





1716 Ringwood Ave, San Jose, CA 95131  
Telephone: 408-436-8885 Fax: 415-723-7225  
[www.ultracade.com](http://www.ultracade.com)

# TAG'EM™

## OPERATION MANUAL

VERSION 1.0

- Read this booklet before use.
- Keep this booklet with machine at all times.

**Reproduction of this publication is forbidden without the prior written permission of UltraCade Technologies, Inc. This manual is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the manual or any technical information contained thereof.**

For permission requests write:  
UltraCade Technologies, Inc.  
1716 Ringwood Ave  
San Jose, CA 95131

# TAG'EM™

## TABLE OF CONTENTS

<b>1. LEGAL INFORMATION</b> .....	4	3.3.8	Fall Down Hits .....	7
1.1 Safety Notices .....	4	3.3.9	Set Defaults .....	7
1.2 Environmental Conditions .....	4	3.4	Physics Menus .....	7
1.3 FCC Notices .....	4	3.5	Operator Settings Menu .....	7
1.4 Joshua Operating System .....	4	3.5.1	Coins Per Play .....	7
1.5 Warranty Information .....	4	3.5.2	Free Play .....	7
<b>2. GAME SETUP</b> .....	5	3.5.3	Demo Length .....	7
2.1 Pre-Game Installation .....	5	3.5.4	Master Volume .....	7
2.2 Game Inspection .....	5	3.5.5	Music Volume .....	7
2.3 Game Installation .....	5	3.5.6	Sound Volume .....	7
<b>3. OPERATOR MENU</b> .....	6	3.5.7	Attract Sounds .....	7
3.1 Entering The Operator Menu .....	6	3.5.8	Reset Stats .....	7
3.2 Navigating The Operator Menu .....	6	3.5.9	Set Defaults .....	8
3.3 Game Settings Menu .....	6	3.6	Redemption Settings Menu .....	8
3.3.1 Round Length .....	6	3.7	Statistics .....	8
3.3.2 Rounds Per Credit .....	6	3.8	Control Test .....	8
3.3.3 Bat Radius .....	6	3.9	Language Setting .....	9
3.3.4 Auto-Swing .....	7	<b>4. TAG'EM WIRING</b> .....		9
3.3.5 Difficulty .....	7	4.1	JAMMA Pinouts .....	9
3.3.6 Blood .....	7	4.2	Trackball Pinouts .....	9
3.3.7 Point Stealing .....	7			



# TAG'EM™

## **1. LEGAL INFORMATION**

### **1.1 SAFETY NOTICES**

The following safety instructions apply to all game operators and service personnel. Specific warnings and cautions will be found throughout this manual where applicable. We recommend that you read this page before preparing your TAG'EM for game play.

Use the following safety guidelines to help protect the system from potential damage and to ensure your personal safety.

- To help avoid damage to the computer, be sure the voltage selection switch on the power supply is set to match the AC power available at the location:
  - 115 volts / 60Hz in most of North and South America and some Far Eastern countries such as Japan, South Korea and Taiwan
  - 230 volts / 50Hz in most of Europe, the Middle East and the Far East
- To help prevent electric shock, plug the system power cables into properly grounded power sources. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3 wire cable with properly grounded plugs.
- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner or uninterruptible power supply (UPS).
- Be sure nothing rests on the system's cables and that the cables are not located where they can be stepped on or tripped over.
- Do not spill food or liquid on your system.
- Do not push any objects into the openings of the system. Doing so can cause fire or electric shock by shorting out interior components.
- Keep your computer far away from radiator and heat sources.
- Do not block cooling vents.

### **1.2 ENVIRONMENTAL CONDITIONS**

TAG'EM is intended for indoor use only. Be sure to keep dry and maintain operating temperatures of 10-40° Celsius.

### **1.3 FCC NOTICES (UNITED STATES)**

Electromagnetic Interference (EMI) is any signal or emission, radiated in free space or conducted along power or signal leads, that endangers the functioning of a radio navigation or other safety service or seriously degrades, obstructs, or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to AM/FM commercial broadcast, television, cellular services, radar, air-traffic control, pager, and Personal Communication Services (PCS). These licensed services, along with unintentional radiators such as digital devices, include computer systems, contribute to the electromagnetic environment.

Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in

the electronic environment. While this computer system has been designed and determined to be compliant with regulatory agency limits for EMC, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference with radio communications services, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver.
- Move the TAG'EM away from the receiver
- Plug the TAG'EM into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult a Regulatory EMC representative of HyperWare, Inc or an experienced radio/television technician for additional suggestions. You may find the FCC Interference Handbook, 1986, to be helpful. It is available from the U.S. Government Print Office, Washington, DC 20402, Stock No. 004-000-00450-7 or on the word wide web at: <http://www.fcc.gov/bureaus/compliance/www/tvibook.html>.

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, and if not installed and used in accordance with the instruction manual, may cause harmful interference with radio communications. Operation of this equipment in an residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

### **1.4 JOSHUA OPERATING SYSTEM**

The JoshuaOS™ is used under license from Joshua Technology, Inc. Joshua Technology, Inc. retains all rights to the code, trademarks and copyrights. By accepting and operating an TAG'EM system, the owner/operator of each TAG'EM system agrees to abide by all copyrights and trademarks and not to attempt to decompile or modify the operating system in anyway. Questions regarding this operating system should be directed to technical support at [www.ultracade.com](http://www.ultracade.com) or [support@ultracade.com](mailto:support@ultracade.com). JoshuaOS is copyrighted 2001-2002 by Joshua Technology, Inc.

### **1.5 WARRANTY INFORMATION**

The TAG'EM cabinet is guaranteed from manufacturing defects. TAG'EM parts are guaranteed for 90 days. If at some point you require warranty service, contact your distributor.

## 2. GAME SETUP

### 2.1 PRE-GAME INSTALLATION

Remove the game from the shipping container. The 1<sup>st</sup> set of keys is in the coin return slot. The 2<sup>nd</sup> set will be hanging on the inside of the coin mech door. Refer to Figure 2-1 for specific locations of each part of the machine. Connect the wall cord to a grounded (3-terminal) AC wall outlet.



**FIGURE 2-1 CABINET ASSEMBLY**

#	Description
1	On / Off Switch on bottom rear of cabinet
2	Control Panel
3	Coin Mech Door and Coin Return Slots
4	Coin Box Door

**TABLE 2-1 CABINET ASSEMBLY**

The following precautions should be followed when installing the game:

- Avoid rough handling of the game, the picture tube is fragile.
- Install the game on a level surface.
- Avoid installing the game where it will receive excessive sunlight or heat, to protect the game from rising internal temperatures.
- Do not install in a damp or dusty location.
- For a short time after connecting the power to the game, the picture may be temporarily distorted.

The monitor's purity is affected by the Earth's magnetic field, causing a variation of color. By turning the game on for 10 or 15 seconds and then off for 20 or 30 minutes the automatic degaussing circuit applies a degaussing field around the edges of the monitor. Doing this several times will correct the problem.

Another way to correct the problem is to purchase a degaussing coil or bulk tape eraser at any electronics store. This will help to immediately demagnetize the video tube. Caution must be used with a degaussing coil so that the magnetic field of the degaussing coil is not allowed to become too intense at any one place on the picture tube, thereby causing a localized color distortion.

If you move the game to another location after degaussing the distortion may reappear. Refer to the video monitor manual for details.

### 2.2 GAME INSPECTION

TAG'EM is shipped ready for operation, but a last visual check should be made to insure the game is in good condition. Please verify the following before turning the game on:

- Inspect the exterior of the game for any shipping damage, chips, dents, or broken parts.
- Open the rear service door and check for any interior damage.
- Check all major assemblies to assure they are mounted securely.
- Make sure there is no damage to the wiring and that all wires are properly connected.
- Check for loose foreign objects, especially metal objects which may cause electrical problems.
- Open coin door and check test switch to make sure it is not damaged.

The game monitor is properly adjusted before shipping. If there are any adjustments necessary, refer to the video monitor manual. This manual contains all the manufacturers recommendations for adjusting the video monitor.

### 2.3 GAME INSTALLATION

Power on the game. When the game is fully started open the coin mech door and press the red test button to enter the Operator Menu. This will allow you to configure your TAG'EM for your specific needs. For more information see section 3. OPERATOR MENU.

### 3. OPERATOR MENU

#### 3.1 ENTERING THE OPERATOR MENU

All TAG'EM game audits, adjustments, and diagnostics are options of the Operator Menu. Each option has its own submenu, listing several choices you may act upon as needed. Press the test button behind the coin mech door in the cabinet to activate the Operator Menu. Refer to Figure 2-1 and Figure 3-1 for locating the test button.

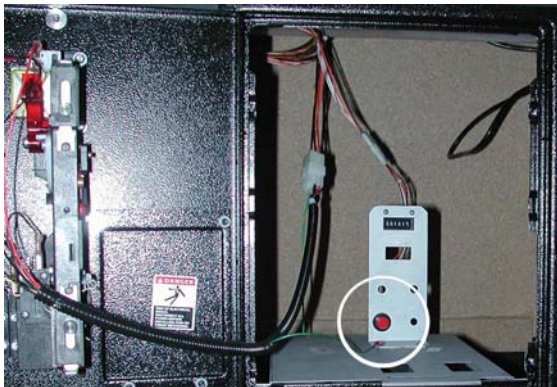


FIGURE 3-1 TEST BUTTON LOCATION

You will be able to access the following sub-menus from the operator menu: Game Settings, Physics, Operator Settings, Redemption Settings, Statistics, Control Test, and Exit.



FIGURE 3-2 OPERATOR MENU

#### 3.2 NAVIGATING THE OPERATOR MENU

The currently selected menu option through out the operator menu and all of its sub-menus will always be highlighted in blue. To change the currently selected menu option roll the player one trackball either up or down. When in the main operator menu press the player one or player two swing/taunt button to select the highlighted sub-menu. To decrease values for selected menu options in a sub-menu press the player one swing/taunt button. To increase values for selected menu options in a sub-menu press the player two swing/taunt button. To immediately exit out of a sub-menu and go back to the main operator menu press the test button again. You may also refer to Table 3-1.

<p><b>Trackball Up</b> Move currently highlighted menu selection up</p>
<p><b>Trackball Down</b> Move currently highlighted menu selection down</p>
<p><b>Player One Swing/Taunt Button</b> Select highlighted submenu Decrease values for submenu options</p>
<p><b>Player Two Swing/Taunt Button</b> Select highlighted submenu Increase values for submenu options</p>
<p><b>Test Button</b> Exit submenu to main operator menu</p>

TABLE 3-1 OPERATOR MENU NAVIGATION

#### 3.3 GAME SETTINGS MENU

The Game Settings Menu allows you to adjust all the settings which will affect gameplay:



FIGURE 3-3 GAME SETTINGS MENU

##### 3.3.1 ROUND LENGTH

This option will allow you to change the length of each game round (in seconds). The recommended default option is thirty seconds.

##### 3.3.2 ROUNDS PER LEVEL

This option will allow you to adjust how many rounds are played each level. The recommended default option is three rounds.

##### 3.3.3 BAT RADIUS

The bat radius effects how far a player can reach when swinging their bat. The higher this option is set, the farther they will be able to reach. The recommended default setting is 25.



### 3.3.4 AUTO SWING

When auto swing is turned on a player's character who is "It" will automatically swing at the opposing character when they are close enough. If this option is turned off the player will have to press the swing/taunt button to make their character swing at an enemy. The recommended default option is auto swing on.

### 3.3.5 DIFFICULTY

There are 5 difficulty settings for TAG'EM: easy, normal, hard, expert, and nightmare. The recommended default option is hard.

### 3.3.6 BLOOD

This will turn the blood effects on and off when players are hit.

### 3.3.7 POINT STEALING

When turned on players will be able to steal taunt points from the opposing player when they tag them. When turned off a person who is taunting will get as many points as he/she has built up before getting tagged.

### 3.3.8 FALL DOWN HITS

When turned on, anytime a player is tagged they will fall down. When turned off the only way to knock an opponent down will be to do a slide tag.

### 3.3.9 SET DEFAULTS

Selecting this option will reset all the Game Settings options to their default values.

## 3.4 PHYSICS MENUS

The Physics menus allow the operator to tweak the statistics of each character. These are more advanced settings and it is not recommended that any of the default values be altered. To change a character's statistics the operator will need to start a game with that character than enter the operator menu while the game is running. To reset a character's statistics highlight the reset option and select it.



FIGURE 3-4 PHYSICS MENUS

## 3.5 OPERATOR SETTINGS MENU

The Operator Settings Menu allows you to adjust the credit cost

for a game, adjust the volume, and reset the accounting information.

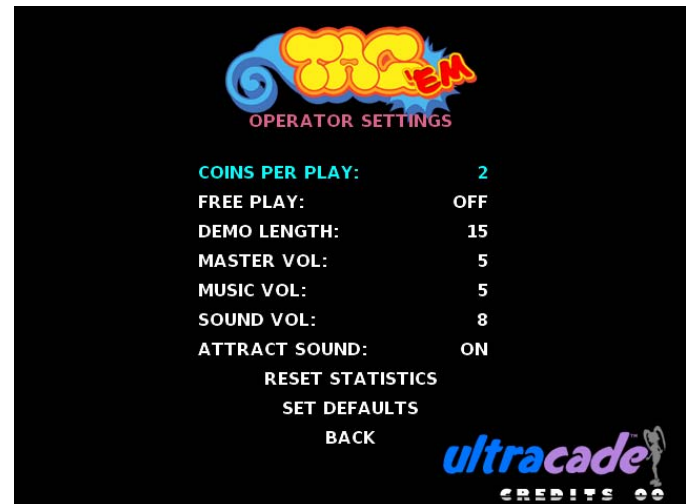


FIGURE 3-5 OPERATOR SETTINGS MENU

### 3.5.1 COINS PER PLAY

This option allows the operator to set the price to play a game. When set to one, it will cost one credit or coin drop for each play. When set to two, it will cost two credits or coin drops for each play. The recommended default value is two.

### 3.5.2 FREE PLAY

When turned on this sets the game to freeplay and it will cost nothing to play the game.

### 3.5.3 DEMO LENGTH

During TAG'EM's attract mode, a short game demo will run. This option will set the length of that demo in seconds. The recommended default value is fifteen seconds.

### 3.5.4 MASTER VOLUME

This option will set the overall volume of the game. Adjust it accordingly to your location.

### 3.5.5 MUSIC VOLUME

This option will only affect the volume of the background music played during the game.

### 3.5.6 SOUND VOLUME

This option will only affect the volume of the sound effects played during the game.

### 3.5.7 ATTRACT SOUND

When turned on the TAG'EM game will play sounds and music during its attract mode. When turned off the attract mode will make no sounds.

### 3.5.8 RESET STATS

Use this menu option to reset the statistics/accounting screen. All coin drops, starts, continues, and play times will be reset to zero and the reset date will register as the current date. Lifetime coins will not be reset.

### 3.5.9 SET DEFAULTS

Selecting this option will reset all the Operator Settings options to their default values.

### 3.6 REDEMPTION SETTINGS MENU

TAG'EM does not currently support redemption tickets. Look for future upgrades to your TAG'EM machine which will allow you to convert it to a redemption machine.

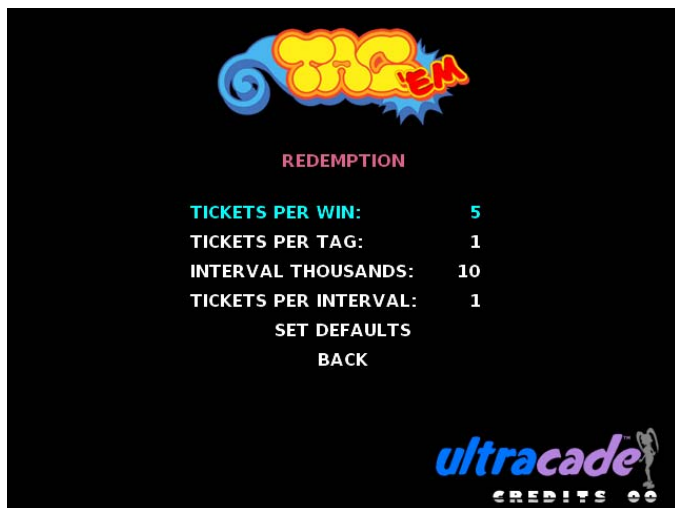


FIGURE 3-6 REDEMPTION SETTINGS MENU

### 3.7 STATISTICS SCREEN

The statistics screen holds all audit information for the TAG'EM game. *Coins Dropped* is the amount of coins which have been entered since the last reset. *Starts and Continues* lists the number of one player and two player starts along with the number of continues since the last reset. *Average Playtime* displays the length of an average game in minutes and seconds since the last reset. The *Reset Date* displays the date of the last reset. *Lifetime Coins* lists the total number of coins which have been entered for the entire lifetime of the machine. This value will never be affected by resetting the other accounting statistics.



FIGURE 3-7 STATISTICS SCREEN

### 3.8 CONTROL TEST

This test is used to check the functionality of the player controls. Operate each player control in turn. Each button press or joystick direction will light when activated. To exit the control test press both player one and player two start buttons. If one or both start buttons are not working the control test screen will automatically timeout in fifteen seconds.



FIGURE 3-8 CONTROL TEST SCREEN

### 3.8 LANGUAGE SETTING

TAG'EM supports multiple languages. Currently supported languages are: English, Spanish, French, German, Italian, and Dutch.

## 4. TAG'EM WIRING

### 4.1 JAMMA PINOUTS

Refer to the below table for the JAMMA edge pinouts that TAG'EM uses.

SOLDER			COMPONENT			
Ground	BLK	A		1	BLK	Ground
Ground	BLK	B		2	BLK	Ground
+5V	RD	C		3	RD	+5V
+5V	RD	D		4	RD	+5V
-5V	BL	E		5	BL	-5V
+12V	OR	F		6	OR	+12V
KEY		H		7		KEY
Not Used	WH/RD	J		8	WH/BLK	Meter 1
Not Used	BLK/GRN	K		9	BLK/YL	Not Used
Left Speaker -	BL/RD	L		10	RD/YL	Left Speaker +
Right Speaker -	BL/GR	M		11	RD/BLK	Right Speaker +
Not Used	GRN	N		12	RD	Not Used
Not Used	WH	P		13	BL	Not Used
Not Used	WH/OR	Q		14	BLK	Not Used
Not Used (Tilt)	BLK/WH	S		15	WH/BRN	Test
Coin 2	BRN/BLK	T		16	YL/BLK	Coin1
P2 Start	RD/WH	U		17	RD	P1 Start
Not Used	BL/WH	V		18	BL	Not Used
Not Used	GRN/WH	W		19	GRN	Not Used
Not Used	OR/WH	X		20	OR	Not Used
Not Used	YL/WH	Y		21	YL	Not Used
P2 Button 1	BRN/WH	Z		22	BRN	P1 Button 1
Not Used	PR/WH	Aa		23	PR	Not Used
Not Used	GRY/WH	Ab		24	GRY	Not Used
Not Used	GRN/YL	Ac		25	GRN/RD	Not Used
Not Used	OR/BLK	Ad		26	OR/RD	Not Used
Ground	BLK	Ae		27	BLK	Ground
Ground	BLK	Af		28	BLK	Ground

**TABLE 4-1 JAMMA PINOUTS**

### 4.2 TRACKBALL PINOUTS

The trackball connectors are each a 12-pin molex connector. They plug into the USBlinx1 just behind the JAMMA edge and are labeled trackball 1 and trackball 2. Pin 1 on the connector is the pin closest to the JAMMA edge. Refer to Table 4-3 USBlinx Wiring for a visual layout of the USBlinx. Refer to the below table for the trackball pinouts.

Pin #	Use	Color
Pin 1	Ground	Black
Pin 2	+5V	Red
Pin 3	-	-
Pin 4	-	-
Pin 5	X1	Green
Pin 6	X2	Yellow
Pin 7	Y1	Blue
Pin 8	Y2	Purple
Pin 9	-	-
Pin 10	-	-
Pin 11	-	-
Pin 12	-	-

**TABLE 4-2 TRACKBALL PINOUTS**