

SEGA ENTERPRISES, INC. USA

MANUAL NO. 999-0788

Warranty

Your new Sega Product is covered for a period of 90 days from the date of shipment. This certifies that the Printed Circuit Boards, Power Supplies and Monitor are to be free of defects in workmanship or materials under normal operating conditions. This also certifies that all Interactive Control Assemblies are to be free from defects in workmanship and materials under normal operating conditions. No other product in this machine is hereby covered.

Sellers sole liability in the event a warranted part described above fails shall be, at its option, to replace or repair the defective part during the warranty period. For Warranty claims, contact your Sega Distributor.

Should the Seller determine, by inspection that the product was caused by Accident, Misuse, Neglect, Alteration, Improper Repair, Installation or Testing, the warranty offered will be null and void.

Under no circumstances is the Seller responsible for any loss of profits, loss of use, or other damages.

This shall be the exclusive written Warranty of the original purchaser expressed in lieu of all other warranties expressed or implied. Under no circumstance shall it extend beyond the period of time listed above.

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SPECIFICATIONS

Power maximum current:

2.31 Amp AC 120V 60 Hz

MONITOR:

STANDARD OR HIGH RES.

INTRODUCTION OF THE OWNERS MANUAL

SEGA ENTERPRISES, LTD., has for more than 30 years been supplying various innovative and popular amusement products to the world market. This Owners Manual is intended to provide detailed descriptions together with all the necessary installation, game settings and parts ordering information related to the WORLD SERIES '99 KIT, a new SEGA product.

This manual is intended for those who have knowledge of electricity and technical expertise, especially in ICs, CRTs, microprocessors, and circuit boards. Read this manual carefully to acquire sufficient knowledge before working on the machine. Should there be a malfunction, non-technical personnel should under no circumstances touch the interior system. Should the need arise, contact our main office, or the closest branch office listed below.

SEGA ENTERPRISES, INC. (USA)

Customer Service 45133 Industrial Drive Fremont, CA 94538 Phone 415-701-6580 Fax 415-701-6594 7:30 am - 4:00 pm, Pacific Standard Time Monday thru Friday Follow Instructions: All operating and use instructions should be followed.

Attachments: Do not use attachments not recommended by the product manufacturer as they may cause hazards.

Accessories: Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use only mounting accessories recommended by the manufacturer.

Moving the Product: This product should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product to overturn.

Ventilation: Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product and to protect it from overheating; these openings must not be blocked or covered. The openings should never be blocked by placing the product in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

Power Sources: This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your location, consult your local power company. For products intended to operate from battery power or other sources, refer to the operating instructions.

Grounding or Polarization: This product is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

Power Cord Protection: Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

Overloading: Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

Object and Liquid Entry: Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

Servicing: Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service: Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- a) If the power cord or plug is damaged;
- b) If liquid has been spilled, or objects have fallen into the product;
- c) If the product has been exposed to rain or water;
- d) If the product does not operate normally when following the operating instructions. Adjust only those controls that are explained in the operating instructions. An improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation;
- e) If the product has been dropped or damaged in any way;

f) When the product exhibits a distinct change in performance; this indicates a need for service.

Replacement Parts: When replacement parts are required, be sure the service technician has used replacements parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Safety Check: Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Heat: The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Lithium Battery- Dispose of batteries only in accordance with the battery manufacturer's recommendations. Do not dispose in an open flame condition, since the battery may explode.

Cleaning: When cleaning the monitor glass, use water or glass cleaner and a soft cloth. Do not apply chemicals such as benzine, thinner, etc.

Location: This an indoor game machine, DO NOT install it outside. To ensure proper usage, avoid installing indoors in the places mentioned below:

- Places subject to rain/water leakage, or condensation due to humidity;
- In close proximity to a potential wet area;
- Locations receiving direct sunlight;
- Places close to heating units or hot air;
- In the vicinity of highly inflammable/volatile chemicals or hazardous matter;
- On sloped surfaces;
- In the vicinity of emergency response facilities such as fire exits and fire extinguishers;
- Places subject to any type of violent impact;
- Dusty places.

INSTALLATION PRECAUTIONS

• Verify the amperage of the branch circuit outlet before plugging in the power plug. Do not overload the circuit.

• Avoid using an extension cord. If one is required, use an extension cord of type SJT, 16/3 AWG rated min. 120 VAC, 7A.

- Moving this unit requires a minimum clearance (of doors, etc.) of 32" (W) by 77" (H).
- For the operation of this machine, secure a minimum area of 32" (W) by 42"(D).

REGULATORY APPROVALS

This game has been tested and found to comply with the Federal Communications Commission Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This game has been tested and listed by Underwriters Laboratories, Inc., to ANSI/UL22.



1. ACCESSORIES



2. ASSEMBLING AND INSTALLATION



Assembling should be performed as per the cabinet's service manual. Since this is a complex machine, erroneous assembling may cause damage to the machine, or malfunctioning to occur. When assembling, be sure to perform work by plural persons. Depending on the assembly work, there are some cases in which performing the work by a single person can cause personal injury or parts damage.

KIT INSTALLATION INSTRUCTIONS

1.) Install VGA Output to Jamma Interface.

2.) Install USB connector to Naomi Filter Board Port.

3.) You can use one of the extra grounds (shown in the picture on the following page) to go out to switched inputs. (The 5V and 12V can be used for whatever you like-coin meter, etc.)

MONITOR INFORMATION

You can use a Standard Resolution-15,750K x 60 (#1 ON & #2-4 OFF) or High Resolution-31,000K x 10 (#1-4 OFF)

> DIP SWITCH SELECTABLE (Switch #1 on NAOMI FILTER BOARD)

3. EXPLANATION OF TEST AND DATA DISPLAY

By operating the switch unit, periodically perform the tests and data check. When installing the machine initially or collecting cash, or when the machine does not function correctly, perform checking in accordance with the explanations given in this section. The following shows tests and modes that should be utilized as applicable.

When performing installation, servicing product or changing game boards refer to individual kit instructions for each of the listed items below:

ITEMS	DESCRIPTION
INSTALLATION OF MACHINE	 When the machine is installed, perform the following: 1. Check to see that each setting is as per standard setting made at the time of shipment. 2. In the INPUT TEST mode, check each SW and VR. 3. In the OUTPUT TEST mode, check each of lamps. 4. In the MEMORY TEST mode, check ICs on the IC Board.
MEMORY	Choose MEMORY TEST in the MENU mode to allow the MEMORY test to be performed. In this test, PROGRAM RAMs, ROMs, and ICs on the IC Board are checked.
PERIODIC SERVICING	 Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting. 3. In the INPUT TEST mode, test the CONTROL device 4. In the OUTPUT TEST mode, check each of lamps.
CONTROL SYSTEM	 In the INPUT TEST mode, check each SW and VR. Adjust or replace each SW and VR. If the problem can not be solved yet, check the CONTROL's moves.
MONITOR	In the MONITOR ADJUSTMENT mode, check to see if the MONITOR adjustment is appropriately made.
IC BOARD	 MEMORY TEST In the SOUND TEST mode, check the sound related ROMs.
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc

3 - 1 SWITCH UNIT AND COIN METER



Never touch places other than those specified. Touching places not specified can cause electric shock and short circuit.



Adjust to the optimum sound volume by considering the environmental requirements of the installation location.

If the COIN METER and the game board are electrically disconnected, game play is not possible.



(3) SERVICE BUTTON (SERVICE SW) Gives credits without registering on the coin meter.

NOTE SWITCH BUTTONS ARE NOT PROVIDED, ONLY A SWITCH PLATE.

3 - 2 TEST MODE

System Menu. This test mode mainly allows the IC board to be checked for accurate functioning, monitor color to be adjusted as well as COIN ASSIGNMENTS and GAME ASSIGNEMENTS to be adjusted.

1.) After turning power on, press the TEST button to have the following test item menu displayed.

2.) Press the SERVICE button to move the arrow. Bring the arrow to the desired item and press the TEST button.



3.) Bring the arrow to the item of Game TEST MODE and press the TEST button to display the GAME TEST MENU peculiar to ZOMBIE REVENGE. See the next page onward.

4.) Upon finishing the test, bring the arrow to EXIT and press the TEST button to return to the Gam Mode.



The contents of settings changes in SYSTEM ASSIGNMENTS, COIN ASSIGNMENTS, and GAME TEST MODE are stored when the test mode is EXITed. If the power is turned off before EXITing, the contents of setting changes are ineffective. Be very careful of this point.

3 - 3 GAME TEST MODE

TEST MENU	
INPUT TEST	
SOUND TEST	
GAME ASSIGNMENTS	
VOLUME SETTING	
BOOKKEEPING	
BACKUP DATA CLEAR	
->EXIT	
SELECT WITH SERVICE BUTTON	
AND	
PRESS TEST BUTTON	

Bring the arrow to the item of GAME TEST MODE in the SYSTEM TEST MENU, and press the Test button to display the TEST MENU peculiar to ZOMBIE RE-VENGE.

Press the SERVICE button to move the arrow. Bring the arrow the desired item and press the TEST button. Upon finishing the test, bring the arrow to EXIT and press the TEST button to return to the SYSTEM MENU MODE.

3 - 4 INPUT TEST

This test displays the state of each switch.

If this switch goes ON when activated, it is satisfactory.

Display varies depending on the JOYSTICK TYPE setting in (3) GAME ASSIGNMENTS.



The XX value of 1P (2P)_STICK (XX,YY), indicates the middle value when the STICK is untouched. It indicates the minimum value when the stick is turned to the right, and the maximum value when the STICK is turned to the left. The volume setting is normal if the maximum value is between 70 and 8F, the minimum value is between 00 and 0F, and the maximum between F0 and FF.

The YY value of 1P (2P)_STICK (XX,YY) indicates the middle vlaue when the STICK is untouched. It indicates the minimum value when the STICK is turned down, and the maximum value when the STICK is turned up. The volume setting is normal when the middle value is between 70 and 8F, the minimum value is between 00 and 0F, and the maximum value is between F0 and FF.

The value of 1P (2P)_BAT indicates the minimum value when the BAT is untouched (face up) position. It indicates the maximum value when the BAT is rotated about half a turn until it is stopped. The volume setting is normal if the minimum value is between 00 and 0F and the maximum value is between F0 and FF.

If any value is abnormal, return to the menu screen and take steps described in #4 "VOLUME SETTING". Then return to this test and confirm the values.

To return to the menu screen, press the TEST Button while holding the SERVICE Button down.

3 - 5 SOUND TEST

This allows sound and background used in the game to be checked/ tested.

SOUND TEST PACKAGE01 PACKAGE02 BGM_PACK AMBIENCE UMPIRE SYSTEM TEAMCALL

SELECT WITH SERVICE BUTTON PRESS TEST BUTTON TO EXIT To check them, specify the appropriate item using the SERVICE Button and press the TEST Button to generate the sound.

By default, the arrow is located at EXIT.

3 - 6 GAME ASSIGNMENTS

GAME ASSIGNMENTS GAME DIFFICULTY NORMAL INNINGS 1 CREDIT 2 INNINGS FAVORITE OFF EXTRA INNING OFF ->EXIT

SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON TO EXIT

Allows game difficulty adjustments to be performed/ changed. SELECTION OF DESIRED ITEM 1.) Press the SERVICE button to move the -> and bring it to the desired item.

2.) Press the TEST betuen to change the seting.

3.) After the device setting is finished, bring the -> to EXIT and press the TEST button.

(A) INNINGS (FOUR SETTINGS LISTED BELOW

This sets the number of innings that can be played in the VERSUS-COM mode.

FOUR SETTINGS (listed below)

I CREDIT 1 INNING	If 1 CREDIT is set, when the game can be continued following
1 CREDIT 2 INNINGS	the end of the sixth inning, the remaining three innings can be
1 CREDIT 3 INNINGS	played on one credit.
1 CREDIT ALL INNINGS	Allows the player all innings on one credit

(B) GAME DIFFICULTY

(VERY EASY, EASY, MEDIUM EASY, NORMAL, MEDIUM HARD, HARD, VERY HARD)

(C) FAVORITE (OFF, Each team)

Sets the favorite team.

The favorite team becomes stronger than the other teams

The favorite team name is displayed in the advertise.

Only one teram can be favored at a time

(D) EXTRA INNINGS (OFF, ON)

Ebnables or disables the extra innings. When set to ON, the game can be played up to 12 extra innings.

3 - 7 VOLUME SETTING

This page allows yo to adjust the volume settings used for the ANALOG STICKS and BAT MECHA.

VOLUME SETTING					
PLAYER1					
STICK-H	HMAX (CO)	HMIN (50)	NOW (80)		
STICK-V	HMAX (CO)	HMIN (50)	NOW (80)		
BAT	BMAX (CO)	BMIN (OC)	NOW (OC)		
PLAYER2	2				
STICK-H	HMAX (CO)	HMIN (50)	NOW (80)		
STICK-V	HMAX (CO)	HMIN (50)	NOW (80)		
BAT	BMAX (CO)	BMIN (OC)	NOW (OC)		
SAVE AND EXIT >EXIT					
SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON TO EXIT					

ADJUSTING THE VOLUME VALUE

For the 1P and 2P ANALOG STICKS, move each from the untouched position to the maximum position vertically and horizontally.

For the 1P and 2P BATS, pull each from the untouched (face-up) position by about half of a turn until it stops.

Then, with the STICKS and BATS untouched, select SAVE AND EXIT and press the TEST Button to return to the menu screen. This completes adjustments.

After adjustments, be sure to return to the INPUT TEST mode to verify that the values are normal. If they are not normal, come back to the VOLUME SETTING page and readjust the volume settings. If the normal values are not recovered after several retries, probably the BAT MECHA is faulty.

3-8 BOOKKEEPING

This test mode allows each of the CREDIT/TIME/GAME data to be ascertained.

BOOKKEEPING GAME REPORT PAGE 1/2	(A) NUMBER OF GAMES 1P, 2P total game playfrequency.
GAME REFORT FACE 1/2	(B) SINGLE 1P GAMES
NUMBER OF GAMES01P GAMES02P GAMES0NUMBER OF CONTINUE01P GAMES02P GAMES0	Displays the total number of games played at 1P side (C) SINGLE 2P GAMES Displays the total number of games played at 2P side (D) DOUBLE GAMES Displays the number of games that two players began
PRESS TEST BUTTON TO EXIT	playing. (E) VERSUS GAMES The SERVICE SWITCH usage frequency.
	(F) NUMBER OF CONTINUE
	Displays the number of continued games
	(G) 1P GAMES
	Displays the total number of games played at 1P side
	(H) 2P GAMES
	Displays the total number of games played at 2D side

Displays the total number of games played at 2P side.

Press the test button to proceed to the next page.

BOOKKEEPING										
				PLA	Y TIME	Ξ				
VS CPU	COU	JNT	AVI	ERAGE	LO	NGES	т	SI	HORT	EST
1-2	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
3-4	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
5-6	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
7-8	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
9-10	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
DOUBLE	2									
1-2	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
3-4	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
5-6	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
7-8	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
9-10	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
VERSUS										
8-9	**	*H	*M	**S	*H	*M	**S	*H	*M	**S
PRESS TEST BUTTON TO EXIT										

(A) VS CPU:

Displays the results of versus_CPU game.

(B) DOUBLE:

Displays the results of two-player game.

(C) VERSUS:

Displays the results of versus game.

The number of items depends on the INNINGS values of GAME ASIGNMENTS. The above examples is for "1 CREDIT 2 INNINGS". "NODATA" is displayed if there is no applicable data.

Press TEST button to return to Menu screen.

3 - 9 BACK UP DATA CLEAR

Clears the contents of BOOKKEEPING.

BACK UP DATA CLEAR

YES (CLEAR) ->NO (CANCEL)

SELECT WITH SERVICE BUTTON AND PRESS TEST BUTTON TO EXIT

When clearing bring-> to YES and when not clearing, to NO, by using the SERVICE SW and then push the TEST button.

When clearing has been finished, COMPLETED will be dislayed.

Pressing the TEST button will have the MENU return to the screen.

4. TROUBLESHOOTING

PROBLEMS	CAUSE	COUNTERMEASURES	
With Main SW ON, no activation	Power is not supplied.	Plug in correctly	
	Power supply/voltage is not correct.	Make sure that power supply/voltage is correct	
Irregular sound emitted from inside Cabinet	Greasing to gear mesh portion is not satisfactory, or extraneous matter mixed in.	Apply greasing or eliminate extraneous matter.	
The color of the image on MON. screen is incorrect.	Connector connections are defective.	Check the connection for the RGB and SYNC connectors of the MON. TERM. BD and VPM BUFFER BD.	
The image on MON. screen has color deviation.	Affected by the magnetic field of installation location.	Make CONVERGENCE adjustment. (Refer to Section 12.)	
No sound is emitted. Sound Volume adjustment is not appropriate.		Adjust sound volume. (see Section 7).	
	Sound BD and speaker are malfunctioning.	Perform sound test to find and replace defective parts.(Refer to Section 7).	

Should trouble occur, first check connector connections.

5. CONTROL PANEL/BAT MECHA



In order to prevent an electrical shock, be sure to turn power off before performing work by touching the interior parts of the product.
Be careful so as not to damage wirings. Damaged wiring can cause an electric shock or short circuit accident.

5 - 1 CONTROL PANEL



EXPLANATION OF CONTROLS:

ANALOG STICK: Move cursor (for throwing, batting); Specify base (for defense, base running)

SW1: Throw (for defense); Steal base (for batting); Advance to next base (for base running) Enter command (within acceptable time).

SW2: Check runner (for throwing); Move between bases (for defense); Return to base (for running) Enter command within acceptable time).

BAT MECHA: Throw, Swing.

START: Start game; Time out (for throwing, batting)

The analog input on the I/O board uses the following channels: CH0: 1P ANALOG STICK VOLUME VERTICAL UP(FFH) DOWN(00H) CH1: 1P ANALOG STICK VOLUME HORIZONTAL LEFT(FFH) RIGHT(00H) CH2: 1P BAT MECHA VOLUME STANDARD POS.(00H) MAX(FFH) CH3: (RESERVE) CH4: 2P ANALOG STICK VOLUME VERTICAL UP(FFH) DOWN(00H) CH5: 2P ANALOG STICK VOLUME HORIZONTAL LEFT(FFH) RIGHT(00H) CH6: 2P BAT MECHA VOLUME STANDARD POS.(00H) MAX(FFH) CH7: (RESERVE)

REMOVING AND ATTACHING THE BAT MECHA

If you need to remove the BAT MECHA as in the case of a failure, open control panel base and remove the BAT MECHA through the following procedure.

To reinstall the BAT MECHA, reverse the removing procedure, being certain that the BAT MECHA is faced in the correct direction.



To prevent electrical shock, be sure to turn off power to the cabinet when removing or attaching the BAT MECHA

- 1.) Remove the wiring connector (AMP 3P, white) located near the volume.
- 2.) Remove the tamperproof screw clamping the bat center axis on the front side of the control panel.
- 3.) Remove the four flange nuts clamping the BAT MECHA body on the back side of control panel.



6. GAME BOARD



Ensure that the DIP SW setting is performed as designated. Failure to observe this may cause functioning not suitable for the operation of product, or malfunctioning.

ASSY CASE NAO USA (840-0003D-01) : WORLD SERIES '99





7. PARTS LIST

GRAPHICS/decals/stickers

ITEM NO.	PART NO.	DESCRIPTION
1	999-0826	MARQUEE GRAPHIC MLB_WS99 KIT
2	999-0816	INSTRUCTION SHEET MLB_WS99 KIT
3	999-0817	CNTRL PNL OVERLAY MLB_WS99 KIT
4	999-0825	STICKER CABI SIDE L MLB_WS99 KIT
5	999-0825	STICKER CABI SIDE R MLB_WS99 KIT

ASSY CONTROL PANEL

3

4 5



999-0824	CONTROL PANEL PLATE MLB_W 599 NAG
509-5560-Y	PB SW W/L 6V 1L Y
610-6723-4C01	ASSY ANALOG JOY 4C GREEN
509-5561-G	PB SW W/L 6V 5L G
610-0409	ASSY BAT MECHA



SW REGU FOR JVS 400-5397



ASSY SHIELD CASE NAO MLB_99 (840-0012D)



ITEM NO.	PART NO.	DESCRIPTION
1	840-0001A-01	ASSY CASE NAOMI BD USA
2	840-0012C	ROM CASE

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SEGA ENTERPRISES, INC. (USA)

45133 Industrial Drive Fremont, CA 94538 (415) 701-6580 phone (415) 701-6594 fax