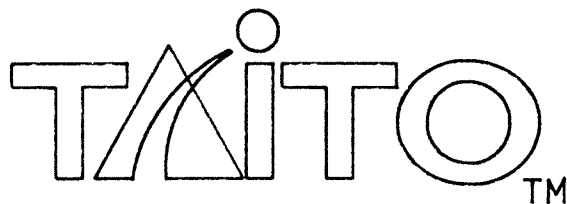# CADASH ™

OPERATING MANUAL

TAITO ™

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PART NO. 250-20

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* **ATTENTION** *

GAME DESCRIPTION

Cadash is a multiple player horizontal kit video game. One or two players can play at a single game, and two games may be linked for additional players. A single game has two complete sets of controls, each player has a joystick and two buttons. The player moves his character with the joystick and uses the buttons to attack or jump.

Players can select their characters at the start of the game. Each character type offers a different set of powers:

|		
FIGHTER	—	Best attacking power and persistence
MAGICIAN	—	Has strong magical powers
PRIEST	—	Has heavy protective magic
NINJA	—	Moves the quickest and has knife throwing abilities

The game begins in the throne room, where the king asks for the rescue of the princess Sarasa. Barrog, the incarnation of evil, has captured the princess.

Players may stop and talk to other travelers and townspeople to recieve hints on how to travel through each level of the adventure.

Each subsequent level becomes increasingly difficult as the player encounters different adversaries and the final 'boss' creature of each scene. Different enemies reward the player with bags of gold, which may be retrieved and used later in the game.

Since Cadash is maze—oriented instead of rack—oriented, the players may encounter different adventures each time they play. There is a portal between mazes that all the players must be present at to open.

The "attack" button is used to attack enemies, start conversation with friendly characters, and select items for sale. The "jump" button is used for defensive moves and to climb onto vines. The joystick motions move the character, select items from a menu, cause the player to crouch or enter doorways.

JOYSTICK MOTIONS:

Climb up, enter doorway

Move left — ◯ — Move right

Climb down, crouch
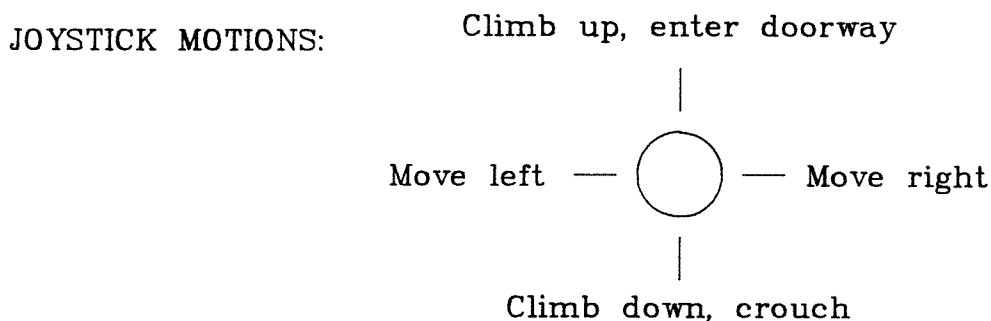
Game is on timer play. Additional time is awarded for level completion. Gold will purchase extra time, weapons, healing potions, armor and even the ability to stop and rest at the inn to regain strength.

GENERAL INFORMATION

This manual will guide you in the conversion of your color monitor upright video game into a "Cadash" game. We strongly urge you to read through the instructions carefully before beginning the conversion.

WARNINGS AND NOTICES

For safety and reliability, Taito America Corporation does not recommend nor authorize any substitute parts or modifications of Taito America Corporation equipment. In addition, any substitute parts or equiptment modifications may void FCC compliance.

Use of non–Taito America parts and/or modifications of game circuitry may adversely affect game performance and safety.

Since "Cadash" is protected by Federal copyright, trademark and patent laws, unauthorized altered versions of this game are illegal under Federal law. This also applies to unauthorized facsimilies of Taito America equipment, logos, designs, publications, assemblies and/or games (or features not deemed to be in the public domain) whether manufactured with Taito America components or not.

NOTICE

Certain parts salvaged from your old game are required to complete your kit. These salvaged parts MUST operate properly to insure the performance and safety level of this game. Always repair electronics malfunctions and cabinet damage before conversion is attempted.

Be sure the power supply from your old game is capable of delivering ± 5 vdc at 7 amps, −5vdc at 1A, and +12vdc at 1A. These operating voltages must be regulated and are necessary for your kit. Please note the enclosed warning with the PC board assembly.

Check the parts supplied in this kit against the parts list included in this manual.

This kit is not intended for use with X–Y (vector) monitors. Suitable monitors are horizontal raster–scan RGB types with composite negative sync. The monitor must be connected to the A.C. line through an isolation transformer.

CAUTION

FOR SAFE OPERATION IT IS STRONGLY RECOMMENDED THAT THE CABINET BE PROPERLY GROUNDED. IF YOUR GAME IS EQUIPPED WITH A THREE CONDUCTOR POWER CABLE, THE THIRD PRONG (round) SHOULD AUTOMATICALLY GROUND THE GAME WHEN PLUGGED INTO A PROPERLY GROUNDED THREE PRONG RECEPTACLE. IF IT BECOMES NECESSARY TO USE AN ADAPTER, THE GROUNDING LUG OR WIRE ON THE ADAPTER MUST BE PROPERLY GROUNDED TO ASSURE SAFE OPERATION.

PARTS LIST

Qty.	Description	Ref. No.	Part No.
1	PCB, Game Logic		250−100001
1	Harness, Standard Jamma		900−601001
1	RFI shield (for FCC regulations)		900−800401
1	Joystick, blue, 8−way		900−401601
1	Joystick, red, 8−way		900−401600
2	Ultimate Pushbutton, blue		900−400003
2	Ultimate Pushbutton, red		900−400001
2	"Attack" button ident tag		900−201107
2	"Jump" button ident tag		900−201106
1	Monitor bezel with artwork		250−200101
1	Marquee with artwork		250−200201
1	Control panel overlay		250−200301
1	Kit instruction manual		250−200701
1	Game instruction card		250−200501

The communications kit is optional and must be ordered seperately.

TOOLS AND SUPPLIES REQUIRED

[ ] Screwdriver, flathead
[ ] Scredriver, Phillips
[ ] Pliers
[ ] Allen wrench set
[ ] Grease pencil or marker
[ ] Soldering iron and solder
[ ] Hacksaw, Jigsaw or Tablesaw
    (with carbide−tipped blade)

[ ] Wire cutters
[ ] X−Acto knife
[ ] Electric drill
[ ] 1.125" drill bit (buttons)
[ ] 1.375" drill bit (joystick)
[ ] .25" drill bit (joystick screws)
[ ] Sandpaper, 180 grit
[ ] Electrical tape or heat−
    shrink tubing

GAME PREPARATION

All games require a certain amount of maintenance to remain in good operating condition. A periodic check of mechanical controls would be benificial to guarantee the profitability of your game.

CLEANING

The exterior of the game, all metal parts and all plastic parts can be cleaned with a non-abrasve cleaner. Caution should be used when cleaning the plastic. A dry cloth can cause scratches and result in a foggy, worn appearance. Plexiglass cleaner on a soft cloth is suggested to keep your monitor crt cover looking new.

Inspect your cabinet for any gouges or items stuck on the cabinet (like chewing gum). Remove all foreign objects and fill in the gouges with any type of quick-hardening wood putty. Sand to ensure a smooth surface. Wipe the outside of the old cabinet clean. Remember that the reason you are converting your old game is to have the increased earnings of a new game, and making your game LOOK new helps spark player interest.

NOTICE

Please make sure you clean the coin mechanisms. It is important that you service them in order for this game to achieve the maximum possible earnings.

CONVERSION INSTRUCTIONS

GAME TITLE MARQUEE

Remove the new "CADASH" marquee from the kit. This new marquee is specifically designed for ease of handling. Place and center the old marquee on top of the new marquee. Border the area that you intend to cut with masking tape. Using an X-Acto or similar knife, score the new marquee and simply break at this score. If your old marquee is made of glass, remove the paint of the old marquee and attach the new marquee behind this glass. If your old marquee is made of Plexiglass, it is recommended that a new, clear plexiglass panel be used to show the CADASH marquee sharply.

MONITOR BEZEL

Remove the new "CADASH" monitor bezel from the kit. Place the bezel around the existing monitor. Using an X-Acto or utility knife, trim the new monitor bezel to neatly fit around the monitor.

CONTROL PANEL

Remove the old control panel buttons, joystick(s) and panel overlay. Refer to the final page of this manual for the preferred positions for the joysticks, buttons and button labels.

Leave your 1 and 2 player start buttons where they are on the old control panel. Drill holes as needed for the installation of the joysticks and buttons. Clean any burrs from around holes. Any hole that is no longer needed we suggest plugging with wood putty or epoxy.

Cut the new "CADASH" Lexan panel overlay to the appropriate size needed to cover the panel. Leave enough to wrap a small lip around the top and bottom of the panel. Remove the backing from the "CADASH" overlay and apply it over the old control panel, being careful to avoid air pockets.

After the Lexan overlay is securely applied, cut through to the holes in the control panel with an X—Acto or utility knife. Install the new joysticks, buttons, button labels and any necessary hardware previously removed from the control panel. Tighten and secure all hardware.

INSTALLING WIRING HARNESS

This game comes with a color—coded cable for easy installation. Refer to the connection diagram included in this manual for quick hook—up.

Disconnect the old wiring harness from the old cpu board and carefully remove the old EMI shields and circuit boards from the game.

Using the wiring diagrams from your old game, carefully note the function of each wire. Cut the wires near the game's coin door, monitor, control panel, power supply and speaker, leaving several inches of wire hanging from each point. Install the new wiring harness to those points referring to the connector diagram. For best results, solder directly to the lugs at the connection points and remove old wiring completely. Use electrical tape or heat—shrink tubing (preferred) to insulate any necessary wire splices. It is recommended that any wire splices be soldered; while an unsoldered twisted connection will work initially, non—conductive oxides will form on the wires that may cause failure of the junction.

Install the RFI "cage" (for FCC compliance) where the old board set was. Mount the "CADASH" pcb assembly with mounting blocks in the center of the RFI cage. Plug the wiring harness onto the pcb and close the cage securely. To complete proper installation, run a ground termination lead from any available chassis ground to the foil side of the RFI cage.

Check and clean the input jack on the power supply board. Replace any burned or damaged pins.

DIP SWITCH SETTINGS

The following option switch settings were designed to allow the customizing of CADASH'S various game features to suit different environments. If used wisely to tailor a game's features to suit the location, the flexibility they offer can maximise game performance and increase potential earnings.

Since CADASH can be a two—unit communications system, one set of boards would be slaved to the second set. The "master" and "slave" settings are determined by the DIP switch setting, so the two—unit system would have different settings on each of the two boards.

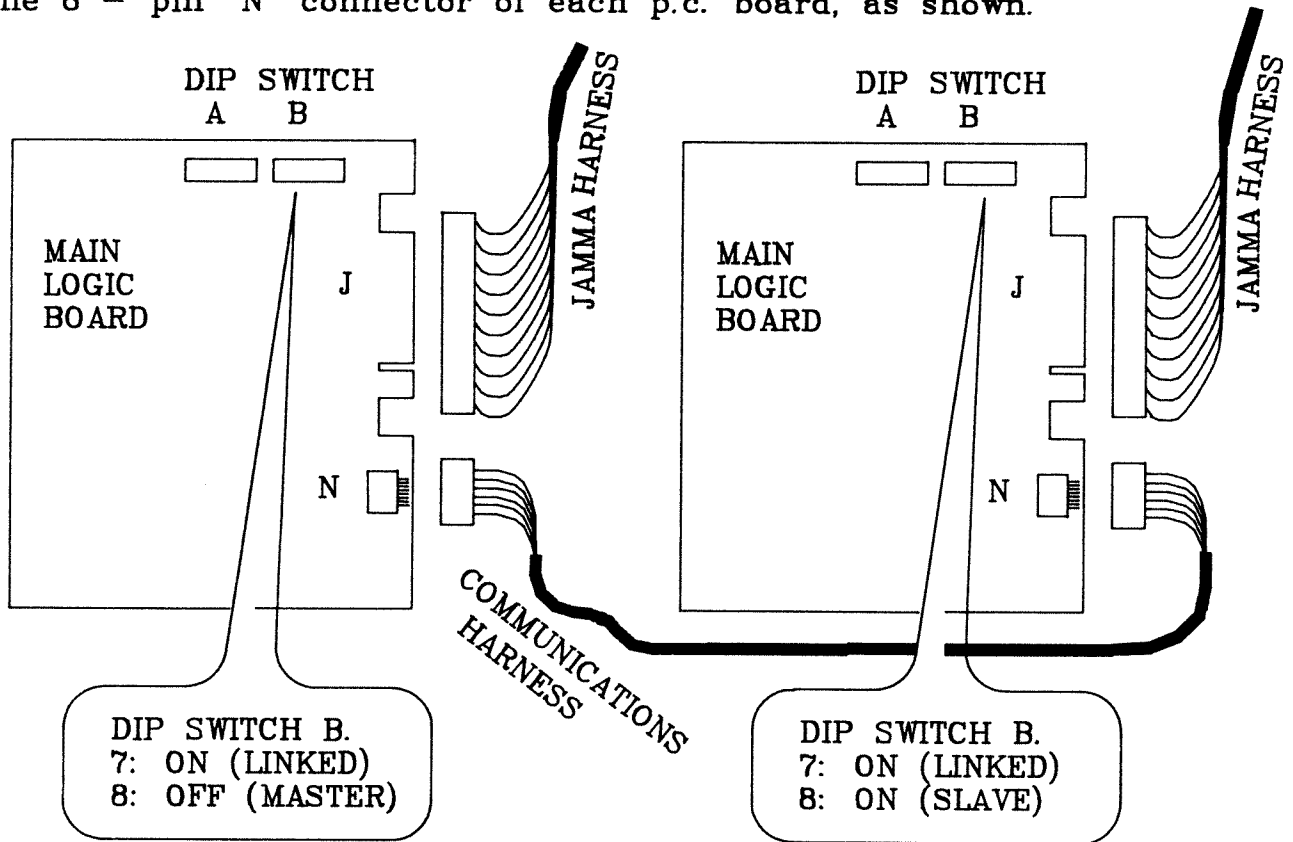The dip settings are listed in the following chart —

"CADASH" (NORTH AMERICAN VERSION) DIP SWITCH SETTINGS

DIP SWITCH - A:

FUNCTIONS	SETTINGS	SWITCH POSITIONS 1	2	3	4	5	6	7	8
ALWAYS OFF		OFF							
SCREEN INVERSION	NORMAL		**OFF**						
	INVERTED		ON						
TEST MODE	NORMAL GAME			**OFF**					
	TEST MODE			ON					
ATTRACT SOUNDS	WITH				**OFF**				
	WITHOUT				ON				
PLAY PRICING	1 COIN = 1 PLAY					**OFF**	**OFF**		
	2 COINS = 1 PLAY					ON	OFF		
	3 COINS = 1 PLAY					OFF	ON		
	4 COINS = 1 PLAY					ON	ON		
PRICING FOR CONTINUED PLAY	SAME AS ABOVE							**OFF**	**OFF**
	1 COIN = 1 CONT.							ON	OFF
	2 COINS = 1 CONT.							OFF	ON
	3 COINS = 1 CONT.							ON	ON

BOLD TYPE INDICATES FACTORY SETTINGS

DIP SWITCH - B:

FUNCTIONS	SETTINGS	SWITCH POSITIONS 1	2	3	4	5	6	7	8
DIFFICULTY LEVELS	MEDIUM	**OFF**	**OFF**						
	EASY	ON	OFF						
	DIFFICULT	OFF	ON						
	NEARLY IMPOSSIBLE	ON	ON						
INITIAL GAME TIME	7 MINUTES			**OFF**	**OFF**				
	8 MINUTES			ON	OFF				
	6 MINUTES			OFF	ON				
	5 MINUTES			ON	ON				
BONUS TIME FOR STAGE COMPLETION	8 MINUTES					**OFF**	**OFF**		
	9 MINUTES					ON	OFF		
	7 MINUTES					OFF	ON		
	6 MINUTES					ON	ON		
LINKED - GAME MODES	SINGLE GAME MODE							**OFF**	**OFF**
	COMMUNICATIONS MODE - MASTER UNIT							ON	OFF
	COMMUNICATIONS MODE - SLAVE UNIT							ON	ON

**BOLD** TYPE INDICATES FACTORY SETTINGS

COMMUNICATIONS SYSTEM

Two "CADASH" games may be connected with a communications harness to allow up to 4 players to play together. The communications harness connects to the 8 — pin "N" connector of each p.c. board, as shown.

DIP SWITCH
A   B

MAIN
LOGIC
BOARD

J

N

JAMMA HARNESS

DIP SWITCH B.
7: ON (LINKED)
8: OFF (MASTER)

COMMUNICATIONS HARNESS

DIP SWITCH
A   B

MAIN
LOGIC
BOARD

J

N

JAMMA HARNESS

DIP SWITCH B.
7: ON (LINKED)
8: ON (SLAVE)

Change the settings of dipswitch B as shown above. The game cabinets should be put together as shown. A special sign is included with the kit to indicate that these two games communicate.
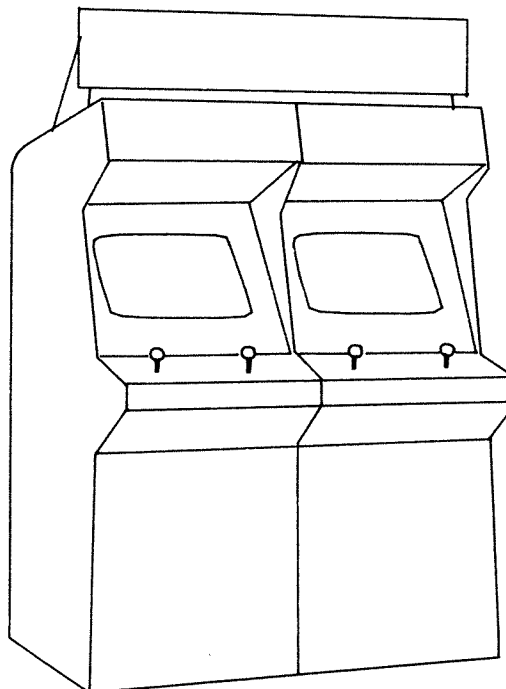
COMMUNICATIONS
GAME
SIGN

LINKED
ADJACENT
GAMES

CONNECTION CHART FOR "CADASH"

	(SOLDER SIDE)		JAMMA EDGE CONNECTOR		(COMPONENT SIDE)	
WIRE FUNCTION	COLOR				COLOR	WIRE FUNCTION
GND	BLK	A	1		BLK	GND
GND	BLK	B	2		BLK	GND
+5VDC	RED	C	3		RED	+5VDC
+5VDC	RED	D	4		RED	+5VDC
−5VDC	BRN	E	5		BRN	−5VDC
+12VDC	BLU	F	6		BLU	+12VDC
KEY		H	7		KEY	
COIN METER B	WHT/VIO	J	8		BLU/BRN	COIN METER A
COIN LOCKOUT B		K	9			COIN LOCKOUT A
SPEAKER (−)	BLK	L	10		WHT/BLK	SPEAKER (+)
VIDEO GREEN	GRN	N	12		RED	VIDEO RED
VIDEO SYNC	WHT	P	13		BLU	VIDEO BLUE
SERVICE SW.	BRN/WHT	R	14		BLK	VIDEO GND
SLAM SW.	WHT/BRN	S	15		YEL	NOT USED
COIN B	GRN/YEL	T	16		WHT/YEL	COIN A
2PL SELECT	RED/BLK	U	17		PNK/BLK	1PL SELECT
2PL UP	BRN/BLU	V	18		ORN/BLU	1PL UP
2PL DOWN	ORN/WHT	W	19		GRN/ORN	1PL DOWN
2PL LEFT	ORN/GRN	X	20		GRN/BLU	1PL LEFT
2PL RIGHT	WHT/ORN	Y	21		RED/YEL	1PL RIGHT
2PL ATTACK	BRN/BLK	Z	22		RED/WHT	1PL ATTACK
2PL JUMP	YEL/WHT	A̅	23		WHT/RED	1PL JUMP
NOT USED	BRN/GRN	B̅	24		YEL/BLK	NOT USED
GND	BLK	E̅	27		BLK	GND
GND	BLK	F̅	28		BLK	GND

CONTROL PANEL LAYOUT
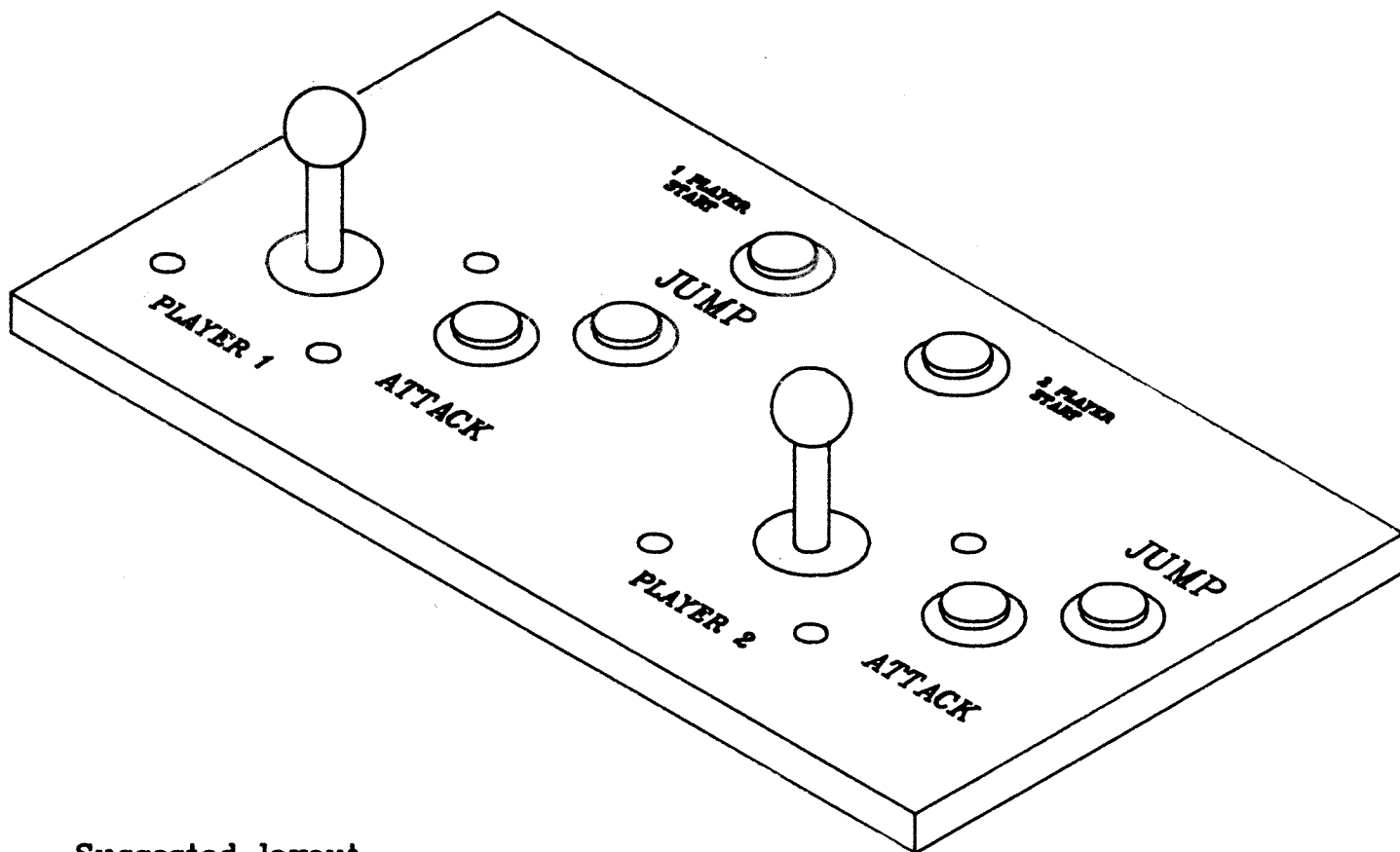
Suggested layout –
Recommend 4" between joystick center
and adjacent button, use 1.125" diameter holes
for button mounting, 1.375" diameter holes for joystick knob openings
and .25" diameter holes for the joystick mounting screws. Try to
avoid obscuring the artwork if possible, it enhances the kit's ability
to present itself as a "New Game".

NOTES