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LA YOUT DR A WINGS & WIRING DIAGRAM		

1.0 SPECIFICATIONS

Conversion Game Requirements

Power Supply: 150 Watt computer-grade,
+5 VDC +5% -1%, 5 Amp Minimum
+12 VDC +/- 5%, 2 Amp Minimum

Harnesses: 56 pin JAMMA-type, key installed at pins H & 7
48 pin extension, key installed at pins A5 & B5
(both harnesses are supplied with the Kit)

Monitor: Horizontally mounted
Scanning retrace: interlace or non-interlace (selectable)
Horizontal sync frequency: 15.75 kHz
Vertical sync frequency: 60 Hz

Kit Contents

[DOMESTIC KIT P/N CA01-08047-00]

P/N	Description	#	P/N	Description	#
CA03-08044-00	PCB, SOUL CALIBUR, SYSTEM 12, W/48P CONN	1*	CA40-08043-00	Decal, Player 2	1
CA40-08032-00	Card, Game Instructions	1*	CA45-08045-00	Manual, SOUL CALIBUR (kit)	1*
CA40-08033-00	Card, Move List	1*	EZ90-07450-00	Cover, Control Panel, Overlay	1
CA40-08034-00	Decal, Marquee - Kit	1	SO50-04940-00	Harness, JAMMA 56P Kit	1
CA40-08035-00	Decal, Control Panel Overlay	1	VG05-06607-00	Mounting Feet, PCB, w/screw	4*
CA40-08036-00	Decal, Side, Left	1	VG46-02653-00	Label, FCC	1
CA40-08037-00	Decal, Side, Right	1	VG78-05265-00	ASSY, Housing & Ferrite Bead	2
CA40-08038-00	Decal, G	2	VG80-07673-00	ASSY, Button & Joystick Consists of:	1
CA40-08039-00	Decal, A	2	VG80-03212-00	Joystk, 4-way/8-way super BK	2
CA40-08040-00	Decal, B	2	VG80-06577-00	Pushbttn w/Horiz Sw, Red	8
CA40-08041-00	Decal, K	2	VG80-06578-00	Pushbttn w/Horiz Sw, Ylw	2
CA40-08042-00	Decal, Player 1	1			

*INTERNATIONAL KIT components

I IMPORTANT NOTE !

The 48-pin connector supplied with the SOUL CALIBUR Kit has a small pitch or distance between connection pads.
DO NOT SUBSTITUTE OTHER 48 PIN CONNECTORS.

Note: Specifications are subject to change without prior notice. Modification and/or alteration of the SOUL CALIBUR game kit with kits or parts not supplied by NAMCO may void the warranty.

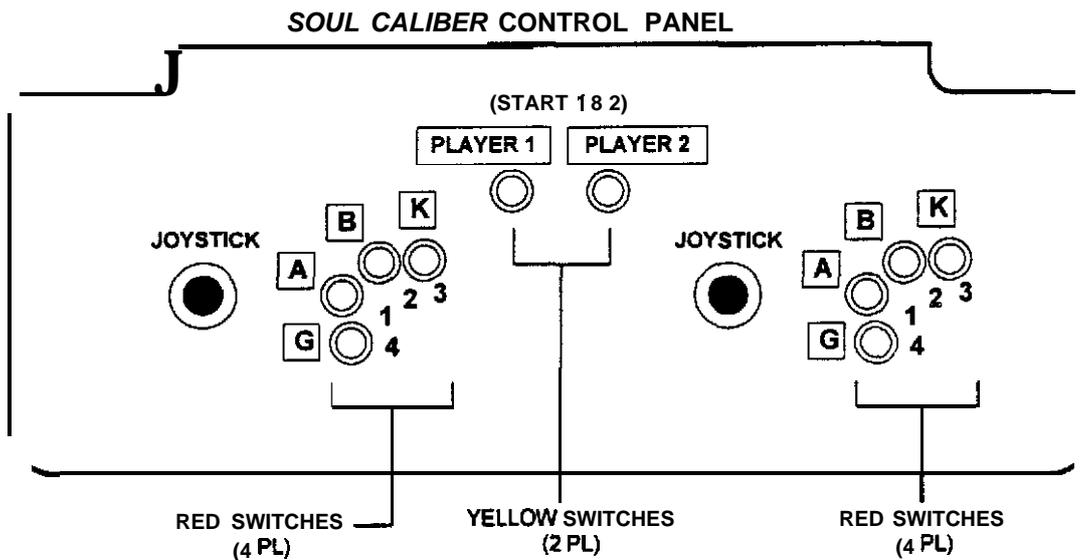
2.0 INTRODUCTION

SOUL CALIBUR is the latest high performance, low cost, two-player, 3-D fighting game from Namco. Powered by the proven System 12 PCB, the game features the popular time release and test modes of the Tekken series, and new complex interactive backgrounds which are sure to keep them coming back for more!

2.1 Game Conversion Overview

The **SOUL CALIBUR Kit** consists of the SOUL CALIBUR PCB set, a standard **JAMMA** (56 pin) wire harness, an extended **JAMMA** (46 pin) wire harness for stereo and extra controls, a set of player controls and **SOUL CALIBUR** graphics. This kit can be installed in an industry-standard 25 or 27 inch RGB color monitor kit cabinet, or, with the appropriate RGB conversion, can be used in conjunction with **NTSC**-compatible video monitors of any size. Optimum results are achieved by installing SOUL CALIBUR in a cabinet with stereo speakers and a large **4-player** control panel.

2.2 Control Panel Layout



2.3 Maximizing Earnings

To achieve optimum earnings it is recommended that you set the game to Namco's USA RECOMMENDED FACTORY SETTINGS. We believe that these settings are the most suitable for a wide variety of locations. These settings are shown in the GAME OPTIONS and COIN OPTIONS test screens. However, as all locations are not alike, settings are easily adjustable via the TEST MODE menu options.

3.0 ***INSTALLATION***

Note: Shipping damage may void the warranty. In case of shipping damage, contact your distributor and the transportation carrier immediately.

CAUTION

The electronic installation should be **performed** by experienced Game technicians only. Existing game wiring must be made compatible with the enclosed **JAMMA** wire list. Wiring should be completely checked and double-checked for continuity and shorts prior to application of power to the game PCB. Damage caused by faulty wiring will void the warranty.

Before beginning the installation, verify that the kit contents match the enclosed kit parts list.

3.1 Precautions

- 1.** Turn power to the cabinet off before installing or removing any electronic components.
 - 2.** The SOUL CALIBUR PCB is a state of the art custom polygon graphics system that is very sensitive to electrostatic discharge (ESD). Be sure to use appropriate ESD reduction procedures such as the use of ground straps and, while preparing for the installation, keep the PCB wrapped in the anti-static material provided.
 - 3.** Dust or foreign matter may cause PCB failure. Dust can be removed using canned compressed air available at electronics supply stores. Turn the power off before cleaning the PCB.
 - 4.** The SOUL CALIBUR PCB can be damaged by even the small internal voltage of a multimeter. Never attempt to troubleshoot the PCB with such instruments. In the event of a PCB failure please contact your distributor for factory repairs.
 - 5.** If the game PCB must be returned for repairs, wrap it in a suitable anti-static foam or bubble wrap, include a note indicating the nature of the trouble(s), and label the return carton with the RMA number obtained through your distributor.
 - 6.** If measurements must be taken while the system is operational, use extreme care to prevent contact with exposed AC or high-voltage monitor components.
-

3.2 Cabinet Preparation

Remove the following from the existing game or standard cabinet:

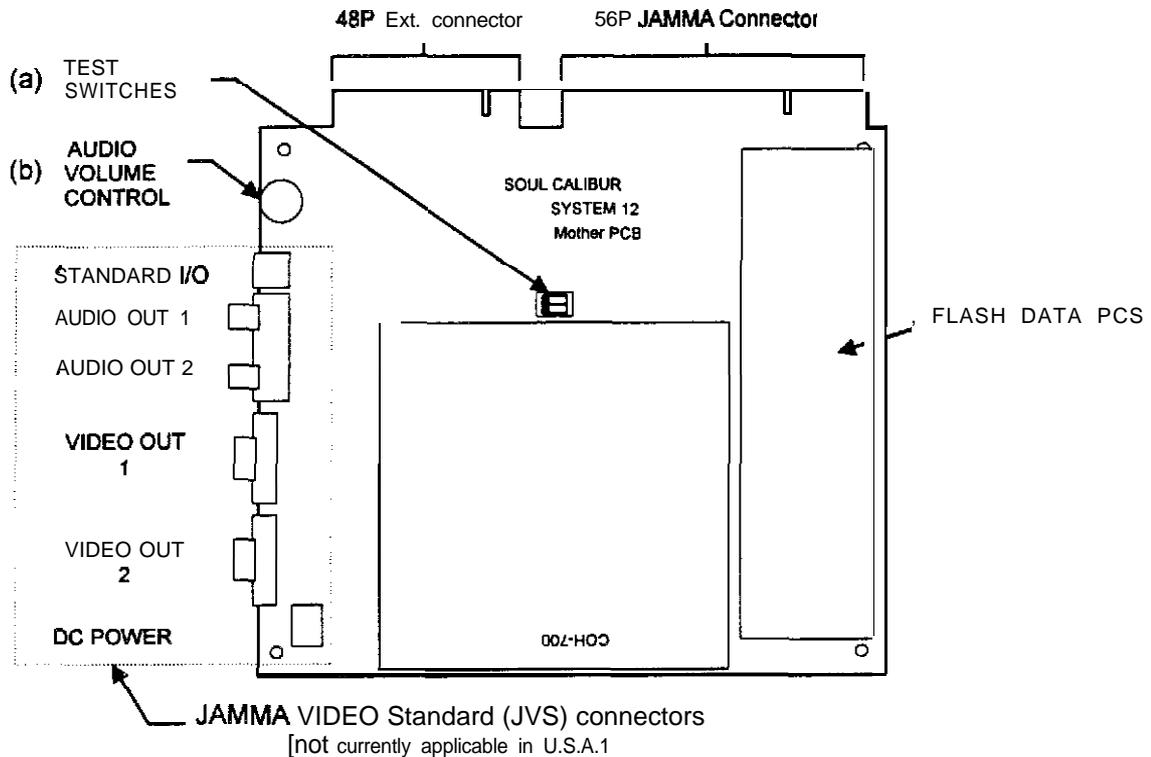
1. Game PCB
2. Control Panel
3. Marquee
4. Decals

Clean and fill all blemishes and dents and paint the exterior of the cabinet as needed.

3.3 Game Installation

1. While carefully handling the PCB, locate the audio volume control and PCB test switches, and set them in accordance with the following:

Test Switch 1	If an external service/test panel is to be used, this switch should be set to OFF. Test mode ON/OFF will be controlled by the external TEST switch. If PCS Test Switch 1 is ON, the game will be in Test mode.
Test Switch 2	Set to OFF. When ON, the screen is in Stop mode.
Volume control	Turn clockwise to increase audio volume., If external potentiometers are to be used for output attenuation, the PCS volume control should be set at least 1/2 turn CW .



- 2.** Mount the game PCB to the inside of the game cabinet, such that there is adequate ventilation provided for the PCB heat sink. Verify that the **56-pin JAMMA** harness is equipped with the 5 ferrite-core elements (provided with the kit harness). When the installation is completed, these ferrite elements should be located within a few inches of the PCB, and along the cabling to the monitor.
- 3.** Place the **56-pin** and **48-pin** wire harnesses in the cabinet, making sure there is adequate length for service loops.
4. Make the appropriate connections to the power supply. Do not turn on power yet.
- 5.** Connect the monitor.
- 6.** Connect the coin door and the coin meter.
- 7.** Connect the **test/service** panel.
- 8.** Connect the speakers to the wire harness. If optional volume potentiometers are to be used, wire in accordance with the enclosed SOUL CALIBUR Wiring Diagram [CA50-08049-00].
- 9.** On the control panel, locate the joystick and push-button holes as shown in the layout drawings. Be sure *to check the clearance for the push buttons and joysticks under the control panel before punching the holes.*
- 10.** Install the SOUL CALIBUR control panel decal and overlay provided in the kit. Using the control panel cutouts as a guide, trim the decal and overlay to fit. Apply the Guard, Horizontal, Vertical, Kick, and Player 1 & 2 labels on top of the decal and beneath the overlay. Install hold-down screws around the overlay border.
12. Install and connect the push button switches [ref: Control Panel Layout].
12. Install and connect the joysticks.
13. Install the control panel on the cabinet and connect the control panel wire harness to the game wire harness.
- 14.** Use the SOUL CALIBUR Wiring Diagram as a guide to verify system connections prior to turning on the power. Tie off any unused wires.
- 15.** Install the cabinet side graphics provided. Float the graphics on by applying a spray of general purpose cleaner to the side wall. Smooth out the bubbles and liquid with a paint squeegee. Wipe the side decal dry with a soft cloth. Repeat for the opposite side.
16. Install the marquee overlay provided in the kit in place of the existing marquee.
- 17.** Install the game play and game moves instruction cards provided with the kit.
- 18.** If needed, trim the graphics to fit the particular cabinet.
- 19.** Turn on the system power. Adjust system settings in TEST mode.

4.0 SET-UP AND TEST

4.1 Test Mode

TEST mode allows the operator to test the game controls, set various game options, set coin options, and test the video monitor.

4.2 Test Mode Procedure

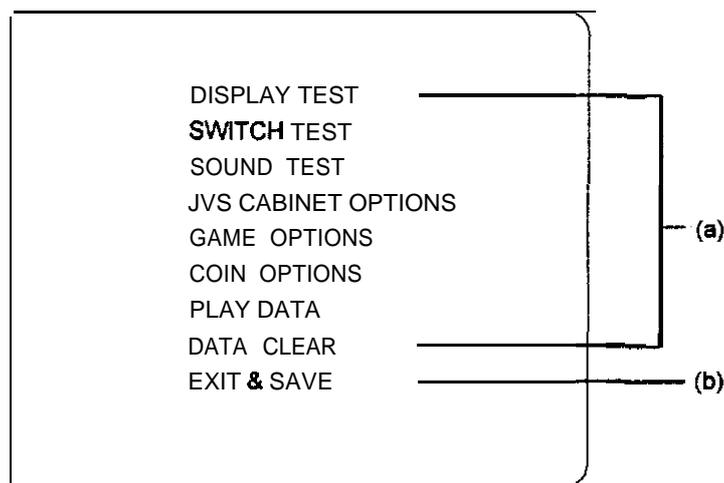
To enter TEST Mode, open the coin door and set the TEST switch to the ON Position.

Alt. Method: Flip Switch No. 1 on the System PCB to the ON position. Switch No. 2 **should** remain OFF at all times.

To adjust the setup options, follow these steps:

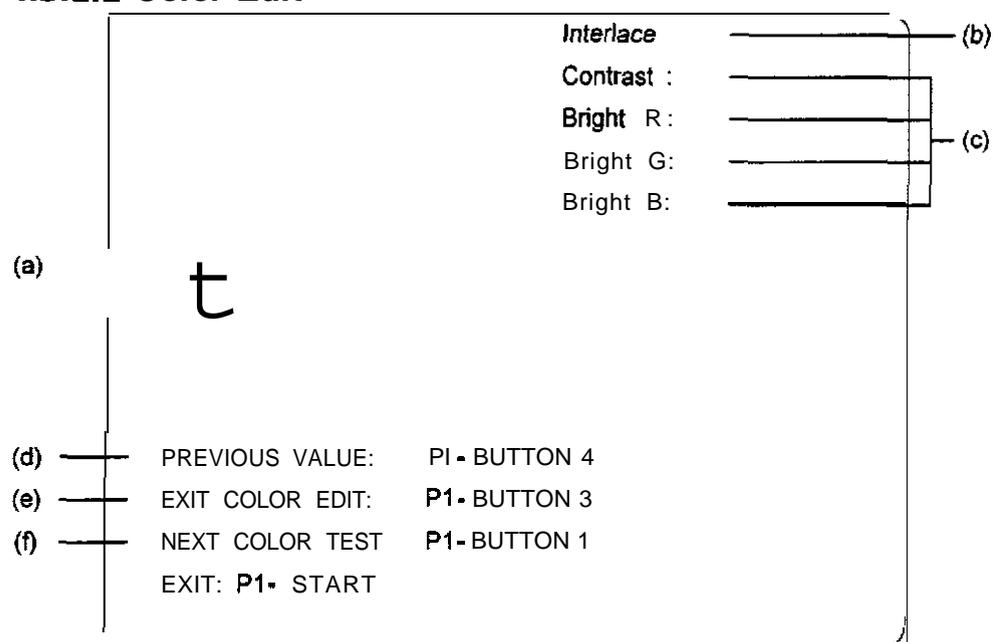
1. Select the desired test screen (a) using the P1 joystick. The selected item is displayed in red.
2. Display the selected screen by pressing PI-BUTTON 1.
3. Within each screen, select and adjust each option using the PI joystick and PI buttons as indicated on the screen graphic.
4. When exiting TEST Mode, always select EXIT & SAVE (b) before pressing P1-BUTTON 1 to end it. If EXIT & SAVE is not selected, TEST Mode will not be exited even if the TEST Switch is turned OFF.

4.3 TEST Menu



4.3.1 **DISPLAY TEST**

4.3.1.1 **Color Edit**

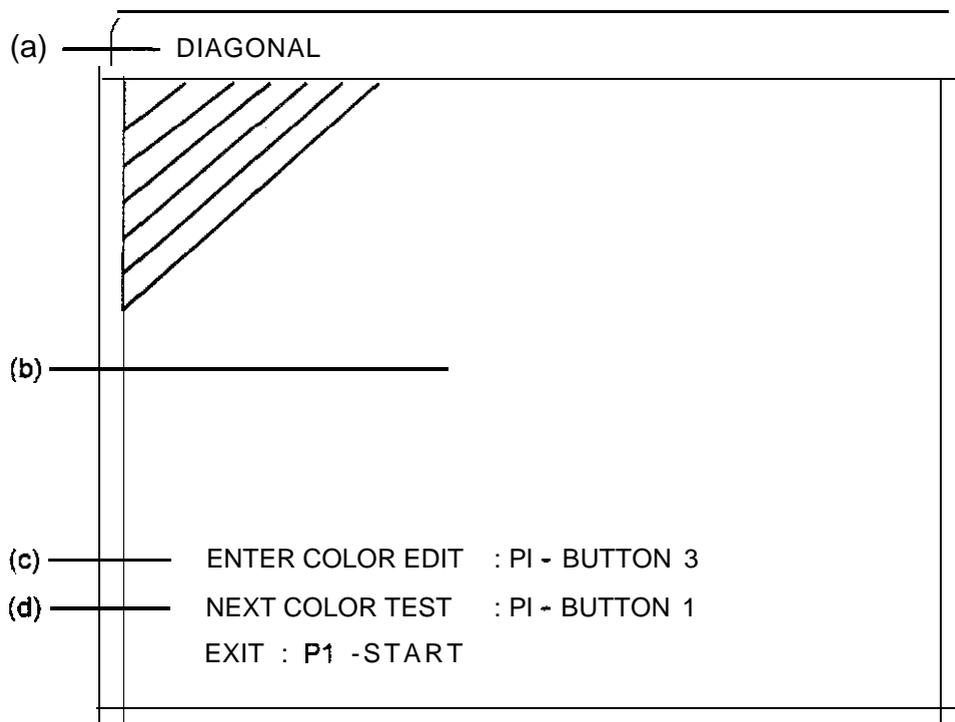


- a) Upon entering the DISPLAY TEST, the Color Edit screen data appears superimposed upon the DIAGONAL screen. Color Edit mode can be entered/exited from either of the 3 test pattern screens: DIAGONAL, COLOR BAR, or CONVERGENCE. Color Edit provides a means for adjusting the overall contrast and for balancing the brightness of the R, G, B signals. To select an item to be changed, move the PI joystick up/down; to change the item setting, move the joystick right/left.
- b) Interlace or non-interlace scanning can be selected depending on the type of monitor used. Interlace will be suitable for the majority of game monitors. If excessive jitter is present, switch the scanning mode.
- c) Adjust contrast and brightness levels in accordance with preferences or standards. Before proceeding, it is best to verify that the monitor itself is in proper adjustment and that its screen has been degaussed.

Item	Range	Default
Contrast	00-FF	A0
Bright R	00-FF	18
Bright G	00-FF	18
Bright B	00-FF	18

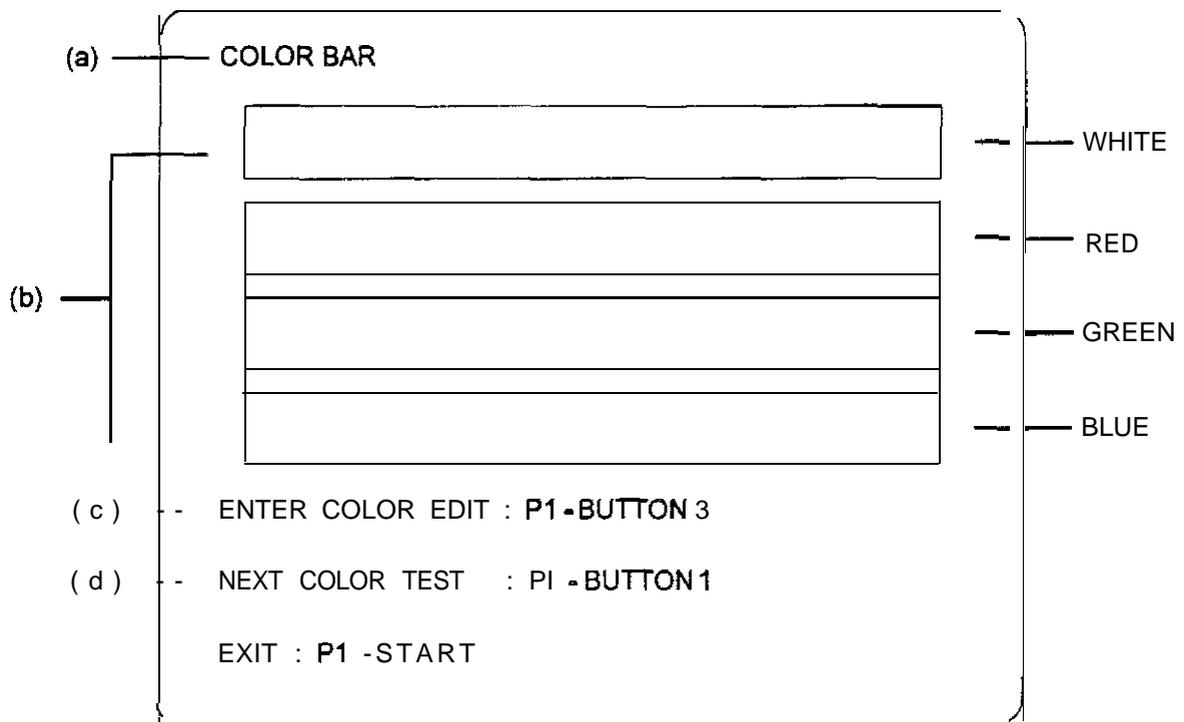
- d) Press P1-BUTTON 4 to negate any changes.
- e) To remove the Color Edit data from the test pattern, press P1 - BUTTON 3.
- f) To proceed to the next test pattern, press P1 - BUTTON 1.

4.3.1.2 DIAGONAL Test Pattern



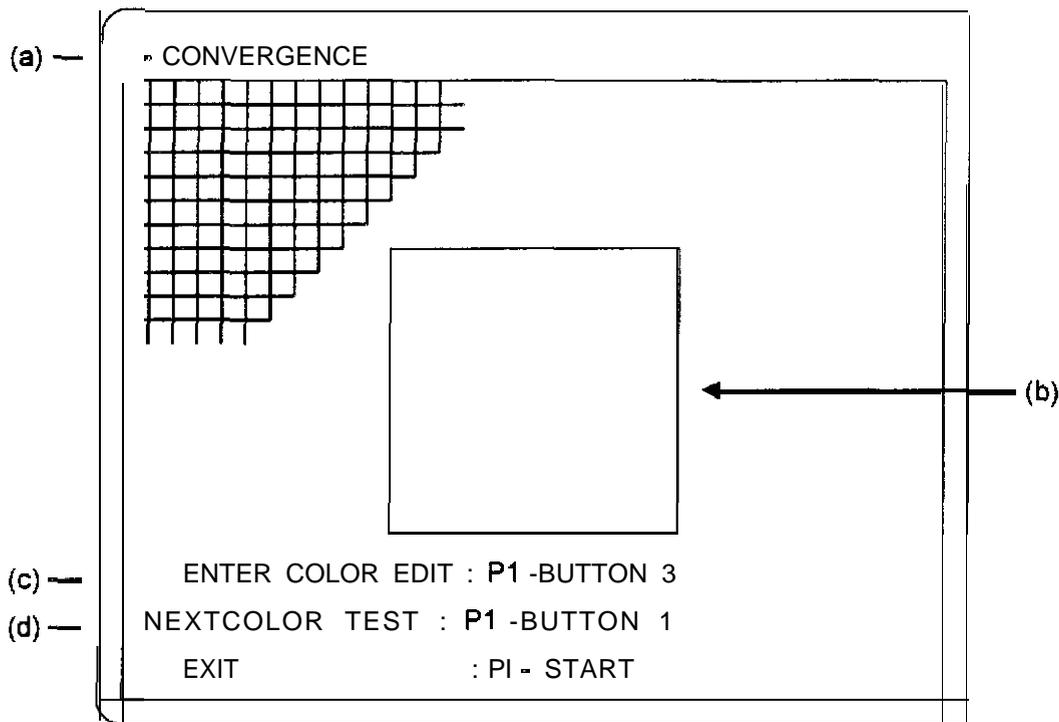
- a) The DIAGONAL test pattern is used to check the monitor in interlace scanning mode. (Reference Color Edit description).
- b) The default display consists of white diagonal lines on a black background. Press the PI-BUTTON 2 to sequence through additional display colors (blue, red, violet, green, light blue, yellow, black on white, and back to white). If display jitter is present, then switch interlace/non-interlace modes in Color Edit.
- c) The Color Edit adjustment screen can be called up by pressing PI-BUTTON 3.
- d) Press PI-BUTTON 1 to switch to the COLOR BAR test pattern.

4.3.1.3 COLOR BAR Test Pattern



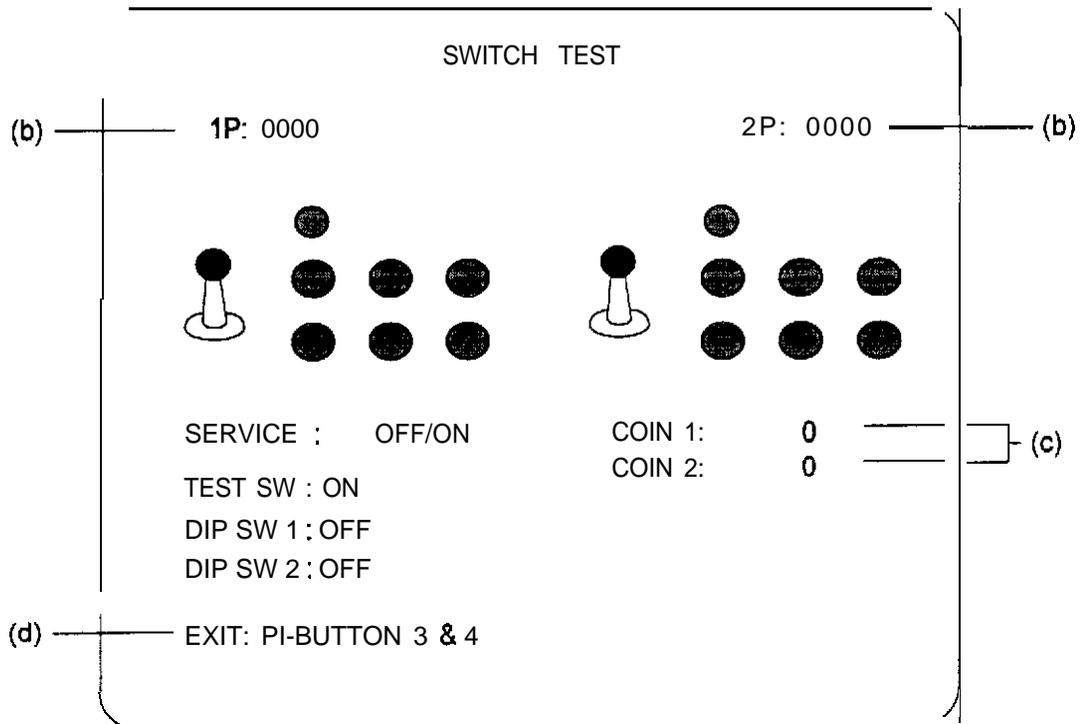
- a) The Color Bar test pattern can be used to check brightness, contrast and discrimination of the main colors.
- b) The default color bars are displayed in 32 brightness gradations. By pressing PI-BUTTON 2, colors bars of 16, 8, 4, and 2 gradations can be displayed.
- c) The Color Edit adjustment screen can be called up by pressing PI-BUTTON 3.
- d) Press PI-BUTTON 1 to switch to the CONVERGENCE test pattern.

4.3.1.4 CONVERGENCE Test Pattern

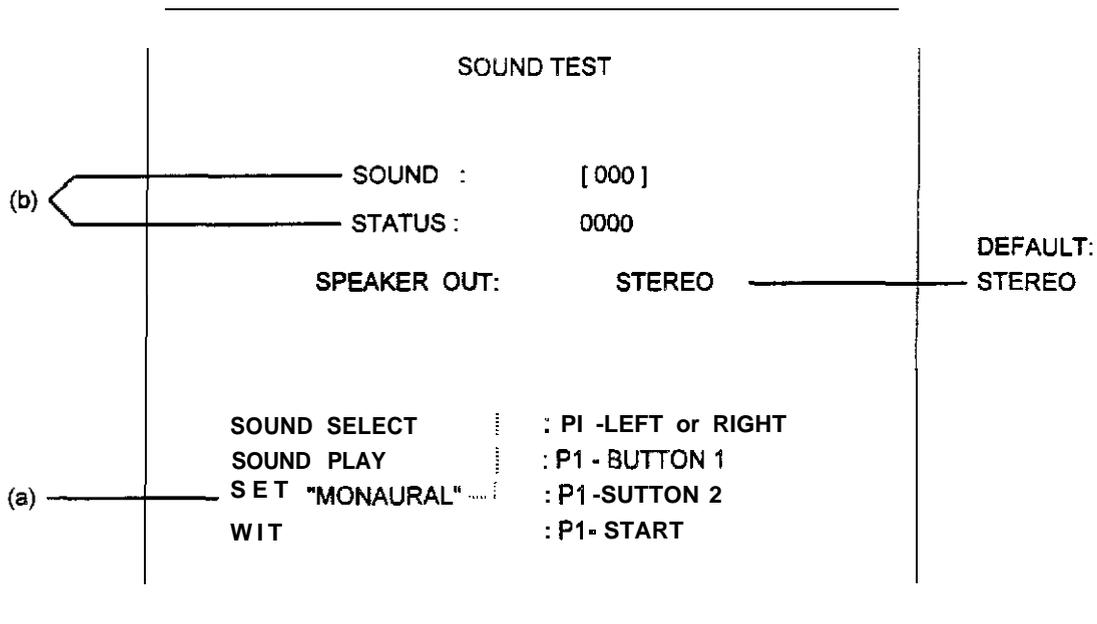


- a) The CONVERGENCE test or “cross hatch” pattern can be used to verify and adjust the display size and position, and to check the distortion.
- b) The default display and “window” is white on a black background. If there is “bleeding” of R, G, B colors around the white grid lines, then monitor convergence adjustments can be made such that all three colors are coincident. (Refer to monitor service manual). Press the PI-BUTTON 2 to sequence through additional display colors (blue, red, violet, green, light blue, yellow, black on white, and back to white).
- c) Color Edit can be called up by pressing PI-BUTTON 3.
- d) Press **P1-BUTTON 1** to switch to the DIAGONAL test pattern, or, press PI - START to exit to the main test menu.

4.3.2 SWITCH TEST



4.3.3 SOUND TEST



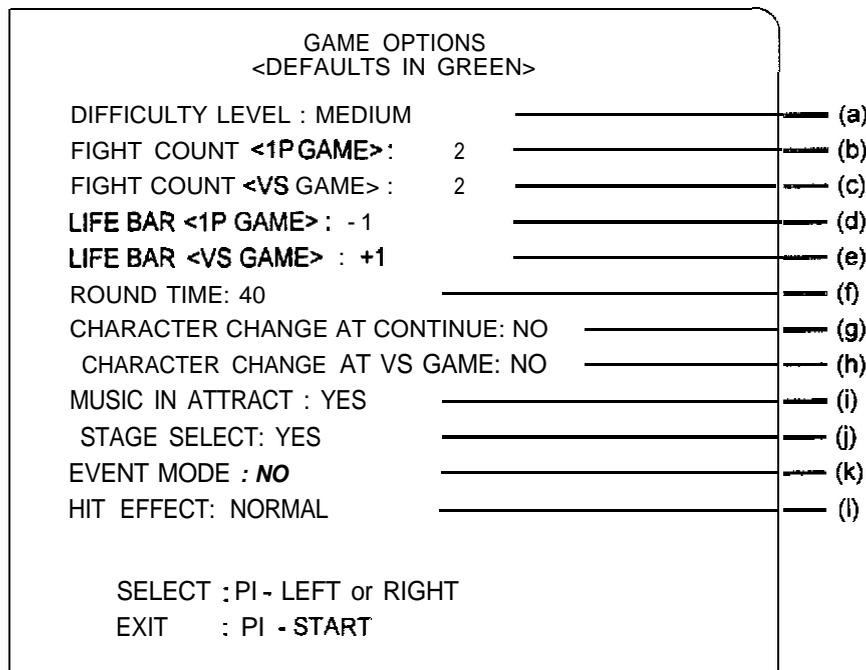
Notes:

- a) Press PI-BUTTON 2 to toggle between mono and stereo modes.
- b) Use the **P1** Joystick (right) to increment the SOUND count. Use the Joystick (**left**) to decrement the count. Press PI-BUTTON 1 to test the item. While the test is active, STATUS **800X** is displayed, where X is the SONG count.
- c) SONG 001 is the stereo output check.
- d) To adjust the audio volume, use either the volume control dial on the game PCB, or the external volume control potentiometers.

4.3.4 JVS CABINET OPTIONS

This item cannot be selected if the cabinet is wired as described using the JAMMA connectors.

4.3.5 GAME OPTION5



Values shown above are recommended settings.

- (a) DIFFICULTY LEVEL is the overall difficulty level of the game
Range: EASY, MEDIUM, HARD, VERY HARD, ULTRA HARD
- (b) FIGHT COUNT <1P GAME> is the number of rounds required for victory in the 1 P game.
Range: 1-5
- (c) FIGHT COUNT <VS GAME> is the number of rounds required for victory in the VS game.
Range: 1-5
- (d) LIFE BAR <1P GAME> is the life gauge during the 1 P game.
Range: -2, -1, NORMAL, +1, +2
- (e) LIFE BAR <VS GAME> is the life gauge during the VS game.
Range: -2, -1, NORMAL, +1, +2
- (f) ROUND TIME is the time of play allowed per round.
Range: 30, 35, 40, 45, 50, 55, 60 Sec.
- (g) CHARACTER CHANGE AT CONTINUE allows players to change characters at a continued play.
Range: YES, NO
- (h) CHARACTER CHANGE AT VS GAME allows players to change characters in 2P play when somebody buys in.
Range: YES, NO
- (i) MUSIC IN ATTRACT allows the sound to be turned on or off during attract mode.
Range: ON, OFF
- (j) STAGE SELECT allows players the option of selecting the stage in which they wish to fight.
Range: YES, NO
- (k) EVENT MODE controls what happens at the end of game play.
Range: YES (game is over for both **players**), NO (if 1P, the winner continues)
- (l) HIT EFFECT controls the color emitted during a hit.
Range: NORMAL, MILD

4.3.6 COIN OPTIONS

COIN OPTIONS <DEFAULTS IN GREEN>	
START COST : 2 COIN TO START	(a)
CONTINUE COST : 2 COIN TO CONTINUE	(b)
COIN CHUTE 1 MECHANICAL VALUE : 1 COIN COUNT AS 1 COIN	(c)
COIN CHUTE 2 MECHANICAL VALUE : 1 COIN COUNT AS 1 COIN	(d)
CREDIT MODE : COMMON	(e)
COIN COUNTER : 1 COUNTER	(f)
FREE PLAY : NO	(g)
SELECT: P1- LEFT or RIGHT	
EXIT :P1- START	

(a) START COST range is 1-9 COINS. Default: 1.

(b) CONTINUE COST range is 1-9 COINS, and must be less than or equal to (a). Default: 1.

(c) & (d) COIN CHUTE 1 & 2 MECHANICAL VALUE is the value of each pulse from either coin switch 1 or 2, respectively. Range: 1 **COIN COUNT** AS (1-9) COIN. **Default:1.**

(e) CREDIT MODE can be either COMMON or EACH ONE, depending on the wiring of the coin switches. If the switches are wired in parallel, select COMMON. If Player 1 and Player 2 are to be credited separately, select EACH ONE.

(f) COIN COUNTER can be adjusted for either parallel coin switches (1 COUNTER), or for a Player 1 and Player 2 configuration (2 COUNTER).

(g) FREE PLAY is either YES or NO. If YES is selected, all COIN OPTION changes are locked-out.

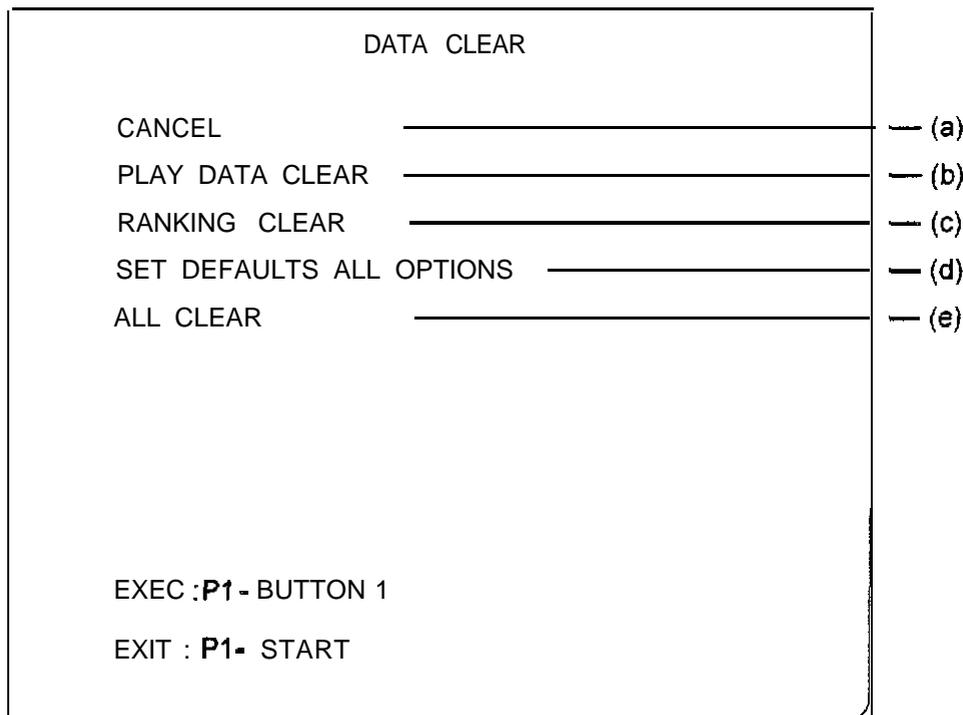
4.3.7 PLAY DATA

This mode provides data on play time in each mode, coin totals, character selection percentages, and VS game win/loss.

To select the display screen, press PI - BUTTON 1.

To return to the main test menu, press the PI - START switch

4.3.8 DATA CLEAR



- a) CANCEL returns to the main test menu screen.
- b) **PLAY DATA CLEAR** effects the play data only.
- c) RANKING CLEAR initializes the ranking data to the factory default values.
- d) SET DEFAULTS ALL OPTIONS initializes all game options to their default values.
- e) ALL CLEAR performs both functions (b) and (c).

4.3.9 EXIT & SAVE

This mode allows a return to the game screen following completion of option adjustments.

EXIT & SAVE must be selected for changes to register.

Note: turn off the TEST switch following return to the game screen.

5.0 PCB CONNECTOR TABLES

5.1 JAMMA Edge Connector

(56 Pin 3.96 mm pitch)

Solder side	Terminal	No.	Parts side
GND	A	1	GND
GND	B	2	GND
+5V	C	3	+5 V
+5 V	D	4	+5 V
	E	5	
+12 V	F	6	+12 V
Insertion error preventing	H	7	Insertion error preventing
Coin counter 2	J	8	Coin counter 1
	K	9	
Speaker (-)	L	10	Speaker(+)
Audio GND	M	11	Audio (+)
Video GREEN	N	12	Video RED
Video SYNC	P	13	Video BLUE
Service Switch	R	14	Video GND
	S	15	Test switch
Coin switch 2	T	16	Coin switch 1
2P START switch	U	17	1P START switch
2P lever UP	V	18	1P lever UP
2P lever DOWN	W	19	1P lever DOWN
2P lever LEFT	X	20	1P lever LEFT
2P lever RIGHT	Y	21	1P lever RIGHT
2P BUTTON 1 (Low)	Z	22	1P BUTTON 1 (Low)
2P BUTTON 2 (High)	a	23	1P BUTTON 2 (High)
2P BUTTON 3 (Special)	b	24	1P BUTTON 3 (Special)
	c	25	
	d	26	
GND	e	27	GND
GND	f	28	GND

Notes:

- Do not connect leads to blank pins.
- The coin counter(s) operate on +12 volts
- Connect the switches to N.O. terminals and the GND to the COM terminal
- The +5V 5A and +12 V 2A supplies must be within +5% and -1% of nominal voltage.

5.2 Extended Edge Connector

(48 Pin 2.54 mm pitch 225D-10024C2-2312 or equivalent)

Solder side	Terminal No.		Parts side
Speaker R (-)	A1	B1	Speaker R (+)
	A2	B2	
	A3	B3	
	A4	B4	
key	A5	B5	Insertion error preventing key
	A6	B6	
	A7	B7	
2P BUTTON 4 (Guard)	A8	B8	2P BUTTON 5
+5V	A9	B9	GND
+5V	A10	B10	GND
	A11	B11	
	A12	B12	
	A13	B13	2P BUTTON 6
	A14	B14	
	A15	B15	
	A16	B16	
+5V	A17	B17	GND
+5V	A18	B18	GND
1P BUTTON 6	A19	B19	1P BUTTON 5
1P BUTTON 4 (Guard)	A20	B20	
	A21	B21	
	A22	B22	
+5V	A23	B23	GND
+5V	A24	B24	GND

Notes:

- Do not connect leads to blank pins.
- For Stereo and Mono setting select the speaker output in the SOUND TEST screen in test mode.
- Monophonic cabinets output only left channel sound when the stereo sound setting is selected.

Speaker connections

- Connect the (L) speaker to the speaker output of 56 Pin JAMMA edge connector.
- Connect the Right speaker to the speaker output of the 48 Pin edge connector.

Bill Of Material

Part Number

Description: **Decal, Soul Calibur, Kit**

Date: **7-7-98**

Revision: **B**

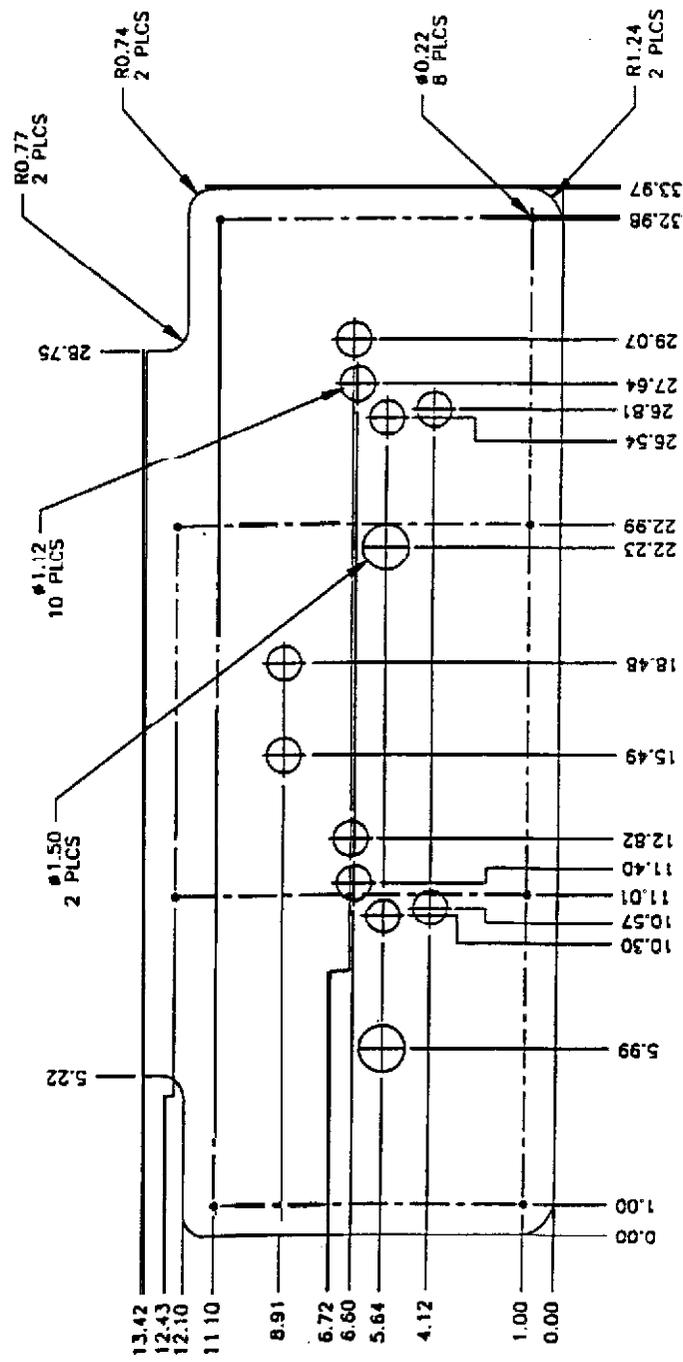
Item #	Part Number	Description	Qty	S t a t u s	
				REL.	COMPL
1	CA40 - 08032 - 00	CARD. GAME INSTRUCTIONS	1	<input type="checkbox"/>	<input type="checkbox"/>
2	CA40 - 08033 - W	CARD, MOVE LIST	1	<input type="checkbox"/>	<input type="checkbox"/>
3	CA40 - 08034 - 00	DECAL, MARQUEE	1	<input type="checkbox"/>	<input type="checkbox"/>
4	CA40 - 08035 - 00	DECAL, CONTROL PANEL OVERLAY	1	<input type="checkbox"/>	<input type="checkbox"/>
5	CA40 - 08036 - 00	DECAL, SIDE PANEL. LEFT	1	<input type="checkbox"/>	<input type="checkbox"/>
6	CA40 - 08036 - 01	DECAL, SIDE PANEL. RIGHT	1	<input type="checkbox"/>	<input type="checkbox"/>
7	CA40 - 08038 - 00	DECAL G	2	<input type="checkbox"/>	<input type="checkbox"/>
8	CA40 - 08039 - 00	DECAL, A	2	<input type="checkbox"/>	<input type="checkbox"/>
9	CA40 - 08040 - 00	DECAL, B	2	<input type="checkbox"/>	<input type="checkbox"/>
10	CA40 - 08041 - 00	DECAL K	2	<input type="checkbox"/>	<input type="checkbox"/>
11	CA40 - 08042 - 00	DECAL PLAYER 1	1	<input type="checkbox"/>	<input type="checkbox"/>
12	CA40 - 08043 - 00	DECAL, PLAYER 2	1	<input type="checkbox"/>	<input type="checkbox"/>
13	CA40 - 08081 - 00	DECAL, SOULCALIBUR LOGO - SIDE	2	<input type="checkbox"/>	<input type="checkbox"/>
14	VG44 - 07943 - 00	LABEL EPILEPTIC WARNING	1	<input type="checkbox"/>	<input type="checkbox"/>

NOTES

1. MATERIAL: 0.060 THK CLEAR ACRYLIC (LUCITE L OR EQUAL)
2. FINISH: NONE
3. DEBURR AND BREAK ALL SHARP EDGES
4. BAG AND TAG WITH PART NUMBER AND REVISION LEVEL

REVISION

LTR	ECO	DATE	DESCRIPTION	BY	APPR
A		1-8-98	PRODUCTION RELEASE	EB...	EB...
B		1-15-98	MOVE 1 PLAYER 2 PLAYER BUTTONS	EB...	EB...
C		7-15-98	ADD SQUICALBUR TO USED ON COLUMN	EB...	EB...



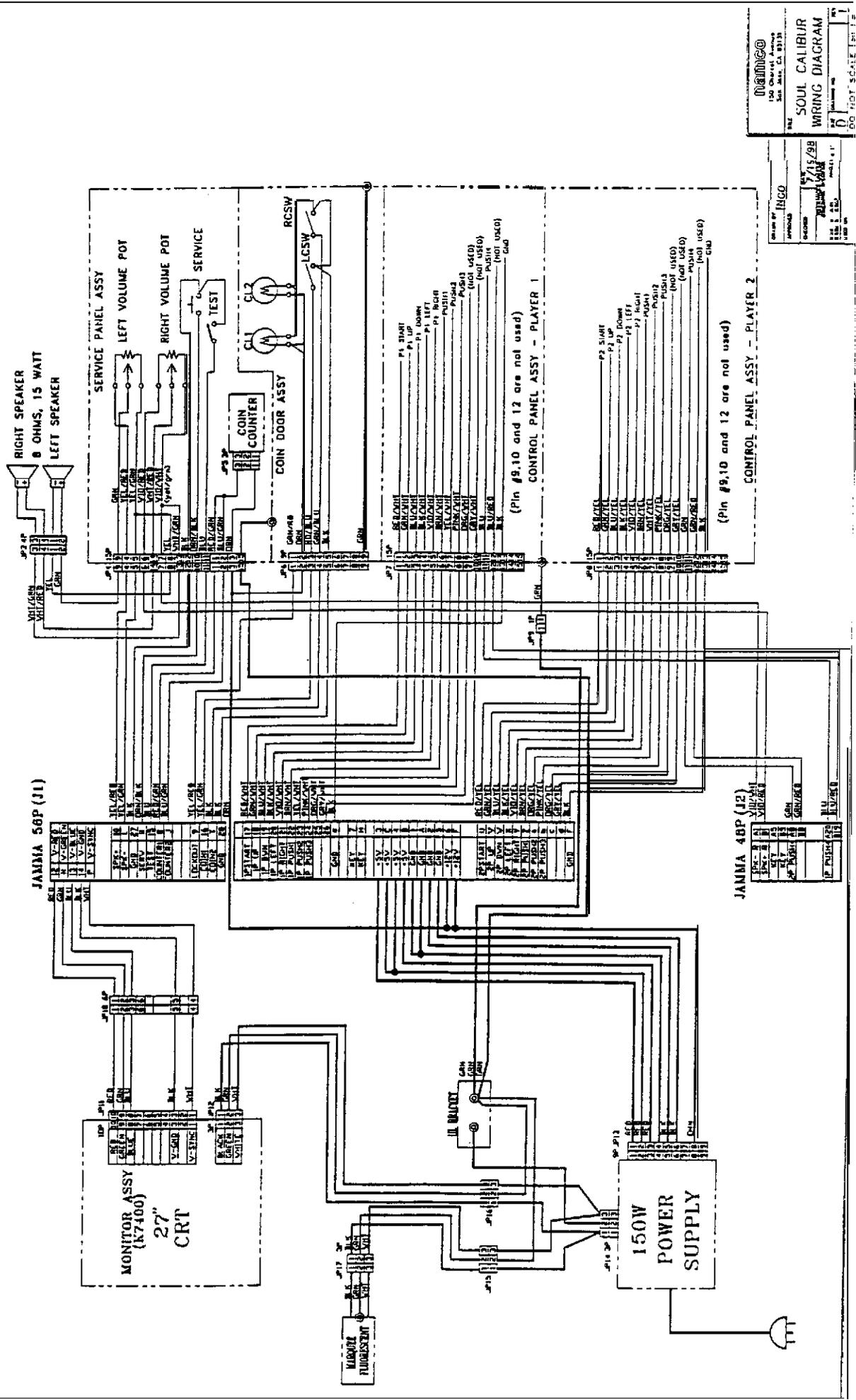
NOTE: UNLESS SPECIFIED OTHERWISE	DESIGN	1-8-98
FINISH	MATERIAL	
DO NOT SCALE	FINISH	
USED ON	CHECKED AND APPROVED	
EHRCZL / SQUICALBUR		
SIZE B	DWG NO. VG95-07460-00	REV. C
SCALE FULL	FILE NAME	SHEET 1 OF 1

nanco 150 Charcol Avenue
San Jose, California 95131

TITLE COVER, LEXAN, CONTROL PANEL
(Dedicated)

NOTES:
 1 APPLY BRAGS FOR THICK LINES AND BRAGS FOR THIN LINES
 2 INDICATES RING TERMINAL
 3 INDICATES RING TERMINAL
 4 WIRE ARE APPLIED BY BOTH SIDES OF 36 PIN CONNECTOR

REV	DESCRIPTION	DATE	APPROVAL
1			



INGO
 1500
 SOUL CALIBUR
 WIRING DIAGRAM

DATE: 7/15/98
 APPROVED: [Signature]
 INGO

DATE: 7/15/98
 APPROVED: [Signature]
 INGO