MADE IN THE U.S.A.

TAITO®

U.S. CHAMPIONSHIP BEACH VOLLEY

V'BALL

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GAME INSTRUCTIONS

GAME CONTROLS:

JOYSTICK - to move the player.

BUTTON A - to serve, receive and spike the ball.

BUTTON B - to jump, jump-serve and block. A player's spiking power increases by repeatedly hitting BUTTON B.

TO SERVE:

Control and position the player for the serve. Toss the ball with BUTTON "A" and serve the ball by pressing BUTTON "A" again. The player can jump-serve by jumping with BUTTON "B" and pressing BUTTON "A". Control the ball-dropping point with the joystick.

TO RECEIVE:

When the ball is served, the ball-dropping point is indicated by the cursor on the screen. To receive the ball, move the player to the point indicated and press BUTTON "A". The type of receive is automatically determined by the distance between the position of the player and the ball-dropping point.

TO TOSS:

When the player successfully receives the ball, the other player, assisted by the CPU, automatically tosses the ball. When the receiver fails to receive the ball, the tosser cannot toss the ball.

TO SPIKE:

When the tossed ball drops to the front-line player positioned close to the net, the player can jump with BUTTON "B" and spike the ball with BUTTON "A". By pressing BUTTON "A" and "B" together, the front-line player can hit a fake-like spike. Unless the player jumps, he cannot spike. The ball-dropping point of the spike ball, like that of the serve ball, is controllable.

TO BLOCK:

By timely jumping close to the net with BUTTON "B", the player can block the ball. The serve ball cannot be blocked.

SPECIAL TECHNIQUES:

The player's spiking power can be increased by repeatedly hitting BUTTON "B" while jumping. A powerful spike sometimes pushes an opponent away.

VARIATION PLAY:

A slow returning ball can be directly spiked. Quick is a technique by which the player spikes the ball at the moment when the ball is tossed. Back spike is a technique by which the tosser spikes the ball in the back position.

PLAYING RIGHTS:

Both players on one team have "playing rights". During play the first "playing right" goes to the player who is positioned close to the ball and thereafter the "playing right" switches in turn. Movements and tosses of the player without "playing right" is automatically controlled by the CPU.

The player takes part in the "U.S. CHAMPIONSHIP BEACH V'BALL TOURNAMENT" and plays in various places throughout the U.S.

There are five stages as follows:

Stage 1 - Daytona Beach
Stage 2 - New York
Stage 3 - Los Angeles
Stage 4 - Hawaii
Stage 5 - Nuclear-Powered Ship

The player plays the following nine games to complete all 3 Rounds of the tournament:

The 1st Round: From Stage 1 to Stage 4 (Minor Circuit).
The 2nd Round: From Stage 1 to Stage 4 (Major Circuit).
The 3rd Round: Stage 5 Only.

The more games the player completes, the more skilled the opponent becomes.

The player can move to the next game by scoring seven points first. There is a limit on playing time and when expired, the player can select to continue play. If the player selects to continue play, the playing time starts from the beginning while scores are carried over from the previous game.

When the player completes one game, 30 seconds are added to the time remaining in the previous game.

V'BALL goes into "Game Over" when the player gains a score of 7 points against the CPU, but if the player selects to continue play, the player can begin V'BALL again starting from the same game.

This manual will guide you in the conversion of your color monitor upright video game into a "V'BALL" game. We urge you to read through the instructions 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.

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

Substitute parts or equipment modifications may void FCC acceptance.

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

NOTICE

Parts salvaged from your old game are required to complete your kit. These salvaged parts MUST operate perfectly, or the converted game can not perform properly or safely. Always repair circuit board malfunctions and cabinet damage before conversion is attempted.

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

CAUTION

For safe operation it is recommended the game be properly grounded. Your game should be equipped with a three conductor power cable. The third conductor is the ground conductor and when the cable is plugged into an appropriate receptacle, the game is grounded. The offset pin on the power cable's three-prong connector is the ground pin on the power cord.

NOTICE

This kit is not intended for use with X-Y monitors. Suitable monitors are the horizontal or vertical raster-scan with inputs for red, green and blue video as well as composite negative sync. (These should be compatible with TTL logic levels.)

Note: "V'BALL" uses a color monitor in a horizontal position.

NOTICE

Be sure the power supply from your old game is capable of +5 vdc regulated at 7A, -5vdc regulated at 1A and +12vdc regulated at 1A. These operating voltages are necessary for your kit. Please note the enclosed warning with the PC Board Assembly.

TAITO AMERICA CORPORATION KIT PARTS PROVIDED

2 - 8 Way Joystick Assemblies

2 - Extra Joystick Assemblies (4 Player Kit ONLY)

4 - Buttons

4 - Extra Buttons (4 Player Kit ONLY)

1 - "V'BALL" Control Panel Overlay

1 - "V'BALL" Monitor Bezel

1 - "V'BALL" Marquee

1 - Wiring Harness (JAMMA Type) with two 9 pin connectors for players 3 & 4

1 - Instruction Sheet With Removable Control Stickers

1 - FCC Cage

1 - "V'BALL" PC Board Assembly

2 - PC Board Mounting Blocks

TOOLS AND SUPPLIES REQUIRED

Screwdriver
Phillips Screwdriver
Pliers
Wire Cutters
Hex Driver
X-Acto Knife
Grease Pencil Or Marker
Electric Drill With Bits
Soldering Iron And Solder
180-Grit Sandpaper
Hacksaw, Jigsaw Or Tablesaw With Carbide-Tipped Blade
Electrical Tape Or Heat-Shrink Tubing

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

GAME PREPARATION

CLEANING

The exterior of the game, all metal parts and all plastic parts can be cleaned with non-abrasive cleaner. Caution should be used when cleaning the plastic. A dry cloth can cause scratches and result in a foggy worn appearance. Plexiglas cleaner on a soft cloth is suggested to maintain and 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 the surface is smooth. Wipe the outside of the old cabinet clean. Remember the reason you are converting your old game is to have the increased earnings of a new game. Making your game look like a new game will spark new 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

Remove the new "V'BALL" Marquee from the kit. This new Marquee provided with your kit is specifically designed for ease of handling. Place and center the old Marquee on top of the new Marquee. Place masking tape on the area where you intend to cut the new Marquee. Using an X-Acto 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 Plexiglas, it is recommended that new clear Plexiglas be used to best provide the brilliance of your new Marquee.

Remove the new "V'BALL" monitor bezel from the kit. Place the bezel around the existing monitor. Using an X-Acto knife trim the new monitor bezel to neatly fit around the monitor.

CONTROL PANEL

Remove the old control panel lexan decal, buttons and joysticks.

Place the template provided in this kit on the control panel to design the best possible positioning for your joysticks, buttons and control panel instructions. A representation of joystick and button placement is provided as a guide.

Leave your 1 and 2 player start buttons where they are on the old control panel. (Use the enclosed 1 and 2 player stickers if needed.) Drill holes as needed for installation of the joysticks and other 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 "V'BALL" lexan to the appropriate size needed to cover the panel. Leave enough lexan to wrap a small lip around the top and bottom of the panel.

Remove the backing from the "V'BALL" lexan and apply it over the old control panel being careful to avoid air pockets.

After the lexan is securely applied, cut the holes on the control panel with an X-Acto knife or razor blade. Install the new joystick, buttons and any hardware that might have been removed on the control panel and tighten them down.

Attach the additional stickers marked "A" and "B" to the control panel.

WIRING PROCEDURES

INSTALLING INTERBOARD WIRING

This game comes with a color-coded cable for easy installation. Refer to the wiring diagram included in this manual for quick connections.

Disconnect the old wiring harness from the old CPU board.

Carefully remove old circuit boards and FCC cages from the game.

Using the diagrams from your old game, carefully note the function of each wire.

Leaving several inches of wire from the old wiring harness at each connector, cut the wires near the game's coin door, monitor, control panel, power supply and speaker wires. Install the new wiring harness to those points following your wiring diagram. Use electrical tape or heat-shrink tubing to insulate all splices.

Install your FCC cage where the old board set was.

Mount the "V'BALL" PCB assembly with the mounting blocks provided in the center of the FCC cage. Plug the wiring harness onto the PCB and close the cage securely. The board cage in this kit must be properly installed and terminated to ground.

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 V'BALL's various game features to suit different environments. If used wisely, the flexibility they offer can maximize game performance and increase potential earnings.

DIP SWITCH 1

SETTINGS	POSITION	1	2	3	4	5	6	7	8
DIFFICULTY LEVEL	MEDIUM EASY HARD HARDEST	OFF ON OFF ON	OFF OFF ON ON						
GAME TIME	1:45 2:00 1:30 1:15			OFF ON OFF ON	OFF OFF ON ON				
START BUTTONS	NORMAL BUTTON "A" BUTTON "B" NORMAL					OFF ON OFF ON	OFF OFF ON ON		
1 & 4 PLAYER JOYSTICKS	NORMAL ROTATE 90							OFF ON	
PLAYER MODE	2 PLAYERS 4 PLAYERS								OFF ON

START BUTTONS - This setting assigns either BUTTON "A" or BUTTON "B" to act as the START button for each player when you are using a 4 player control panel. Set this switch to NORMAL if you are using a two player control panel with the standard 1 & 2 PLAYER START buttons.

1 & 4 PLAYER JOYSTICKS - This setting rotates the joystick controllers for player 1 & 4 90 degrees. Use this setting if you have a Gauntlet or similar control panel which positions players 1 & 4 to the side of the cabinet facing inward.

PLAYER MODE - Use this setting to adjust your game for a 2 player or 4 player configuration. When set at the 4 PLAYER MODE, game time increases from the original setting. For example, if your game time is set at 2 minutes, setting this switch to the 4 PLAYER MODE will increase your game time to 3 minutes.

DIP SWITCH SETTINGS (cont.)

DIP SWITCH 2

SETTINGS	POSITION	1	2	3	4	5	6	7	8
PLAY PRICING COIN - 1	1 CO = 1 PL	OFF	OFF	OFF					
	1 CO = 2 PL	ON	OFF	OFF					
	1 CO = 3 PL	OFF	ON	OFF					
	1 CO = 4 PL	ON	ON	OFF					
	1 CO = 5 PL	OFF	OFF	ON					
	2 CO = 1 PL	ON	OFF	ON					
	3 CO = 1 PL	OFF	ON	ON					
	4 CO = 1 PL	ON	ON	ON					
PLAY PRICING COIN - 2	1 CO = 1 PL				OFF	OFF	OFF		
	1 CO = 2 PL				ON	OFF	OFF		
	1 CO = 3 PL				OFF	ON	OFF		
	1 CO = 4 PL				ON	ON	OFF		
	1 CO = 5 PL				OFF	OFF	ON		
	2 CO = 1 PL				ON	OFF	ON		
	3 CO = 1 PL				OFF	ON	ON		
	4 CO = 1 PL				ON	ON	ON		
SCREEN INVERT	NORMAL							OFF	
	INVERT							ON	
ATTRACT SOUNDS	ENABLED								OFF
	DISABLED								ON

WIRING DIAGRAM FOR "V'BALL" KIT HARNESS ASSEMBLY

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 2	WHT/VIO	J	8	BLU/BRN	COIN METER 1
		K	9		
SPEAKER (-)	BLK	L	10	WHT/BLK	SPEAKER (+)
		M	11		
VIDEO GREEN	GRN	N	12	RED	VIDEO RED
VIDEO SYNC	WHT	P	13	BLU	VIDEO BLUE
SERVICE	BRN/WHT	R	14	BLK	VIDEO GND
TILT	WHT/BRN	S	15	YEL	
COIN 2	GRN/YEL	T	16	WHT/YEL	COIN 1
2PL START	RED/BLK	U	17	PNK/BLK	1PL START
2PL UP	BRN/BLU	V	18	ORG/BLU	1PL UP
2PL DOWN	ORG/WHT	W	19	GRN/ORG	1PL DOWN
2PL LEFT	ORG/GRN	X	20	GRN/BLU	1PL LEFT
2PL RIGHT	WHT/ORG	Y	21	RED/YEL	1PL RIGHT
2PL BUTTON ""	BRN/BLK	Z	22	RED/WHT	1PL BUTTON "A"
2PL BUTTON ""	YEL/WHT	a	23	WHT/RED	1PL BUTTON "B"
NOT USED	BRN/GRN	b	24	YEL/BLK	NOT USED
		c	25		
		d	26		
GND	BLK	e	27	BLK	GND
GND	BLK	f	28	BLK	GND

WIRING DIAGRAM FOR V'BALL - PLAYER 3 & 4 (9 PIN JACKS)

J4 - PLAYER #3

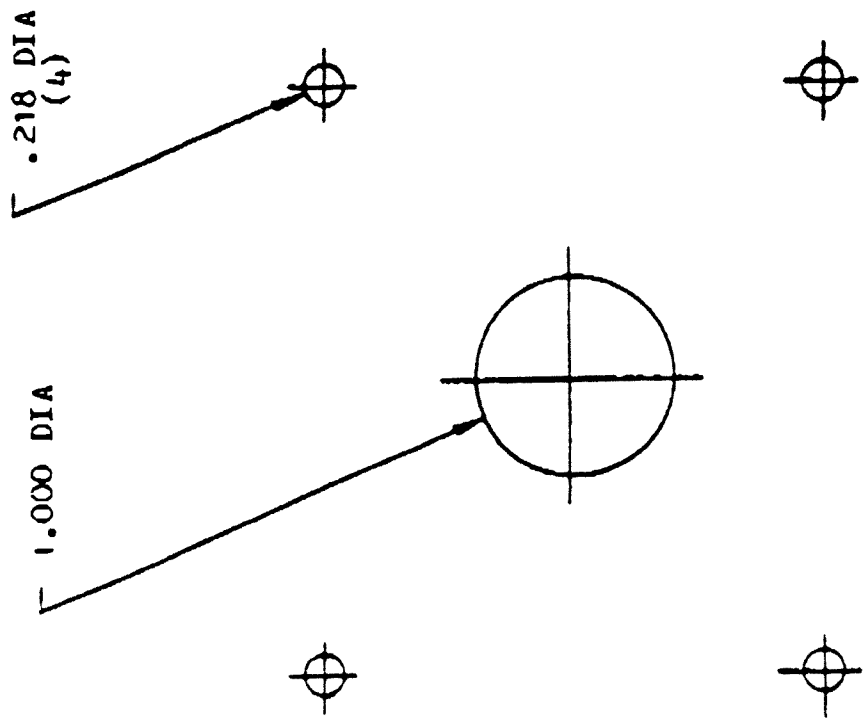
1	ORG	3PL RIGHT
2	ORG/BLK	3PL LEFT
3	ORG/RED	3PL UP
4	GRN/WHT	3PL DOWN
5	BLK/WHT	3PL BUTTON "A"
6	BLK/YEL	3PL BUTTON "B"
7	KEY	NOT USED
8	BLK/RED	3PL START
9	BLK	GND

J3 - PLAYER #4

1	BLU/WHT	4PL RIGHT
2	BLU/YEL	4PL LEFT
3	BLU/RED	4PL UP
4	BLU/BLK	4PL DOWN
5	YEL/RED	4PL BUTTON "A"
6	YEL/GRN	4PL BUTTON "B"
7	KEY	NOT USED
8	RED/BLU	4PL START
9	BLK	GND

JOYSTICK TEMPLATE

FIGURE 3



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