

DOUBLE DRAGON

双截龍
The Revenge™



ROMSTAR™ INC.

INSTRUCTION MANUAL

ROMSTAR™ inc.

Invites You To Use

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RETURN MERCHANDISE AUTHORIZATION — (RMA)

ALL RETURNED MERCHANDISE MUST HAVE AN RMA NUMBER CLEARLY VISIBLE ON THE OUTSIDE OF THE PACKAGE.

ALL RMA NUMBERS MUST BE OBTAINED FROM ROMSTAR BY AN AUTHORIZED ROMSTAR DISTRIBUTOR. (PLEASE HAVE ROMSTAR SERIAL NUMBER AVAILABLE WHEN CALLING FOR AN RMA #).

ALL PC BOARDS RETURNED TO ROMSTAR WITHOUT AN RMA NUMBER WILL NOT BE ACCEPTED.

ROMSTAR WILL SHIP ADVANCE REPLACEMENT BOARDS TO DISTRIBUTORS OR AT DISTRIBUTORS REQUEST, DROP-SHIP BOARDS DIRECT TO THE OPERATOR.

ADVANCE REPLACEMENT BOARDS WILL BE BILLED TO THE DISTRIBUTOR UNTIL RECEIPT OF A RETURNED BOARD BY ROMSTAR AT WHICH TIME A CREDIT WILL BE ISSUED.

ALL REPAIRS AND/OR REPLACEMENTS WILL BE SHIPPED BY ROMSTAR WITHIN 24 HOURS OF RECEIPT OR REQUEST. (SUBJECT TO AVAILABILITY OF BOARDS).

FOR ANY ROMSTAR PRODUCT PURCHASED AFTER 3/1/86, A ROMSTAR WARRANTY CARD MUST BE ON FILE FOR EACH BOARD TO FACILITATE REPAIR & RETURN.

ROMSTAR WILL REPAIR OR REPLACE ROMSTAR PCB's FOR A MINIMAL CHARGE FOR A PERIOD OF 1 YEAR.

MINIMUM \$50.00 SERVICE CHARGE FOR ALL NON-WARRANTY REPAIRS OR RETURNS.

ANY UNAUTHORIZED NON-FACTORY REPAIR OR ATTEMPTED REPAIR VOIDS WARRANTY. (ATTEMPTED REPAIR USUALLY INCREASES THE TIME AND COST OF REPAIR.)

(*ALL WARRANTY PERIODS BEGIN ON THE DATE OF PURCHASE FROM ROMSTAR)

LIMITED WARRANTY

ROMSTAR INC. ("Seller"), warrants only to the initial purchaser of its products that the items listed below are free from defects in material and workmanship under normal use and service for the warranty periods specified:

- | | |
|---------------------------|-----------|
| A. Printed Circuit Boards | (60) days |
| B. Electronic Components | (30) days |
| C. Television Monitors | (30) days |

No other parts of Seller's products are warranted.

Warranty periods are effective from the initial date of shipment from Seller to its authorized distributors.

Seller's sole liability shall be, at its option, to repair or replace products which are returned to Seller during the warranty periods specified, provided:

- A. Seller is notified promptly upon discovery by buyer that stated products are defective.
- B. Such products are properly packaged and then returned, prepaid to Seller's plant.

This warranty does not apply to any parts damaged during shipping or handling, or due to improper installation or usage, or alteration. In no event shall Seller be liable for any anticipated profits, loss of profits, loss of use, incidental or consequential damages or any other losses incurred by the customer in connection with the purchase of Romstar Inc. product.

(WARRANTY DISCLAIMER)

EXCEPT AS SPECIFICALLY PROVIDED IN A WRITTEN CONTRACT BETWEEN SELLER AND PURCHASER, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

WARNING
THIS GAME MUST BE GROUNDED. FAILURE TO DO SO MAY
RESULT IN DESTRUCTION TO ELECTRONIC COMPONENTS.

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not used in accordance with the instructions manual, may cause interference to radio communications. 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.



“WINNERS DON’T USE DRUGS”
William S. Sessions, Director, FBI

* IN COOPERATION WITH THE AAMA AND FBI ANTI-DRUG CAMPAIGN*

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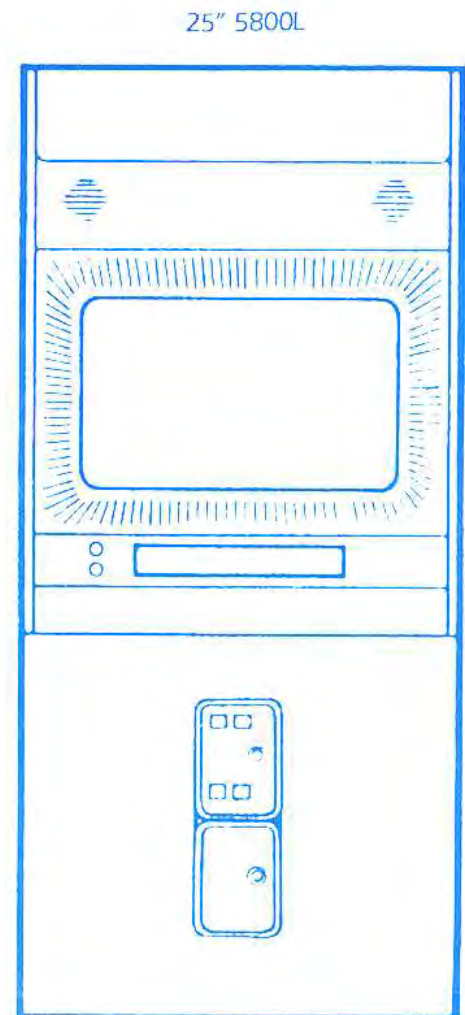
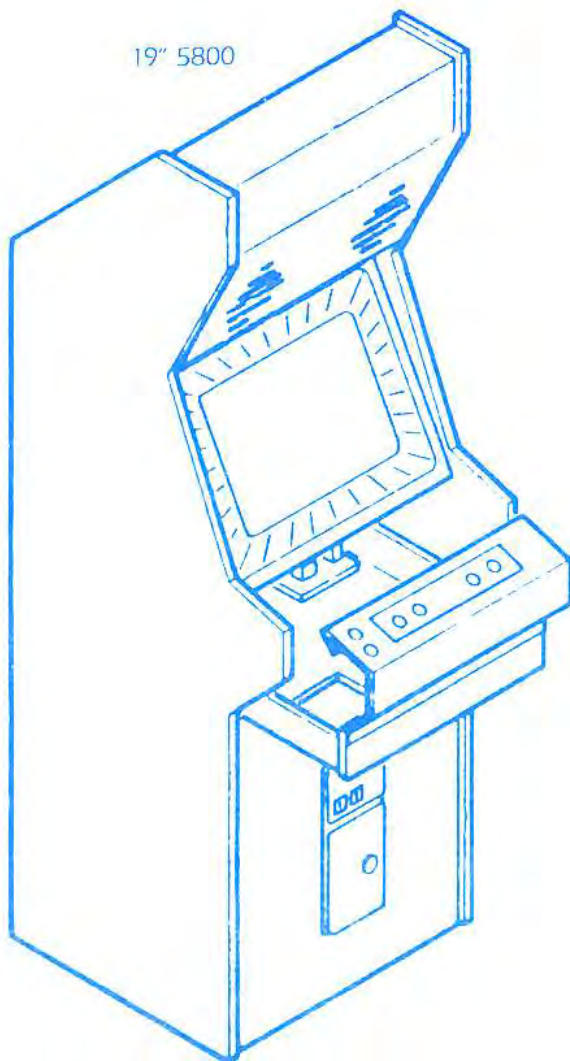
The game play, all graphic designs, this technical manual, its accompanying diagrams, and the display manual are protected by the law.

You may void the game warranty if you do any of the following:

- substitute non-Romstar electronic parts in the game
- modify or alter any circuits in the game by using kits or parts *not* supplied by Romstar.

RECOMMENDED FACTORY SETTING
(PLEASE SET THE PCB AS FOLLOWS:)

DESCRIPTION	SETTING	ADJUSTMENT	POSITION	DIPBANK
COIN 1	1 COIN — 1 PLAY	OFF/OFF/OFF	1, 2, 3	1
COIN 2	1 COIN — 1 PLAY	OFF/OFF/OFF	4, 5, 6	1
TV-SCREEN	NORMAL	OFF	8	1
DIFFICULTY	3	ON/OFF	1, 2	2
DEMO SOUND	NO SOUND	OFF	3	2
HURRICANE KICK	EASY	ON	4	2
# MEN	2	ON/OFF	7, 8	2
TIME	FAST	OFF/ON	5, 6	2



*Refer to page 5 for complete settings list.

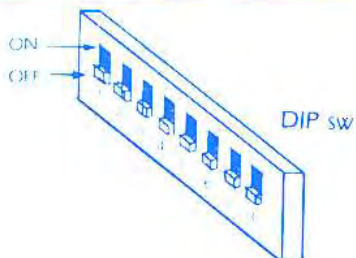
DIP SWITCH SETTINGS

DIP SWITCH 1 (DOUBLE DRAGON II)

1	2	3	4	5	6	7	8	
								• Coin-1
OFF	OFF	OFF						* 1 Coin — 1 Play
ON	OFF	OFF						1 Coin — 2 Play
OFF	ON	OFF						1 Coin — 3 Play
ON	ON	OFF						1 Coin — 4 Play
OFF	OFF	ON						1 Coin — 5 Play
ON	OFF	ON						2 Coin — 1 Play
OFF	ON	ON						3 Coin — 1 Play
ON	ON	ON						4 Coin — 1 Play
								• Coin-2
			OFF	OFF	OFF			* 1 Coin — 1 Play
			ON	OFF	OFF			1 Coin — 2 Play
			OFF	ON	OFF			1 Coin — 3 Play
			ON	ON	OFF			1 Coin — 4 Play
			OFF	OFF	ON			1 Coin — 5 Play
			ON	OFF	ON			2 Coin — 1 Play
			OFF	ON	ON			3 Coin — 1 Play
			ON	ON	ON			4 Coin — 1 Play
								• TV-Screen
						OFF		Table type use
						ON		* Up-right type use
								• Screen Invert
							OFF	Normal
							ON	Invert

DIP SWITCH 2

1	2	3	4	5	6	7	8	
								• Degree of Difficulty
OFF	OFF							Normal
OFF	OFF							Easy
ON	OFF							* Less than difficult
ON	ON							Difficult
								• Sound for Demonstration
		OFF						Sound
		ON						* Not sound
								• Hurricane Kick
			OFF					Normal
			ON					* Easy
								Timer
				OFF	OFF			Normal
				ON	OFF			Slow
				OFF	ON			* Fast
				ON	ON			Very Fast
								• Number of Characters
						OFF	OFF	1
						ON	OFF	* 2
						OFF	ON	3
						ON	ON	4



* Refer to page four for Factory Setting

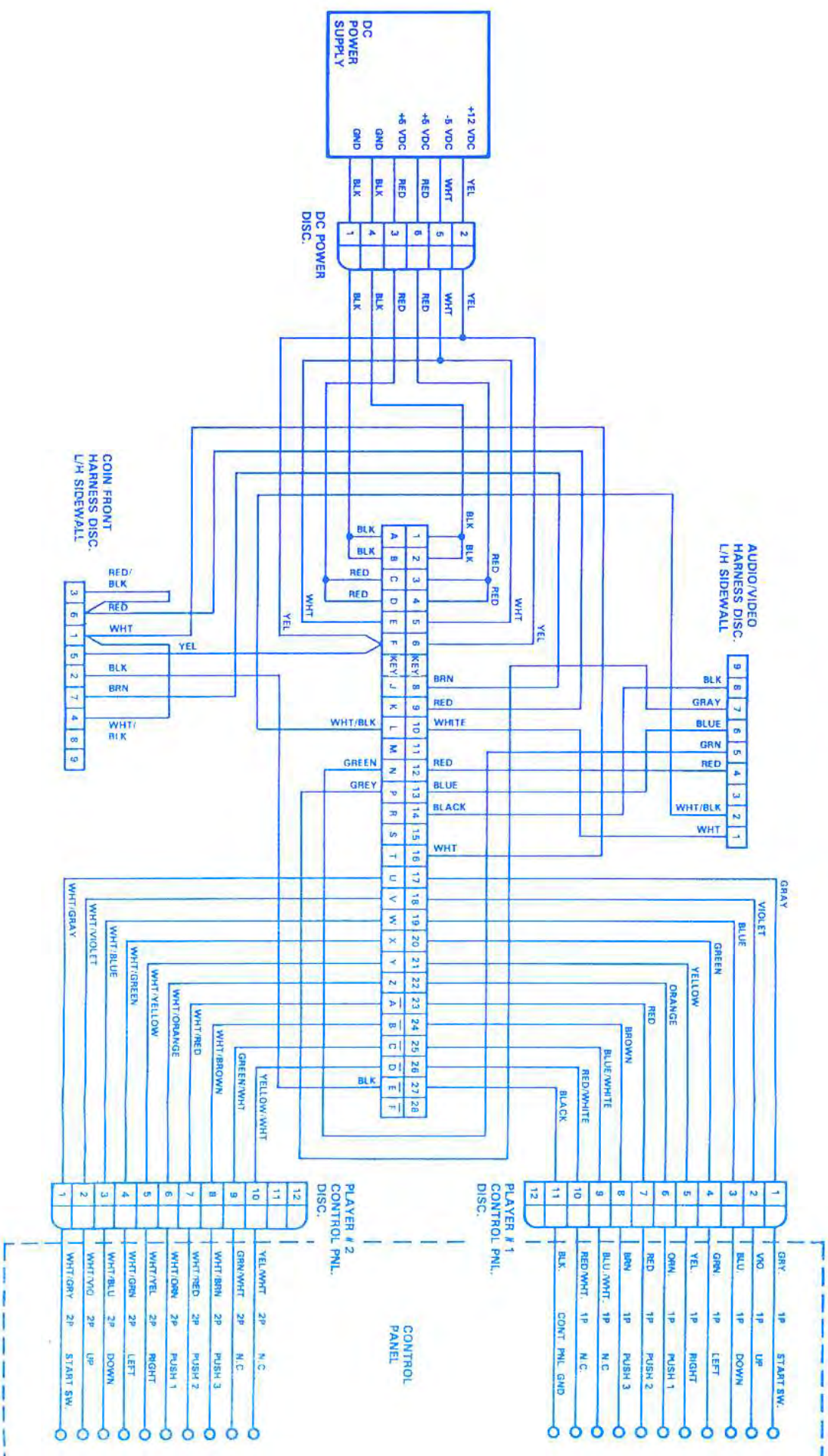
CONNECTING DIAGRAM

Solder Side			Parts Side
GND	A	1	GND
GND	B	2	GND
+5V	C	3	+5V
+5V	D	4	+5V
-5V	E	5	-5V
+12V	F	6	+12V
N/A	H	7	N/A
Coin Counter 2	J	8	Coin Counter1
N/A	K	9	N/A
Speaker (-)	L	10	Speaker (-)
	M	11	
Video Green	N	12	Video Red
Video Sync	P	13	Video Blue
Service	R	14	Video GND
N/A	S	15	N/A
Coin 2	T	16	Coin 1
2P Start	U	17	1P Start
2P Up	V	18	1P Up
2P Down	W	19	1P Down
2P Left	X	20	1P Left
2P Right	Y	21	1P Right
2P Push S/W 1 (L/Attack)	z	22	1P Push S/W 1 (L/Attack)
2P Push S/W 2 (Jump)	a	23	1P Push S/W 2 (Jump)
2P Push S/W 3 (R/Attack)	b	24	1P Push S/W 3 (R/Attack)
N/A	c	25	N/A
N/A	d	26	N/A
GND	e	27	GND
GND	f	28	GND

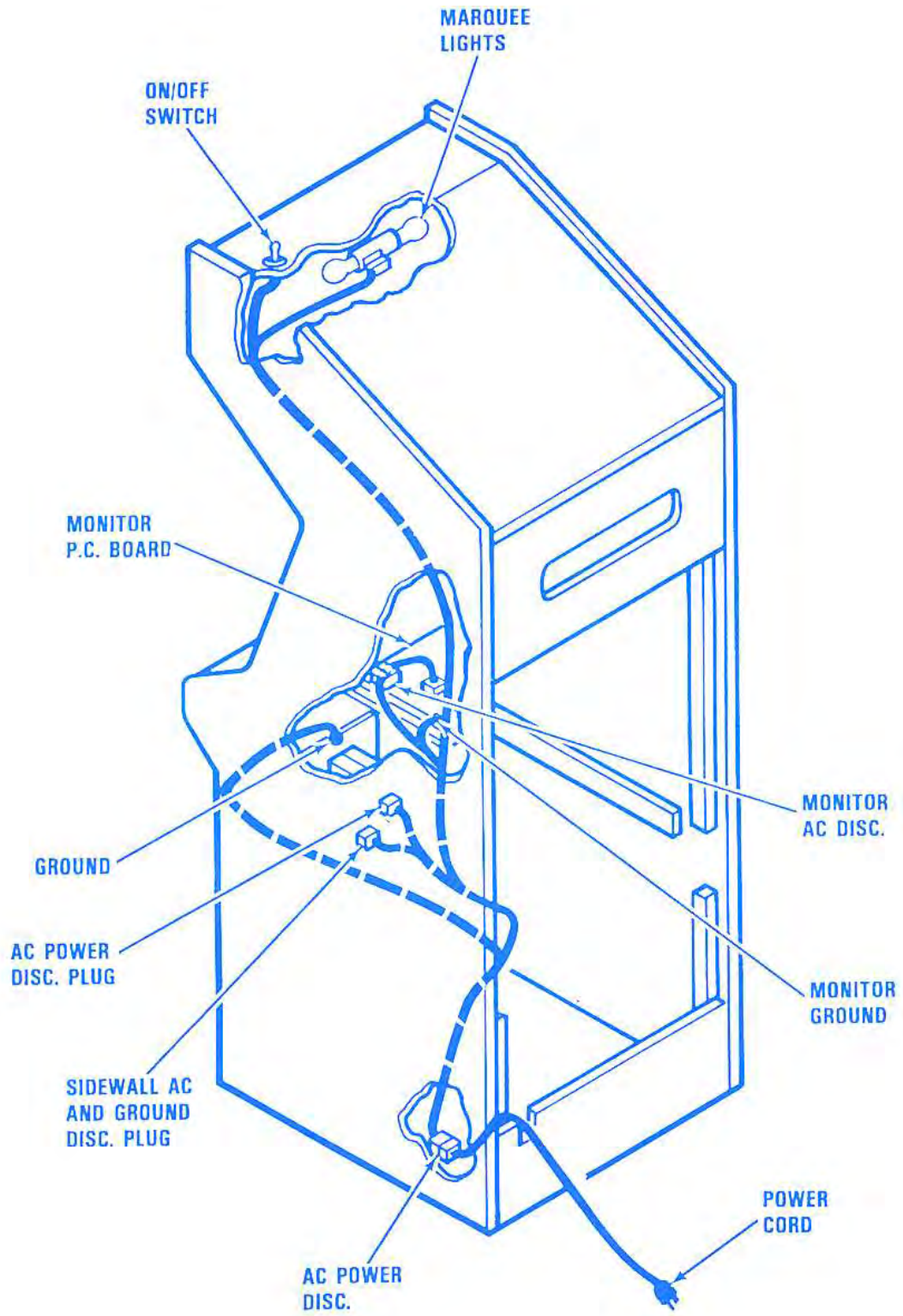
56 PIN EDGE CONN. PIN-OUT CHART (JAMMA COMPATIBLE)

WIRE COLOR	SOLDER SIDE		PARTS SIDE		WIRE COLOR
BLACK	GND	A	1	GND	BLACK
BLACK	GND	B	2	GND	BLACK
RED	-5V	C	3	-5V	RED
RED	-5V	D	4	-5V	RED
WHITE	-5V	E	5	-5V	WHITE
YELLOW/ YELLOW	-12V	F	6	-12V	YELLOW/ YELLOW
	KEY	H	7	KEY	
	COIN COUNTER 2	J	8	COIN COUNTER 1	BROWN
	COIN LOCK OUT 2	K	9	COIN LOCK OUT 1	RED
WHITE/BLACK	SP (-)	L	10	SP (·)	WHITE
OP.-BLU/BLACK	N.C.	M	11	N.C.	BLUE-OPTION
GREEN	VIDEO GREEN	N	12	VIDEO RED	RED
GRAY	VIDEO SYNC	P	13	VIDEO BLUE	BLUE
RED/BLACK	SERVICE SWITCH	R	14	VIDEO GND	BLACK
OP.-BRN/BLACK	TILT SW.	S	15	TEST SW.	BROWN
	COIN SW. 2	T	16	COIN SW. 1	WHITE
WHITE/GRAY	START SW. 2	U	17	START SW. 1	GRAY
WHITE/VIOLET	2P UP	V	18	1P UP	VIOLET
WHITE/BLUE	2P DOWN	W	19	1P DOWN	BLUE
WHITE/GREEN	2P LEFT	X	20	1P LEFT	GREEN
WHITE/YELLOW	2P RIGHT	Y	21	1P RIGHT	YELLOW
WHITE/ORANGE	2P PUSH 1	Z	2@	1P PUSH 1	ORANGE
WHITE/RED	2P PUSH 2	a	23	1P PUSH 2	RED
WHITE/BROWN	2P PUSH 3	b	24	1P PUSH 3	BROWN
GREEN/WHITE	N.C.	c	25	N.C.	BLUE/WHITE
YELLOW/WHITE	N.C.	d	26	N.C.	RED/WHITE
BLACK	GND	e	27	GND	BLACK
OPTION-BLACK	GND	f	28	GND	BLACK-OPTION

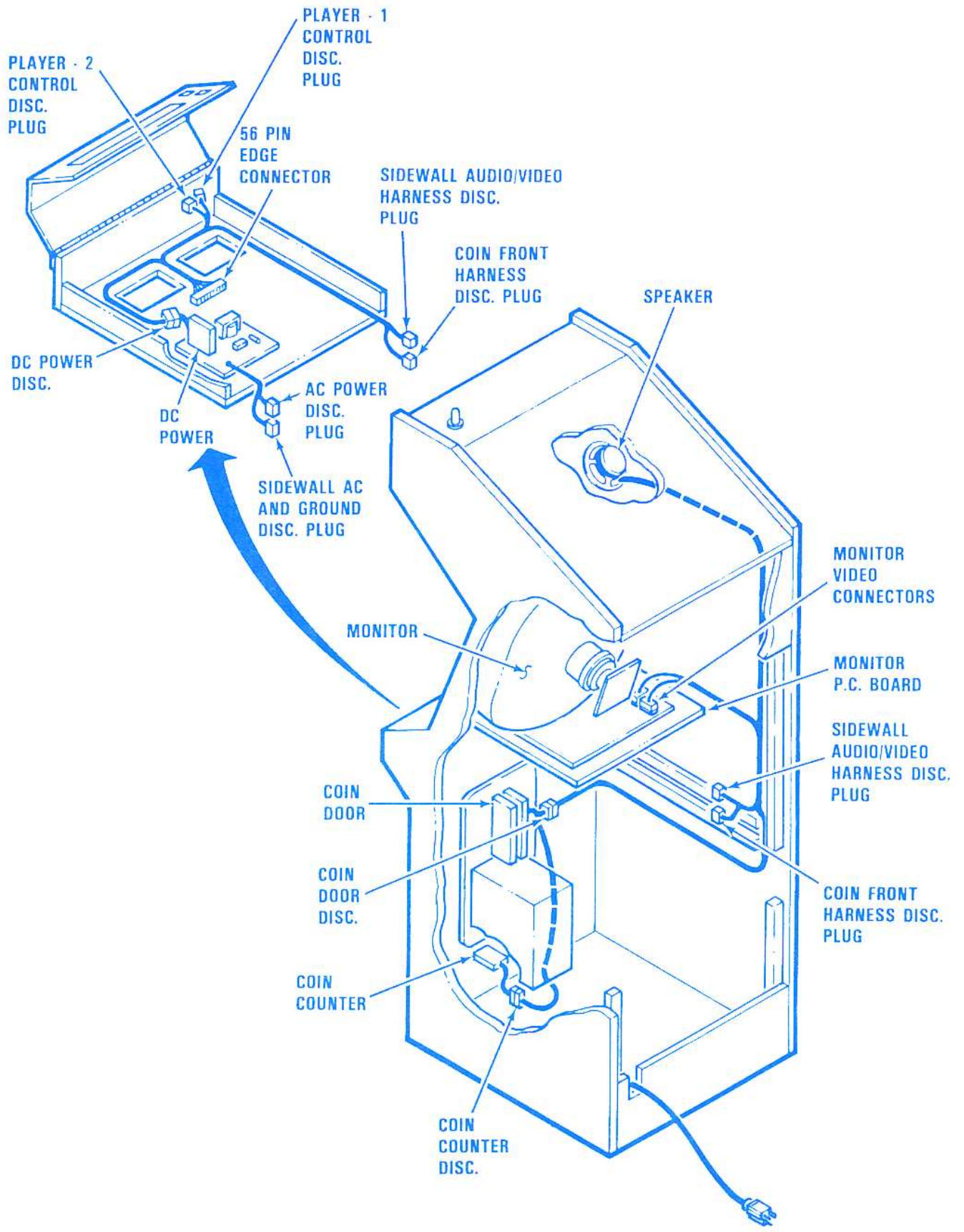
MAIN HARNESS WIRING DIAGRAM



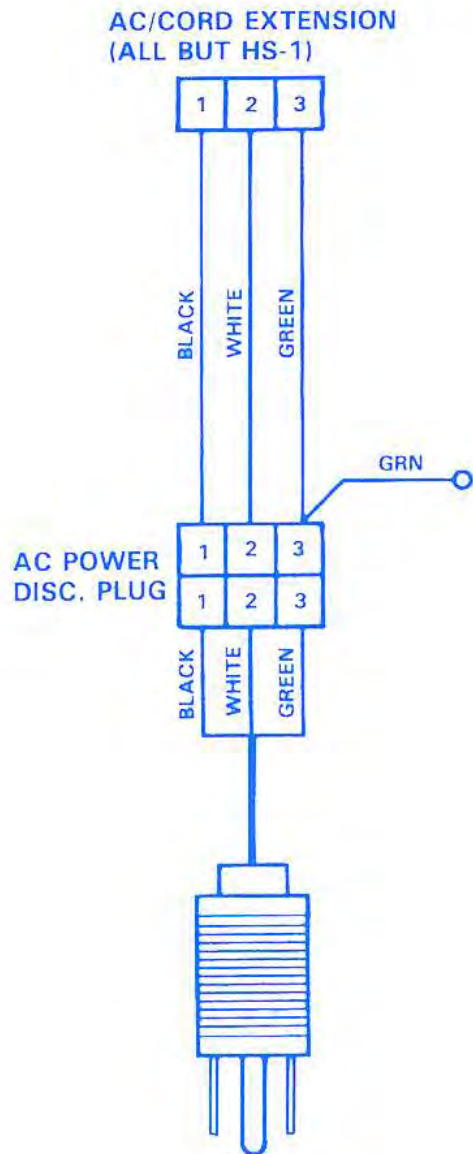
SIDEWALL AC AND GROUND HARNESS LAYOUT



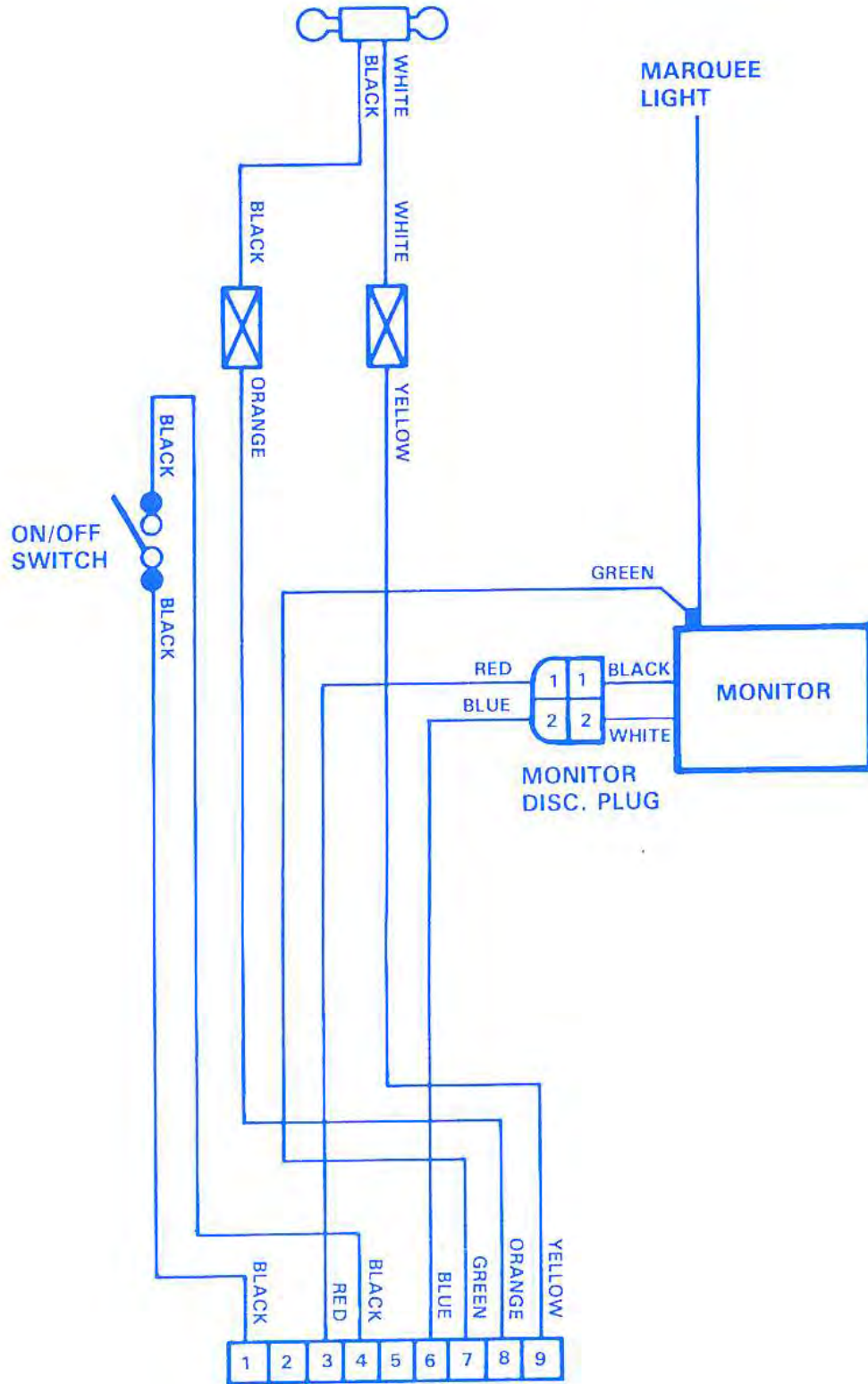
MAIN HARNESS LAYOUT



AC POWER CORD WIRING DIAGRAM

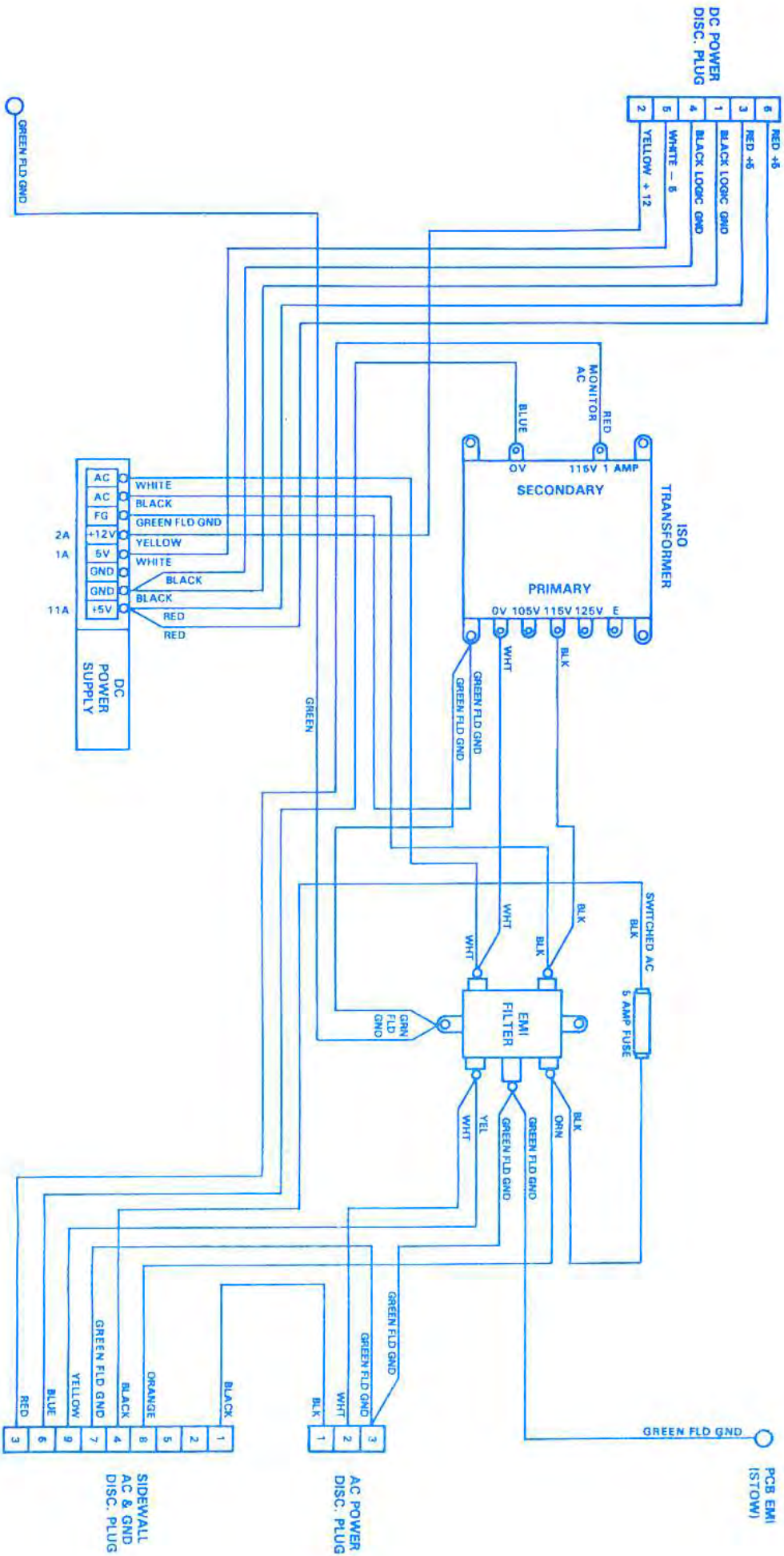


SIDEWALL AC AND GROUND HARNESS

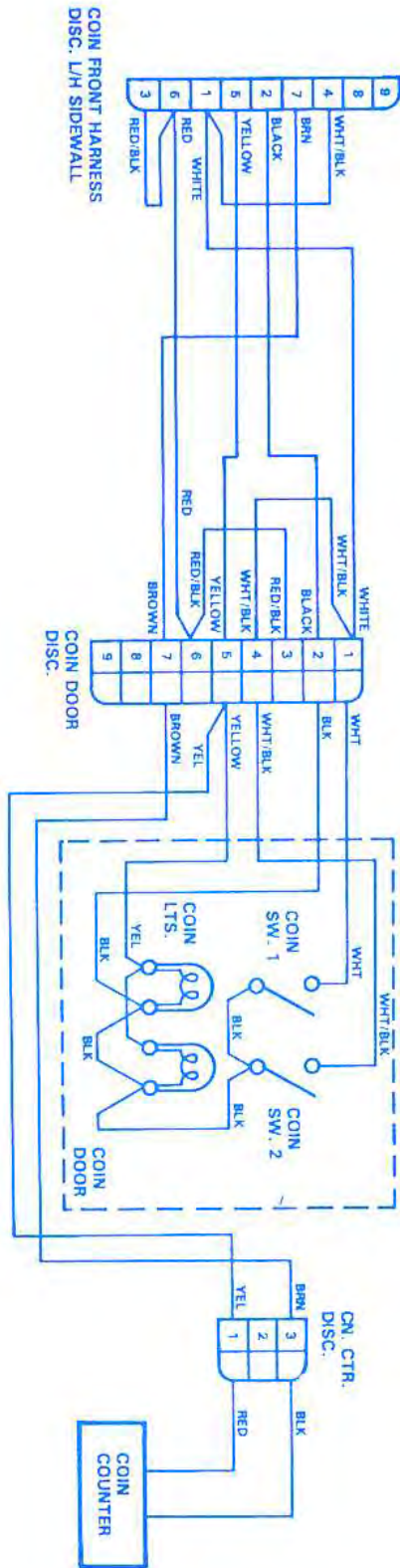


SIDEWALL AC AND
GROUND DISC. PLUG
R/H SIDEWALL

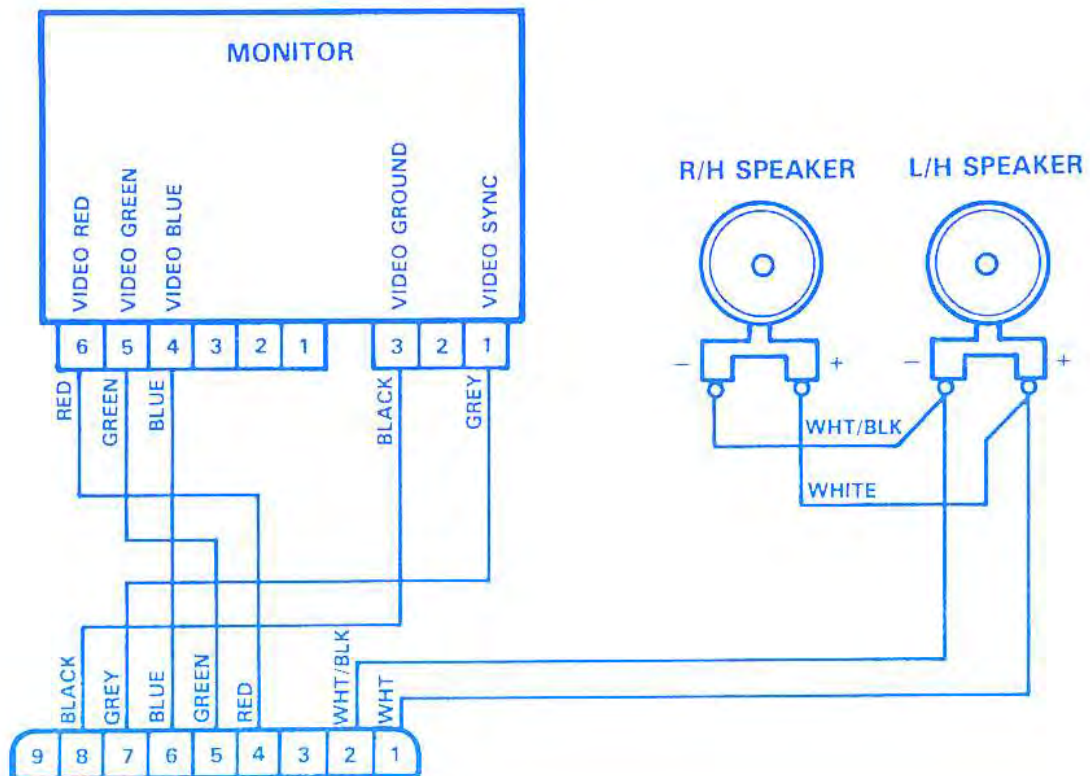
POWER SUPPLY - WIRING DIAGRAM



COIN FRONT HARNESS WIRING DIAGRAM

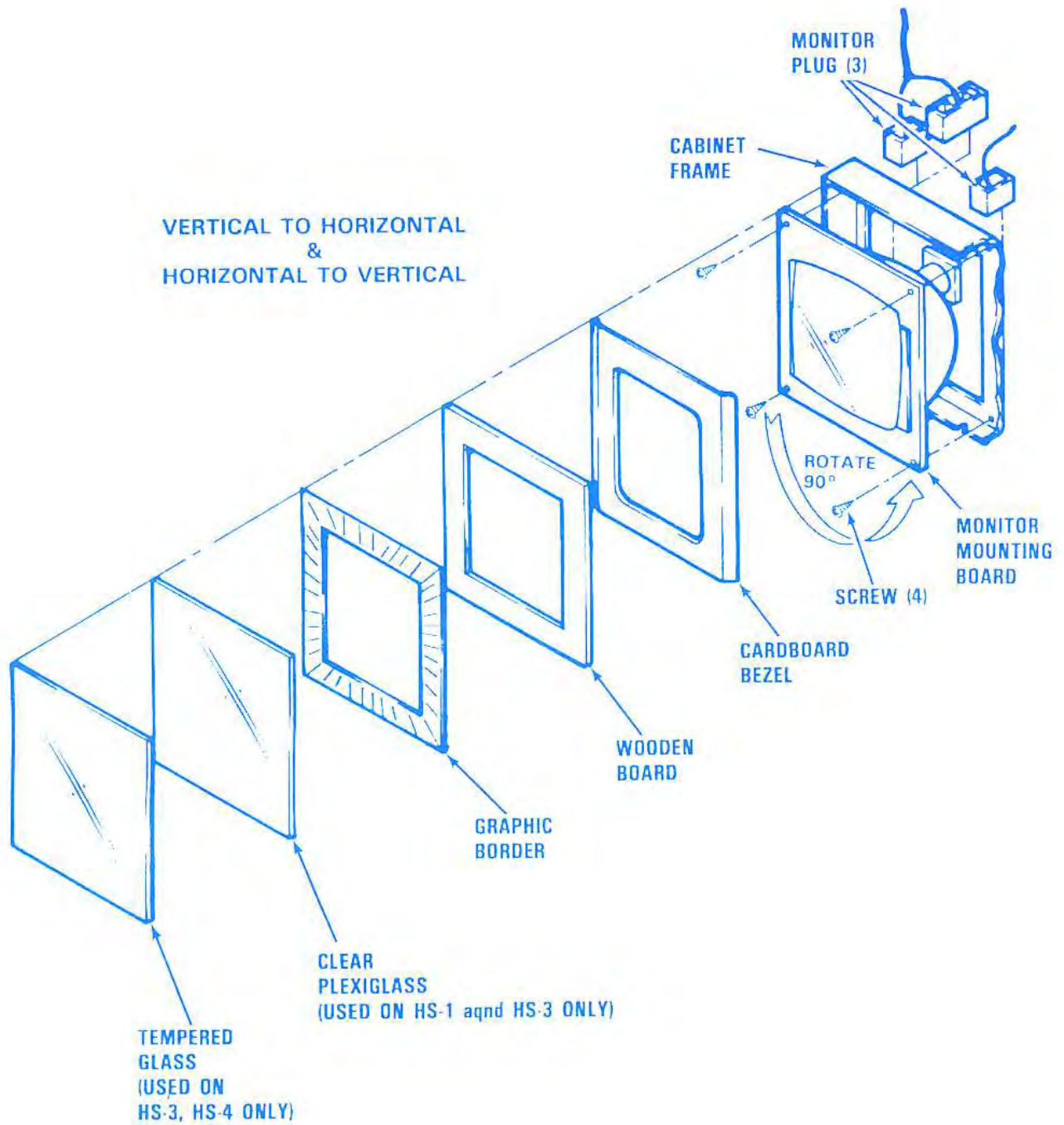


SIDEWALL AUDIO/VIDEO HARNESS WIRING DIAGRAM

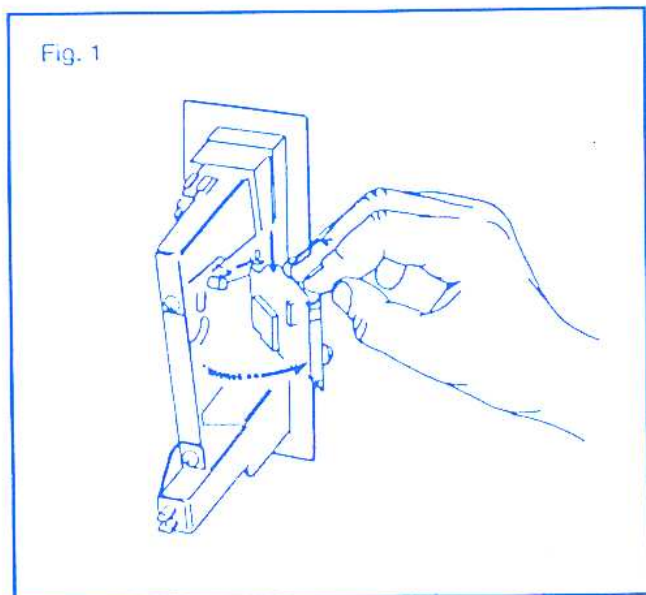


SIDEWALL AUDIO/
VIDEO HARNESS
DISC. PLUG

MONITOR CONVERSION



COIN DOOR MAINTENANCE



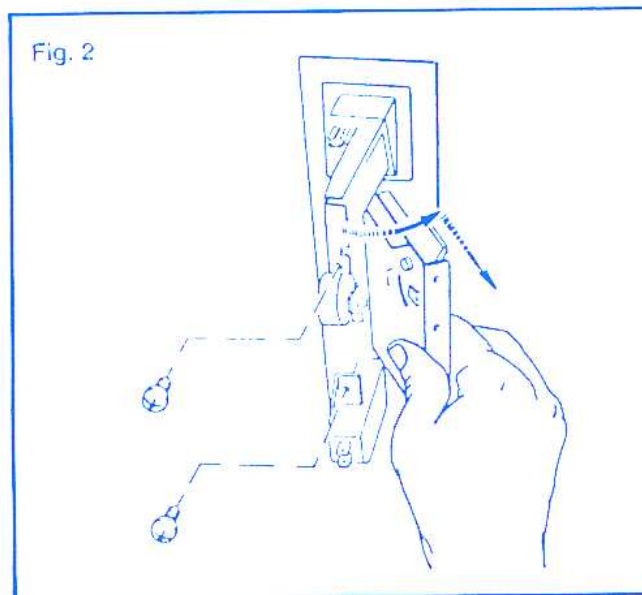
The magnet that is fitted to the mechanism, should be kept clean from foreign particles. The magnet can be cleaned by swinging the gate open. (as shown in Fig. 1). Remove metal filings from the magnet by guiding the point of a screwdriver along the edges of the magnet, such that the filings cling to the screwdriver.

The mechanism can be cleaned by immersing in water using a small brush to clean the mechanism. Rinse the mechanism with boiling water and dry with compressed air.

Note:

Since the Gold Mech relies on coins passing the magnet at a constant speed, the rejector must be free of dirt and grease which may slow down the coins. Do not lubricate the acceptor with oil as this slows down coins.

If the above procedures are not successful, check for worn, bent or damaged parts and replace where necessary.



Removal of Mechanism

To remove the coin selector: Unscrew the two screws (as shown in Fig. 2) — swing rear of selector body away from the lock-out side and withdraw.

The Gold Mech Acceptors are designed to require a minimum of maintenance and field adjustment. Coins are checked by diameter and thickness, weight, metal content, bounce, and for ferromagnetic coins such as nickel and steel, a rim test also used.

Coin Switch

The coin switch comes in two different spring tensions — identified by the color of the plastic boss at the wire's pivot point.

Red: Light tension — U.S. .25c

White: Heavy tension — heavy foreign coins

CHECKPOINTS IN CASE OF DIFFICULTY PROBLEM / CAUSE-CURE

No Raster/No Video

- Check A.C. line cord
- Check line fuse
- Check monitor brightness
- Check power switch and/or interlock switch
- Check all solder connections on line filter and transformer
- Check for proper orientation of the PCB connector

Raster/No Video

- Check all PCB to monitor connections
- Check power supply voltage on PCB

No Video/Game sounds can be heard

- Check monitor brightness
- Check all PCB to monitor connections

Wrong colors

- Monitor needs degaussing
- Check for proper wiring between PCB and monitor
- Check monitor adjustment and adjust if necessary

Wavy picture

- Check monitor ground is properly connected to monitor
- Be certain sync inputs are properly connected to monitor
- Check horizontal hold adjustment

Horizontal/Vertical Roll

- Check horizontal and/or vertical hold adjustments
- Check for proper wiring of sync from PCB to monitor

No sound

- Check for - 5 volts on edge connector of PCB
- Check volume control potentiometer adjustment
- Check for +12 volts on edge connector of PCB
- Check wiring from PCB to speaker
- Check speaker for low resistance between the "+" and "-" tabs

Bad sound

- Check wiring to speaker for bad solder connections
- Check sound with another speaker

No switch input

- Check ground connection to switch/es
- Check wiring between PCB and switch/es for proper connection
- Check switch/es with an ohmmeter to verify proper operation

Switch operates incorrect function

- Check wiring between PCB and switches for proper orientation
- Check wiring for shorts between switch inputs

No coin meter

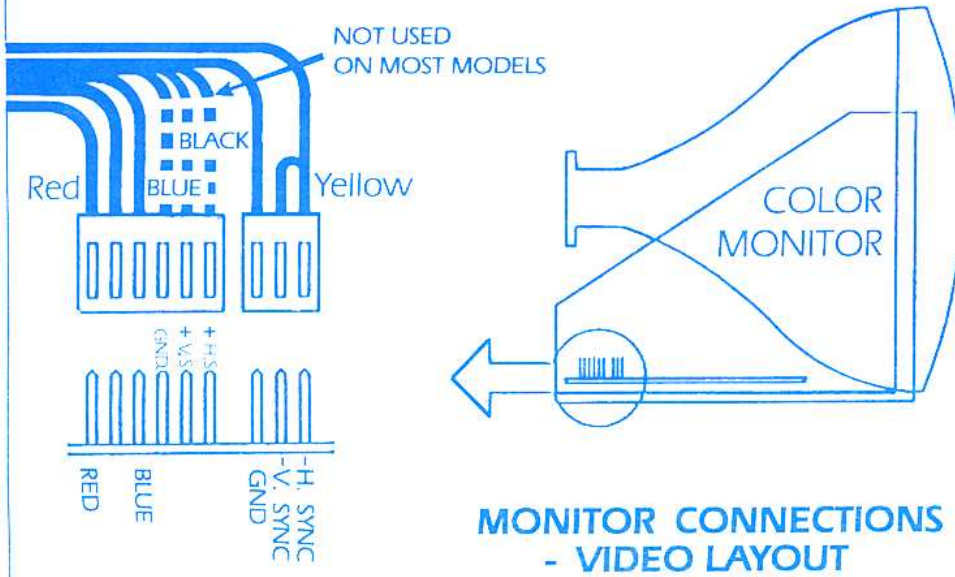
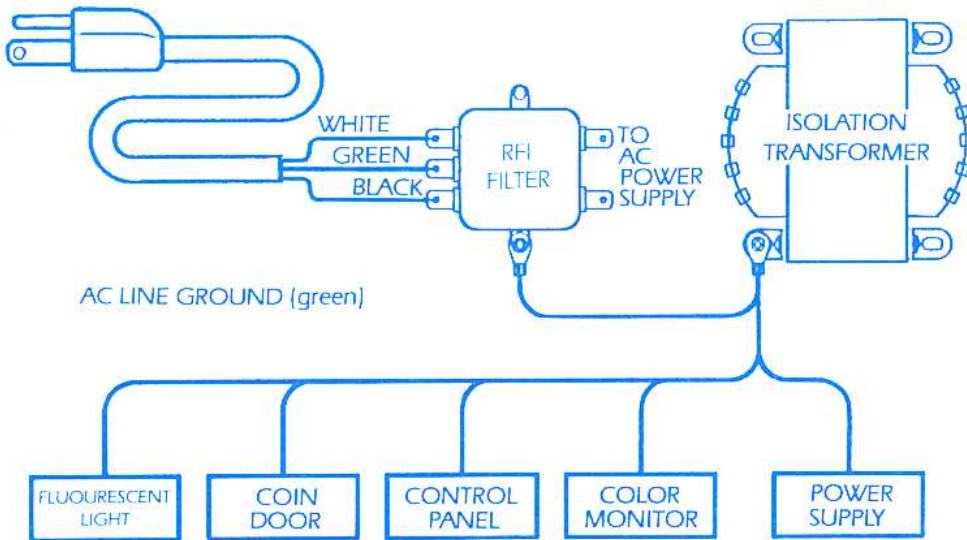
- Check wiring to coin meter
- Check that +5 volts is on "+" side of meter
- Verify a +5 volt meter is used

When coin switch is made and meter pulses, the screen blanks out and/or game resets

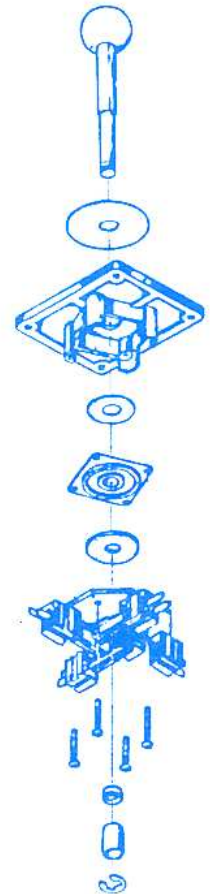
- Verify that a meter with a diode is used
- If no diode is built in meter a 1N4004 can be used across the meter. Cathode to "+" side of meter and anode to "-" side of meter

ILLUSTRATED PARTS LISTS

AC GROUND

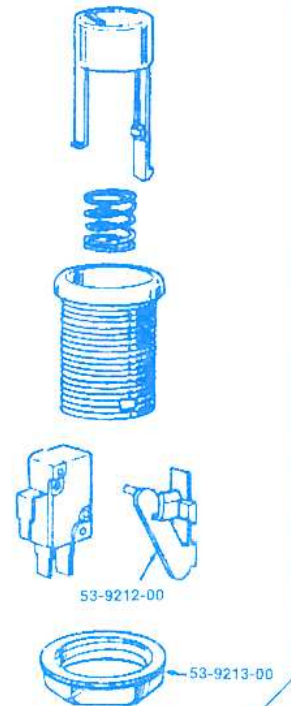


COIN METER LAYOUT

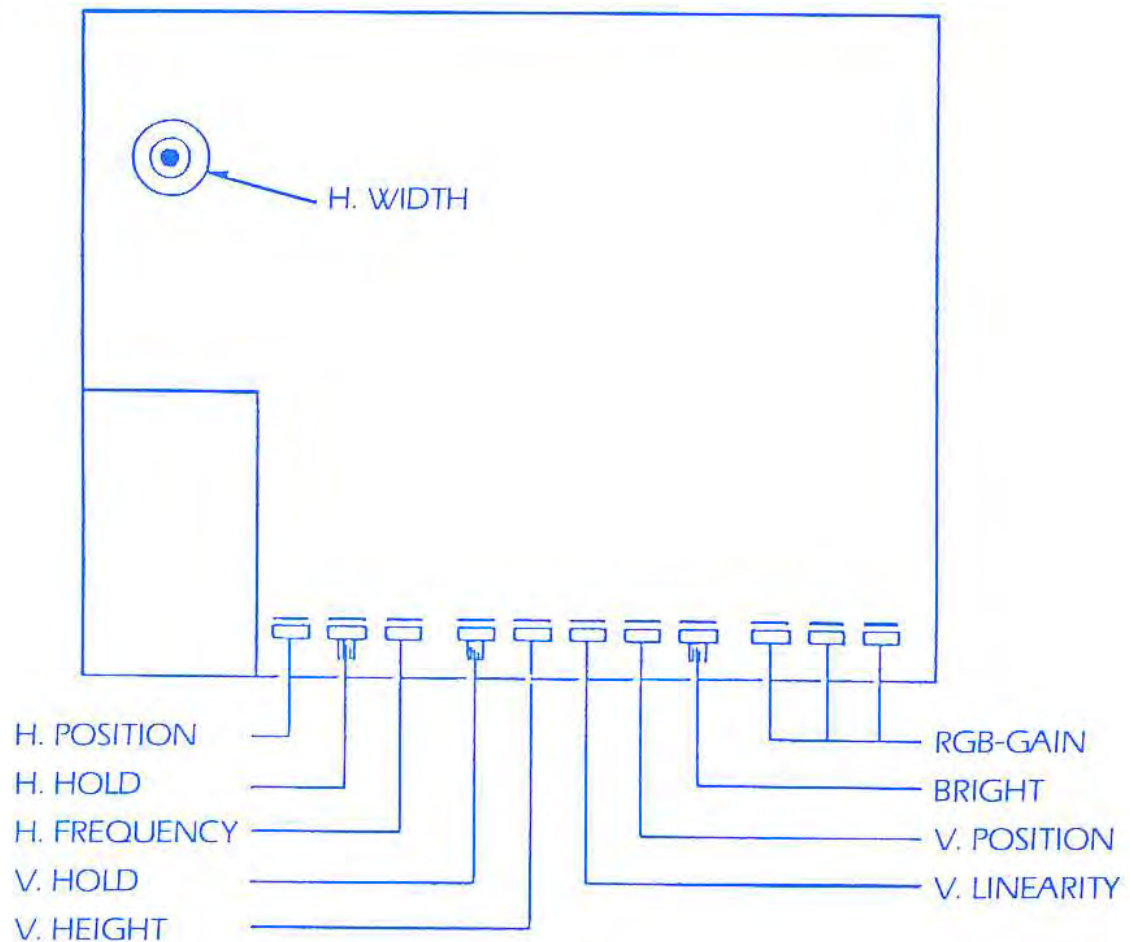


95-4115-00
MICROSWITCH WITH
GOLD CONTACTS

Exploded View



ADJUSTMENT ON COLOR VIDEO MONITOR



- The adjustments have been done at the factory for the best performance, but if necessary, adjust the above pots by referring the explanation for each adjustment.

NOTE:

Careless adjustment will cause failures such as out of synchronization, picture distortion, and high-voltage rising.

Never touch the white-paint-locked adjusting devices. Also, extra care must be taken when you adjust the TV monitor, because higher voltages exist there.

- Color distortion may happen depending on the setting condition of the machine. In that case, use a degaussing device or the degaussing switch.
Keep magnets away from the screen, or they may result in color distortion.

— **IMPORTANT NOTICE** —

**DOUBLE DRAGON II:
THE REVENGE**

will be available exclusively through

AMERICAN TECHNOS, INC. and ROMSTAR, INC.

All purchases of this game must be made through
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— **BEWARE OF COPY GAMES** —

Double Dragon II: The Revenge will be available first in the U.S. and Canada until all sales and distribution have been completed. Upon completion of Sales and Distribution in the U.S. and Canada, **Double Dragon II** will be released in limited quantities in Europe.

Anyone offering parallel boards of **Double Dragon II: The Revenge** will more than likely be selling illegal and illegitimate copies, and will be prosecuted accordingly.

American Technos and Romstar support the efforts of the AAMA and the FBI in its anti-drug campaign. The “**Winners Don't Use Drugs**” message will appear in all *legitimate* versions of **Double Dragon II: The Revenge**.

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Suggested Improvements _____

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Name _____

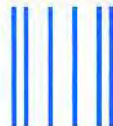
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