1 ST PRINTING - (UK Edition)



ALIEN \*\* & C 1993 TWENTIETH CENTURY FOX FILM CORPORATION. ALL RIGHTS RESERVED.

**OWNER'S MANUAL** 



Built in the UK by Deith Leisure Limited (A SEGA Company)

MANUAL NO. ALIEN3 / MAN

TADLE OF CONTENTS	TABL	E 0	FC	ONT	ENT	S
-------------------	------	-----	----	-----	-----	---

6	INTRODUCTION OF THE OWNER'S MANUAL
1	1. HANDLING PRECAUTIONS
	2. PREVENTION OF COUNTERFEITING AND CONVERSION
1151	3. PRECAUTIONS CONCERNING INSTALLATION LOCATION
Linus ra	4. NAME OF PARTS 4
	5. ACCESSORIES
S APLIN	6. INSTALLATION PRECAUTIONS AND TRANSPORTATION OF MACHINE
-motori	7. HOW TO PLAY
	8. EXPLANATION OF TEST AND DATA DISPLAY
COLUMN-	0-1 SWITCH UNIT
RUUK	8_3 MEMORY TEST
	8-4 GUN ADJUSTMENT
	8–5 INPUT TEST
	8–6 OUTPUT TEST
	8-7 SOUND TEST
	8-8 C.R.T. TEST
	8-9 GAME ASSIGNMENTS
	8-10 COIN ASSIGNMENTS 21~25
1	8-11 BOOKKEEPING
)	8-12 BACKUP DATA CLEAR 28
	9. CONTROLLER
	9-1 TAKING OUT THE CONTROLLER
	9-2 ADJUSTMENT AND REPLACEMENT OF VOLUME
	9-3 REPLACEMENT MOTOR BRUSH
	9-5 GREASING
	10. REPLACEMENT OF FLUORESCENT LAMP
	11. EXPLANATION OF COIN SELECTOR.
	12. MONITOR ADJUSTMENTS
3	13. PERIODIC INSPECTION TABLE
	14. TROUBLESHOOT ING
Whield	15. GAME BOARD
mag	15-1 COMPOSITION OF GAME BOARD 44
	15-2 INPUT AND OUTPUT 45
	16. DESIGN RELATED PARTS
	17. PARIS LIST 47~71
	10. WIRE COLOR CODE TABLE
7	19. WINING DIAGNAM
	SPECIFICATIONS
	SFECIFICATIONS
	Installation space : 1,360 mm (53.5 in.)(D) × 800 mm (31.5 in.)(W)
	Height : 1,930 mm (76.0 in.)
	Weight : Approx, 215 kg, (475 lbs.)
	Power maximum current
	C100207 (C201 + RM.)
	230W 1.6A(AC 220V 50 Hz AREA)
	220W 1.6A(AC 220V 60 Hz AREA)
	230W 1.5A(AC 240V 50 Hz AREA)
	220W 1 4A (AC 240V 60 Hz ARFA)

CRT

NOTE: Descriptions in this manual are subject to change without prior notice.

28 INCH MONITOR

:

## INTRODUCTION OF THE OWNER'S MANUAL

TABLE OF CONTENTS

SEGA ENTERPRISES, LTD., supported by its high eletronic technology of LSIs, microprocessors, etc. and a wealth of experience, has for more than 30 years been supplying various innovative and popular game machines to the world market. This Owner's Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards ALIEN<sup>3</sup>THE GUN, a new SEGA product.

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This manual is intended for those who have knowledge of electricity and technical expertise especially in ICs, CRTs, microprocessors, etc. Carefully read this manual 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 such a case arise, contact our Main Office or the closest branch office listed as follows:

SEGA ENTERPRISES, INC. (U.S.A.)/CUSTOMER SERVICE 45133 Industrial Drive, Fremont, California 94538, U.S.A. Phone : (415) 802–3100 Fax : (415) 802–1754

STREAT AND REPLACEMENT OF WALLARS.

SEGA AMUSEMENTS EUROPE LIMITED/AMUSEMENT MACHINE SALES DIVISION Unit 2 Industrial Estate, Leigh Close, New Malden, Surrey KT3 3NL, England Phone : (081) 336–2256 Eax : (081) 336–1715

1A. TROUGLESHOOT ING.

Fax : (081) 336-1715

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#### SPECIFICATIONS

Calle	Va	llelland	o, 19-23, 1° A, 3	7008-Salama	anca, Spain	Triple
Phone	:	(923)	265893	and the second second	1 dram 1605 munit Kam	, 1990
Fax	:	(923)	265913			
		ATTA	(AC 220V 50 No.	2308 1.60		
		(ARRA)	(AC 220V 60 Hz	220W 1.64		
		AREAD	(AC 2407 50 Hz	230W L.57		
		AREA)	(AC 240V 60 Hz	2208 1.44	3.	
			SOTIV	28 TACH M		TRO

NOTE: Descriptions in this manual are subject to change without prior notice.

### HANDLING PRECAUTIONS

- When installing or inspecting the machine, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.
- Be sure to switch the power off before working on the machine.
- To insert or pull out the plug quickly is dangerous.

1.

- It is necessary to make sure that the power cord or grounding wire is not routed in a manner so as to be dangerous. Make sure that grounding connections are made safely at a position where so specified.
- Do not use any fuse that does not meet specified rating.
- Make complete connections for the IC board and other connection. Insufficient insertion of ICs and connectors will lead to unreliability and possible damage to the machine.
- The operating (ambient) temperature range is from 5°C to 40°C.
- When cleaning the Monitor CRT front glass, use a soft dry cloth and glass cleaner. Do not apply chemicals such as thinners, benzene etc.

After confirming that there are no irregularities, turn the power ON.

POLICIA (HERITARD TT

This Sell product has the coveright nullos as follows:

65 SELA 1983

This signifies that this work was disclosed in 1000 and is the property of

## 2. PREVENTION OF COUNTERFEITING AND CONVERSION When installing or inspecting the machine, be very careful ORILLERAL Double and

To prevent counterfeits and conversions, the following labels are put on all the SEGA products. When handling such goods, be sure to confirm the labels. They are used to prevent illegal acts such as the unauthorized copying of the products and the printed circuit boards thereof or carrying on business by manufacturing similar merchandise or by converting, selling or using such products or printed circuit boards. manuat so as to be di

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Do not use any fuse way does not most specified rating

ORIGINAL SEAL The following seal is put on the The following seal is put on all SEGA kits, such as the printed machines manufactured by SEGA. circuit boards.

ant) humperature range or from 3°C to &



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-2-

#### 3. PRECAUTIONS CONCERNING INSTALLATION LOCATION

The ALIEN<sup>3</sup> THE GUN is an indoor game machine. Absolutely do not install it outside. Even indoors, avoid installing in places mentioned below so as to ensure proper usage:

•Places subject to rain or water leakage, or condensation due to humidity. •In the proximity of an indoor swimming pool and/or shower.

The FL UNIT is mounted on the

CONCINENTS DOOR

CASHBOX DOOR

·Places subject to direct sunlight.

·Places subject to heat sources from heating units, etc., or hot air.

•Vicinity of highly inflammable/volatile chemicals or hazardous matter. •Sloped surfaces.

•Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.

·Places subject to any type of violent impact.

·Dusty places.

#### INSTALLATION PRECAUTIONS

1) Do not insert more than one electrical plug into the power plug socket.

2) The per unit standard voltage/amperage is  $100 \sim 120 \text{V/5A}$  and  $200 \sim 240 \text{V/3A}$ .

3) If an extension cord is to be used, use a cord of 5A or higher rating.

----- Electric current consumption

MAX.1.6A(AC220V50 Hz)MAX.1.6A(AC220V60 Hz)MAX.1.5A(AC240V50 Hz)MAX.1.4A(AC240V60 Hz)

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## 4. NAME OF PARTS

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The ALLER THE GEN is an indeer gase metrics. Absolutely ab justal is a outside. Even indeers, avoid installing in places next basis water as a lo essure proper usage.



-4-

5. SPARES AND ACCESSORIES

right-hand side of the screen.

When the Life Gauge shows 0, the game is over.

Part No.	Qty	Description	Remarks	
ALIEN3 / MAN	a bpa	Owners Manual, Alien Gun (UK)	Please read	:0
53889750	1	Hantarex Monitor Service Manual	fuel,	
540-0006-01	1	Wrench for TMP PRF SCR M4	Tool	
540-0007-01	1	Wrench for TMP PRF SCR M5	Tool	1
220-5373	1	Potentiometer, B - 5k Ω Lin	For spare, refer to section 9	
601-7227	2	Motor Brush	For spare, refer to section 9	
E1253	1 princip s	Euro Mains Lead with Plug	To convey power to the machine	W.
	2	Key, Coin door	For opening/closing door	
saffres un en dreu aug	2	Key, Cash box	For opening/closing door	
	2	Key, Front service door	For opening/closing door	

- Destroying the Bost memory at the and of each stage results in a STAGE CLEAR.

In each utage, various ITEMS can be found. Short and capture them,

Note: Capturing the ITEMs gives various effects such as surengthening the weapons, recovering the Power, etc. Explanations on the ITEMs are given later.

#### (TAMPERPROOF WRENCH)

TOOL

M4 540-0006-01 store date to class of more provided by the M4 540-0006-01 store date to class to class of more provided by M5 540-0007-01

- The player's name can be entrued if his results (point, earned as of the GAME OVER time) are placed 15th or

higher,

-5--8-

• The Life Gauge and Gun Power Gauge for the player using the left-hand side gun are displayed on the lower left-hand side of the screen, and those for the player using the right-hand side gun are displayed on the lower right-hand side of the screen.

Part No.

- When the Life Gauge shows 0, the game is over.
- · When the Gun Power shows 0, the machine gun's consecutive shooting becomes slow.

Note: While the Flamethrower is used, the Gun Power Gauge becomes whitish and shows the remaining

fuel.	Hantarea Monther Service Manual	- E - J	53889750
IooT	Wrandi for TMP PRF SCR M4	1	\$40-0006-01
Tool	Wrenali for TMP PRF SCR M5	1	540-0007-01
For spars, refer to section 9	Potentiometer, B - Sk Q Lin	1	220-5373
 TO BLAY ETC 101	Allotter Brush	2	601-7227
 To convey power to the	Eino Maine Land will Plag	1	E1253

HO To convey power to the

- After credits are registered, the "pull trigger" message will be shown. Start the game by pulling the trigger.
- When the game is started, the story and the still image of that STAGE as well as the map of all stages are

displayed (pull the trigger when cancelling).

· Destroying the Boss enemy at the end of each stage results in a STAGE CLEAR.

· In each stage, various ITEMS can be found. Shoot and capture them.

Note: Capturing the ITEMs gives various effects such as strengthening the weapons, recovering the Power, etc. Explanations on the ITEMs are given later.

#### (TAMPERPROOF WEINCE)

· Depending on the results of each stage (the number of enemies shot, frequency of damage caused to the player, etc.), the player's ranking varies. As regards ranking, explanations are given later.

TOOL

. The player's name can be entered if his results (points earned as of the GAME OVER time) are placed 15th or higher.

-8----

#### CONCERNING ITEMS:

Flamethrower

wer wer

are

r,

er,

OF



This is fired from the muzzle. Use it to wipe out the enemies. Although powerful, it is not effective against far away enemies.

Hand Grenade Supply Unit



Every time the player captures this, one hand grenade is replenished.

25% Life Supply Unit

Recovers 1/4 of the player's power.

100% Life Supply Unit

Recovers the player's power completely.

Sergent Staff Sergent Gomery Sergent Matter Sergent Sergent Might Warnet Office Otief Warsen Office Second Liettent Golder Capacit Lieutowart Colored Major General Major General Colored Colored Second

.[]]]

## KNACK OF HOW-TO-EARN HIGH SCORE

1

Shoot the ensemies (rows are excepting) and articles appearing in the stage that can be damaged (lights, house ere), and he very cavity not to shoot Marines (if you do, points decrease).

The reaking argenting after a trage may go higher in a slower pace due to me mequency of damage canner, the nissers frammer of CONTINUE or absorbing the Marine by mistake.

-9-

#### RANKING

#### CONCERNING TIEMS:

• The ranking herein stated refers to the Colonial Marine which the characters operated by the player belong to. Note: The following 21 ranks are based on the ranking of the U.S. Marine Corps.

Private Private First Class Lance Corporal Corporal Sergeant Staff Sergeant Gunnery Sergeant Master Sergeant Sergent Major Warrant Officer Chief Warrant Officer Second Lieutenant First Lieutenant Captain Major Lieutenant Colonel Colonel Brigadier General Major General Lieutenant General General

Princess 149 of the Princes in

KNACK OF HOW-TO-EARN HIGH SCORE

Shoot the enemies (some are escaping) and articles appearing in the stage that can be damaged (lights, boxes, etc.), and be very careful not to shoot Marines (if you do, points decrease).

The ranking appearing after a stage may go higher in a slower pace due to the frequency of damage caused to the player, frequency of CONTINUE or shooting the Marine by mistake.

-10-

1.

## 8. EXPLANATION OF TEST AND DATA DISPLAY

0.

10.4

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.

ITEMS	DESCRIPTION	REFERENCE SECTIONS
INSTALLATION OF	<ul><li>When the machine is installed, perform the following:</li><li>1. Check to see that each setting is as per standard setting made at the time of shipment.</li></ul>	8-9
MACHINE	2. In the INPUT TEST mode, check each SW and VR.	8-5
	3. In the OUTPUT TEST mode, check each motor.	8-6
	4. In the SELF-TEST mode, check ICs on the IC Board.	8-3
MEMORY	Choose MEMORY TEST in the MENU mode to allow the MEMORY to be performed. In this test, PROGRAM RAMs, ROMs, and ICs on the IC Board are checked.	8-3
PERIODIC	Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting.	8-3 8-9
SERVICING	<ol> <li>In the INPUT TEST mode, test the CONTROL device</li> <li>In the OUTPUT TEST mode, check each motor.</li> </ol>	8-5 8-6
CONTROL SYSTEM	<ol> <li>In the INPUT TEST mode, check each SW and VR.</li> <li>Adjust or replace each SW and VR.</li> <li>If the problem can not be solved yet, check the CONTROL's moves.</li> </ol>	8-5 8-4, 8-5, 9-2
MONITOIR	In the MONITOR ADJUSTMENT mode, check to see if the MONITOR adjustment is appropriately made.	8-8
IC BOARD	<ol> <li>MEMORY TEST</li> <li>In the SOUND CHECK mode, check the sound related ROMs.</li> </ol>	8-3 8-7
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc	8-11, 8-12 8-9

A JOY



-12 -

#### 8-2 TEST MENU

The MEMORY TEST mode is for checking the memory IC operations on the board

• The Test Menu allows the functioning of each part of the Cabinet to be checked, the monitor to be adjusted, and the coins and game related various settings to be performed.

**EIG MEMORY TEST** 

- Basically, all settings (game, coin, etc.) are performed in the TEST MENU and therefore, DIP SW is not used.
- This cabinet is provided with 2 SERVICE BUTTONs and either can be used.
- · Press the TEST BUTTON to cause the following Test Menu to be displayed on the monitor.



During the test, NOW TESTING flashes at the above portion of

Press the SERVICE BUTTON untill the pointer "→" is moved to the desired item. Then press the TEST BUTTON

the TEST BUTTON. After the test is complete, move " $\rightarrow$ " to "EXIT" and press the TEST BUTTON to return to the Game Mode.

onds, this may have been camed by bound malfunctioning,

You may position the pointer to "INDIVIDUAL" and press the TEST BUTTON. The word "INDIVIDUAL" toggles to "CONTINUE". In the "CONTINUE" mode, each push of the TEST BUTTON causes transition to the next item. In the "INDIVIDUAL" mode, only the item indicated by the pointer is tested.

#### 8-3 MEMORY TEST

#### 8-2 TEST MENU

The MEMORY TEST mode is for checking the memory IC operations on the board. "GOOD" is displayed for normal ICs and "BAD" is displayed for abnormal ICs.

to be adjusted, and the coins and game refined various settings to be performed



BOOKLEEPING

BACKUP DATA GLEAR

· The right-hand side of each IC displays the following in the sequential order.

	NOT	T BY SERVICE BUT	SHLEC	
* * * *	-+910	TEST	IMA+	GOOD or BAD
(before test)		(under test)		(test completed)

· During the test, NOW TESTING flashes at the above portion of

PUSH TEST BUTTON TO EXIT. Single and lines MOTTUE EDIV SEE and agent

· When the test is completed, if the results are shown as above, it is satisfactory. BUTTON to return to the

'EXIF' and press the er the test is complete, move 207 · It takes approximately thirty seconds to complete the test. If the period exceeds thirty seconds, this may have been caused by board malfunctioning.

· After finishing the test, pressing the TEST BUTTON allows the MENU mode to return on to INDIVIDUAL" toggles to "CONTINUE". In the "CONTINUE the screen. TEST BUTTON causes transition to the next item. In the "INDIVIDUA only the item indicated by the pointer is tested.

#### 8-4 GUN ADJUSTMENT

#### 8-5 IMPUT TEST

Selecting "GUN ADJUSTMENT" causes the following to appear on the monitor screen and this enables the sighting of gun to be set.



- Bring the cursor to CANCEL and press the TEST BUTTON to allow the MENU mode to return on to the screen.
- Bring the cursor to ADJUST and press the TEST BUTTON to have the ADJUST mode appear. The ADJUST mode allows the gun (sight) to be set and adjusted.
- · When replacing the game BD. and V. R., be sure to choose ADJUST in this menu for the setting.

When ADJUST is selected, the following screen appears:



- In this mode, carefully move the left-hand side and right-hand side guns within the mobile range.
   Move them fully in the horizontal direction. When moving them vertically, however, be sure to stop them before going beyond the normal mobile range so as to avoid a kickback reaction.
- Pressing the TEST BUTTON causes the GUN ADJUSTMENT setting to be registered, allowing the MENU mode to return on to the screen.

-15-

#### 8-4 GUN ADJUSTMENT

the sighting of gun to he set.

5

#### 8-5 INPUT TEST

Selecting "INPUT TEST" causes the following to appear on the monitor screen and this enables the status

of each switch and GUN(CONTROLLER) to be checked.



Presering the TEST BUTTON muses the GUN ADJUSTMENT setting to be registered, ellowing the MENU mode to return on to the screen.

16

#### 8-6 OUTPUT TEST

us

1-7 SOUND TEST

Selecting the "OUTPUT TEST" causes the following to appear on the monitor. This mode allows the gun's VIBRATE MOTOR to be tested.



- By bringing the arrow to each of the test items and pressing the TEST BUTTON, if ON is displayed on the screen and the vibration of the guns attached to the cabinet is ascertained, it is satisfactory. As seen from the front of the cabinet, the left-hand side gun is for 1P and the right-hand side one is for 2P.
- The gun is activated while the switch is depressed. When the switch is released, OFF is displayed and the gun ceases to operate.
- Bring the "→" to "EXIT" and press the TEST BUTTON to return to the Menu mode.

-17-

#### 8-7 SOUND TEST

Choose SOUND TEST to cause the following mode to appear on the monitor so that SOUND MEMORY check can be performed.

SOUND TEST
B.G.M. No. 0
S.E. No. 0
EXIT

Bring the arrow to B.G.M. for background music and move it to S.E. for sound effects.
At No. 0, however, sound will not be emitted.

• Bring the " $\rightarrow$ " to "EXIT" and press the TEST BUTTON to return to the Menu mode.

The goan is activated while the switch in disconseal. When the switch is released, OPP is

1.

#### 8-8 C.R.T. TEST

#### 8-9 GAME ASSIGNMENTS

GAME DIFFICULTY

(1) RGB color adjusting screen (1/2)

This page is for adjusting the monitor color.



Red, green, and blue are darkest on the leftmost scale and get brighter by 31 gradations to the right. The contrast of the monitor is normal, if the white color bar is black in the leftmost position and is white in the rightmost position.

Press the TEST BUTTON to turn a page.

The pame difficulty is c (2) Monitor size adjusting screen (2/2)

EST to EXTRA HAR This page is for checking the monitor size.

When adjusting the monitor size, be careful so that grids do not go off of the screen.

	C.	н. I	• • •	ESI	2/	2	1	1	AS	E.	-	_	$\square$
				;			L	1.21	RC	1			
						-			36.2			-	
						+	-	1	-	12			$\square$
						(10	6.33	21		3			
							12	ac	rel.	1			
PUS	SH TE	EST B	UTTO	N TO	) EX	IT							+

Press the TEST BUTTON to return to the Menu.

#### 8-9 GAME ASSIGNMENTS

In this mode, the present game setting is displayed and also, the game setting changes can be made.



GAME DIFFICULTY The game difficulty is classified into 8 different categories from EASI EST to EXTRA HARDEST. (EASIEST~EXTRA HARDEST)

Game difficulty is classified into the following 8 different levels:

EASIEST EASIER EASY NORMAL HARD HARDER EXTRA HARD HARDEST

· GUN VIBRATION Gun vibration YES or NO can be set.

• Bring the arrow mark( $\rightarrow$ ) to EXIT and press the TEST BUTTON to return to the Menu.

#### 8-10 COIN ASSIGNMENTS

be

The "COIN ASSIGNMENTS" mode permits you to set the start number of credits, as well as the basic numbers of coins and credits. This mode expresses "how many coins correspond to how many credits."



Note: COIN CHUTE TYPE

INDIVIDUAL: Each player uses a coin chute which accepts coins independently.

COMMON: Coins are accepted in common for both players.

As a standard, it is set to "INDIVIDUAL."

 For COIN/CREDIT SETTING, refer to TABLE 1 (INDIVIDUAL) and TABLE 2 (COM-MON).

SETTING #24 | COOH C CRI

- Choosing the MANUAL SETTING allows a finer classification settings to be made.
- Bring the arrow mark( $\rightarrow$ ) to EXIT and press the TEST BUTTON to return to the Menu.

#### TABLE 1 COIN/CREDIT SETTING (COIN CHUTE INDIVIDUAL TYPE)

齨

m

NAME OF SETTING	FUNCTIONING OF EACH COIN CHUTE
SETTING #1	1 COIN 1 CREDIT
SETTING #6	1 COIN 2 CREDITS
SETTING #8	1 COIN 3 CREDITS
SETTING #9	1 COIN 4 CREDITS
SETTING #10	1 COIN 5 CREDITS
SETTING #11	1 COIN 6 CREDITS
SETTING #12	2 COINS 1 CREDIT
SETTING #15	1 COIN 1 CREDIT
	2 COINS 3 CREDITS
SETTING #17	3 COINS 1 CREDIT
SETTING #18	4 COINS 1 CREDIT
SETTING #19	1 COIN 1 CREDIT
	2 COINS 2 CREDITS
	3 COINS 3 CREDITS
	4 COINS 5 CREDITS
SETTING #21	3 COINS 1 CREDIT
	5 COINS 2 CREDITS
SETTING #22	2 COINS 1 CREDIT
	4 COINS 2 CREDITS
	5 COINS 3 CREDITS
SETTING #24	1 COIN 1 CREDIT
	2 COINS 2 CREDITS
	3 COINS 3 CREDITS
	4 COINS 4 CREDITS
	5 COINS 6 CREDITS
SETTING #26	FREE PLAY

		STATES FROM SHARES
NAME OF SETTING	FUNCTIONING OF COIN CHUTE #1	FUNCTIONING OF COIN CHUTE #2
SETTING #1	1 COIN 1 CREDIT	1 COIN 1 CREDIT
SETTING #2	1 COIN 1 CREDIT	1 COIN 2 CREDITS
SETTING #3	1 COIN 1 CREDIT	1 COIN 3 CREDITS
SETTING #4	1 COIN 1 CREDIT	1 COIN 4 CREDITS
SETTING #5	1 COIN 1 CREDIT	1 COIN 5 CREDITS
SETTING #6	1 COIN 2 CREDITS	1 COIN 2 CREDITS
SETTING #7	1 COIN 2 CREDITS	1 COIN 5 CREDITS
SETTING #8	1 COIN 3 CREDITS	1 COIN 3 CREDITS
SETTING #9	1 COIN 4 CREDITS	1 COIN 4 CREDITS
SETTING #10	1 COIN 5 CREDITS	1 COIN 5 CREDITS
SETTING #11	1 COIN 6 CREDITS	1 COIN 6 CREDITS
SETTING #12	2 COINS 1 CREDIT	2 COINS 1 CREDIT
SETTING #13	2 COINS 1 CREDIT	1 COIN 1 CREDIT
SETTING #14	2 COINS 1 CREDIT	1 COIN 2 CREDITS
SETTING #15	1 COIN 1 CREDIT	1 COIN 1 CREDIT
	2 COINS 3 CREDITS	2 COINS 3 CREDITS
SETTING #16	1 COIN 1 CREDIT	1 COIN 3 CREDITS
	2 COINS 3 CREDITS	CREDEF
SETTING #17	3 COINS 1 CREDIT	3 COINS 1 CREDIT
SETTING #18	4 COINS 1 CREDIT	4 COINS 1 CREDIT
SETTING #19	1 COIN 1 CREDIT	1 COIN 1 CREDIT
	2 COINS 2 CREDITS	2 COINS 2 CREDITS
	3 COINS 3 CREDITS	3 COINS 3 CREDITS
	4 COINS 5 CREDITS	4 COINS 5 CREDITS
SETTING #20	1 COIN 1 CREDIT	1 COIN 5 CREDITS
	2 COINS 2 CREDITS	(D. Dependings (COMCRED)
	3 COINS 3 CREDITS	Contract of the second s
SER VICE COUN	4 COINS 5 CREDITS	(i) This sets how many COIN
SETTING #21	3 COINS 1 CREDIT	1 COIN 2 CREDITS
	5 COINS 2 CREDITS	tranjot domu won stas ent. (D
SETTING #22	2 COINS 1 CREDIT	2 COINS 1 CREDIT
	4 COINS 2 CREDITS	4 COINS 2 CREDITS
	5 COINS 3 CREDITS	5 COINS 3 CREDITS
SETTING #23	2 COINS 1 CREDIT	1 COIN 3 CREDITS
	4 COINS 2 CREDITS	
	5 COINS 3 CREDITS	
SETTING #24	1 COIN 1 CREDIT	1 COIN 1 CREDIT
	2 COINS 2 CREDITS	2 COINS 2 CREDITS
	3 COINS 3 CREDITS	3 COINS 3 CREDITS
	4 COINS 4 CREDITS	4 COINS 4 CREDITS
	5 COINS 6 CREDITS	5 COINS 6 CREDITS
SETTING #25	1 COIN 1 CREDIT	1 COIN 6 CREDITS
and a second second	2 COINS 2 CREDITS	CALDITO
	3 COINS 3 CREDITS	3
	4 COINS 4 CREDITS	
	5 COINS 6 CREDITS	
SETTING #26	FREEPLAY	FREE PLAY

# TABLE 2 COIN/CREDIT SETTING (COIN CHUTE COMMON TYPE)

-23-

MANUAL SETTING

Latin Arbite states	140 15 5010	cted, the following	g appear	s on th	e scre	een:	nnni -
IN CREDIT	30 1 1	I CREDIT		1100	1	IN ONLES	38
NN 2 CREDITS	1 00	CREDIT.		100	1	TTING #2	SE
IN 3 CREDITS	33.1	LIGHTON L	1	100	T.	F# OKULT	SE
WH A CREDITS	oo I co	IN ASSIGNMENT	S	COIL	1	NA DNILL	519
IN 5 CREDIT	00 I		1	100	I	SM DMULL	98
IN 2 CREDITS	DO TMA	NUAL SETTING	1	4103	1	2# DULL	818
NICE COIN	TO CRE	DIT CTICEN 1 C	OIN 1	CRED	tt ·		<u>.</u>
IN J CREDITS		2 CREDITS	DONUL	וממא	70	SN DMET	12
CITCLER & CREDIC	5 ADDER	S THE DAY NO	BONUS	ADDI	SK	Ga Doll11	38
COIN CH	IUTE#1	MULTIPLIER		1100	1	OIM DENILI	18
TIGES COIN 1 CO	IN COUN	TS AS 1 COIN		100	1	IIM DNULL	38
INSC 1) CREDIT	3 4 5	6789		40.0		CIM OMILI	16
TICES AND CREDIT	00 <b>1</b> 1	na na	8	(100	2	EIN DHITT	SE
We	0.9			9(4)	2	NIN DRITT	SE
TICH COIN CH	IUTE#2	MULTIPLIER	1 COT	N	1	ATTING #15	SE
Indaso COIN	3 4 5	6 7 8 9	I COI	100	S		
masic (1 2 Ma	3 4 5	6 7 8 9		COIN	1	TTING #16	SE
CREDIT		CREDITS	S	COIN	2		-
	05 E	0(15)(0)	8	COIN	£	TING #17	SE
INS I CREDIT	4 CO	CREDIT	8	COIN	h.	TTING #18	跑
IN 1 CREDIT	SELEC	T BY SERVICE	BUTTON	COIN	1	TTING #19	SE
INS 2 CREDITS	AND CO	PUSH TEST BU	TTON	COIN	2		
1MS J. C26ED105	3 00	CREDITS	2	COR	F .	Constantine and and	
INS 5 CREDITS	4 00	CREDITS.	5 3	COIN	4		
IN 5 CREDITS	1 CO	CREDIT	1	COIN	1	TTNG #20	218
1) Determines COI	NCRED	T setting 1990	5 2	COIN	2		3
Determines con	y crebb.	CREDITS	5 J	CODY	3		
2 This sets how ma	any COIN	IS should be inse	rted to	obtain	one	SERVICE O	COIN
N 2 CREDITS	1 00	CREDIT	1 2	COIN	3	TING #21	SET.
(3) This sets how ma	iny token	s one COIN repr	esents.	COIN	3		
A COIN CHUTE #	2 is disn	aved only at the	time "C	OMM	ON'	is set.	SIST
	100	cheburs	8 2	COIN	p.		
PETERSTRATE COM	100.2.	CREDITS	r 5	COIN	5		
the second se	OTARL					a hair and serves	
For each setting, refer t		CREDIT	1 2	COINS	2	TING #23	SET
For each setting, refer t	105 1	CREDIT	1 2	COIN	5 4	TING #23	SEI
For each setting, refer t		CREDIT	1 4 4 4	COINS COINS COINS	4 4 20	TING #23	SEI
For each setting, refer t	105 1	CREDIT CREDITS CREDITS CREDITS	5 1 5 3 1	COINS COINS COINS COINS	440-	ADI DINE	9E7
For each setting, refer t	100 1	CREDIT CREDITS CREDITS CREDITS CREDIT CREDITS		COIN: COIN: COIN: COIN: COIN:	442-0	KON DINIT	SET SET
For each setting, refer t	1 COI 1 COI 2 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS		COIN: COIN: COIN: COIN: COIN: COIN:	440-44	NON DINIT	987 732
For each setting, refer to	1 COI 2 COI 3 COI 4 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS	5 2 1 3 2 1 5 5 5 1 5 5 5 5 2 1 5 5 5 5 5 5 5 5	COINS COINS COINS COINS COINS COINS	440-444	KON DINIT	987 987
For each setting, refer to	1 COI 2 COI 3 COI 4 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS		COINS COINS COINS COINS COINS COINS COINS	542 - 5 2 4 N	NON DWIT	rae rae
For each setting, refer to	1 COI 2 COI 3 COI 4 COI 5 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS	6 6 8 2 1 3 1 3	COINS COINS COINS COINS COINS COINS COINS COINS	5 4 5 1 5 1 4 5 °	TING 624	987 738
For each setting, refer to	1 COI 2 COI 3 COI 4 COI 5 COI 1 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS	5 2 2 1 3 1 3	COIN COIN COIN COIN COIN COIN COIN COIN	4 4 2 1 2 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2	TING #23	SET SET
For each setting, refer to	1 COI 2 COI 3 COI 4 COI 5 COI 1 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS		COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN:	5 4 2 2 2 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2	TING #23	SET SET
For each setting, refer to	1 COI 2 COI 3 COI 4 COI 5 COI 1 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS		COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN:	5 4 2 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4	TING #23	SET SET
For each setting, refer to	1 COI 2 COI 3 COI 4 COI 5 COI 1 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS		COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN:	1 A 2 2 4 5 4 4 2 4 3 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4	TING #23	SET SET
For each setting, refer to	1 COI 2 COI 3 COI 4 COI 5 COI 1 COI	CREDIT CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS CREDITS	6 4 3 2 1 6 6 3 2 1 3 2 1	COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN: COIN:	5 A 2 2 4 4 2 4 4 2 4 2 4 2 4 2 4 2 4 2 4	TING #23	SET SET



#### TABLE 3 MANUAL SETTING

8-11 BOOKKEEPING

	COIN TO CREDIT	1 COIN 1 CREDIT
		2 COINS 1 CREDIT
		3 COINS 1 CREDIT
	ING 1/2	4 COINS 1 CREDIT
	0 14	5 COINS 1 CREDIT
	0 VIC	6 COINS 1 CREDIT
		7 COINS 1 CREDIT
	0 TIG 0 TIG	8 COINS 1 CREDIT
	0 710	9 COINS 1 CREDIT
	ME Ø	NUMBUR OF GA
	BONUS ADDER	NO BONUS ADDER
	OD OH OM OS	2 COINS GIVE 1 EXTRA COIN
	20 M0 H0	3 COINS GIVE 1 EXTRA COIN
	0H 0M 0S	4 COINS GIVE 1 EXTRA COIN
	TUMPTWOY OF MO	5 COINS GIVE 1 EXTRA COIN
	adrittida et via	6 COINS GIVE 1 EXTRA COIN
		7 COINS GIVE 1 EXTRA COIN
bine	ut in. As seen from the front of the q	8 COINS GIVE 1 EXTRA COIN
binet	ut in. As seen from the front of the c d the left- hand side is #2.	8 COINS GIVE 1 EXTRA COIN 9 COINS GIVE 1 EXTRA COIN
bine	nut in. As seen from the front of the e d the left- hand side is #2. eduations of coin chutes by both the left and eight SERVICE BI	8COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN
bine DTT(	b adt to tront set from the front of the d d the left- hand side is V2. Dy both the left and right SERVICE B redits RELIVICE M	8 COINS GIVE       1 EXTRA COIN         9 COINS GIVE       1 EXTRA COIN         1 COIN COUNTS AS       1 COIN
bine JTTC RED	nut in. As seen from the front of the d d the left- hand side is ¥2. eductions of coin chutes by both the left and right SERVICE B redits <b>RELATION ETUHO NIOD</b> <sup>E</sup> IP and 2P	8 COINS GIVE       1 EXTRA COIN         9 COINS GIVE       1 EXTRA COIN         1 COIN COUNTS AS       1 COIN         1 COIN COUNTS AS       2 COINS
ibinet JTTC RED May,	nut in. As seen from the front of the d d the left- hand side is #2. eduations of coin chuics by both the left and right SERVICE B redits <b>RELATION ETUHO ALOO</b> <sup>E</sup> IP and 2P by both IP and 2P (in a simultaneous)	8 COINS GIVE       1 EXTRA COIN         9 COINS GIVE       1 EXTRA COIN         1 COIN COUNTS AS       1 COIN         1 COIN COUNTS AS       2 COINS         1 COIN COUNTS AS       3 COINS
binet JTTC RED	nut in. As seen from the front of the c d the left- hand side is #2. <u>by both the left and right SERVICE B</u> redite <b>RELIGITION STUHO NIOD</b> IF and 2P by both LP and 2P (in a simultaneous) is not counted.)	8COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN1COIN COUNTS AS1COIN1COIN COUNTS AS2COINS1COIN COUNTS AS3COINS1COIN COUNTS AS4COINS
binet JTTC RED	nut in. As seen from the front of the c d the left- hand side is #2. <u>Aby both the left and right SERVICE B</u> redits <b>RELIGITION STUHO NIOD</b> IF and 2P by both IF and 2P is not counted.)	8COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN1COIN COUNTS AS1COIN1COIN COUNTS AS2COINS1COIN COUNTS AS3COINS1COIN COUNTS AS4COINS1COIN COUNTS AS5COINS
binet, JTTC RED	nut in. As seen from the front of the d d the left- hand side is #2. <u>by both the left and right SERVICE B</u> redits <b>RELIGITIUM ETUHO NIOD</b> IP and 2P by both IP and 2P is not counted.)	8COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN1COIN COUNTS AS1COIN1COIN COUNTS AS2COINS1COIN COUNTS AS3COINS1COIN COUNTS AS4COINS1COIN COUNTS AS5COINS1COIN COUNTS AS5COINS1COIN COUNTS AS5COINS1COIN COUNTS AS6COINS
binet JTTC RED	nut in. As seen from the front of the d d the left- hand side is #2. <u>by both the left and right SERVICE B</u> nedits <b>RELIGITLUM ETUHO NIOD</b> IP and 2P by both IP and 2P is not counted.) next page.	8COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN1COIN COUNTS AS1COINS1COIN COUNTS AS2COINS1COIN COUNTS AS3COINS1COIN COUNTS AS4COINS1COIN COUNTS AS5COINS1COIN COUNTS AS5COINS1COIN COUNTS AS6COINS1COIN COUNTS AS7COINS
bine ,FTT REL ylay,	nut in. As seen from the front of the d d the left- hand side is #2. Structions of coin chutes by both the left and right SERVICE B redits <b>RELIGITIUM ETUHO NIOD E</b> IP and 2P by both IP and 2P (in a simultaneous) se is not counted.)	8COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN9COINS GIVE1EXTRA COIN1COIN COUNTS AS1COIN1COIN COUNTS AS2COINS1COIN COUNTS AS3COINS1COIN COUNTS AS4COINS1COIN COUNTS AS5COINS1COIN COUNTS AS5COINS1COIN COUNTS AS6COINS1COIN COUNTS AS7COINS1COIN COUNTS AS8COINS

12

#### 8-11 BOOKKEEPING

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

BOOKKEEP	ING	1/2			
COIN CHUTE	#1	C	1.1.1.51		
COIN CHUTE	, #2	C C			*
TOTAL CO	JIN	0			
COIN CRE	DIT	0			
SERVICE CRE	DIT	0			
TOTAL CRE	DIT	0			
NUMBER OF GA	ME	0			
TOTAL TIME	0 D	0н	0 M	05	
GAME PLAY TIME	0 D	0 H	0 M	05	
AVERAGE GAME TIME		0 H	0 M	05	
LONGEST GAME TIME		0 H	0 M	05	
SHORTEST GAME TIME		0 H	0 M	05	
PUSH TEST BUTT	ON TC	CONT	INUE		

•	COIN CHUTE	Number of coins put in. As seen from the front of the cabinet, the right-
		hand side is #1 and the left- hand side is #2.
•	TOTAL COIN	Total number of activations of coin chutes
•	COIN CREDIT	Credits registered by both the left and right SERVICE BUTTONs.
•	TOTAL CREDIT	Total number of credits (COIN CREDITS + SERVICE CREDITS)
•	NUMBER OF GAME	Total play by both 1P and 2P
•	GAME PLAY TIME	Total time of play by both 1P and 2P (in a simultaneous play,
		the overlapped time is not counted.)

1.

-26-

• Press the TEST BUTTON to proceed to the next page.

BOOKK	EPING 2/2	
TIME	ISTOGRAM	Clears for complete of BOO
0 M00S~ 0 M29S	. 0	
0 M30S~ 0 M59S	0	
1 M00S~1 M29S	0	
1 M30S~1 M59S	0	
2 MOOS~2 M29S	0	
2 M30S~2 M59S	0	
3 M00S~ 3 M29S	0	
3 M30S~ 3 M59S	0	
4 M00S~4 M29S	0	
4 M30S~4 M59S	0	8
5 M00S~ 9 M59S	0	
OVER 10M00S	0	

When the data has been eleared, "COMPLETT O" will be displayed

prives the TEST BUTTON to cause the Manu mode torreturn on to the priverty

PUSH TEST BUTTON TO EXIT

• TIME HISTOGRAM shows the number of players whose play became "GAME OVER" in each of the above time periods.

· Press the TEST BUTTON to return to the Menu.

-27-

#### 8-12 BACKUP DATA CLEAR

Clears the contents of BOOKKEEPING.



When clearing, bring " $\rightarrow$ " to "YES" and when not clearing, to "NO", by using the SERVICE BUTTON, and then push the TEST BUTTON.

When the data has been cleared, "COMPLETED" will be displayed. Bring " $\rightarrow$ " to "NO" and press the TEST BUTTON to cause the Menu mode to return on to the screen.

1

#### 9. CONTROLLER

In the TEST menu, when the CONTROLLER'S V.R. values can not be adjusted to the allowable range, it is necessary to adjust the V.R. installation position or replace the V.R.. Also, be sure to apply grease for the mechanism part every 3 months.

To perform the above-mentioned work, remove the CONTROLLER from the cabinet.

#### 9-1 REMOVING THE CONTROLLER

- ① Take off the SERVICE DOOR from the CONTROLLER to be removed.
- ② Disconnect 7 CONNECTORs inside the SERVICE DOOR (3P red, 3P blue, 2P red, 2P blue, 2P black, and 1P white 2).
- ③ Take off 12 TAMPERPROOF SCREWs to remove the 2 MECHA COVERs.
- ④ Take out the 6 HEXAGON BOLTs and remove the CONTROLLER. First, make sure that the wires are free and then carefully lift it up.



#### 9-2 ADJUSTMENT & REPLACEMENT OF V.R.

9. CONTROLLER

1-0

When the V.R. value is set in the GUN ADJUSTMENT of the TEST menu, if the COTROLLER's sight does not correctly function, it is necessary to adjust the V.R. installation position, or replace the V.R..

apply grease (or the mochanism part every 3 months,

To perform the above-mentioned work, remove the CONTROLLER

V.R. ADJUSTMENT

① Loosen the 2 screws (which secure the V.R. BRACKET) to move the V.R. BRACKET.

- ② Move the V.R. BRACKET to disengage the GEAR and ADJUST GEAR. Move the V.R. SHAFT and make sure that the cut portion of the V.R. SHAFT faces the opposite side of the ADJUST GEAR as shown in Fig. 9.2.
  - 3 Cause the GEAR to be engaged and tighten the 2 screws. At this time, make backlash adjustments.
  - (4) Carefully swing the gun in the horizontal and vertical directions and check to see if the V.R. value is within the allowable range.
  - (5) After making adjustments, reset the V.R. value in the GUN ADJUSTMENT in the TEST menu.



FIG. 9.1 REMOVEND THE CONTROLLER.

### REPLACEMENT OF VOLUME (220-5130 or 220-5373 VOL CONT B-5K OHM)

- ① Remove the SCREWs "A" that fasten the VR BRACKET. The VR BRACKET becomes unfastened and the VR GEAR disengaged from the HANDLE GEAR.
- ② Remove the VR GEAR from the VR. Then, replace the VR.

ht

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ue

③ After the replacement of the VR, newly set the VR value in the VOLUME ADJUSTMENT mode. (Refer to the preceding page.)

#### REMOVING THE MOTOR BRUSH

- CTake off the 4 TAMPERPROOF SCREWs and remove 1 SHAFT COVERs B.
- ② The MOTOR appears at shown in the Fig. at the right. Turn the cap with a screwleiver, etc., to merous the family.

It the motor brushes are were out as another, in page them. Be sure to replace both of the brodies at the same time.



## 9-3 REPLACEMENT OF MOTOR BRUSH

#### CAUTION: When replacing the brush, be very careful so as not to drop it in the machine.

When 1P GUN or 2P GUN display is ON in the OUTPUT TEST screen in the TEST mode, if the gun does not vibrate, first check the CIRCUIT PROTECTOR of the SWITCH UNIT. If the circuit protector is satisfactorily

working, check the motor brushes.

#### REMOVING THE MOTOR BRUSH

- Take off the 4 TAMPERPROOF SCREWs and remove 2' SHAFT COVERs B.
- ② The MOTOR appears as shown in the Fig. at the right. Turn the cap with a screwdriver, etc., to remove the brush.

If the motor brushes are worn out as shown, replace them. Be sure to replace both of the brushes at the same time.





FIG. 9.3 REPLACING THE MOTOR BRUSH

#### 9-4 REPLACEMENT OF TRIGGER SW

When the TRIGGER is pulled, if ON is not shown in the TRIGGER display in the TEST menu "INPUT TEST" screen, the MICRO SW may be malfunctioning. In that case, it is necessary to replace the MICRO SW.

REPLACING THE MICRO SW.

#### **REMOVING THE GRIP:**

- 1 Take off 7 TAMPERPROOF SCREWs A and remove COVER RIGHT.
- ② Take off 5 TAMPERPROOF SCREWs and remove COVER LEFT with COVER BRACKET as is attached to it (or it could be removed), while paying attention to the wires.
- ③ Disconnect the CONNECTOR which is connected to the GRIP.
- ④ Remove the GRIP by taking out the 6 HEXAGON NUTs.





-34-

9-5 GREASING

O GUN LIRIVE portion:

Apply greate to the pin's portion marked with stant lines

Apply greasing for the following portions every 3 months:

OGUN DRIVE portion OSLIDE RAIL

Apply the grease from the 4 replenishment ports (on each side).

OV.R. GEAR portion OForward/Backward turning SHAFT OHorizontally sliding portion


#### O GUN DRIVE portion:

Apply grease to the pin's portion marked with slant lines.



<u>Т</u> М

#### O HORIZONTALLY SLIDING PORTION:

Apply grease to the portions marked with slant lines (to the surfaces where the following items come into contact with each other):

SPACER RING & SWING BRACKET SWING BRACKET & SPACER BLOCK A; and SPACER BLOCK B & MECHA BASE





## 11. EXPLANATION OF COIN SELECTOR

#### HANDLING THE COIN JAM

Even when the REJECT button is pressed, if the coin is not rejected, open the coin chute door and open the selector gate. After removing the jammed coin, put a normal coin in and check to see that the selector correctly functions.

In a manuate as about n below, wentace the Plana

GATE

### CLEANING THE COIN SELECTOR

The coin selector should be cleaned once every 3 months. When cleaning, follow the procedure below:

- Turn the power for the machine OFF.
  Open the coin chute door.
- Open the gate and dust off by using a soft brush (made of wool, etc.).
  - ③ Remove stain by wiping with a soft cloth which contains water or chemical detergent.
- Remove the CRADLE. When removing the retaining ring (E ring), be very careful so as not to bend the shaft.
  - S Remove stain from the shaft and pillow portions by wiping off with a soft cloth, etc.
  - 6 After wiping off as per 5 above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

Absolutely do not apply machine oil, etc. to the coin selector.



## 12.MONITOR ADJUSTMENTS

O Do not operate the ADJUSTMENT knobs without good reason.

O A certain portion of the monitor is subject to a high voltage and therefore be very careful of this point.

O When making adjustment, utilize a resinous Alignment Screwdriver. ADDRE CHECK

OMake adjustments from the BACK DOOR side.

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8-7

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	13% NUMBER NUMBER	0803		8-9. 8-10
CONTROLLER	CHECK THE VOLU	ME VALUE	Monthly	1-8
	GREASING	. *	Trimonthly	9.5
COIN SELECTOR	CLEANING		Trimoethty	1.1

#### REMOVING THE FRONT GLASS.

Remove the PROPT CLASS also choosing lines and of a Plan, remove OLASS HOLDER UPPER only. These job year band drivings the square hole to the fract size of OLASS HOLDER UPPER, and pull the FREINT CILLARS Investigy unit.



For further information please refer to the Hantarex Service Manual supplied in the Spares and Accessories Kit.

## 13. PERIODIC INSPECTION TABLE TRULOA ROTIVOM ST

The items listed below require periodic check and maintenance to retain the performance of this machine.

	E LINE DOINE.	0
Item	Interval	Reference
SELF TEST, MEMORY CHECK	fake ndjustments fi	8-3, 8-7
CHECK EACH SETTING	Monthly	8-9, 8-10
CHECK THE VOLUME VALUE	Monthly	8-4
GREASING	Trimonthly	9-5
CLEANING	Trimonthly	11
	Item SELF TEST, MEMORY CHECK CHECK EACH SETTING CHECK THE VOLUME VALUE GREASING CLEANING	ItemIntervalSELF TEST, MEMORY CHECKMonthlyCHECK EACH SETTINGMonthlyCHECK THE VOLUME VALUEMonthlyGREASINGTrimonthlyCLEANINGTrimonthly

## REMOVING THE FRONT GLASS:

Remove the FRONT GLASS when cleaning the back side of it. First, remove GLASS HOLDER UPPER only. Then, put your hand through the square hole in the back side of GLASS HOLDER UPPER, and pull the FRONT GLASS towards you.



42-

## 14. TROUBLESHOOTING

ORADIE BOARD

15-1 COMPUSITION OF GAME BOARD

PROBLEM	CAUSE	COUNTERMEASU	RES
Main SW is turned ON but the machine is not functioning.	The power is not supplied. The power supply voltage is not correct. Blowing off of fuse due to	Make sure that the plug is f socket. Make sure that the power sup Replace AC unit fuse.	fully inserted into the plug
	instantaneous overcurrent.	FUSE 6.4 \$\phi \times 30 5000mA 125V (514-5036-5000)	AC 100~120V AREA
	1	FUSE 6.4 \$\phi \times 30 3000mA 250V (514-5037-3000)	AC 220~240V AREA
A	Blowing off of fuse due to instantaneous overcurrent.	Replace power supply fuse: FUSE $6.4 \phi \times 30$ 4000mA 125V (514-5036-4000)	A.
Sound is not emitted.	VR setting is incorrect.	Adjust the SW unit and VOLUME ADJUSTMENT (refer to 8-1).	
CONTROLLER (GUN) MOTOR does not func- tion.	The protector functioned due to an instantaneous overcurrent. The Motor Brushes are worn out.	Cause the functioning of the SW unit Circuit Protector restore to its original condition (refer to 8-1). are Replace the Motor Brushes (refer to 9-3).	
The Fluorescent lamp does not light up.	The Fluorescent tube is burnt out.	Replace the Fluorescent tube with an FL 30W tube (refer to Sction 10).	
During game play, CON- TROLLER sight is not correct (deviates).	GUN ADJUSTMENT is incorrect.	Perform ADJUSTMENT and SETTING correctly as per GUN ADJUSTMENT in the TEST menu (refer to 8-4).	
During game play, CONTROLLER's TRIG- GER SW does not operate.	SW malfunctioning.	Replace SW (refer to 9-4).	
The on-screen image of the monitor sways and or shrinks.	The power source and voltage are not correct.	Make sure that the power supply and voltage are correct	
SD COMPANY	16-17289.		COLUMN TRACT

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ED-MEAT-TAIN

### A. TROUBLESHOOTING

## 15. GAME BOARD

### 15-1 COMPOSITION OF GAME BOARD



	U.S.A.	OTHERS
GAME BD NO.	834-9877-01	834-9877-02
① MAIN BD (SYSTEM 32 COM)	837	7-7428-03
② ROM BD	837-9878-01	837-9878-02
③ A/D BD SYSTEM 18, 32	837	7-7536

### 15-2 INPUT AND OUTPUT

16. DESIGN RELATED PARTS

#### GAME BD ALIEN 3 THE GUN



-45-04-

# 16. DESIGN RELATED PARTS

TURTUO GMA TURMI S-BI

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OAME BD ALLEN 3 THE GUN



-46-



# 1 TOP ASSY ALIEN 3 THE GUN

12. PARTS LIST

TOD A VODA COT

(D-2/2)

2

ITEM NO.	PART NO.	DESCRIPTION	I BADICIA (BER 1013
1	AIN 0100		
2	AIN 1000	ASSI SHIELD CASE	
2	OUT 0002	SUIELD CASE STODDED	(a)
5	101 5000 015	ODICINAL SEAL ALIEN 2 THE CUN	-
5	421-3800-213	ORIGINAL SEAL ALIEN 3 THE GUN	
0	421-6594	STICKER SERIAL NO.INFO	
13	421-7987	STICKER ELEC SPEC	
14	421-7988	STICKER SERIAL NUMBER	[10]
15	421-6709	STICKER SERVICE INSTR ENG	
16	421-6671	STICKER DANGER HIGH VOLTAGE	
18	SGM-3784	POLYETHYLENE COVER 950×1500×1900	
201	000-P00520-W	M SCR PH W/FS M5×20	lh
401	601-6604-30	CARTON BOX 30	
402	SGM-2675	POLYETHYLENE BAG 240×370	
403	420-6101-01	<b>OWNERS MANUAL ALIEN 3 THE GUN ENG</b>	E.
404	220-5381	KEY MASTER FOR 220-5380	
405	SGM-4111	KEY BAG	(10)
406	540-0006-01	WRENCH FOR TAMP PRF SCR DUAL TYPE	M4
407	540-0007-01	WRENCH FOR TAMP PRF SCR DUAL TYPE	M5
408	220-5130	VOL CONT B-5K OHM	
408	220-5373	VOL CONT B-5K OHM	1 2
409	601-7227	MOTOR BRUSH	(65)
410	514-5036-4000	FUSE 64 d × 30 4000m & 125V	1
411	514 5036 5000	EUSE 6.4.4 $\times$ 30 5000mA 125V	AC100~120V ADEA
411	514 5027 2000	FUSE 6.4 $\phi$ × 30 3000m A 250V	AC100 - 120V AREA
411	514-5057-5000	FUSE 0.4 φ × 30 3000mA 250 V	AC200~240V AREA
	BVG-0026	SHIPPING BRACKET	di.
	000-P00525-W	M SCR PH W/FS M5×25	F
	421-6690~	STICKER~V	
	421-6119-91	STICKER FCC	FOR USA
	421-6120-91	STICKER SEGA USA	FOR USA
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## 2 ASSY SHIELD CASE (AIN-0100)

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(3) ASSY CABINET (AR-1000)



ITEM NO.	PART NO.	DESCRIPTION	
1	AIN-0101	SHIELD CASE BRKT	
2	105-5150	SHIELD CASE FOR SYS 32	
3	253-5354	BD GUIDE	
4	839-0476-01	FLT BD SYSTEM 32(W/O JUMPER)	
5	421-5563	STICKER ARROW	
6	AIN-0102	SHIELD CASE PLATE	
7	834-9877-01	GAME BD ALIEN 3 THE GUN USA	FOR USA
7	834-9877-02	GAME BD ALIEN 3 THE GUN EXP	FOR OTHERS
101	280-5203-4	RACK CARD GUIDE L=215.9	
201	000-P00408-W	M SCR PH W/FS M4×8	
202	012-P00406	TAP SCR PH $4 \times 6^{-1}$	
301	CE15645	WIRE HARN SHIELD A/D	
302	CE15632	WIRE HARN LINE OUT SHIELD	

## (3) ASSY CABINET (AIN-1000)

(Ch-D)SSY SHIELD CASE (AIN-0100)



FOR USA. FOR OTHERS

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# 3 ASSY CABINET (AIN-1000)

# (C-2/3) ASSY CABINET (AIN 1000)

ITEM NO.	PART NO.	DESCRIPTION	PART NO.	ATTEM NO.	
1	AIN-1001	ASSY SUB-CABINET			
2	AIN-1021	SW UNIT	004001-029	212	
3	AIN-1023	AC UNIT	000001+000	212	
4	AIN-1024	FLUNIT	00%001-060	226	
5	AIN-1025	ASSY MONITOR 20	100000 680	615	
6	AIN-1028	ASSY WIRE	090-0024	216	
Ū	CE15610	WIRE HARN MAIN			
	CE15643	WIRE HARN A/D 1	CH 1564/	1026	
	CE15644	WIRE HARN A/D 2	600-8374-44	3022	
	600-6314-19	WIRE HARN EXT COIN	600-6314-15	101	
	600-6314-20	WIRE HARN EXT SOUND	000-6314-00	34(37)	
	CE 15639	WIRE HARN EXT VOLUME	22-1109-003	205	
	CE 15640	LINE FILTER A			
	601-0460	PLASTIC TIE BELT 100mm			
7	AIN-1029	BILLBOARD SASH UPPER		-	
8	AIN-1030	BILL BOARD SASH LOWER			
9	AIN-1031	FRONT GLASS			
10	AIN-1032	RUBBER PACKING			
11	AIN-1033	GLASS HOLDER UPPER			
12	AIN-1034	GLASS HOLDER LOWER			
13	AIN-1035	CUSHION			
14	AIN-1036	WOODEN MASK			
15	AIN-1037	MIRROR BRKT			
16	AIN-1038	MIRROR			
17	AIN-1039	MIRROR SASH			
18	AIN-1040	MIRROR HOLDER			
19	AIN 1041	MECHA COVER			
20	AIN-1042	STICKER MECHA COVER LEFT			
21	AIN-1043	STICKER MECHA COVER RIGHT			
22	AIN-2000	ASSY CONTROLLER			
23	AIN-4000	ASSY PWR SPLY			
24	253-5366	CASH BOX			
26	421-7020	STICKER CAUTION FORK			
27	421-7308~	DENOMINATION SHEET 1GAME~			
28	422-0460-01	PLAY INSTR SH AIN ENG			
29	423-0207	BILLBOARD PLATE AIN			
101	280-0419	HARNESS LUG			
102	280-5009-01	CORD CLAMP 21			
201	000-P00412-W	M SCR PH W/FS M4×12			
202	000-P00420-W	M SCR PH W/FS M4×20			
203	000-P00430-W	M SCR PH W/FS M4×30			
204	000-P00530-S	M SCR PH W/S $M5 \times 30$			
205	008-T00408-0C	TMP PRF SCR TH CRM M4 $\times$ 8			
206	008-T00420-OB	TMP PRF SCR TH BLK M4×20			
207	000-T00516-OB	M SCR TH BLK M5×16			
208	005-R03110	W SCR RH 3.1×10			
209	005-F03113	W SCR FH 3.1×13			
210	030-000612-S	HEX BLT W/S M6×12			
211	030-000840-S	HEX BLT W/S M8×40			

(C-3/3) ASSY CABINET (AIN-1000)

# 3 ASSY CABINET (AIN-1000)

ITEM NO.	PART NO.	DESCRIPTION	PART NO.	ITEM NO.
	· 11	ASSY SUBJCARDINGT	AIN-1001	1
212	050-F00400	FLG NUT M4	ADV-1021	2
213	060-F00600	FLT WSHR M6	ABV-1023	E
214	060-F00800	FLT WSHR M8	ATM-1024	b
215	069-000001	FLT WSHR 5.5-20×1.6	ATN-1025	2
216	090-0024	SCOCH ELEC. TAPE UL10 19mm×	55mm	2
		LAT A D. C. LE CA LE CENTRE	0132137	
301	CE 15641	WIRE HARN EXT MOTOR	CLOCID_/	
302	600-6314-44	WIRE HARN EARTH CONT R	KN351923	
303	600-6314-45	WIRE HARN EARTH CONT L	600,6214,10	
304	600-6314-46	WIRE HARN EARTH COIN SW	C1-P1C0-000	
305	600-6314-47	WIRE HARN EARTH COIN METER	CE 15630	
		A GOT FOR DIAL	(AAAAAT CIPS	
		HOLD T ERG OFF OFFSA R	601.0460	
		COONTING AND	A194_1070	7
		ATTO REAL CRACKETED	ACCH LILA	9
		NEW CLINEAS COMPOSITION	LOOF MEA	0
		FINDER CLASS	CONTENIA	01
		AUDIAL PACKARD	SCOL-PULP.	17
		NETTI NECLON SEALD	ADD DDA	01
		CERTING TRUE DEVEN	ACOL MAN	51
		MPAN MERTINA	AFOT MIA	hi
		THER COURSES	ATM. 1037	21
		BONSTM	REDI-MIA	16
		H2A2 SOUTH	ATR-1039	17
		ALL OF ADAMA	AIN-1040	81
*		MRCHA COVER	AIN 1041	21
		STICKER MECHA COVER LEFT	AIN-1042	2.0
		STICKER MECHA COVER RIGHT	AIN-1043	21
		ASSY CONTROLLER	AIN-2000	22
		ASSY PWR SPLY	AIN-4000	23
		CASH BOX	253-5366	24
		STICKER CAUTION FORK	421-7020	26
		DENOMINATION SHEET IGAME~	421-7308~	27
		PLAY INSTRISH AIN ENG	422-0460-01	28
		BILLBOARD PLATE AIN	423-0207	29
			01100.000	101
		INARIASS LOO	6140-002	101
		CORD CLARKER 21	10-6000-087	201
		M SICR PH W/FS M4×12	000-1400412-W	201
		M SCR. PH W/FS M4×20	000-P00420-W	202
		M SCRITH WIFS MAX 30	W-96M04-000	203
		M SCR PH W/S MS×30	000-P00530-S	204
		TMP PRF SCR TH CRM M4×8	008-T00408-0C	205
		TMP FRF SCR TH BLK M4×20	008-700420-03	206
		M SCR TH BLK MS×16	000-T00316-OB	207
		W SCR RH 3.1×10	005-1803110	208
		W SCR #H 3.1×13	005-F03113	209
		HEX BLT W/S M6×12	030-000612-5	210
		HEX BLT W/S M8×40	030-000840-5	211

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## (4) ASSY SUB-CABINET (AIN-1001)

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ITEM NO.	PART NO.
201	000-P00308-W
201	
202	000-P00416-W
203	000-P00420-W
204	000-T00420-0B
205	008-T00430-0B
207	005-R03113-F
208	005-R03513-F
209	005-R03525
210	030-000630-SB
211	030-000830-S
212	031-000630-0C
213	031-000650-0C
214	050-H01600
215	050-F00600
216	060-F00600
217	060-F00800
218	069-000001
219	031-000530-0C
220	079-000008
221	050-F00500

#### DESCRIPTION

00308-W	M SCR PH W/FS M3×8	FOR OTHERS
	NOTUSED	FOR MARS
)0416-W	M SCR PH W/FS M4×16	1
)0420-W	M SCR PH W/FS M4 $\times$ 20	2
00420-0B	M SCR TH BLK M4 $\times$ 20	2
00430-0B	TMP PRF SCR TH BLK M4×30	
03113-F	W SCR RH W/F 3.1×13	. 2
03513-F	W SCR RH W/F 3.5×13	6
03525	W SCR RH 3. 5×25	$\overline{\chi}$
0630-SB	HEX BOLT BLK W/S M6×30	.8
)0830-S	HEX BLT W/S M8×30	9
0630-0C	CRG BLT CRM M6×30	10
0650-0C	CRG BLT CRM M6×50	11
01600	HEX NUT M16	8.8
00600	FLG NUT M6	12
00600	FLT WSHR M6	
00800	FLT WSHR M8	
00001	FLT WSHR 5.5-20×1.6	
00530-0C	CRG BLT CRM M5×30	
80000	SCR NAIL THH STNLS 1.5×16	
00500	FLG NUT M5	



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# METER UNIT (AIN-1020).

This unit is included on the VTS Bracket on machines built in the UK See ⑤.



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#### VTS ASSY

ASSY SUB-CABINET (AIN-1001)

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	DESCRIPTION	ITEM NO. PART NO.	
ITEM No	PART No. 24 W LES SOL M	DESCRIPTION	C
1	DLM/MP-1029	VTS Panel Bracket Type B	1
2	M SCR PH W/ES M4 × 20 -IG	VTS Label Type B	1
3	M2067D 12V	Impulse Counter, Panel	1
4	F207	Control Knob, 15mm	1
5	E0611 PS	Push Button	3
6	F0755I	Potentiometer, 5k LIN	1
7	F357 25 X 2 .C HR RD2 W	Fuse Holder, 20mm (Type FX0377	) 2
8	E1031 PS	Fuse, 2A 20mm Anti-surge	2
10	CB-005 CM MORD TUR DRD	Klingon Credit Board	1
11	CE15631	Wire Harness, VTS	1
12	CE15646	Wire Harness, Volume SW	1
	AM RHRW TJF RM RHRW TJFI	216 060-F00600 217 060-F00800	
	FLT WEIR 5.5-20×1.6 CERT BLT CEM M5×30	218 069-000001 219 031-000536-002	
	SCR WAIL THH STMLS 1.5×16 FLG NUT MS	220 079-00006 221 050-700500	



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### **O** AC UNIT ASSY

(B) FL UNIT



FL Lighting Tray, 15W 1 Flourescent Tube, 15W 18" White 1 FL interface 1

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D AC UNIT ASSY

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8 FL UNIT



# (9) ASSY MONITOR 29 (AIN-1025)

Not applicable to UK built machines

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ITEM NO.	PART NO.	DESCRIPTION
1	AIN-1026	MONITOR BRKT A
2	AIN-1027	MONITOR BRKT B
3	280-5112	BUSH FOR TV
4	280-5113	COLLAR FOR TV
5	280-5114	SPACER 6.4-25×2
101	200-5242-15-03	ASSY CLR DSPL 29 TYPE 15K 100V
201	000-P00512-W	M SCR PH W/FS M5×12
202	050-F00600	FLG NUT M6

## 1 ASSY CONTROLLER (AIN-2000)

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## 1 ASSY CONTROLLER (AIN-2000)

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(D-2/2) WECHA (AIN-2100)

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ITEM NO.	PART NO.	DESCRIPTION
	*)	() BB() (BB())
1	AIN-2100	ASSY MECHA
2 😡	AIN-2200	CONTROL UNIT
3	AIN-2001	COVER LEFT
4 (1)	AIN-2002	COVER RIGHT
5 6	AIN-2003	COVER BRACKET
6 0	AIN-2004	SHAFT COVER A
101	280-5207	HARNESS LUG CC-1005
201	008-T00512-OB	TMP PRF SCR TH BLK M5×12
202	008-T00408-OB	TMP PRF SCR TH BLK M4×8
203	050-H00600	HEX NUT M6
204	060-F00600	FLT WSHR M6
205	060-500600	SPR WSHR M6
206	090-0012	SCREW LOCK
207	000-P00412-W	M SCR PH W/FS M4×12
208	010-P00308-F	S-TITE SCR PH W/F M3×8
208	010-P00308-F	S-TITE SCR PH W/F M3×8

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## (1) ASSY MECHA (AIN-2100)

### 10005-MAN RELIORTHOD YZ (D-1/3)



-63-

## (1) ASSY MECHA (AIN-2100)

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ITEM NO.	PART NO.	DESCRIPTION	PART NO.	.099 MEET
1	AIN-2101	MECHA BASE	060-500600	220
2	AIN-2102	SPACER BLOCK A	060-500800	221
3	AIN-2103	STOPPER	060-S01000	222
4	AIN-2104	STOPPER STAY	080-301400	223
5	AIN-2105	STOPPER BRACKET	099-000022-011	224
6	AIN-2106	SWING BASE	090-0002	225
7	AIN-2107	SPACER BLOCK B	090-0012	226
8	AIN-2108	RING	E100-(WR)	227
9	AIN-2109	RING SPACER	0204/0098-8000	728
10	AIN-2110	SWING BRACKET		
11	AIN-2111	SLIDE PLATE	CE 13380.	10£
12	AIN-2112	STAY OF BURNER	CE15581	302
13	AIN-2113	RUBBER	CE153kt	303
14	AIN-2114	SLIDE SHAFT	CEISSE	100
15	AIN-2115	BUMPER	CE15384	205
16	AIN-2116	CONTROLLER SHAFT	CE13389	305
17	AIN-2117	SHAFT COVER B	CE15590	307
18	AIN-2118	EXT SPRING		
19	AIN-2119	HOLE COVER A		
20	AIN-2120	VR BRKT LOWER		
21	GLC-2107	VR BRKT		
22	GUN-2629	GUIDE RING 140°		
23	601-6005	ADIUST GEAR		
24	601-5410	GEAR 15 d 6		
25	GI C-2122	GEAR PLATE		
26	AIN-2121	HOLE COVER B		
101	220 5120	VOL CONT P SK OHM		
101	220-5150	VOL CONT B SK OHM		
101	220-3373	COPD CLAMP 4 15		
102	200-3000	HADNESS I LIG CC 1005		
105	200-3207	DUCU 2 2T		
104	001-3902-39	BUSH 3.21 DUCH 2.2T		
105	001-3902-90	BUSH 3.21 BUSH 2.2T		
100	001-5902-110	SUMITURE E EXAMIN		
107	310-3029-F20	SUMITOBE F F20MM		
201	000-F00308	M SCR FH M3×8		
202	000-F00416	M SCR FH M4 $\times$ 16		
203	000-F00512	M SCR FH M5 $\times$ 12		
204	000-P00408-W	M SCR PH W/FS M4×8		
205	000-P00412-W	M SCR PH W/FS M4×12		
206	008-T00408-OB	TMP PRF SCR TH BLK M4×8		
207	028-P00308-F	SET SCR PH FLAT P M3×8		
208	028-P00416-P	SET SCR PH CUP P M4×16		
209	030-000612-S	HEX BLT W/S $M6 \times 12$		
210	050-H00600	HEX NUT M6		
211	050-H00800	HEX NUT M8		
212	050-H01000	HEX NUT M10		
213	050-H01400	HEX NUT M14		
214	050-U00400	U NUT M4		
215	050-U00500	U NUT M5		
219	060-F01200	FLT WSHR M12		

# (1) ASSY MECHA (AIN-2100)

(C.C.-D) ASSY MECHA (AIN-2100)

ITEM NO.	PART NO.	DESCRIPTION	PART NO.	ITEM NO.
220	060-500600	SPR WSHR M6	inic inte	
221	060-500800	SPR WSHR M8	COLEMAN	
222	060-501000	FI T WSHR MIO	2012-2012	2
223	060-501400	SDD WSHD M14	CD12-FILM	5
224	060.000022 OB	ELT WOUD DI V 0 5 25 V 1 6	PULZ-PILA	
224	009-00022-00	CLUE CEMEDINE N. 2000DO	COTZ-MITY	6
225	090-0002	OLUE, CEMEDINE NO.3000RS	A19-2100	0
220	090-0012	SCREW LUCK	AIN-2107	1
227	090-0015	GREASE	AIN-2108	8
220	000-F00420	M SCR FH $M4 \times 20$	A1N-2109	6
201	OF 16500	WIDE HADNE OF SHE	ATM-2110	10
302	CE 15580	WIRE HARN L/R	AIN-2111	11
302	CE15581	WIRE HARN UP/DN	AIN+2112	12
303	CE15582	WIRE HANK EXT SHOT 1	AIN-2113	13
304	CE15583	WIRE HARN EXT SHOT 2	AIN-2114	14
305	CE15584	WIRE HARN EXT MOTOR	AIN-2115	15
300	CE15589	WIRE HARN EARTH MECHA	AIN-2116	16
307	CE15590	WIRE HARN EARTH SHAFT	AIN-2117	17
		PERT SPREMO	AIN-2118	18
		HOLE COVEN A	AIN-2119	61
		VR BRET LOWER	AIN-2120	20
		VR BRET	GLC-2107	21
		GURDE RING 140"	OUN-2629	22
		ADJUST GEAR	601-6005	23
		GEAR 15 46	601-5410	24
		GEAR PLATE	GLC-2122	25
		HOLE COVER B	AIN-2121	26
		NILO NE R TROS IOU	0012.000	101
		MERO SER E TRADO LOV	0010-052	101
		SUL BLA DOGOD	C105-UAA	101
			0000-005	201
		CONT-20 GOG ECONDIAN	1022-082	1001
		TAG NGUG	8C-208C-100	201
		15.6 116.0 0.	04-2046-100	001 -
		TALANCE TO LEGAL	011-2020-110	003
		NINO24 4 SECTINDS	07-4-6706-04.6	101
		M SCR FH M3×8	80E007-000	201
	*	M SCR FH MAX 16	000-F00416	202
		M SGR FH M5×12	000-F00512	203
		M SCR PH W/PS M4×8	000-F00408-W	204
		M SCR PH W/PS MAX 12	000-P00412-W	205
		TMP PRF SCR TH BLK M4×8	608-T00408-OB	206
		SET SCR PH FLAT P M3×8	028-P00308-F	207
		SET SCR PH CUP P M4 × 16	028-P00416-P	208
		HEX BUT W/S M6×12	030-090612-S	209
		HEX NUT MG	050-1300600	210
		BM TUM XRH	0080065-020	211
		HEX NUT MIG	050-1301000	217
		ALM TITLE WITH	0051081020	515
		2010 201114 14	001001000	ALC
		EM TUR U	0020011-020	210
		ET WERE MIZ	000108-000	210
		and highly have	00010-1-000	61.9

-65-

## (2) CONTROL UNIT (AIN-2200)





# 2 CONTROL UNIT (AIN-2200)

(0025-MA) UNIT (AIN-2200)

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ITEM NO.	PART NO.	DESCRIPTION
1	AIN-2201	BASE CENTER
2	AIN-2300	ASSY MOTOR
3	AIN-2202	IOINT BRACKET
4	AIN-2203	JOINT BAR
5	AIN-2204	SPACER
6	AIN-2205	PIN
7	AIN-2206	COM SPRING
8	AIN-2207	SPRING BRACKET
9	AIN-2208	BASELEET
10	AIN-2209	BASE BIGHT
11	AIN-2210	FRONT BRACKET
12	AIN-2211	REAR BRACKET
13	AIN-2212	BASE FRONT
14	AIN-2400	ASSY GRIP
15	AIN-2213X	JOINT SPACER
	60	
101	100-5169	SLIDE RAIL
102	280-5207	HARNESS LUG CC-1005
103	509-5524-01	PUSH BUTTON SW BLUE
	4	V V VY VY X
201	000-P00412-W	M SCR PH W/FS M4×12
202	010-P00308-F	S-TITE SCR PH W/F M3×8
203	050-U00400	UNUT M4
204	050-U00500	U NUT M5
205	050-U00600	U NUT M6
207	060-F00500	FLT WSHR M5
208	060-F00600	FLT WSHR M6
209	060-S00400	SPR WSHR M4
210	060-S00500	SPR WSHR M5
211	060-S00600	SPR WSHR M6
212	090-0012	SCREW LOCK
213	090-0013	GREASE
	(D)	AND A AND SAL
301	600-6314-42	WIRE HARN PUSH SW
	AR NO	

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ASSY GRIP (AIN-2400)

## (3) ASSY MOTOR (AIN-2300)



TTEM NO. PART NO. DESCRIPTION GRIP BASE AIN-2401 AIN-2402 DESCRIPTION PART NO. ITEM NO. AIN-2403 Ь AIN-2404 MOTOR BRACKET AIN-2301 1 2 AIN-2405 MOTOR SPACER AIN-2302 2 MOTOR PLATE AIN-2303 3 509-5080 CAM AIN-2304 4 280-5207 MOTOR DC24V 716rpm F D1088M 350-5276 101 **DIODE SIB01-02** 481-0027 103 THELKM AMP SPARK SUPPRESSOR CONN 211-5409 104 RPHBLEM CONTACT 211-5410 105 PH W/F M3X PLASTIC TIE BELT 100mm 601-0460 106 204 TPE3 BLK MS 090-0070 M SCR PH W/FS M4×20 000-P00420-W 201 SET SCR CH CUP P M4×8 028-C00408-P 202 600-6314 SCREW LOCK 090-0012 203 WIRE HARN MOTOR 301 600-6314-43

# (14) ASSY GRIP (AIN-2400)



ITEM NO.	PART NO.	DESCRIPTION
1	AIN-2401	GRIP BASE
2	AIN-2402	GRIPLEET
3	AIN-2403	GRIPRIGHT
4	AIN-2404	LEVER
5	AIN-2405	TORSION SPRING
101	509-5080	SW MICRO TYPE
102	280-5207	HARNESS LUG CC-1005
103	310-5029-D10	SUMITUBE F D10MM
201	008-T00512-OB	TMP PRESCE THERE MSX 12
202	AIN-2406	TMP PRESCR PH BLK M5×12
203	010-P00308-F	S-TITE SCR PH W/E M3×25
204	050-C00500-3B	CAP NITT TYPE? DI V M5
205	090-0070	GREASE 248 (SOLVEST 248)
301	600-6314-41	WIRE HARN MICRO SW



Components and layout will differ on UK machines

-70-

### (15) ASSY PWR SPLY (AIN-4000)

ITEM No. PART No. DESCRIPTION 1 AIN-4001 Wooden Base (Part of Cabinet) 2 1146 Mains Transformer 2 x 18.5V @ 5A 3 000AY004 2A DC SSR Board (2 ccts) 4 Rectifier Board DC 24V 000AY005 5 6 101 E0507 Switch Mode Power Supply module 102 601-6227-01 Power Amp W/SW Regu 12V 5A 201 202 203 204 No.8 x 1/2" FLG HD SCR 205 005-R02725 W SCR RH 2.7 x 25 301 CE15634 Wiring Harness, Trans 18.5V 302 CE15635 Wiring Harness, Rect. BD 303 CE15636 Wiring Harness, Speaker Wiring Harness, SSR BD 304 CE15620 305 Wiring Harness, PSU Mains int. CE15628 Wiring Harness, Trans int. A 306 CE15626 307 Wiring Harness, Trans int. B CE15627 308 Wiring Harness, Switch Mode int. CE15625 309 CE15624 Wiring Harness, Low Voltage int.

#### (D-2/2)

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### 18. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follows :

	And Constraints and a second
A	DTMU
4	PINK
	1 1 1 1 1 1

- B SKY BLUE
- C BROWN.
- D PURPLE
- E LIGHT GREEN

Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

1	RED
2	BLUE
3	YELLOW
4	GREEN
5	WHITE
7	ORANGE
8	BLACK
9	GRAY

If the right-hand side numeral of the code is 0, then the wire will be of a single color shown by the left-hand side numeral (see the above).

Note 1 : If the right-hand side alphnumeric is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.



Note 1 : The character following the wire color code indicates the size of the wire.

K : A W G 18, U L 1015

L : A W G 20, U L 1007

None: A W G 22, U L 1007

Wire colours may differ on UK machines



19. WIRING DIAGRAM

-73-



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