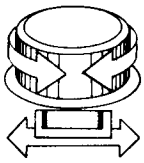
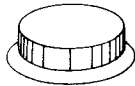


FREE  
KICK

## OPERATION



BOTH WAY  
DIAL



YOU CAN MAKE  
CURVE BALL BY  
DIAL WHEN THE  
BUTTON KEEP  
PUSH.

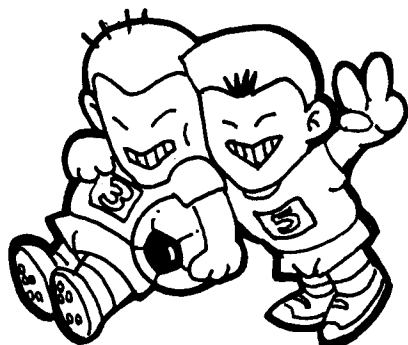
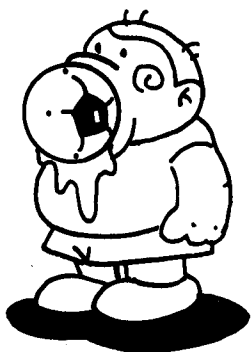
PLAYER

## SEEN CLEAR

YOU CAN GO NEXT SEEN WHEN YOU GET THE POINT OVER ENEMY'S POINT WHICH APPEAR UPPER SIDE ON THE SCREEN OR YOU KNOCK DOWN ALL ENEMY EXCEPT ENEMY'S "GOAL KEEPER" AND "FORWARD"

## POWER UP

<b>B</b>	MAKE SLOW YOUR BALL
<b>C</b>	CAN CATCH YOUR BALL
<b>DF</b>	YOUR DEFENSE LENGTH CHANGE TO LONG
<b>FW</b>	YOUR FORWARD APPEAR, THEN IF GET PASS CAN HELP SHOOT TO GOAL
<b>LP</b>	FOR NEXT SEEN
<b>IUP</b>	INCREASE ONE PLAYER



# DIP SW I

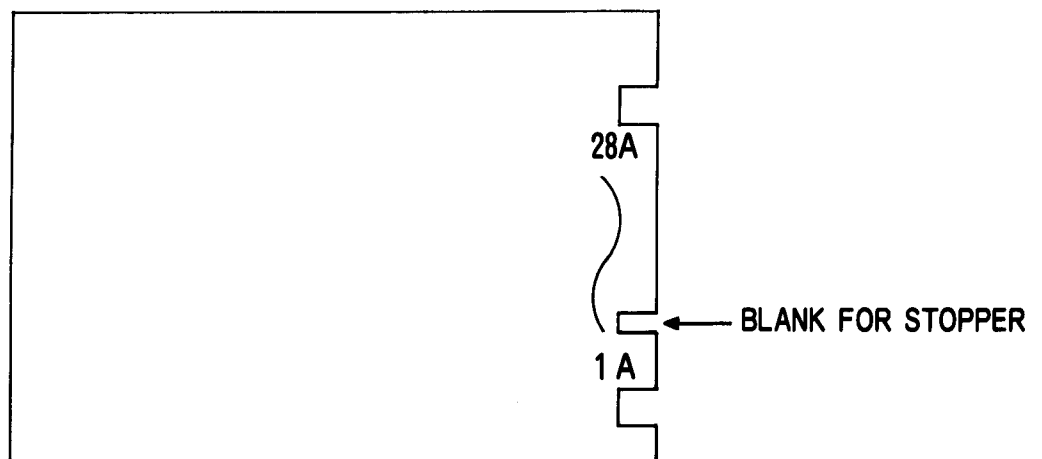
ITEM	CONTENTS	1	2	3	4	5	6	7	8
PLAYER NUMBER	3	OFF							
	5	ON							
EXTEND	2·3·4·5·60000POINTS		OFF	OFF					
	3·4·5·6·7·80000POINTS		OFF	ON					
	20000 & 60000POINTS		ON	OFF					
	ONLY 20000POINTS		ON	ON					
DIFFICULTY	LEVEL 1	EASY ↓ DIFFICULT			OFF	OFF			
	LEVEL 2				OFF	ON			
	LEVEL 3				ON	OFF			
	LEVEL 4				ON	ON			
CONTINUE PLAY	YES					OFF			
	NO					ON			
GAME STYLE	TABLE TYPE							OFF	
	UPRIGHT TYPE							ON	
MONITOR SCREEN	NORMAL								OFF
	REVERSE								ON

# DIP SW II

ITEM	CONTENTS	1	2	3	4	5	6	7	8
COIN·A	1 COIN 1 CREDIT	OFF	OFF	OFF	OFF				
	1 2	OFF	OFF	OFF	ON				
	1 3	OFF	OFF	ON	OFF				
	1 4	OFF	OFF	ON	ON				
	1 5	OFF	ON	OFF	OFF				
	2 1	OFF	ON	OFF	ON				
	2 3	OFF	ON	ON	OFF				
	2 5	OFF	ON	ON	ON				
	3 1	ON	OFF	OFF	OFF				
	3 2	ON	OFF	OFF	ON				
	3 4	ON	OFF	ON	OFF				
	3 5	ON	OFF	ON	ON				
	4 1	ON	ON	OFF	OFF				
	4 3	ON	ON	OFF	ON				
	4 5	ON	ON	ON	OFF				
5 1	ON	ON	ON	ON					
COIN·B	1 COIN 1 CREDIT					OFF	OFF	OFF	OFF
	1 2					OFF	OFF	OFF	ON
	1 3					OFF	OFF	ON	OFF
	1 4					OFF	OFF	ON	ON
	1 5					OFF	ON	OFF	OFF
	2 1					OFF	ON	OFF	ON
	2 3					OFF	ON	ON	OFF
	2 5					OFF	ON	ON	ON
	3 1					ON	OFF	OFF	OFF
	3 2					ON	OFF	OFF	ON
	3 4					ON	OFF	ON	OFF
	3 5					ON	OFF	ON	ON
	1 10					ON	ON	OFF	OFF
	1 25					ON	ON	OFF	ON
	1 50					ON	ON	ON	OFF
5 1					ON	ON	ON	ON	

SOLDER SIDE			PARTS SIDE
GND	1 B	1 A	GND
"	2 B	2 A	"
+ 5 V	3 B	3 A	+ 5 V
"	4 B	4 A	"
	5 B	5 A	
+12V	6 B	6 A	+12V
BLANK FOR STOPPER COUNTER B	7 B	7 A	BLANK FOR STOPPER COUNTER A
	8 B	8 A	
	9 B	9 A	
SPEAKER (-)	10B	10A	SPEAKER (+)
	11B	11A	
GREEN	12B	12A	RED
SYNC	13B	13A	BLUE
	14B	14A	GND
	15B	15A	
*COIN B (SERVICE)	16B	16A	COIN A
2 P START	17B	17A	1 P START
	18B	18A	
	19B	19A	
	20B	20A	
	21B	21A	
2 P SHOOT	22B	22A	1 P SHOOT
	23B	23A	
	24B	24A	
(FOR SENSOR (LEFT))2PL	25B	25A	1PL (FOR SENSOR (LEFT))
(FOR SENSOR (RIGHT))2PR	26B	26A	1PR (FOR SENSOR (RIGHT))
GND	27B	27A	GND
"	28B	28A	"

※WHEN DIP SW 3-8 "ON". IT MAKE SERVICE SW. (1COIN 1CREDIT)






INSTALLATION & OPERATING  
INSTRUCTIONS FOR

FREE



KICK

Under License from;  
Nihon Systems, Inc.



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Merit Industries, Inc.  
2525 State Road  
Bensalem, PA 19012

BEFORE STARTING . . . READ THIS

A FEW MINUTES NOW WILL HELP GET YOU ORGANIZED AND SAVE TIME  
INSTALLING YOUR FREE KICK KIT

- 1 - Make sure that your FREE KICK kit has all the listed parts.
- 2 - Is the game you have chosen to convert able to supply all the required voltages for FREE KICK?

NOTE: Some games (like Ms.PacMan and Galaxian) don't use switching power supplies and regulate their voltages on the main board. This makes using the existing power supply difficult or impossible. These games will need a regulated switching power supply for you to install your FREE KICK.

- 3 - Is your game cabinet monitor vertical or horizontal? FREE KICK is a vertical monitor game. This is important since most monitors are hard to flip. Check your cabinet now to eliminate lots of work down the line.
- 4 - Do you have all the tools you need? Check the tool list.
- 5 - Does the light behind the marquee work or is it burned out? Remember this when you install your new marquee graphics.

\*\*\*\*\*

FREE KICK KIT CONTENTS

- |                                |                           |
|--------------------------------|---------------------------|
| (1) Main Printed Circuit board | (1) Marquee Screen        |
| (1) Connecting Wire Harness    | (1) Control Panel Overlay |
| (1) Controller                 | (2) Red Fire Buttons      |
| (1) White 1 Player Button      | (1) White 2 Player Button |
| (1) Set Instruction Decals     | (4) PC Board Spacers      |
| (4) Wood Screws                |                           |

\*\*\*\*\*

POWER REQUIREMENTS

- +5 VDC @ 7 amp minimum
- +12 VDC @ 1 amp minimum

---

MONITOR REQUIREMENTS

- Vertical mounted with raster scan
- Negative composite sync

\*\*\*\*\*

\*\*\*\*\*

## TOOLS AND OTHER THINGS

Power drill  
Vacuum cleaner  
Drill bit 1/4"  
Electrical tape  
Regular size pliers  
Ruler/straight edge  
Wire cutters/strippers  
Small file or emery cloth  
Hex sockets or nut drivers  
Some screws, bolts and nuts  
Utility knife with new blades  
Chassis punch 1-5/8" and 1-1/8"  
Screwdrivers - Phillips and Slotted  
Soldering iron and 60/40 resin core solder  
Paint, brushes, sand paper, etc. (to touch up cabinet)  
Plexiglass cleaner and some soft paper towels or rags  
Imagination (if you don't have everything listed above)

\*\*\*\*\*

## DIP SWITCH SETTINGS

For maximum profits and player satisfaction study the DIP SWITCH settings at the back of this booklet.

By adjusting DIP SWITCH 1 you can control how long a game will last by mixing DIFFICULTY, NUMBER OF BALL SHOOTERS and BONUS LEVELS.

You can also choose to have the player(s) continue play at the current level by adding more coins.

\*\*\*\*\*

## INSTALLATION WITHOUT AGGRAVATION

Converting a game isn't just hooking up a new board and walking away.

If the cabinet doesn't look good and the screen isn't clean, it won't mean that no one will play the game but it might mean that some people won't play the game. Regardless, you'll feel better knowing that you did everything possible to make the game a winner.

Save some future "empty coin box" aggravation by making sure that the cabinet looks first class. This could mean anything from a simple cleaning to a full scale sand and paint job. You're the best judge of how much has to be done, so do it.

\*\*\*\*\*  
GETTING RID OF THE OLD STUFF  
UNPLUG YOUR GAME ! ! ! ! !

To get started you have to strip out most of the dedicated components from the existing game.

- 1 - Remove the existing main logic board. This may be a single board or two or more boards stacked together or connected together by cables.

Don't remove the harness before you know whether it's a "JAMMA" harness or not. "FREE KICK" uses a "JAMMA" harness so check NOW !!!

- 2 - Remove the control panel.
- 3 - Remove the monitor plexiglass and bezel.
- 4 - Remove the marquee.
- 5 - Remove any decals, stickers or other things referring to any games the cabinet was used for before.

At this time you should remove any old adhesive with lacquer thinner. PLEASE, NO SMOKING WHILE PERFORMING THIS OPERATION.

Also check the monitor plexiglass for scratches or clouding. If the plexiglass is damaged, you should replace it with a piece of equal thickness. Most hardware stores have plexiglass available.

Vacuum out the cabinet from top to bottom.

\*\*\*\*\*  
INSTALLING THE PC BOARD & HARNESS

- 1 - Mount the PC Board in the same general area as the old board was. Four mounting feet are mounted on the PC Board and let you adjust the mounting orientation slightly to allow for your particular installation.
- 2 - If your previous game had a "JAMMA" PC Board, leave the main harness alone!!! To use this harness just move onto the control panel installation step.
- 3 - Attach your kit harness to the PC Board making sure that the keying slot on the board matches the key in the harness connector. Look at this very carefully then double check (you don't want to put +5v on the signal lines of your controller). If the connector key is missing, you can check out the wires with the illustration on the pinout chart at the back of this booklet.



- Your harness wires are long enough to reach any part of the cabinet. Take each wire and run it to its correct destination. If you don't have new connectors for the wires, cut back the existing wires to a convenient length and solder them to the new wires. Wrap the splice with electrical tape or use heat shrinkable tubing.

NOTE: ALWAYS solder your splices !!! When using electrical tape for wrapping splices, alternate the location of the splices so that if the tape comes off, the wires won't short out.

- 5 - The power wires should all be connected. This helps to evenly divide the current going through each wire and connector pin for the PC Board. Failure to use all the wires could result in damage to an edge connector pin (from high current) and cause problems.

\*\*\*\*\*

### M O R E I M P O R T A N T C O N N E C T I O N S

- 1 - MONITOR - Five wires go to the monitor. With these wires you will be supplying a negative composite sync signal to the monitor. Check your monitor manual or call MERIT CUSTOMER SERVICE if you are having a problem.
- 2 - SPEAKER - No problem here --- two wires and two terminals.
- 3 - COIN MECHS - Use either one or two coin inputs as shown on the pinout chart. Leave the coin door lamps hooked up.
- 4 - METER(S) - Hook up the wires to the meter(s) by connecting one wire from the PC Board to one wire of each meter. Depending on if you have a 6V or 12V meter you will have to connect the other meter wires to either +5V or +12V on the power supply.

That's it for the major wiring, except for the control panel which we'll do in a few minutes. But first double check what you've done so far. Use a couple small ty-raps to straighten up the wiring and tighten up any loose screws.

Plug the game back in and turn the power on. Listen, look and smell for any smoldering components (hope there aren't any).

If anything seems wrong, **IMMEDIATELY** turn off the power!!!

If everything is fine you should start getting a picture and start hearing game sounds.

No sound could mean the volume control is turned down too far. If your sound isn't clear enough, try reversing the speaker wires.

If the picture is upside down SWITCH 8 of DIP SWITCH 1 will solve the problem. Turn off the power, change the switch and turn the power back on. The picture should be corrected.

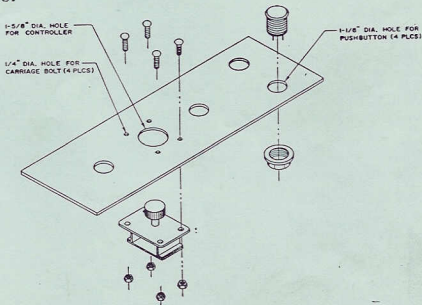
Before adjusting your monitor for brightness, focus, centering, etc. clean off the front monitor glass.

\*\*\*\*\*

## INSTALLING THE CONTROL PANEL

- 1 - Remove the existing game controls (even if they're the same, you'll want to put on new ones). Before removing the old control panel lexan mark where you want to place all of the game controls.

Here is one suggested layout for the controls but you can change it if your control panel has existing holes that come close.



- 2 - Use a 1-5/8" Greenlee (chassis) or sheet metal punch for your controller hole. Use a 1-18" punch for your button holes. Drill (4) 1/4" holes for mounting the controller.
- 3 - Remove the old lexan, clean off the control panel surface and install the new lexan. Locate and place the controller, button and instruction decals onto the lexan.
- 4 - Remove the buttons, controller and controller harness from the box and install them in the control panel.
- 5 - Connect the wires using the chart at the back of this booklet. Use existing connectors like you did before if you have to (or wire up directly to each button).

\*\*\*\*\*  
M A R Q U E E   P A N E L   I N S T A L L A T I O N

- 1 - Remove the existing marquee panel then replace the backlighting lamp if it was burned out.
- 2 - Using the existing marquee panel as a template, trim your styrene FREE KICK panel to the same size. Place your trimmed panel behind a clear plexiglass marquee.

\*\*\*\*\*  
F I N A L   G A M E   C H E C K

Look over your entire cabinet both inside and out. Check for things like torn or scraped wire insulation, loose brackets, dusty power supplies and anything else that could cause a problem.

Clean and adjust the coin mechs.

Check that the coin vs credit DIP SWITCHES are set up the way you want along with other adjustable features. Turn the power on and rack up a few credits, then check the meter and play some games. Check all controls and buttons.

F R E E   K I C K   K I T  
W A R R A N T Y   A N D   S E R V I C E

ALL FREE KICK KITS ARE WARRANTED BY MERIT INDUSTRIES, INC. FOR A PERIOD OF NINETY DAYS.

THIS WARRANTY COVERS DEFECTS IN MATERIAL AND WORKMANSHIP BUT DOES NOT COVER DAMAGE DUE TO PHYSICAL ABUSE OR ATTEMPTED REPAIR BY UNTRAINED SERVICE PERSONNEL.

SHOULD A PROBLEM OCCUR, SERVICE AND TROUBLESHOOTING MUST BE PERFORMED BY A QUALIFIED SERVICE TECHNICIAN FAMILIAR WITH MICROPROCESSOR BASED EQUIPMENT.

IF A QUALIFIED TECHNICIAN IS NOT AVAILABLE, EQUIPMENT IN NEED OF REPAIR SHOULD BE RETURNED TO YOUR DISTRIBUTOR AND **NOT** DIRECTLY TO MERIT INDUSTRIES, INC.

FOLLOWING THE ABOVE PROCEDURES WILL RETURN YOUR EQUIPMENT TO OPERATION IN THE SHORTEST TIME POSSIBLE.

ENTER TEST MODE BY HOLDING DOWN  
"SHOOT" BUTTON WHILE TURNING ON POWER

# DIP SW I

ITEM	CONTENTS	1	2	3	4	5	6	7	8
PLAYER NUMBER	3	OFF							
	5	ON							
EXTEND	2-3-4-5-60000POINTS		OFF	OFF					
	3-4-5-6-7-80000POINTS		OFF	ON					
	20000 & 60000POINTS		ON	OFF					
	ONLY 20000POINTS		ON	ON					
DIFFICULTY	LEVEL 1	EASY ↓ DIFFICULT			OFF	OFF			
	LEVEL 2				OFF	ON			
	LEVEL 3				ON	OFF			
	LEVEL 4				ON	ON			
CONTINUE PLAY	YES						OFF		
	NO						ON		
GAME STYLE	TABLE TYPE							OFF	
	UPRIGHT TYPE							ON	
MONITOR SCREEN	NORMAL								OFF
	REVERSE								ON

## Recommended Settings

# DIP SW II

ITEM	CONTENTS	1	2	3	4	5	6	7	8
COIN-A	1 COIN 1 CREDIT	OFF	OFF	OFF	OFF				
	1 2	OFF	OFF	OFF	ON				
	1 3	OFF	OFF	ON	OFF				
	1 4	OFF	OFF	ON	ON				
	1 5	OFF	ON	OFF	OFF				
	2 1	OFF	ON	OFF	ON				
	2 3	OFF	ON	ON	OFF				
	2 5	OFF	ON	ON	ON				
	3 1	ON	OFF	OFF	ON	OFF			
	3 2	ON	OFF	OFF	ON	ON			
	3 4	ON	OFF	ON	OFF	ON			
	3 5	ON	OFF	ON	ON	ON			
	4 1	ON	ON	OFF	OFF	OFF			
	4 3	ON	ON	OFF	ON	ON			
	4 5	ON	ON	ON	OFF	OFF			
5 1	ON	ON	ON	ON	ON				
COIN-B	1 COIN 1 CREDIT					OFF	OFF	OFF	OFF
	1 2					OFF	OFF	OFF	ON
	1 3					OFF	OFF	ON	OFF
	1 4					OFF	OFF	ON	ON
	1 5					OFF	ON	OFF	OFF
	2 1					OFF	ON	OFF	ON
	2 3					OFF	ON	ON	OFF
	2 5					OFF	ON	ON	ON
	3 1					ON	OFF	OFF	OFF
	3 2					ON	OFF	OFF	ON
	3 4					ON	OFF	ON	OFF
	3 5					ON	OFF	ON	ON
	1 10					ON	ON	OFF	OFF
	1 25					ON	ON	OFF	ON
	1 50					ON	ON	ON	OFF
5 1					ON	ON	ON	ON	

\*\*\*\*\*  
 FREE KICK WIRING HARNESS

\*\*\*\*\* STANDARD JAMMA INTERFACE \*\*\*\*\*

SOLDER SIDE

COMPONENT SIDE

SOLDER SIDE			COMPONENT SIDE		
BLACK	GROUND	-A-	-1--	GROUND	BLACK
BLACK	GROUND	-B-	-2--	GROUND	BLACK
RED	+5V	-C-	-3--	+5V	RED
RED	+5V	-D-	-4--	+5V	RED
		-E-	-5--		
YELLOW	+12V	-F-	-6--	+12V	YELLOW
===== KEY =====		-G-	-7--	===== KEY =====	
RED	METER B	-H-	-8--	METER A	VIOLET
		-J-	-9--		
BLACK	SPKR -	-L-	-10-	SPKR +	GRAY
		-M-	-11-		
GREEN	VIDEO GREEN	-N-	-12-	VIDEO RED	RED
WHITE	VIDEO SYNC	-P-	-13-	VIDEO BLUE	BLUE
		-R-	-14-	VIDEO GROUND	BLACK
		-S-	-15-		
ORANGE	COIN B/SERV	-T-	-16-	COIN A	TAN
GRAY	2 PLYR STRT	-U-	-17-	1 PLYR STRT	BROWN
		-V-	-18-		
		-W-	-19-		
		-X-	-20-		
		-Y-	-21-		
RED	2 PLYR SHOOT	-Z-	-22-	1 PLYR SHOOT	RED
		-a-	-23-		
		-b-	-24-		
VIOLET	2 PLYR LEFT	-c-	-25-	1 PLYR LEFT	VIOLET
YELLOW	2 PLYR RGHT	-d-	-26-	1 PLYR RGHT	YELLOW
BLACK	GROUND	-e-	-27-	GROUND	BLACK
BLACK	GROUND	-f-	-28-	GROUND	BLACK

CONTROLLER PC BOARD WIRING HARNESS

Main PC Board	Main Harness	Controller Harness	Controller PC Bd
-c-	-25-	->--- VIOLET --->---	BLUE -- 1 OR 2 PLYR LEFT --->---
-e-	-27-	->--- BLACK --->---	WHITE ----- GROUND ----->---
-d-	-4 -	->--- RED --->---	YELLOW --- +5V --->---
-d-	-26-	->--- YELLOW --->---	PINK -- 1 OR 2 PLYR RIGHT --->---

\* UNMARKED LOCATIONS ARE NOT USED