resistor, Carbon, 4.3K Ohm, ¼W.	1
R36,37,39	Resistor, Carbon, 5.1 Ohm, ½W.	3
R41	Resistor, Carbon, 39K Ohm, ¼W.	1
R42	Resistor, Carbon, 47K Ohm, ¼W.	1
R43	Resistor, Carbon, 100K Ohm, ¼W.	1
R44	Resistor, Carbon, 390K Ohm, 1/8W.	1
RS1	Resistor, Manganin wire, 0.005 Ohm (A2145)	1
RS2	Resistor, Manganin wire, 0.03 Ohm (A2256)	1
VR1	Mini-Potentiometer, 2K Ohm	1
F1	Fuse, 3 Ampere	1
FH1	Fuse Holder, F207	1



ITEM	QTY	PART NO.	DESCRIPTION
23	6"	417-1638	BRAIDED TUBE, NTRAL CLR, PT 3/4" DEANCO
22	27	417-1601	4" TY WRAPS
21	144"	402-1517	INSULATED WIRE, 22AWG, BLACK
20	136"	402-1518	" " " BROWN
19	87"	402-1519	" " " RED
18	48"	402-1520	" " " ORANGE
17	49"	402-1521	" " " YELLOW
16	39"	402-1522	" " " GREEN
15	103"	402-1523	" " " BLUE
14	49"	402-1524	" " " VIOLET
13	129"	402-1525	" " " GRAY
12	88"	402-1526	" " " WHITE
11	23"	402-1527	" " 18AWG. BLACK
10	23"	402-1529	" " " RED
9	19"	402-1530	" " " ORANGE
8	49"	402-1534	" " " VIOLET
7	20	401-1261	CRIMP TERMINAL MOLEX# 08-03-0303
6	25	401-1223	FEMALE PIN MOLEX# 02-09-1116
5	4	401-1246	INSULATED OPEN LUG
4	1	401-1299	9P RECEPTICLE MOLEX# 03-09-1091
3	2	401-1231	6P RECEPTICLE MOLEX# 03-09-1061
2	3	401-1225	3P RECEPTICLE MOLEX# 03-09-1031
1	1	401-1247	DUAL 18P EGDE CONN. MOLEX# 09-50-5185

BILL OF MATERIALS

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	

FIGURE 11

REV. LET.	ECN NO.	REVISION	BY
A	4040-01	CHG'ED GRAY WIRE TO BRN; CHG'ED BRN QTY FRM 49" TO 136" & GRN FRM 216" TO 129"	MJ.

TOLERANCES
Unless Otherwise Specified
FRACTIONS ± 1/32
DECIMALS 2 PL ± .015
DECIMALS 3 PL ± .005
HOLES + .003 – .001
ANGLES ± 1/2°
SHT. MET BENDS ± 2°

centuri HIALEAH, FLORIDA 33014

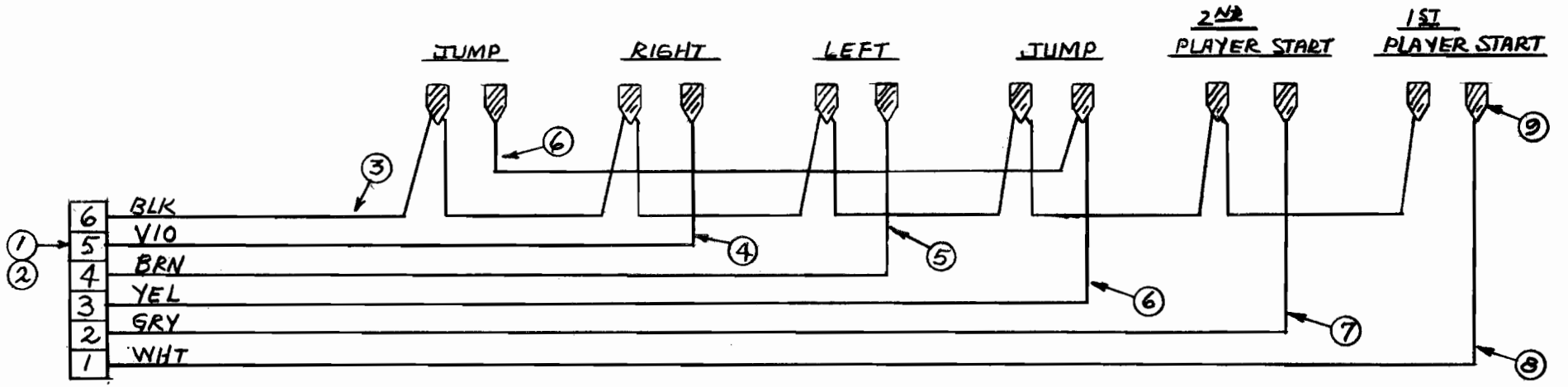
NAME: CPU HARNESS - CIRCUS CHARLIE, U/R

MATL'S.	HEAT TREAT.	FINISH

DWN.	APV'D	DATE	SCALE	PART NO.	REV.
MJ.		12-27-83	X	008-4928	A

AF 178998

FIGURE 12



ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
5	32"	402-1518	INSULATED WIRE, 22AWG, BROWN	10	10	417-1601	4" TY WRAPS
4	23"	402-1524	" " " , VIOLET	9	12	401-1302	3/16" PUSH ON TERMINAL ETC #695
3	80"	402-1517	" " " , BLACK	8	38"	402-1526	INSULATED WIRE, 22AWG, , WHITE
2	6	401-1222	MALE PIN MOLEX #02-09-2116	7	35"	402-1525	" " " , GRAY
1	1	401-1229	6 P PLUG MOLEX #03-09-2061	6	38"	402-1521	" " " , YELLOW

BILL OF MATERIALS

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	

REV. LET.	ECN NO.	REVISION	BY
A	4041-02	SCHEMATIC CORRECTION ONLY	MJ

TOLERANCES
Unless Otherwise Specified

FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 / − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

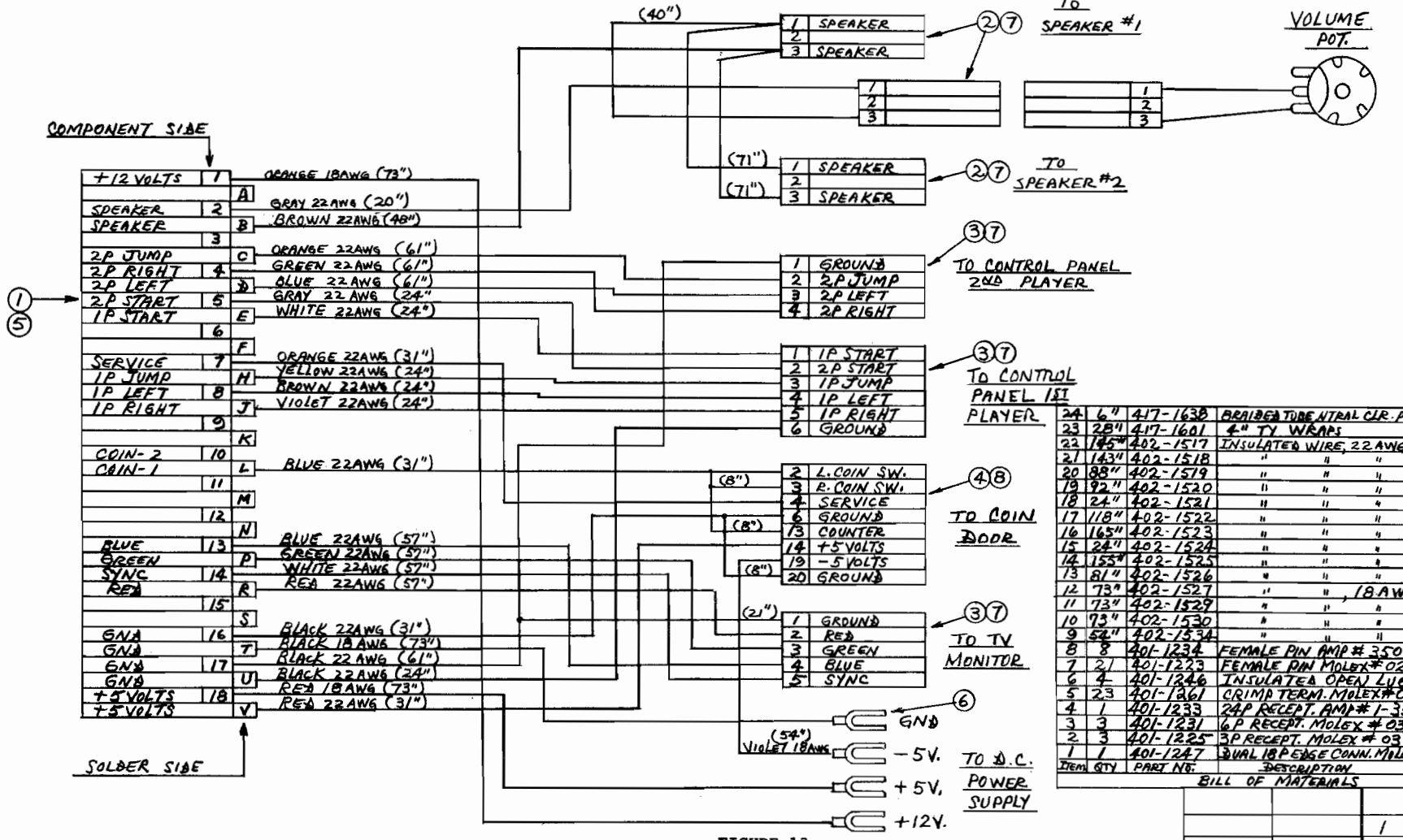
centuri inc. HIALEAH, FLORIDA 33014

NAME: CNTRL PNL HARNESS-CIRCUS CHARLIE, U/R

MATL'S.	HEAT TREAT.	FINISH

DWN.	APR'D	DATE	SCALE	PART NO.	REV.
M.J.		12-28-83	¾	008-4929	A

AF 17899A



Item	QTY	PART NO.	DESCRIPTION
24	6"	417-1638	BRAIDED TUBE NTRAL CLR. PT 3/4" BEANCO
23	28"	417-1601	4" TY WRAPS
22	145"	402-1517	INSULATED WIRE, 22 AWG, BLACK
21	143"	402-1518	" " " BROWN
20	88"	402-1519	" " " RED
19	92"	402-1520	" " " ORANGE
18	24"	402-1521	" " " YELLOW
17	118"	402-1522	" " " GREEN
16	165"	402-1523	" " " BLUE
15	24"	402-1524	" " " VIOLET
14	155"	402-1525	" " " GRAY
13	81"	402-1526	" " " WHITE
12	73"	402-1527	" " , 18AWG, BLACK
11	73"	402-1529	" " " RED
10	73"	402-1530	" " " ORANGE
9	54"	402-1534	" " " VIOLET
8	8	401-1234	FEMALE PIN AMP # 350665-1
7	21	401-1223	FEMALE PIN MOLEX # 02-09-1116
6	4	401-1246	INSULATED OPEN LUG
5	23	401-1261	CRIMP TERM. MOLEX # 08-03-0303
4	1	401-1233	24P RECEPT. AMP # 1-350246-9
3	3	401-1231	6P RECEPT. MOLEX # 03-09-1061
2	3	401-1225	3P RECEPT. MOLEX # 03-09-1031
1	1	401-1247	DUAL 18P EDGE CONN. MOLEX # 09-50-5185

BILL OF MATERIALS

FIGURE 13

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	

REV. LET.	ECN NO.	REVISION	BY
A	4041-01	CHG'ED GRAY WIRE TO BRN, CHG'ED BRN WIRE QTY FRM 24" TO 143", GRAY FRM 274" TO 155"	MJ

TOLERANCES
Unless Otherwise Specified

FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

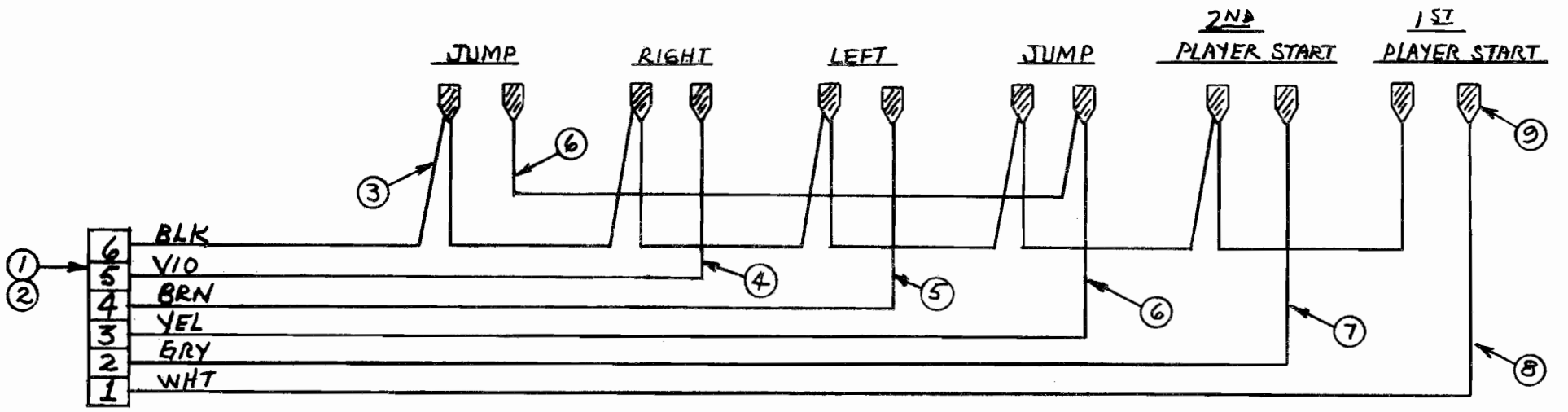
centuri inc. HIALEAH, FLORIDA 33014

NAME: CPU HARNESS-CIRCUS CHARLIE, C/T

MATL'S. | HEAT TREAT. | FINISH

DWN.	APP'D.	DATE	SCALE	PART NO.	REV.
MJ.		12-28-83	X	008-4930	A

FIGURE 14



ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
5	23½"	402-1518	INSULATED WIRE, 22 AWG, BROWN	10	9	417-1601	4" TY WRAPS
4	21½"	402-1524	" " " VIOLET	9	12	401-1302	3/16" PUSH ON TERMINAL ETC #095
3	70"	402-1517	" " " BLACK	8	27"	402-1526	INSULATED WIRE, 22 AWG, WHITE
2	6	401-1222	MALE PIN MOLEX #02-09-2116	7	27"	402-1525	" " " GRAY
1	1	401-1229	6P PLUG MOLEX #03-09-2061	6	30"	402-1521	" " " YELLOW

BILL OF MATERIALS

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	

REV. LET.	ECN NO.	REVISION	BY
A	4041-02	SCHEMATIC CORRECTION ONLY	MJ

TOLERANCES
Unless Otherwise Specified

FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

centuri inc. HIALEAH, FLORIDA 33014

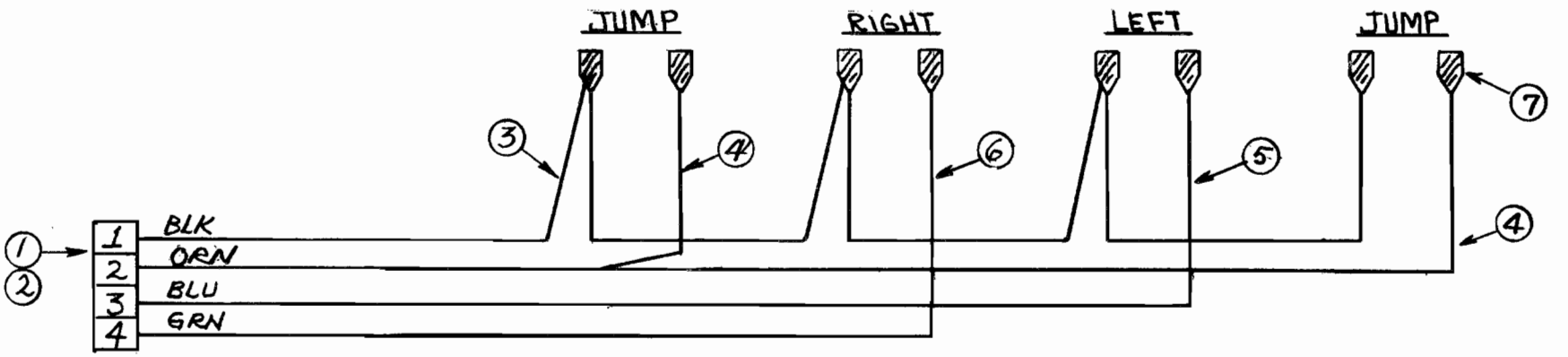
NAME: CNTRL PNL HARNESS-1ST PLYR- CIRCUS CHARLIE, C/T

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D.	DATE	SCALE	PART NO.	REV.
MJ.		12-28-83	½	008-4931	A

AF 17899A

FIGURE 15



ITEM	QTY	PART NO.	DESCRIPTION
4	32"	402-1520	INSULATED WIRE, 22AWG., ORN
3	55"	402-1519	" " " BLACK
2	4	401-1222	MALE PIN MOLEX #02-09-2116
1	1	401-1229	6P PLUG MOLEX #03-09-2061

ITEM	QTY	PART NO.	DESCRIPTION
8	7	417-1601	4" TY WRAPS
7	8	401-1302	3/16" PUSH ON TERMINAL ETC #905
6	22"	402-1522	INSULATED WIRE, 22AWG, GREEN
5	26"	402-1523	" " " BLUE

BILL OF MATERIALS

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	

REV. LET.	ECN NO.	REVISION	BY
A	4041-02	SCHEMATIC CORRECTION ONLY	MJ

TOLERANCES
Unless Otherwise Specified

FRACTIONS	±	1/32
DECIMALS 2 PL	±	.015
DECIMALS 3 PL	±	.005
HOLES	+	.003
	−	.001
ANGLES	±	1/2°
SHT. MET BENDS	±	2°

centuri inc. HIALEAH, FLORIDA 33014

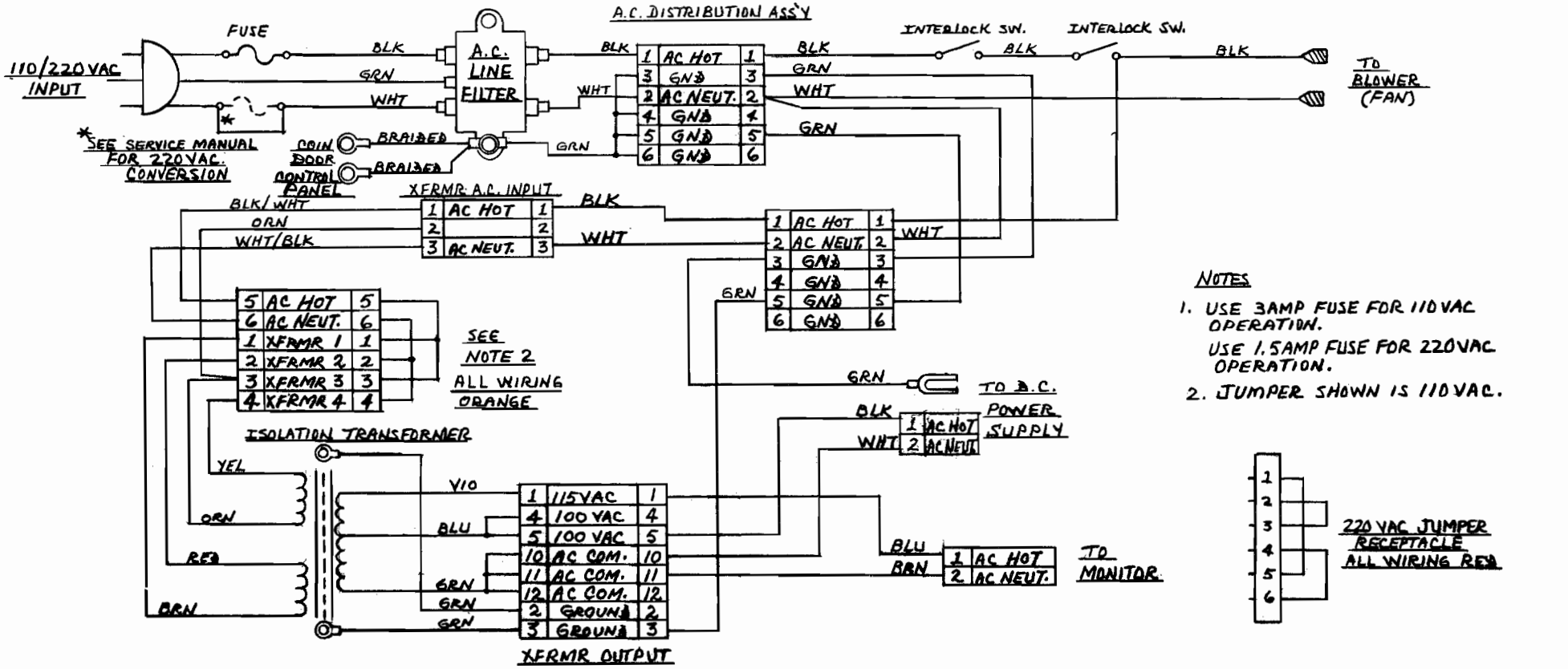
NAME: CNTRL PNL HARNESS-2ND PLYR-CIRCUS CHARLIE, C/T

MATL'S.	HEAT TREAT.	FINISH

DWN.	APR'D.	DATE	SCALE	PART NO.	REV.
MJ.		12-28-83	**	008-4932	A

AF 17899A

FIGURE 16



QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

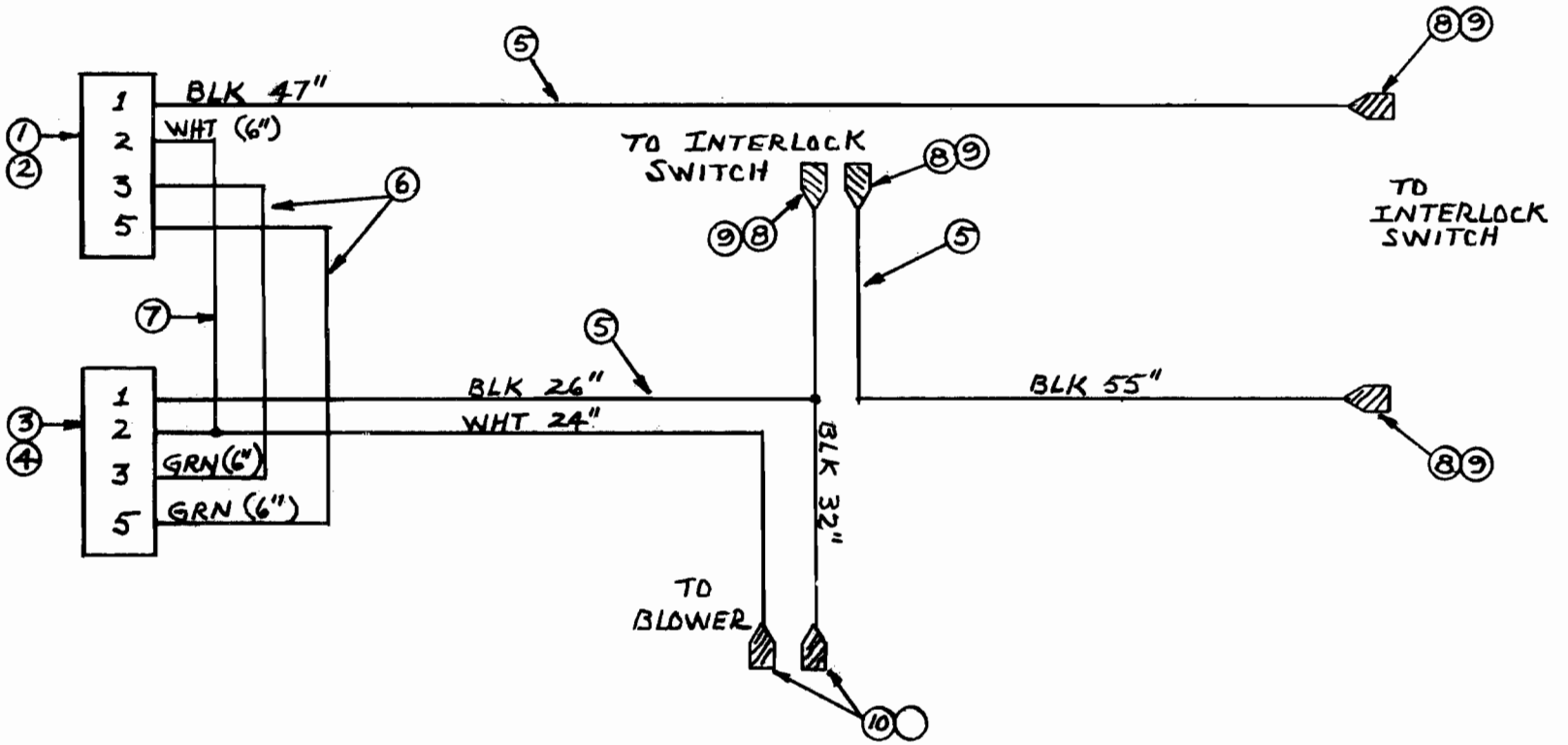
TOLERANCES
Unless Otherwise Specified
FRACTIONS ± 1/32
DECIMALS 2 PL ± .015
DECIMALS 3 PL ± .005
HOLES + .003 − .001
ANGLES ± 1/2°
SHT. MET BENDS ± 2°

centuri HIALEAH, FLORIDA 33014

NAME 110/220 VAC INTERCONNECT DIAGRAM, C/TABLE
MATL'S. | HEAT TREAT. | FINISH
DWN. MA. | APP'D. | DATE 4-27-83 | SCALE | PART NO. 302-0004 | REV.

AF 17898

FIGURE 17



BILL OF MATERIALS

ITEM	QTY	PART NO.	DESCRIPTION	ITEM	QTY	PART NO.	DESCRIPTION
6	12"	402-1532	INSULATE WIRE, 18AWG, GREEN				
5	160"	402-1527	" " " , BLACK	11	10	417-1601	4" TY WRAPS
4	4	401-1223	FEMALE PIN MOLEX #02-09-1116	10	2	401-1290	1/8" PUSH ON TERMINAL
3	1	401-1231	6 PIN RECEPT. MOLEX #03-09-1061	9	6"	417-1609	1/4" DIA. HEAT SHRINK TUBING
2	4	401-1222	MALE PIN MOLEX #02-09-2116	8	4	401-1302	3/16" PUSH ON TERMINAL ETC #995
1	1	401-1229	6 PIN PLUG MOLEX #03-09-2061	7		402-1536	INSULATED WIRE, 18AWG, WHITE

QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO
		1	

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES
Unless Otherwise Specified

FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 / − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

centuri inc. HIALEAH, FLORIDA 33014

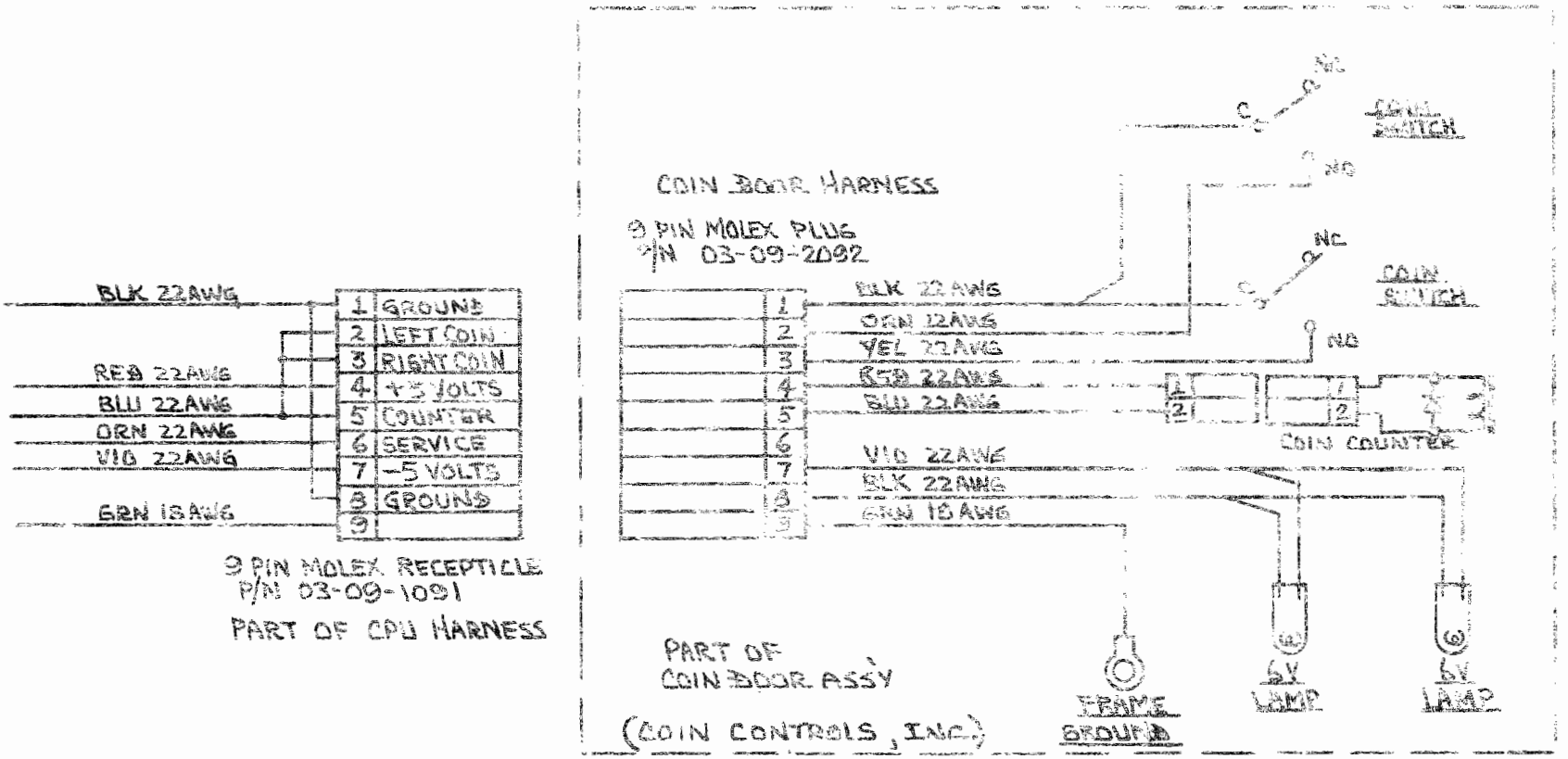
NAME: A/C INTERLOCK & FAN MOTOR HARNESS, C/T

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D	DATE	SCALE	PART NO.	REV.
MJ		1-18-84	X	008-4896	

AF 17899A

FIGURE 16



QC. APV'D	PROD. APV'D	QTY.	ASSEMBLY NO

REV. LET.	ECN NO.	REVISION	BY

TOLERANCES	
Unless Otherwise Specified	
FRACTIONS	± 1/32
DECIMALS 2 PL	± .015
DECIMALS 3 PL	± .005
HOLES	+ .003 − .001
ANGLES	± 1/2°
SHT. MET BENDS	± 2°

centuri inc. HIALEAH, FLORIDA 33014

NAME
$BLE FRAME MINI – COIN DOOR WIRING DIAGRAM

MATL'S.	HEAT TREAT.	FINISH

DWN.	APP'D	DATE	SCALE	PART NO.	REV.
MJ.		11-30-83			

AF 17899A

CIRCUS CHARLIE

CPU/LOGIC PC BOARD ASS'Y (010-4637)

PARTS LIST

DESCRIPTION	PART NO.	QTY
74LS00	501-0102	1
74LS02	501-0105	1
74LS04	501-0108	3
74LS08	501-0153	1
74LS10	501-0112	3
74LS14	501-0169	1
74LS30	501-0117	1
74LS32	501-0156	3
74LS74	501-0121	4
74LS86	501-0125	10
74LS107	501-0129	1
74LS138	501-0200	3
74LS139	501-0170	1
74LS153	501-0131	5
74LS157	501-0141	8
74LS161	501-0137	4
74LS164	501-0146	1
74LS174	501-0135	1
74LS175	501-0158	1
74LS244	501-0214	2
74LS245	501-0202	4
74LS259	501-0190	1
74LS273	501-0205	6
74LS283	501-0207	2
74LS293	501-0427	1
74LS367	501-0176	2
74LS374	501-0204	1
74LS377	501-0182	5
MB89001P-G	501-0469	1

CIRCUS CHARLIE

CPU/LOGIC PC BOARD ASS'Y (010-4637)

PARTS LIST

DESCRIPTION	PART NO.	QTY
IC. MB14082M-G	501-0470	1
IC. P/D2128-15	501-0074	3
IC. 2764-25	500-0023	2
IC. 2764-30	500-0026	11
IC. 2114AL-4	501-0077	2
IC. 2164-5	501-0477	8
IC. 6301-1, J16	500-0028	1
IC. 6331-1, J18	500-0027	1
IC. NE555	501-0224	1
TRANSISTOR, 2SA999	502-0401	1
TRANSISTOR,2SC2320	502-0379	1
CRYSTAL, 18.432MHZ	507-0572	1
RESISTOR, 100 OHM, ¼W,	503-0473	1
RESISTOR, 220 OHM, ¼W,	503-0433	3
RESISTOR, 470 OHM, ¼W,	503-0407	5
RESISTOR, 1K OHM, ¼W,	503-0413	6
RESISTOR, 2.2K OHM, ¼W,	503-0400	2
RESISTOR, 4.7K OHM, ¼W,	503-0405	2
RESISTOR, 10K OHM, ¼W,	503-0417	2
RES. ARRAY, 4.7K OHM,X4, 1/8W,	504-1043	3
RES. ARRAY, 4.7K OHM,X8, 1/8W	504-1045	1
CAP. LYTIC, 47MF, 10V.	516-0802	2
CAP. LYTIC, 220MF, 10V.	516-0822	1
CAP. LYTIC, 330MF, 10V.	516-0913	1
CAP. TANTALUM, 4.7MF, 35V.	519-0852	3
CAP. CERAMIC, 100PF, 50V.	515-0748	1
CAP. CERAMIC, 150PF, 50V.	515-0726	2
CAP. CERAMIC, 470PF, 50V.	515-0716	1
CAP. CERAMIC, 0.1MF, 50V.	515-0701	94
CAP. CERAMIC, 0.01MF, 50V.	515-0702	1

CIRCUS CHARLIE

CPU/LOGIC PC BOARD ASS'Y (010-4637)

DESCRIPTION	PART NO.	QTY
DIODE, 10D1	510-0654	1
DIODE, 1S1588	510-0611	1
IC SOCKET, 42 PIN	514-1582	1
IC SOCKET, 40 PIN	514-1570	1
IC SOCKET, 28 PIN	514-1572	14
FLAT CONNECTOR, 40 PIN	401-1376	1
JACK & LEAD CONNECTOR	008-4794	1

SOUND PC BOARD ASS'Y (010-4638)

IC. 74LS02	501-0105	1
IC. 74LS04	501-0108	1
IC. 74LS08	501-0153	1
IC. 74LS74	501-0121	1
IC. 74LS138	501-0200	2
IC. 74LS174	501-0135	1
IC. 74LS253	501-0436	3
IC. 74LS367	501-0176	5
IC. 74LS374	501-0204	3
IC. 74LS393	501-0180	2
IC. Z80-A	501-0250	1
IC. 76489, SOUND GENERATOR	501-0467	2
IC. LA4460, AUDIO AMP.	501-0437	1
IC. uPC324C	501-0231	1
IC. MSM4066RS, CMOS	501-0212	1
IC. 2764-30	500-0026	2
IC. 2114-2	501-0077	2
TRANSISTOR, 2SC2320	502-0379	2
TRANSISTOR, 2SD361	502-0380	2
CRYSTAL, 14.318MHZ	507-0560	1

CIRCUS CHARLIE

SOUND PC BOARD ASS'Y (010-4638)

DESCRIPTION	PART NO.	QTY
RESISTOR, 4.7 OHM, ¼W,	503-0535	2
RESISTOR, 10 OHM, ¼W,	503-0553	2
RESISTOR, 120 OHM, ¼W,	503-0576	1
RESISTOR, 220 OHM, ¼W,	503-0433	17
RESISTOR, 470 OHM, ¼W,	503-0407	2
RESISTOR, 1K OHM, ¼W,	503-0413	3
RESISTOR, 2.2K OHM, ¼W,	503-0400	2
RESISTOR, 3.3K OHM, ¼W,	503-0431	1
RESISTOR, 4.7K OHM, ¼W,	503-0405	2
RESISTOR, 5.1K OHM, ¼W,	503-0454	1
RESISTOR, 10K OHM, ¼W,	503-0417	13
RESISTOR, 20K OHM, ¼W,	503-0459	9
RES. ARRAY, 2.2K OHM,X8, 1/8W	504-1028	5
CAP. LYTIC, 330MF, 10V.	516-0913	1
CAP. LYTIC, 220MF, 16V.	516-0860	1
CAP. LYTIC, 100MF, 25V.	516-0804	1
CAP. LYTIC, 1000MF, 25V.	516-0827	1
CAP. MYLAR, 0.033MF, 50V.	517-0772	2
CAP. MYLAR, 0.047MF, 50V.	517-0758	1
CAP. MYLAR, 0.01MF, 50V.	517-0768	1
CAP. MYLAR, 0.1MF, 50V.	517-0765	3
CAP. TANTALUM, 0.47MF, 35V.	519-0853	4
CAP. CERAMIC, 30PF, 50V.	515-0733	1
CAP. CERAMIC, 150PF, 50V.	515-0726	1
CAP. CERAMIC, 220PF, 50V.	515-0734	1
CAP. CERAMIC, 470PF, 50V.	515-0716	1
CAP. CERAMIC, 0.1MF, 50V.	515-0701	34
DIODE, 10D1	510-0654	2
DIP SWITCH, 8 POSITION	506-1000	2

CIRCUS CHARLIE

SOUND PC BOARD ASS'Y (010-4638)

DESCRIPTION	PART NO.	QTY
RESISTOR, VARIABLE 1K OHM	512-0672	1
IC SOCKET, 28 PIN	514-1572	2
FLAT CONNECTOR, 40 PIN	401-1376	1
FLAT CABLE, 40 PIN	402-1543	1
CONNECTOR POST W/BASE, 2P	401-1280	1
HEAT SINK, OS-SEIKI, KN-5D,	408-3008	1

centuri™ inc.

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