

SERVICE BULLETIN BOOK

1991

WMS GAMES

PARTS AND SERVICE INC.

WILLIAMS ELECTRONIC GAMES, INC.

MIDWAY MANUFACTURING COMPANY

MAKERS OF WILLIAMS AND BALLY AMUSEMENT GAMES

3401 N. CALIFORNIA AVE.

CHICAGO, ILLINOIS 60618

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FLIPPERS: Improving their Action & Reliability

As part of the Williams' tradition of improving pinball flippers, we are announcing several improvements concerning Williams' pinball flipper parts.

For your customers who are experiencing damaged flipper links, particularly the black or white plastic link, a gray plastic link is now available. Its slightly different design is for the purpose of preventing damage to the link near the plunger end. The part number of this new link is 03-8050-1, for ordering purposes.

We are also making this available in the form of the complete A-10656 Flipper Link Assembly (combining the plunger, gray plastic link, and the spring pin) to enable your customers to simply pull out the older Flipper Link Assembly and put in the new assembly, thereby minimizing down time.

At the same time that the Flipper Link Assembly is being replaced, we recommend the replacement of the coil plunger spring, with the latest version of the Coil Plunger Spring, part number 10-376.

In addition to these parts, a new Flipper Stop Assembly, part number A-12111, is now available. This part has a slightly longer 'post', which fits inside the coil sleeve to ensure that the plunger does not enter the coil quite as far as the earlier flipper stop (A-10821) permitted.

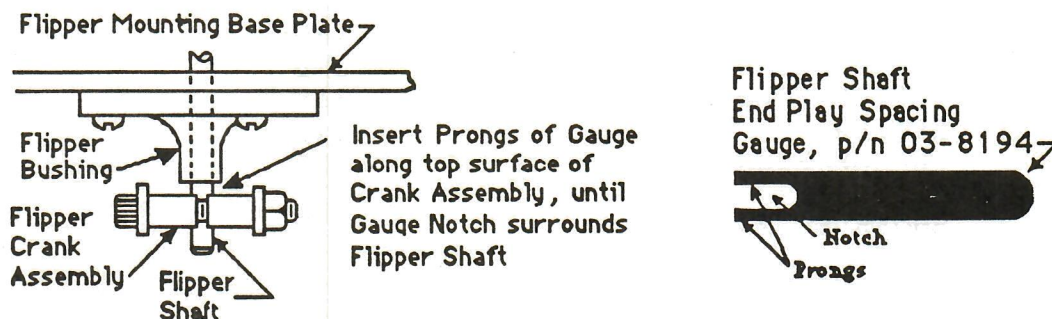
Concerning compatibility, all of these parts will work with Williams' flippers from the present-day back to Firepower II of a few years ago.

Flipper Shaft End Play Spacing Gauge

Keep that great "Williams Flipper Play" on your game!

Whenever you adjust the flipper mechanism, use the Flipper Shaft End Play Spacing Gauge (p/n 03-8194) to ensure that the flipper shaft end play is correct.

With the playfield raised, slip the prongs of the gauge around the Flipper Shaft between the nylon Flipper Bushing and the Flipper Crank Assembly (with cap screw and nut gripping the shaft). Your flipper is properly adjusted, when the End Play Gauge slides smoothly around the shaft. Excessive gauge binding (too little end play) or excessive looseness ('sloppy fit') indicates that the flipper shaft end play is incorrect.



REMINDER: Readjust the Flipper EOS switch for proper operation after replacing any of these parts.

WILLIAMS AND BALLY GAMES BY SYSTEM

THIS IS A LISTING OF GAMES BY THE CPU SYSTEM IT USED. 11A BOARDS CAN BE USED FOR 11 AND 11A GAMES. 11B BOARDS CAN BE USED FOR SYSTEMS 11A, 11B AND 11C. SYSTEMS 9, 11, 11C AND WPC CAN ONLY BE USED FOR THEIR OWN SYSTEMS RESPECTIVELY.

GAME	SYSTEM
SPACE SHUTTLE	9
SORCERER	9
COMET	9
STRIKE ZONE	9
HIGH SPEED	11
GRAND LIZARD	11
ROAD KINGS	11
ALLEY CATS	11
PINBOT	11A
MILLIONAIRE	11A
F-14 TOMCAT	11A
FIRE!	11A
TIC TAC STRIKE	11A
BIG GUNS	11A & 11B
SPACE STATION	11B
CYCLONE	11B
BANZAI RUN	11B
SWORDS OF FURY	11B
TAXI	11B
JOKERZ	11B
GOLD MINE	11B
TOP DAWG	11B
EARTHSHAKER	11B
BLACK KNIGHT 2000	11B
POLICE FORCE	11B
ELVIRA	11B
TRANSPORTER	11B
BAD CATS	11B
SHUFFLE INN	11B
MOUSIN' AROUND	11B
WHIRLWIND	11B
SHUFFLE INN DELUXE	11B
GAME SHOW	11C
POOL SHARKS	11C
ROLLER GAMES	11C
RADICAL	11C
DINER	11C

WILLIAMS AND BALLY GAMES BY SYSTEM (CONTINUED)

GAME	SYSTEM
RIVERBOAT	11C
BUGS BUNNY	11C
DR. DUDE	11C/WPC
FUNHOUSE	WPC
HARLEY DAVIDSON	WPC
THE MACHINE	WPC
SLUGFEST	WPC
GILLIGAN'S ISLAND	WPC
TERMINATOR 2	WPC

WILLIAMS

ELECTRONICS GAMES, Inc.

3401 N. California Ave., Chicago, IL 60618

September 8, 1989

SERVICE BULLETIN

SUBJECT: System 11 Pinball Games display the ADJUSTMENT FAILURE message after Power-Up.

Information: During normal game Power-Up, the Coin Door is closed, causing the Memory Protect switch to be actuated. If a problem causes the game program to try to reset to Factory Settings, the ADJUSTMENT FAILURE message appears, when the game program fails to complete the reset operation.

This indicates a problem with the Memory Protect circuitry (which may include the batteries, diodes, U25, U36, or switch and wiring).

- PROCEDURE:**
1. Check that the CPU Board batteries are firmly in place in the battery holder and that they have good electrical contact with the holder's terminals.
 2. With the game turned off, check for a minimum battery voltage of 3.8V dc at pin 24 of U25. Replace batteries if voltage is low.
 3. Check for proper diode action of CPU Board diodes D1 and D2.
 4. Check CPU Board CMOS RAM U25 and associated circuitry.
 5. Check the Coin Door wiring, including the action of the Memory Protect switch.
 6. Check CPU Board U36 (Memory Protect circuit) for proper operation.
 7. Check for an open on all +50V coil diodes.

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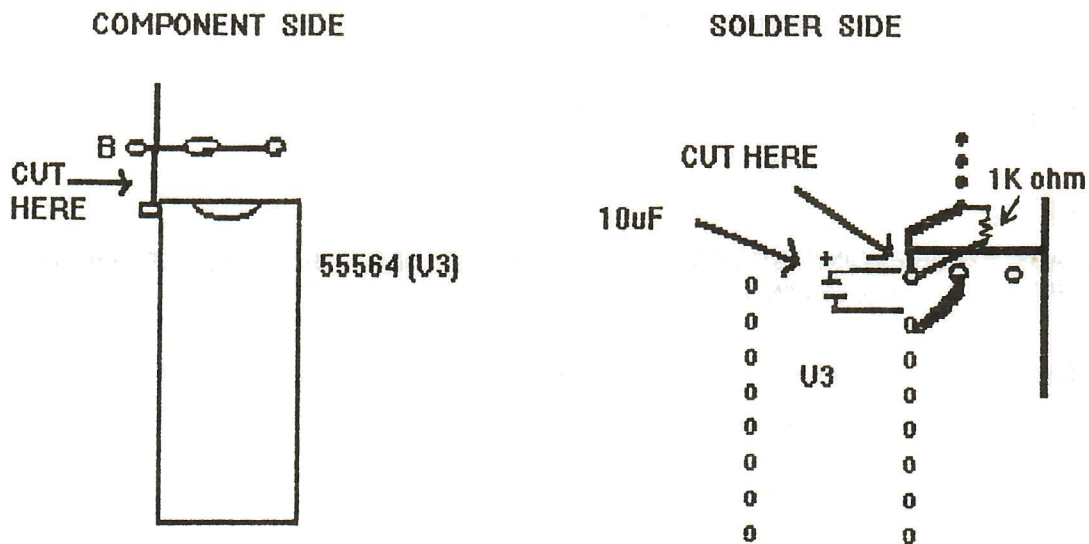
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SERVICE TIP

SUBJECT: JOKERZ AUDIO HUM

THE FOLLOWING MODIFICATIONS SHOULD BE MADE TO THE SYSTEM 11B BOARD (CPU) IN THE SOUND SECTION TO REDUCE NOISE IN THE JOKERZ PINBALL GAME.

1. PIN 1 OF U3 MUST BE ISOLATED FROM THE +5VDC SUPPLY.



2.. BOTH CUTS MUST BE MADE.

3. THEN ADD A 10 uF CAPACITOR FROM PIN 1 TO PIN 2 ON I.C. U3, WITH THE POSITIVE SIDE SOLDERED TO PIN 1.

4. ADD A 1 K ohm RESISTOR FROM U3 PIN 1 TO U9 PIN 20.

5. MAKE SURE YOU HAVE NO LESS THAN CPU EPROM REV.6 AND SOUND EPROM REV. 2

THESE MODIFICATIONS WILL GREATLY REDUCE NOISE IN THE AUDIO SYSTEM.

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SERVICE BULLETIN

DATE: OCTOBER 9, 1990

GAMES: "DR. DUDE" AND "RIVERBOAT GAMBLER"

SUBJECT: STICKING FLIPPERS

IF YOU ARE EXPERIENCING STICKING FLIPPERS ON EITHER "DR. DUDE" OR "RIVERBOAT GAMBLER", PLEASE REVIEW THE FOLLOWING:

- CHECK BOTH THE LEFT AND RIGHT FLIPPER CABINET BUTTONS, THE CAPACITOR ACROSS THE SWITCH SHOULD BE A .1uF, 500V.
- SOME GAMES HAD A 2.2uF, 250V CAPACITOR INSTALLED, WHICH WILL WORK FINE, EXCEPT YOU MIGHT SEE THE FLIPPER STAY IN THE UP POSITION FOR A BRIEF MOMENT AFTER THE FLIPPER BUTTON HAS BEEN RELEASED.

THANK YOU

WMS GAMES SERVICE DEPT.

TELEPHONE # 312-509-6544

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SERVICE BULLETIN

DATE: APRIL 10, 1991

SB20

PROBLEM: "FUNHOUSE" AND "HARLEY DAVIDSON" OUTHOLE LINKS OCCASIONALLY BREAKING.

SOLUTION: REPLACE THE BROKEN LINK (01-4251) AND INSTALL A WEAKER COIL (AE-27-1200).

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SERVICE BULLETIN

DATE: MARCH 4, 1991

SB21

GAME: "HIGH IMPACT" (KIT)

SUBJECT: SOUND BOARD FAILURE

WE HAVE RECEIVED CALLS REGARDING THE SOUND BOARD ON OUR "HIGH IMPACT" VIDEO KIT. COMPLAINTS RANGE FROM; 1) NO SOUND, 2) SOME SOUNDS MISSING, AND 3) A CLICKING SOUND.

IN CASES #1 AND #2 (NO SOUND & MISSING SOME SOUNDS) THE PROBLEM HAS BEEN THAT THE -5VDC WAS MISSING. REMEMBER, THE -5VDC SHOULD BE HOOKED UP TO PINS 5 & E (GRY-GRN WIRE) ON THE JAMMA EDGE CONNECTOR.

IN CASE #3 (CLICKING SOUND), WE HAVE MADE A RUNNING CHANGE ON THE SOUND BOARD. IF YOU EXPERIENCE THIS CONDITION, CHANGE RESISTORS R2 & R3 TO 470 OHM. (ORIGINALLY THEY WERE 2.2K OHM).

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SERVICE BULLETIN

DATE: MARCH 14, 1991

SB22

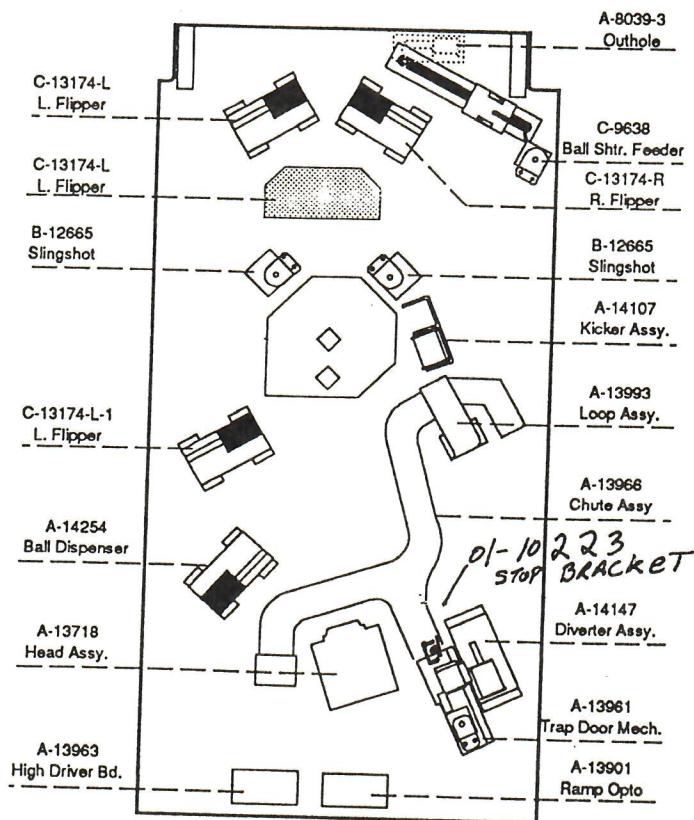
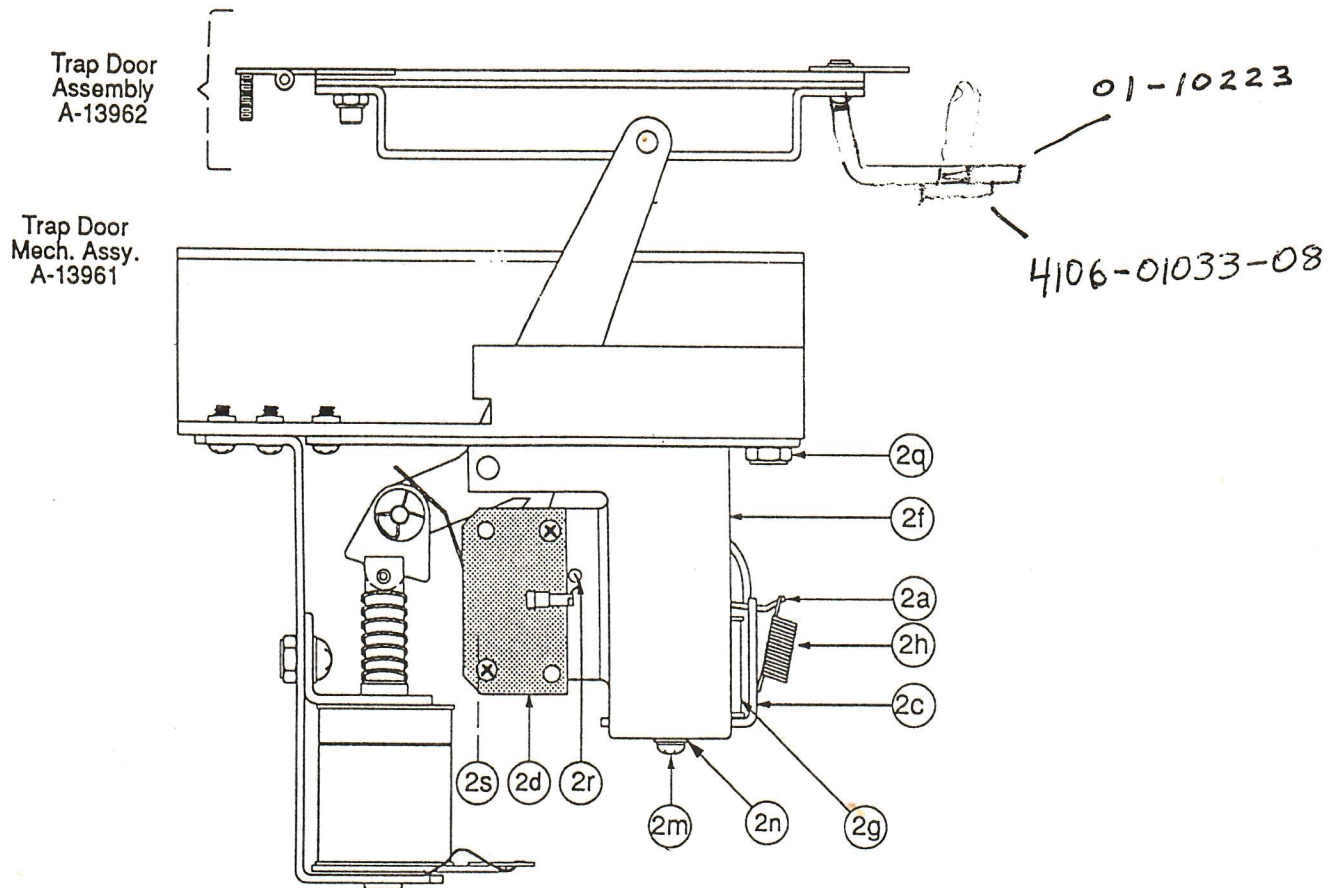
PROBLEM: FUNHOUSE TRAP DOOR FLAP (A-13962) BENDING OR BREAKING.

SOLUTION: INSTALL BRACKET 01-10223 WITH PHILLIPS TRUSSHEAD SCREW.

(PART # 4106-01033-08)

PROCEDURE: REMOVE LOWER CHUTE ASSEMBLY A-13993, INSTALL BRACKET 01-10223 WITH MOUNTING SCREW 4106-01033-08. CHECK THAT TRAP DOOR ASSEMBLY A-13962 IS RESTING ON THE BRACKET (01-10223) AND NOT THE SPRING STEEL FROM THE TOP OF THE PLAYFIELD. INSTALL CHUTE ASSEMBLY A-13966.

SEE PAGE 2 FOR LOCATION DRAWINGS



*Under Side of Playfield,
Viewed in Raised Position*

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SERVICE BULLETIN

DATE: APRIL 3, 1991

SB23

SUBJECT: "TROG" SOFTWARE (KIT) WHEN USED IN A TWO PLAYER CABINET.

SYMPTOM: IF THE DIP-SWITCHES ARE SET FOR A TWO PLAYER ONLY KIT

(DS2-5 = OFF AND DS2-6 = ON), THE GAME PERIODICALLY

RESETS DURING PLAY OR THE 'BLOOP' CHARACTER

EXPERIENCES STRANGE COLORATIONS.

FIX: SET DIP-SWITCHES AS FOLLOWS; DS2-5 = OFF & DS2-6 = OFF
OR UPDATE TO LA5 SOFTWARE.

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SERVICE BULLETIN

MAY 13, 1991

SB24

SUBJECT: "SLUGFEST" ROM UPDATE

*ERRORS HAVE BEEN DETECTED IN THE "SLUGFEST" EPROM(LABELED PROTO B OR PROTO 2). RANDOMLY THE PROGRAM WILL LOCK UP SO THAT YOU CANNOT COIN-UP A GAME. TURNING THE GAME OFF AND ON WILL CLEAR THE PROBLEM FOR A SHORT TIME.

*WE ARE SENDING 1 UPDATED EPROM FOR EVERY GAME SHIPPED WITH THE PROTO B EPROM.

*GAMES WITH SERIAL NUMBERS BELOW 730165 NEED TO BE UPDATED.

*PLEASE NOTIFY YOUR CUSTOMERS AND SEND THEM THE UPDATED EPROM AS SOON AS POSSIBLE.

THANK YOU,
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SERVICE BULLETIN

MAY 13, 1991

SB25

SUBJECT: WPC EPROM JUMPERS.

1. JUMPERS W1 AND W2 ON THE WPC CPU BOARD ARE USED TO CONFIGURE YOUR SYSTEM ACCORDING TO EPROM TYPE.
2. WITH W2 INSTALLED THE SYSTEM IS CONFIGURED FOR 512K AND 1MEG EPROMS. "FUNHOUSE", "HARLEY DAVIDSON" AND "THE MACHINE" WERE ALL 1MEG EPROMS. WE HAVE NOT USED 512K EPROMS.
3. WITH W1 INSTALLED THE SYSTEM IS CONFIGURED FOR 1MEG, 2MEG, AND 4MEG EPROMS.
4. "SLUGFEST", IS USING A 2MEG EPROM.
5. AS A GENERAL RULE, ALWAYS INSTALL W1. THAT WAY YOU SHOULD BE PREPARED FOR ANY EPROM TYPE WE HAVE USED ON ANY WPC GAME TO DATE.

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SERVICE BULLETIN

MAY 14, 1991

SB26

GAME: "SLUGFEST"

SUBJECT: BASEBALL CARDS JAMMING ON "SLUGFEST"

SOLUTION: IMPROVED CARD CHUTE ASSEMBLY

BASEBALL CARDS HAVE BEEN JAMMING ON THE CARD DISPENSER CHUTE ON "SLUGFEST". WE HAVE AVAILABLE THROUGH OUR PARTS DEPARTMENT, ON AN EXCHANGE BASIS, AN IMPROVED CARD CHUTE ASSEMBLY. THE PART NUMBER IS A-14796. GAMES SHIPPED WITH SERIAL NUMBER 730528 HAVE THE IMPROVED CHUTE.

THANK YOU,

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SERVICE BULLETIN

MAY 14, 1991

SB27

SUBJECT: WEAK BAT ACTION ON "SLUGFEST".

1. A WEAK BAT MAY BE A RESULT OF THE BAT DRIVE LINK BECOMING MAGNETIZED.
- 2.. ALL "SLUGFEST" GAMES WITH A SERIAL NUMBER OF 730070 AND ABOVE HAVE BEEN MANUFACTURED WITH A STAINLESS STEEL BAT DRIVE LINK.(PART# 01-10071) TO ELIMINATE THIS CONDITION.
3. IF YOU HAVE GAMES WITH SERIAL NUMBERS PRIOR TO 730070 , YOU MAY NEED THE STAINLESS STEEL LINK.
4. ONCE AGAIN, THE PART NUMBER FOR THE STAINLESS STEEL BAT DRIVE LINK IS 01-10071 AND IS AVAILABLE THROUGH THE *WMS GAMES* PARTS DEPARTMENT.

THANK YOU,

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SERVICE BULLETIN

JUNE 26, 1991

SB28

SUBJECT: "FUNHOUSE" TRAP DOOR HINGE

- IN ORDER TO ELIMINATE STRESS ON THE A-14155 "FUNHOUSE" TRAP DOOR HINGE ASSEMBLY THE FOLLOWING PROCEDURE IS RECOMMENDED.
- IF THE A-13961 TRAP DOOR MECHANISM ASSEMBLY IS MOVED FORWARD (TOWARDS THE PLAYER) IN THE AMOUNT OF .150" , THE INCIDENCE OF TRAP DOOR HINGE BREAKAGE WILL BE GREATLY REDUCED, IF NOT ELIMINATED. HOWEVER, IN ORDER TO ACCOMPLISH THIS, THE A-13966 CHUTE ASSEMBLY MUST FIRST BE REMOVED AND A LIKE AMOUNT OF MATERIAL REMOVED FROM THE OPEN END OF THE CHUTE WHICH IS IN FRONT OF THE MECHANISM.
- THESE ACTIONS COMBINED WITH THE REPLACEMENT OF THE A-14155 HINGE ASSEMBLY SHOULD RESOLVE THIS CONDITION.

THANK YOU,

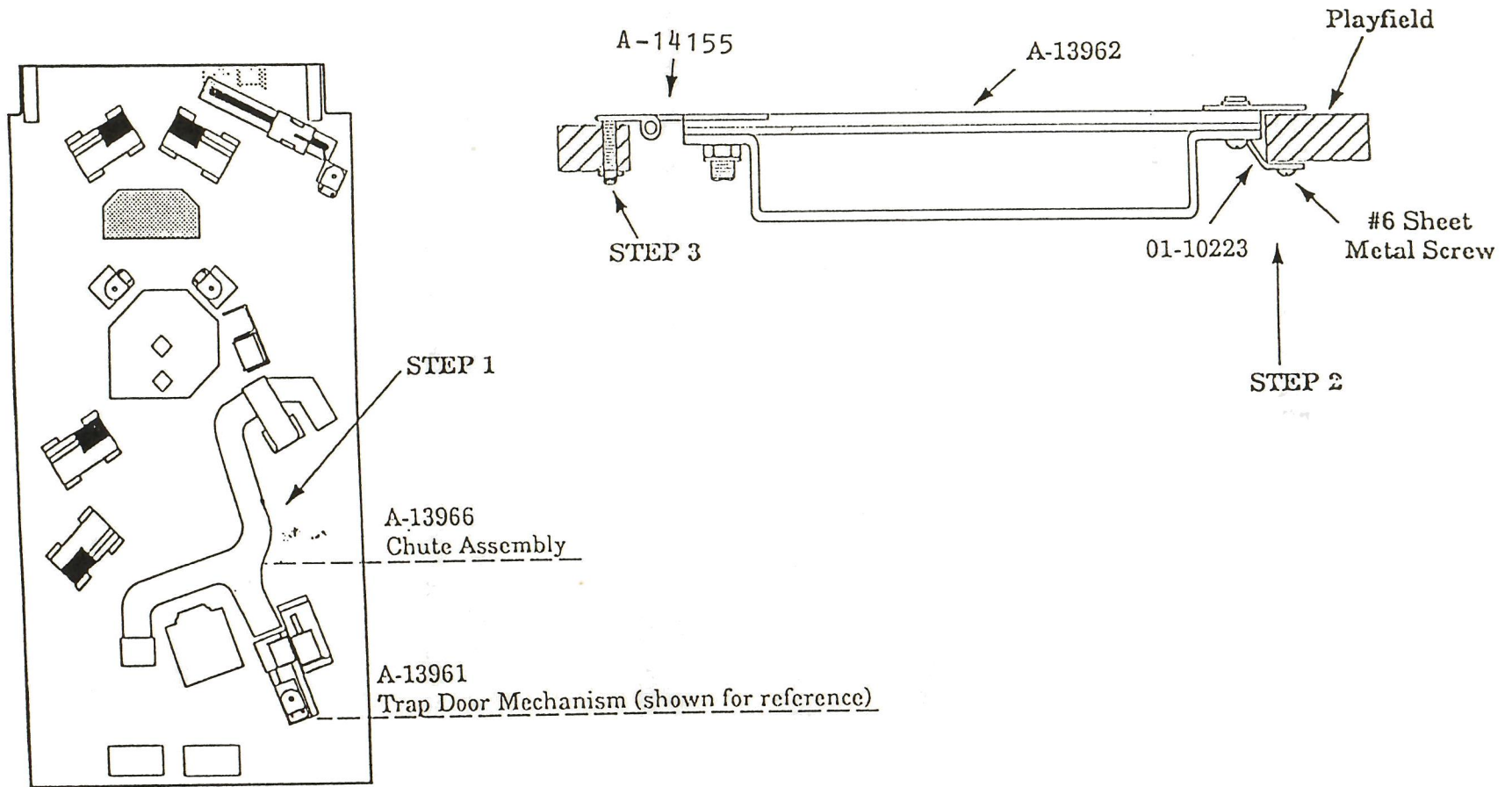
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Installation Instructions

01-10223
Trap Door Stop Bracket

A-13962
Trap Door Assembly

- Step 1. From underside of playfield, remove Chute assembly (A-13966).
- Step 2. Trap Door Stop Bracket (01-10223) should be centrally installed in Trap Door opening, (using #6 sheet metal screw provided), and have its inside corner aligned with the lower playfield corner.
- Step 3. If existing Trap Door assembly is damaged, remove and replace with new assembly provided.
- Step 4. Reinstall Chute assembly.



*Under Side of Playfield,
Viewed in Raised Position*

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SERVICE BULLETIN

AUGUST 1, 1991

SB29

GAME: "GILLIGAN'S ISLAND"

SUBJECT: RAMP LIFTING MECHANISM..

SOLUTION: IF YOU ARE EXPERIENCING PROBLEMS ON THE "GILLIGAN'S ISLAND" RAMP LIFTING MECHANISM:

1. CHECK FOR BINDING ON THE LIFT CRANK ASSEMBLY.
2. REPLACE THE COIL WITH COIL # SM1-29-1000-DC .

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SERVICE BULLETIN

DATE: AUGUST 16, 1991

SB30

SUBJECT: "TERMINATOR 2" PINBALL CANNON MOTOR

THE CANNON MOTOR ON "TERMINATOR 2" CAN BE DAMAGED IF YOU TRY TO TURN IT BY HAND. IF FOR SOME REASON THERE IS A NEED TO TURN THE CANNON, PLEASE UTILIZE THE GUN TEST MODE. THE GUN TEST MODE CAN BE FOUND IN THE TEST MENU, ITEM T.12. (REFER TO THE OPERATIONS MANUAL PAGE 1- 34 FOR MORE INFORMATION.)

THANK YOU,

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SERVICE BULLETIN

DATE: AUGUST 16, 1991

SB31

SUBJECT : PLASTIC PARTS ON PLAYFIELDS

AS WE ALL KNOW, PINBALL GAMES HAVE HAD SCREENED PLASTICS FOR A VERY LONG TIME. NOW THAT PINBALLS HAVE MULTI-LAYERS (RAMPS), MANY OF THE RAMPS UTILIZED ARE MADE OF PLASTIC. IN FACT, IN OUR BASEBALL GAME, "SLUGFEST", THE WHOLE PLAYFIELD IS COVERED WITH A COMPLETE SHEET OF PLEXIGLASS. PLEASE TAKE THE TIME TO INSURE THAT THE GAMES ARE KEPT OUT OF DIRECT SUNLIGHT. COVER THE PLAYFIELDS WHEN TRANSPORTING THEM IN THE BACK OF A TRUCK. BY TAKING A FEW PRECAUTIONARY STEPS YOU CAN INSURE THAT YOUR PLASTIC PARTS WILL NOT BE WARPED.

THANK YOU,

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AMENDMENTS

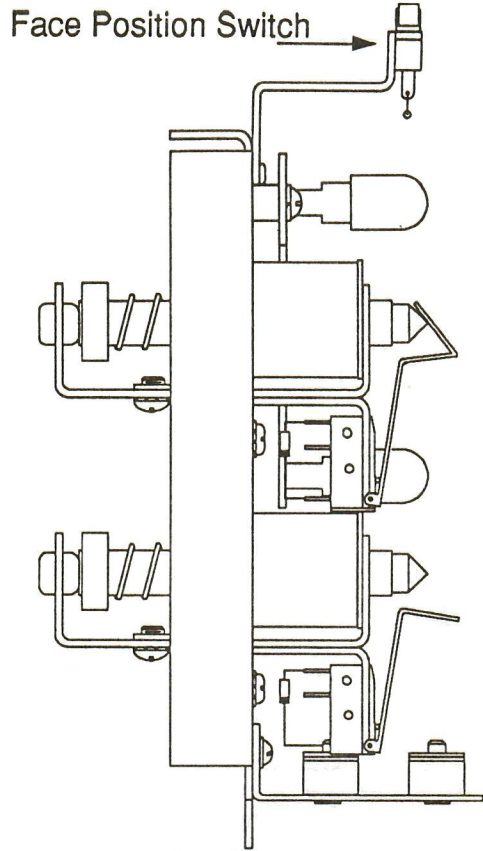


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The Machine

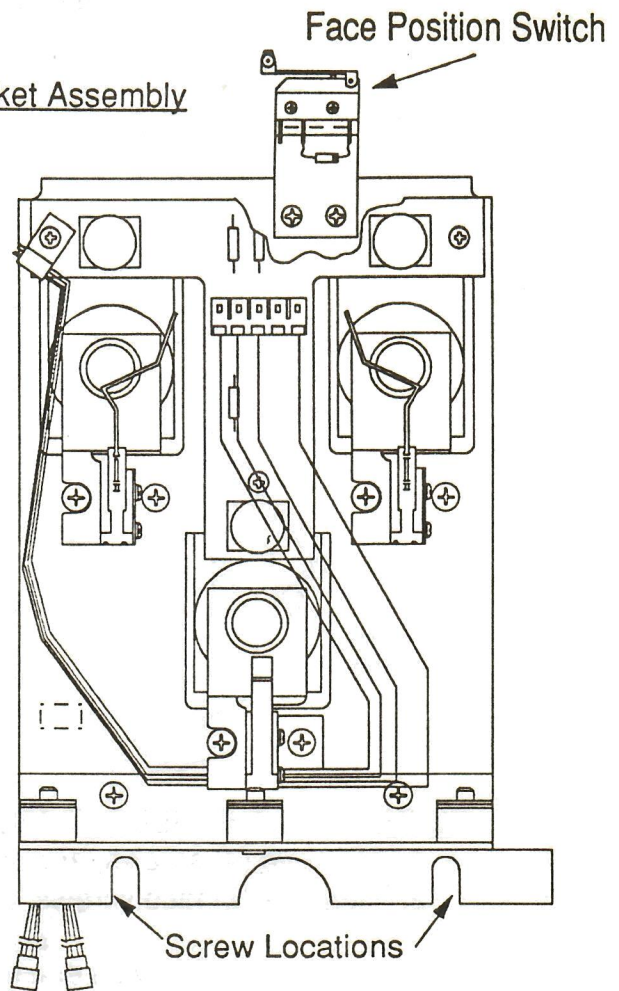
Head and Face Assembly Adjustment

1. Turn game On to allow the Head to calibrate to the Face 1 position or, if the game can't find the Face 1 position, advance to the Test Menu, (see page 1-33 of the Machine Manual if you are not familiar with WPC Menu System operation). Once in the Test Menu advance to, and enter T.12 The Head MSTR/SW Test. Use the Up or Down button to rotate the Head Assembly to the Face 1 position. (See the Speaker/Display Panel in the backbox to identify the 4 Faces.)
2. Turn the game Off. Remove the 6 screws holding the Helmet Assembly. Lift the Helmet Assembly away from the Head Assembly. Be sure not to damage the wires attached to the Helmet bulbs. Remove the 2 screws holding the Face 1 plate. Remove the plate and set aside.
3. Put thumb and forefinger on either side of the Face Plate Bracket and push the bracket toward the back of the game.
4. Check for a 1/32" gap between the Face Support Bushing on the Head Assembly and the Main Bracket Assembly. Use a Flipper Gage to check the gap. The Flipper Gage is shipped in Cashbox.
5. Loosen (Do Not Remove) the 2 screws at the base of the Main Bracket Assembly, near the wire chute (see Top View of Main Bracket Assembly on reverse side). Use a #2 Phillips Screwdriver. Adjust the gap to 1/32".
6. Push the Main Bracket Assembly towards the back of the game until the gap between the Face Support Bushing, on the Head Assembly, and the Main Bracket Assembly is 1/32". Tighten the 2 screws and check the gap with the Flipper Gage once more.
7. Turn game On. The Head Assembly rotates. Advance to and enter T.12 the Head MSTR/SW Test. Use the Up or Down button to rotate the assembly until the Face 1 position is on top.
8. Adjust the Face Position Switch at the top of the Main Bracket Assembly. BEING CAREFUL NOT TO TOUCH ANY WIRES OR COILS, loosen (Do Not Remove) the 2 screws that hold the Face Position Switch to the bracket just enough to move the switch by hand. Use a #1 Phillips Screwdriver.
9. Move the switch until #67 shows in the displays. Then tighten the switch down.
10. Use the Down Button to rotate the Head Assembly counterclockwise. When Faces 1, 2, and 3 appear on top the #67 should show in the displays. When Face 4 appears on top no number should be shown in the displays.
11. Turn the game Off and On. The Head Assembly should calibrate to the 'Home' (Face 1) position. If not, return to Step 8 and repeat adjustments. If Head calibrates to the 'Home' position, turn the game Off and replace the Face Plate and the Helmet Assembly.
12. Turn the game On. The game enters the Attract Mode and is ready for play.

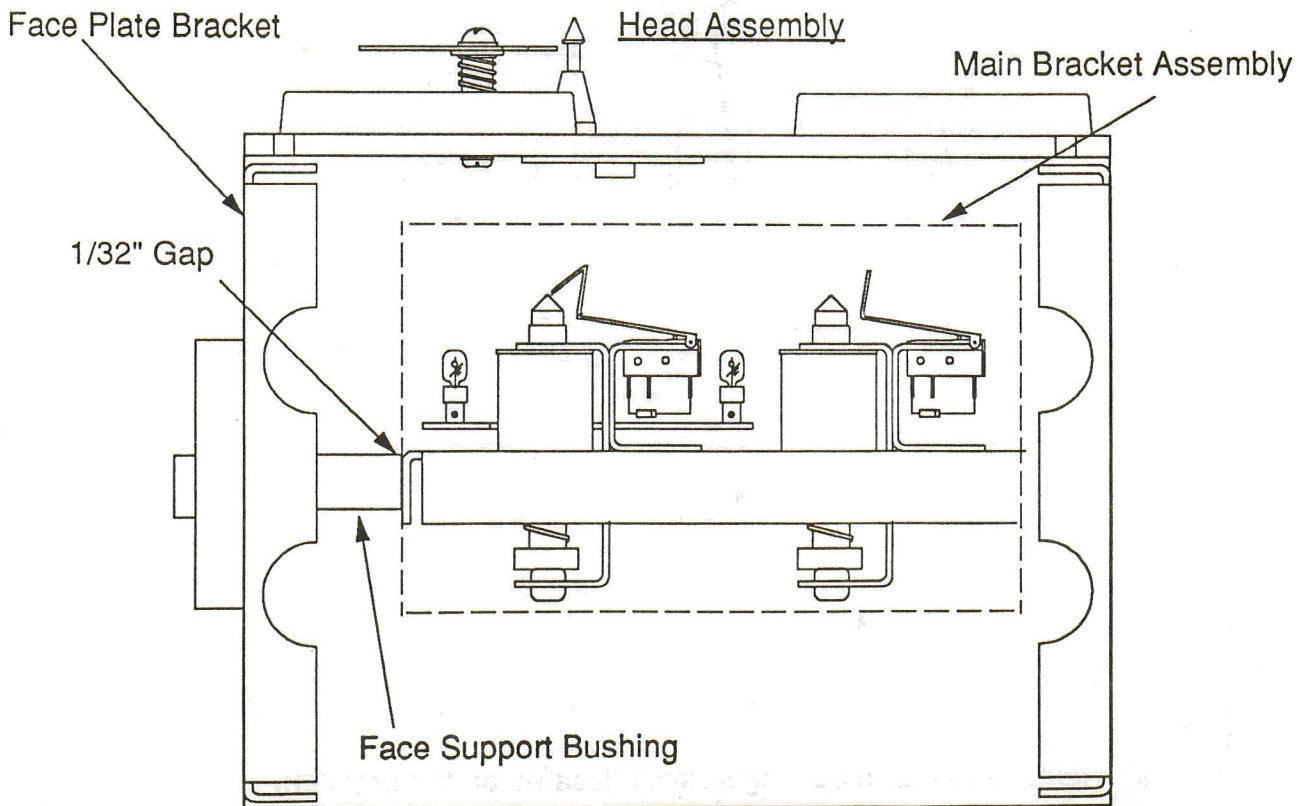


SIDE VIEW

Main Bracket Assembly

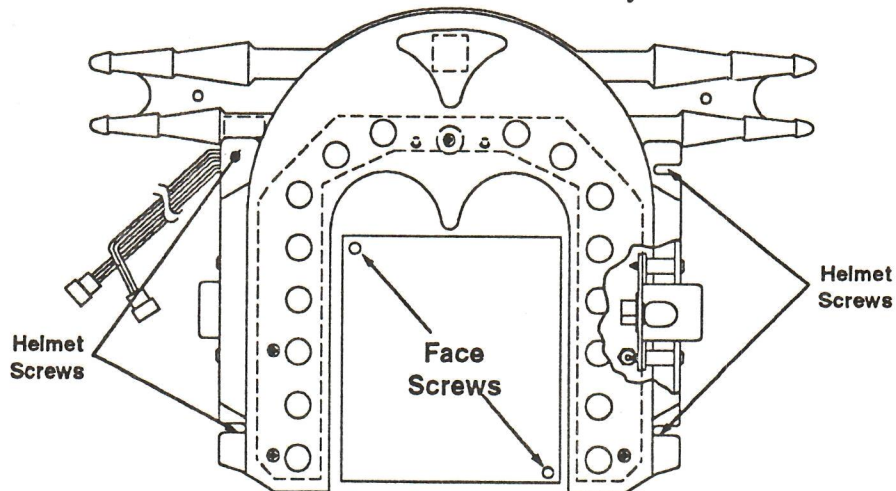


TOP VIEW



THE MACHINE: HEAD SERVICE INSTRUCTIONS (Lamps, Switches, & Coils)

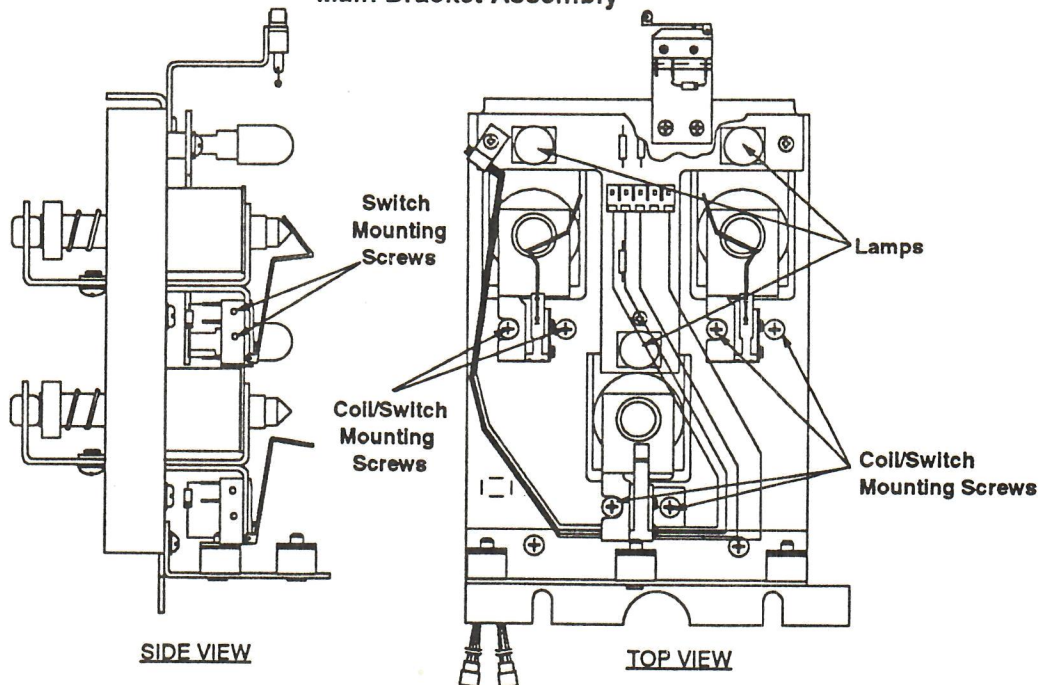
A-14508 Helmet Assembly



TO REMOVE THE HELMET ASSEMBLY & FACE PLATE:

1. Remove (4) screws, and lift off helmet assembly (as shown above).
2. Remove (2) face screws, and lift off face plate (as shown above).

A-14120
Main Bracket Assembly



3. To remove lamps, simply pull out desired bulbs (as shown above).
4. To remove a switch or coil:
 - a) Remove (2) screws mounting each coil/switch assembly.
 - b) Tilt individual assembly forward, and carefully lift out of head.
5. To remove a switch assembly from a coil bracket:
 - a) Remove the (2) mounting screws (located on the bracket).

Slugfest Amendment #1

The following are additions and changes to the Slugfest Manual.

This game is factory set to dispense 2 Baseball Cards/50¢, or if tickets are desired, 6 Tickets/50¢. If 50¢ per inning is too high a price for your location use Preset U.9 29 through U.9 36 to change the game's pricing.

Changing coinage does not change the amount of cards or tickets dispensed.

Page 1-19

Coinage Change:

USA 3/\$1.00 is really USA 9/\$1.00

Page 1-19

Factory Default Changes:

Coinage: 1 inning/50¢, 9 innings \$4.00

Page 1-19

Additional Coin Settings:

<u>Display</u>	<u>Credits/Coins</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>06</u>	<u>07</u>	<u>08</u>	<u>09</u>
Custom	1/50¢, 9/\$4.00	01	04	01	00	02	16	01	00

Page 1-41

Additional Presets:

U.9	34	\$2.00/9 innings	(1 inning/25¢, 9 innings \$2.00)
U.9	35	\$4.00/9 innings	(1 inning/50¢, 9 innings \$4.00)
U.9	36	\$2.50/9 innings	(First inning 50¢, Additional innings 25¢)

Slugfest Amendment #2

The following are additions and changes to the Slugfest Manual.

Page 1-6

8. Installing the Card Chute Assembly. The part number for the two 1/4-20 x 1-1/8 carriage bolts should be 4320-01123-18, (instead of 4320-001123-18).

Page 1-10 (for Ticket Dispenser)

After the Dispenser is in place, the Ticket Dispense Rate is 6 Tickets/Quarter, (instead of 3 Tickets/Quarter).

Page 1-19

This game is now Factory Set for; 25¢ per inning, \$2.00 for 9 innings
1 Baseball Card/Quarter

Page 1-42

C. Game Configuration Menu

- C.1 Set Cards
- C.2 Set Tickets
- C.3 Set Coin-Op

C.1 Set Cards

The operator uses this option to remove credit awards and replace them with a conservative initial Baseball card dispense rate of 1 card per quarter. Press the Enter button to use initial settings as shown in the Game Configuration Setting Table on page 1-43.

C.2 Set Tickets

The operator uses this option to remove credit awards and replace them with a conservative initial Ticket dispense rate of 6 tickets per quarter. Press the Enter button to use initial settings as shown in the Game Configuration Setting Table on page 1-43.

C.3 Set Coin-Op

The operator uses this option to remove all redemption awards and replace them with regular coin-operated credit and extra inning awards. Press the Enter button to use initial settings as shown in the Game Configuration Setting Table on page 1-43.

Page 1-43

Game Configuration Setting Table

A.6.09	"Tickets/Game Start"	Set Cards is now 0
A.6.10	"Tickets/Buy-in"	Set Cards is now 0
A.6.20	"Tickets/Level 1 Run"	Set Tickets is now 2
A.6.22	"Tickets/Level 2 Run"	Set Tickets is now 4
A.6.24	"Tickets/Level 3 Run"	Set Tickets is now 6
A.6.26	"Tickets/Level 4 Run"	Set Tickets is now 8

If you are going to change coinage

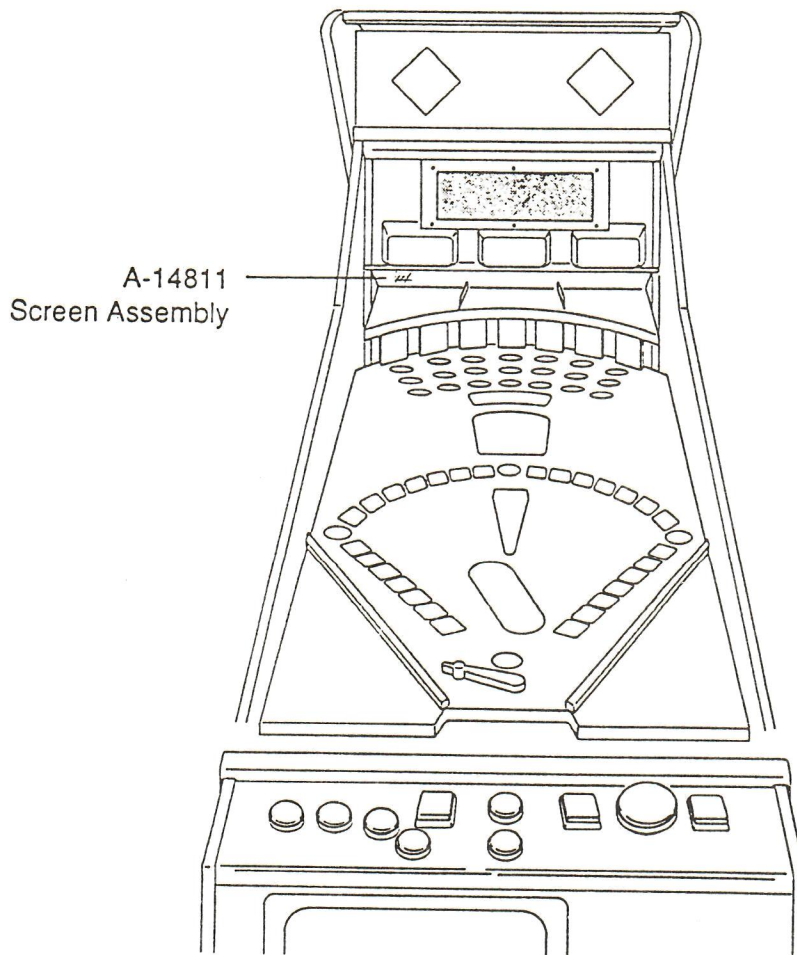
If you wish to change the coinage, you can choose a variety of preset coinages at the end of the "Utilities Menu" under "Presets Menu", or create one of your own. Remember, that changing the coinage also effects the dispenser rate. So, if you change the 9 Inning Cost, change the Ticket Award Adjustments (in the Dispenser Adjustments Menu) proportionally. For Example: If you increase the cost of the game, say to \$4.00/9 Innings from \$2.00/9 Innings, then double the initial ticket awards (except for the "Ticket/Game Start" and "Ticket/Buy-in"). Also, if you buy More or Less Innings with 1 coin, then proportionally increase the runs on the four "Run Levels". For Example: Changing from 25¢/1 inning to 25¢/3 Innings, it is recommended to also multiply the number on all four "Run Levels" by 3.

Slugfest Amendment #3

The following information is listed to correct the operations manual. Please reference the page numbers and items indicated below:

<u>PAGE</u>	<u>CHANGE</u>
2-2	A-14811 Screen Assembly replaces A-14563 Screen Assembly
2-6	Shown below Pictorially
2-35	A-14811 Screen Assembly replaces A-14563 Screen Assembly

Top View



Note: Above change started with serial number 730516 and above, please check for this information before placing order.

5-13

Slugfest Amendment #4

The A-14612 Hinged Door Assembly has been changed. The new part Number is A-14940. This change only effects games with serial number 731027 or higher.

The Hinge Door Assembly is on pages 2-2, 2-4, and 2-35 of the manual.

GILLIGAN'S ISLAND AMENDMENT

The information listed in this amendment is to correct the operations manual. Please reference the page number indicated in this amendment to the equivalent pages in the operations manual.

INSIDE FRONT COVER (Jumper Charts)

Display	W1	W2
1 MEG, 2 MEG, 4 MEG EPROM	IN	OUT
512K, 1MEG EPROM	OUT	IN

W1 & W2 are not for the displays. There are no jumpers specific for the displays. W2 jumper is for the 512K or 1meg memory eprom as used on Funhouse, The Machine and Harley Davidson. W1 jumper is for the 1meg, 2meg or 4meg memory eprom, being used now and is downward capatibile. If a game needs a 2meg chip (Example: Gilligan's Island) but has the W2 jumper in, you will get a blank check sum error. W1 can be used for everything.

PAGE 1-14

- A.1 29 General Illumination Power Saver**
This adjustment allows the general illumination lamps to be dimmed following a time interval after a game is played. Power Saver Level (A.1 30) determines how dim the lamps will get. The use of this feature will substantially increase the life of the general illumination lamps.
- Settings: Off 2-60 Minutes
- A.1 30 Power Saver Level**
When GI Power Saver (A.1 29) is turned on, this is the intensity level that is used once the game is idle for the specified period of time.
- Settings: 4-7
-

PAGE 1-22

- A.5 06 Serial D.T.R. (Data Terminal Ready)**
When a Serial Printer is used, this line may be connected to a printer output line signaling that the printer is busy.
- Normal = Normal D.T.R. signal goes low to indicate the printer is not ready.
- Inverted = Inverted D.T.R. (busy) signal goes high to indicate printer is not ready.
- Ignore = D.T.R. signal is ignored.

PAGE 1-22

B.1 Main Audits

B.1 06 Total Plays 00

PAGE 1-23

B.3 Standard Audits

B.3 02 Total Plays • 00 • As a new WPC feature, the
"Total Plays" counter only
counts completed games. A
game is considered completed
when the final ball begins.
Audit information from an
incomplete game is ignored.
Therefore operation for test
and service do not affect the
Audits.

PAGE 1-24

B.3 Standard Audits

B.3 35 1st Replay Level 24,000,000

PAGE 2-25

A-14586 Ball Popper Assembly

Item #8 Should Be Part Number AE-26-1200 Coil Assembly.

GILLIGAN'S ISLAND AMENDMENT

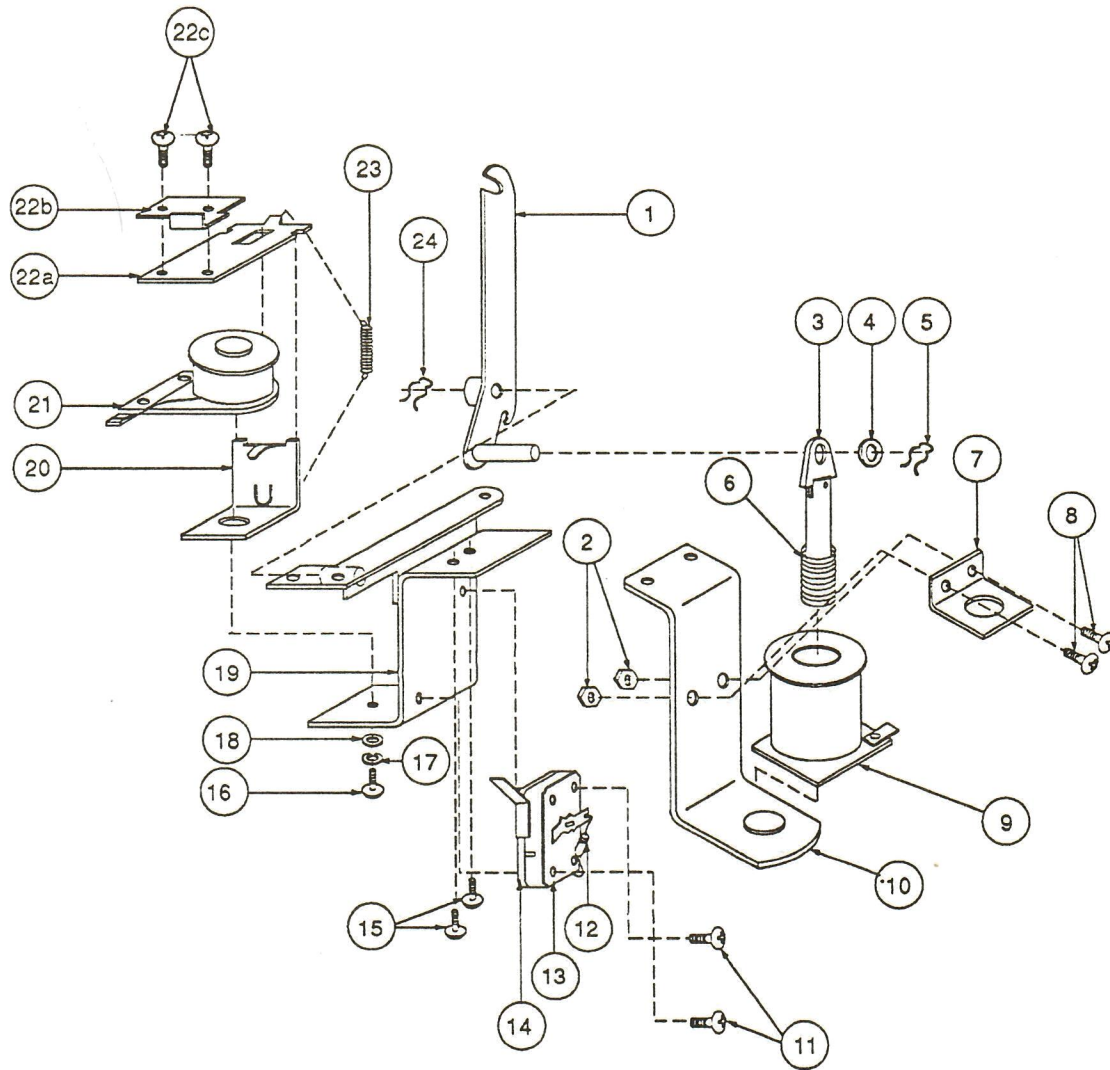
The information listed in this amendment is to correct page 2-24 of the Gilligan's Island Operations Manual.

Item #21, the coil assembly, has been changed from SM1-26-600 to SM1-29-1000-DC.

The Ramp Lifting Mechanism Assembly, part number B-11304-3, has been changed to part number B-11304-4.

Please insert this update in your manual for future reference.

B-11304-4 Ramp Lifting Mechanism



Item	Part Number	Description	Item	Part Number	Description
1.	A-11137	Lift Crank Assembly	15.	03-7066	Tubing, Coil
2.*	4406-01119-06	Nut, 6-32 ESN	16.	4008-01021-07	Mach. Screw, 8-32 x 7/16
3.	A-8050	Plunger Assembly, 2-1/4"	17.	4701-00003-00	Lockwasher, #8 Split
4.	4700-00073-00	Flatwasher, 9/32x1/2x21ga.	18.	4700-00089-00	Flatwasher, 11/64x7/16x16ga.
5.	12-6227	Hairpin Clip	19.	B-11302-1	Lift Mech Bracket Assy
6.	10-128	Spring	20.	A-6892	Frame & Eyelet Assy
7.*	01-8-508-S	Coil Retaining Bracket	21.	SM1-29-1000-DC	Coil Assembly
8.*	4006-01017-06	Mach. Screw, 6-32 x 3/8	22.	A-11139	Armature Assembly
9.*	AE-26-1200	Coil Assembly	a)	A-8936	Armature Sub-Assembly
10.*	B-7572-1	Bracket & Stop Assembly	b)	01-8390	Lift Crank Lock
11.	4004-01003-10	Mach. Screw, 4-40 x 5/8	c)	4006-01003-03	Mach. Screw, 6-32 x 3/16
12.	5070-06258-00	Diode, 1N4001, 1.0A.	23.	10-363	Extension Spring
13.	A-7438-1	Terminal Strip Assembly	24.	12-6227	Hairpin Clip
14.	5647-12001-00	Microswitch			

* Part of Coil & Bracket Assembly, B-9362-L-2.