## ELECTROCOIN AUTOMATICS LTD

 SERVICE MANUAL
# SPA CE 

 GUNTAITO CORPORATION

- 


## SPECIFICATIONS:

1. Power Supply
2. Power Consumption
3. Play Pricing
4. TV Monitors
5. Dimensions

HANTAREX US 250
140w
Adjustable on Dip switches
HANTAREX $25^{\prime \prime}$ MTC 9000
Width : 727
Depth : 1051 (1065 with plinth fitted)
Height : 1975

6 Weight
Approximately: 150 kg

* The specifications and appearance may be changed for improvement.

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## PRECAUTIONS TO BE OBSERVED WHEN INSTALLING MACHINE

## THIS VIDEO GAME IS FOR INDOOR USE ONLY. WHEN INSTALLING AVOID PLACES MENTIONED BELOW

1. PLACES SUBJECT TO CONDENSATION DUE TO HUMIDITY.
2. IN THE PROXIMITY OF AN INDOOR SWIMMING POOL OR SHOWER.
3. PLACES SUBJECT TO DIRECT SUNLIGHT.
4. VICINITY OF HIGHLY INFLAMMABLE/VOLATILE CHEMICALS.
5. UNEVEN SURFACES.
6. VICINITY OF FIRE EXITS AND FIRE EXTINGUISHERS.
7. DUSTY ATMOSPHERE.

INSTALLATION
IT IS IMPORTANT TO AVOID ROUGH HANDLING OF THIS MACHINE AS CERTAIN PARTS ARE FRAGILE.
UPON REMOVAL OF THE SHIPPING CARTON EXAMINE THE EXTERIOR OF THE CABINET FOR DENTS, CHIPS OR BROKEN PARTS.
ACCESS TO THE APPLIANCE SHOULD ONLY BE MADE BY QUALIFIED PERSONNEL FOR ANY PURPOSE.
INSPECT THE INTERIOR OF THE CABINET AS FOLLOWS:
A) CHECK THAT ALL THE PLUG IN CONNECTORS ARE FIRMLY SEATED i.c. THE EDGE CONNECTOR ON THE CPU BOARD. IF ANY CONNECTORS ARE FOUND UNPLUGGED IT IS IMPORTANT WHEN RE-PLUGGING NOT TO FORCE THE CONNECTORS TOGETHER. AS SOME MAY BE KEYED AND ONLY GO ON IN THE PROPER ORIENTATION.
B) CHECK THAT ALL PLUG-IN INTEGRATED CIRCUITS AND SUB BOARDS ON THE GAME PCB ARE FIRMLY SEATED IN THEIR SOCKETS.
C) CHECK ALL SUB ASSEMBLIES SUCH AS THE POWER SUPPLY FOR SECURE MOUNTING.

ENSURE THE MAINS SUPPLY IS CORRECT FOR OPERATION OF THE MACHINE, AND THAT THE SUPPLY HAS A GOOD EARTH CONNECTION.

SAFETY/MAINTENANCE
THIS VIDEO GAME REQUIRES CERTAIN MAINTENANCE TO KEEP IT IN GOOD WORKING ORDER.
IT IS ADVISED THAT THE SITE MANAGER CHECKS THE SERVICEABILITY OF THE MACHINE DAILY.

## WARNING

HIGH VOLTAGES EXIST WITHIN THE MACHINE SO IT IS ADVISABLE THAT ONLY QUALIFIED SKILLED PERSONNEL SHOULD TOUCH ANY INTERNAL PARTS OF THE MACHINE. THE HIGH VOLTAGES PRESENT MAY CAUSE SHOCK OR EVEN FATALITY WITH MISUSE. ALWAYS TURN THE MACHINE OFF BEFORE COMMENCING ANY WORK.

HIGH VOLTAGES MAY EXIST IN ANY MONITOR UNIT, EVEN WITH THE POWER DISCONNECTED. USE EXTREME CAUTION AND DO NÓT TOUCH ELECTRICAL PARTS, OR THE YOKE WITH YOUR HANDS OR WITH METAL OBJECTS HELD IN YOUR HANDS. INFORMATION ON THE MONITOR FUSES ARE CONTAINED IN THE MONITOR MANUAL SUPPLIED WITH THIS MACHINE.

## CAUTION

DO NOT USE FUSES OTHER THAN THOSE SPECIFIED, FOR THE CONTINUED PROTECTION OF YOUR GAME.

NEVER CONNECT OR DISCONNECT ANY CONNECTORS OF THE PCB, OR RESET THE DIP SWITCH SETTINGS WHILE THE POWER IS ON.

REGULARLY CLEAN THE OUTSIDE OF THE CABINET. DO NOT DRY WIPE ANY OF THE ACRYLIC PANELS, BECAUSE ANY DUST CAN SCRATCH THE SURFACE AND RESULT IN FOGGING THE PLASTIC. ACRYLIC SURFACES MAY BE CLEANED WITH ANY NONABRASIVE HOUSEHOLD CLEANER.

## GAME DESCRIPTION

Beware! The Galaxy is being invaded.
Destroy the monsters with powerful automatic machine guns.
You have been ordered to rescue the hostages immediately.

## STORY

The year is 2019 A.D. Man takes deep space exploration to a new level of sophistication. However, at a distant space colony, a sudden escalation of unexplained disappearances and deaths caused the Federal Government of the Earth to launch a thorough investigation. Their best team of commandos is emmitting from an earth bound cargo ship. The crew has been taken hostage by unkown life form and are in great danger if not rescued immediately. The alien life forms must be destroyed before they reach their final conquest. . . The Earth.

## HOW TO PLAY

This high powered shooting game is in the first person perspective and can be played by one or two players simultaneously. A second player can join the game at any time. Grab the controls and start shooting.

The hostages must be rescued while anninilating the alien monsters which appear in seven exhausting rounds.

The game is over when the players LIFE ENERGY has expired when no hostages have been rescued, or when the seven rounds have been completed.

A LIFE ENERGY capsuel appears periodically to restore life to the player. In addition to the endless supply of bullets, the player can collect special weapons including Freeze, Blade and Fire Bombs. All of these put unprecadented power into the players hands.

## OPERATION

The controls include a high powered pump-action fully automatic machine gun and a foot dal to assist the player in manoeuvering through the large infested ship.

The pump action allows the player to select the special weapons. Then the player simply pulls the trigger to unleash destructive power.

The foot pedal allows the player to reverse his direction of travel, giving the player the manoeuverability required to explore the ship.

## DIP SWITCH SETTINGS

DIP SW A

| SETTINGS | POSITIONS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| LASER SIGHT | APPEARS AS AN ITEM APPEARS ALWAYS | OFF | OFF <br> ON |  |  |  |  |  |  |
| TEST MODE | NORMAL GAME TEST MODE |  |  | $\begin{aligned} & \text { OFF } \\ & \text { ON } \end{aligned}$ |  |  |  |  |  |
| ATTRACT MODE | WITH WITHOUT |  |  |  | OFF <br> ON |  |  |  |  |
| COIN A PRICING | $\begin{aligned} & 1 \text { COIN } 1 \text { PLAY } \\ & 2 \text { COINS } 1 \text { PLAY } \\ & 3 \text { COINS } 1 \text { PLAY } \\ & 4 \text { COINS } 1 \text { PLAY } \\ & \hline \end{aligned}$ |  |  |  |  | $8 \mathrm{FF}$ | OFF ON |  |  |
| OIN B <br> RRICING | $\begin{array}{ll} 1 \text { COIN } 2 & \text { PLAYS } \\ 1 \text { COIN } 3 & \text { PLAYS } \\ 1 & \text { COIN } 4 \\ 1 \text { COIN } 5 & \text { PLAYS } \end{array}$ |  |  |  |  |  |  | $\begin{aligned} & \text { OFF } \\ & \text { ON } \\ & \text { OFF } \end{aligned}$ | $\begin{aligned} & O F F \\ & O N \end{aligned}$ |

DIP SW B


## TEST MODE

To enter test mode, first turn the machine off and then on again. Dip Sw A-3 on the main pcb.
Now turn the machine back on and the screen will display "WELCOME TO TEST MODE".

## TEST 1 <br> CRT TEST

In this test the cross hatch and colour bars are displayed in order to adjust the monitor correctly i.e. brightness \& colour.

To exit this test press Player 2 Start button and you will now be in gun test mode.

## TEST 2

## GUN TEST MODE

If you need to set up the guns press Player 2 Start button to enter. If the guns are set ok and you want to go onto the next test mode then press Player 1 Start button.

How to set the guns up
Point Player 1 gun at the top left hand side of the screen. There should be a yellow indicator flashing, when you press the trigger this position will then be set and the indicator will now flash in the centre of the screen. Point the gun at this and then pull the trigger to set. The indicator will now move to the bottom right hand side of the screen. Point the gun at this and pull the trigger to set.
NOTE: When setting gun to the centre of the screen it might not set directly on the target. Therefore lower the gun about one inch below the indicator and set.

Once you have set Player 1 gun, you will automatically go to Player 2 gun, and the procedure is as for Player 1 gun set up.

After both guns have been set up you are asked to INITIATE EEPROMS.
Press Player 2 Start button to set once this has been done, the screen will now display:EEPROM "WRITE" OK
EROM "READ" OK
Press Player 2 Start button to go onto next test mode.
TEST 3
FUNCTION TEST

| COIN A | OFF | COIN B | $:$ OFF |
| :--- | :--- | :--- | :--- |
| SERVICE | $\vdots$ OFF |  | OF2 START |
| PL1 START | $:$ OFF | OFF |  |
| PL1 TRIGGER | $\vdots$ OFF | PL2 TRIGGER | OFF |
| PL1 BOMB | $:$ OFF | PL2 BOMB | $:$ OFF |
| PL1 PEDAL | $:$ OFF | PL2 PEDAL | OFF |

DIP SW A
$\begin{array}{llllllll}1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ \mathrm{H} & \mathrm{H} & \mathrm{L} & \mathrm{H} & \mathrm{H} & \mathrm{H} & \mathrm{H} & \mathrm{H}\end{array}$
DIP SW B
L L H H H H H H ( H: OFF)

## SOUND CODE 0

RAM OK
ROM OK
SOUND OK

Press any of the switch's and for example if you press Service then the screen will display SERVICE: ON etc.

To Exit test mode turn the machine off turn Dip Sw A-3 off and then turn the machine back on. The machine will now be in normal game mode.

## EDGE CONNECTOR

|  | Ct? | $\mathrm{Pef}^{2}$ |  |  |
| :---: | :---: | :---: | :---: | :---: |
| BLK | GND | \| A | 1 | | GND | BLK |
| BLK | GND | \| $\mathrm{B}\|2\|$ | GND | BLK |
| PNK | $+5 \mathrm{v}$ | \| C | 3 | | $+5 \mathrm{v}$ | PNK |
| PNK | $+5 \mathrm{v}$ | \| D | 4 | | $+5 \mathrm{v}$ | PNK |
| VIO | -5v | \| 151 | -5v | VIO |
| RED/BLK | $+13 \mathrm{v}$ | \| F | 61 | +12v | ORG |
| KEYWAY |  | \| H | 71 | KEYWAY |  |
| ORG/GRN | SP L- | 1 J \| 8 | | SP L+ | ORG/VIO |
| GRY/WHT | SP $\mathrm{R}^{-}$ | \| K | 91 | SP R+ | GRY/BLK |
| YEL/RED | ROTARY 2 | $1 \mathrm{~L}\|10\|$ | ROTARY 1 | YEL/BRN |
| YEL/GRN | ROTARY 3 | \| M | 11 | |  |  |
| GRN/BLK | START PL 1 | \| N | 12 | |  |  |
| GRN/RED | START PL 2 | \| P | 13 | |  |  |
| BLU/BLK | BOMB PL 1 | \| R | 14 | |  |  |
| WHT/BLU | TRIGGER PL1 | \| $\mathrm{S} \mid 15$ \| | BOMB PL2 | RED/GRN |
| RED/BLU | TRIGGER PL2 | \| T | 16| | SERVICE SW | GRY/BLU |
| YEL/BLK | COIN SW B | \| U | 17 | | COIN SW A | ORG/BLK |
| WHT/YEL | METER B | $\mid$ V \| 181 | METER A | WHT/ORG |
|  |  | \| W | 191 |  |  |
| RED/WHT | COIL 2P | \| X | 201 | COIL 1P | RED/YEL |
| GRN | VIDEO GRN | \| Y 121 | | VIDEO RED | RED |
| WHT | VIDEO SYNC | \| Z | 221 | VIDEO BLUE | BLU |
| GRY/GRN | VR 2P X | \| AAl 231 | VIDEO GROUND | BLK |
| GRY/RED | VR SP Y | \| ABl 24 | | VR 1P X | YEL |
| YEL/BLU | ACCEL 1 | $\mid \mathrm{ACl} 251$ | VR 1P Y | GRY |
| BLU/YEL | ACCEL 2 | \| ADl 26 | |  |  |
| BLK | GND | \| AEI 27 | | GND | BLK |
| BLK | GND | \| AFl 281 | GND | BLK |


| $\frac{\text { CONNECTOR LBS }}{\text { PIN }}$ |  | 9 WAY | AMP M + L MALE HSNG | (MALE PINS) |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | FUNCTION |  |
| 1 | PNK |  | +5VDC |  |
| 2 | PNK |  | +5VDC |  |
| 3 |  |  |  |  |
| 4 | BLK |  | GROUND |  |
| 5 | BLK |  | GROUND |  |
| 6 | BLK |  | GROUND |  |
| 7 | BLK |  | GROUND |  |
| 8 | ORG |  | +12VDC |  |
| 9 | VIO |  | -5VDC |  |
| CONNECTOR MS |  | 4 WAY | AMP M+L MALE HSNG | (MALE PINS) |
| PIN | COLOUR |  | FUNCTION |  |
| 1 | BRN |  | 135v |  |
| 2 | RED/BRN |  | 0 v |  |
| 3 | ORG |  | 0 v |  |
| 4 | YEL |  | 240v |  |


8 GRY/YEL +24VDC

| GRY/YEL | $+24 V D C$ |
| :--- | :--- |
| GRY/YEL | $+24 V D C$ |


| CON | OR V | 12 WAY AMP M+L MALE HSNG (FEMALE PINS) |
| :---: | :---: | :---: |
| PIN | COLOUR | FUNCTION |
| 1 | BLK/BLU | VIDEO GROUND |
| 2 |  |  |
| 3 | BLU | VIDEO BLUE |
| 4 | WHT | VIDEO SYNC |
| 5 | RED | VIDEO RED |
| 6 | GRN | VIDEO GREEN |
| 7 | BRN | 135V MONITOR SUPPLY |
| 8 |  |  |
| 9 | YEL | 240 V MONITOR SUPPLY |
| 10 | RED/BRN | 0 V MONITOR SUPPLY |
| 11 |  |  |
| 12 | ORG | OV MONITOR SUPPLY |




| CONNECTOR C |  |
| :--- | :--- |
| PIN |  |
| 1 | COLOUR |
| 2 | ORG |
| 3 | PNK |
| 4 |  |
| 5 | BLLBLK |
| 6 | ORG/BLK |

```
6 \text { WAY AMP M+L HSNG (MALE PINS)}
    FUNCTION
    +12VDC
    +5VDC
    COIN 2
    GROUND
    COIN 1
`ONNECTOR A 4 WAY AMP MINI M+L FEMALE HSNG (MALE PINS)
4 WAY AMP MINI M+L FEMALE HSNG (MALE PINS)
FUNCTION GROUND
ACCEL 1
ACCEL 2
EARTH
```

| PIN |  | COLOUR |
| :--- | :--- | :--- |
|  |  |  |
|  | BLK |  |
| 3 |  | YEL/BLU |
| 3 |  | BLU/YEL |
| 4 |  | GRN/YEL |


| CONNECTOR E |  | 3 WAY AMP M+L FEMALE HSNG (MALE PINS) |
| :--- | :--- | :--- |
| $\frac{\text { PIN }}{1}$ | $\frac{\text { COLOUR }}{\text { PNK }}$ | $\frac{\text { FUNCTION }}{+5 \mathrm{VDC}}$ |
| 2 |  |  |
| 3 | WHT/RED | CREDIT BD METER (If electronic mech fitted) |

CONNECTOR SERVICE SW PUSH SWITCH

COLOUR
GRY/BLU
BLK
ONNECTOR VOL.
COLOUR
YEL/BRN
YEL/RED
YEL/GRN
CONNECTOR H
COLOURS
GRN/BLK
GRN/RED
BLK
CONNECTOR SP
COLOUR
ORG/VIO
ORG/GRN
GRY/BLK
GRY/WHT

FUNCTION
SERVICE SW
GROUND
ROTARY MIGET WAFER SWITCH
FUNCTION
VOLUME 1
VOLUME 2
VOLUME 3
0.187" FASTONS + COVERS

FUNCTION
START PL1
START PL2
GROUND
BOMB TERMINATIONS
FUNCTION
SPEAKER L+
SPEAKER $L^{-}$
SPEAKER R+
SPEAKER R-

## COIN CONTROLS CCU

TECHNICAL DATA

## APPLICATIONS

CCU with sentinel
The CCU is designed to work with the sentinel 30 range of validators in a single or dual currency mode. All connections to the validators are directly from the CCU. Connections to the host machine being via the 6 way connector. If it is required that the host machine controls inhibits directly then the inhibit wiring will need to be modified to suit the application.

## SWITCH SETTINGS FOR CCU

## Totalising switch

As each coin is accepted, the number of credits generated by the coin are calculated by dividing the coin value by the price per credit. The result is added to the credit total. In non-totalise mode, if the coin is 20 p or 10 p , any money remaining after the credit calculation is added to the next $20 \mathrm{p} / 10 \mathrm{p}$ entered before the next credit calculation is performed. If the coin is $£ 1$ or 50 p then the additional credits will also be added to the credit total. totalise mode all 20 p and 10 p coins are added together. Whenever this total exceeds $\mathfrak{f} 1$ or 50 p then the corresponding additional credits are added to the credit total. A time limit is placed on the totalisation to prevent the money total from being passed from one used to the next.

| S11 ON | - TOTALISE MODE |
| :--- | :--- | :--- |
| S11 OFF | NON TOTALISE MODE |

## CURRENCY SELECT SWITCH

Most coin sets have a fixed ratio of $100,50,20,10 \mathrm{eg} .100 \mathrm{p}, 50 \mathrm{p}, 20 \mathrm{p}, 10 \mathrm{p}$, but a small number of coin sets possess a different ratio eg. 100 cents, 25 cents, 10 cents, 5 cents. On the CCU an option switch is available to allow an operator to select the coin set required. When the standard coin set is selected, the meter output pulses are in units of 10 p. For the non-standard coin set, the meter output pulses are in units of 5 c .

$$
\begin{array}{lll}
\text { S12 ON } & - \text { NON-STANDARD COIN SET }(100,25,10,5) \\
\text { S12 OFF } & - \text { STANDARD COIN SET }(100,50,20,10)
\end{array}
$$

## INHIBIT SWITCHES

The inhibit switches are connected directly to the sentinel. There are individual switches for 11-14 and 15,6 and 17,8 .
NOTE: When sentinel is used in dual currency mode, and 15,6 and 17,8 are enabled by setting SW17 and 18 on. Then both currencies must have the same coin ratios.

### 4.4 PRICE SETTING

The price settings switches are arranged in three groups:- 5 switches for the basic price per credit, 3 switches for the number of additional credits bought by the highest value coin eg. $£ 1$.
2 switches for the number of additonal credits bought by the second highest value coin eg. 50p.

PRICE PER GAME FOR 100, 50, 20, 10 COIN SET

| SW1 | SW2 | SW3 | SW4 | SW5 | UNITS/GAME |
| :---: | :---: | :---: | :---: | :---: | :---: |
| X | ON | ON | ON | ON | 5 |
| X | OFF | ON | ON | ON | 10 |
| X | ON | OFF | ON | ON | 20 |
| X | OFF | OFF | ON | ON | 30 |
| X | ON | ON | OFF | ON | 40 |
| X | OFF | ON | OFF | ON | 50 |
| X | ON | OFF | OFF | ON | 60 |
| X | OFF | OFF | OFF | ON | 70 |
| X | ON | ON | ON | OFF | 80 |
| X | OFF | ON | ON | OFF | 90 |
| X | ON | OFF | ON | OFF | 100 |
| X | OFF | OFF | ON | OFF | 110 |
| X | ON | ON | OFF | OFF | 120 |
| X | OFF | ON | OFF | OFF | 130 |
| X | ON | OFF | OFF | OFF | 140 |
| X | OFF | OFF | OFF | OFF | 150 |

ADDITIONAL GAMES FOR HIGHEST VALUE COIN(COIN 1)

| SW6 | SW7 | SW8 | FUNCTION |
| :---: | :---: | :---: | :---: |
| ON | ON | ON | NO ADDITIONAL GAMES |
| OFF | ON | ON | 1 ADDITIONAL GAME |
| ON | OFF | ON | 2 ADDITIONAL GAMES |
| OFF | OFF | ON | 3 ADDITIONAL GAMES |
| ON | ON | OFF | 4 ADDITIONAL GAMES |
| OFF | ON | OFF | 5 ADDITIONAL GAMES |
| ON | OFF | OFF | 6 ADDITIONAL GAMES |
| OFF | OFF | OFF | 7 ADDITIONAL GAMES |

ADDITIONAL GAMES FOR SECOND HIGHEST COIN (COIN 2)

| SW9 |  | SW10 |
| :--- | :--- | :--- |
| ON |  | FUNCTION |
| OFF | ON |  |
| OFOADDITIONAL GAMES |  |  |
| ON | ON |  |
| OFF ADDITIONAL GAME |  |  |
| OFF | OFF |  |
|  | OFF ADDITIONAL GAMES |  |

TOTALISING SWITCHES
SII ON TOTALISE MODE
S11 OFF NON-TOTALISE MODE
CURRENCY SELECT SWITCHES
S12 ON NON-STANDARD COIN SET (100, 25, 10, 5)
S12 OFF STANDARD COIN SET (100, 50, 20, 10)
INHIBIT SWITCHES

| S13 | COIN 1 | ON $=$ ACCEPT | OFF $=$ INHIBIT |
| :--- | :--- | :--- | :--- |
| S14 | COIN 2 |  |  |
| S15 | COIN 3 |  |  |
| S16 | COIN 4 |  |  |
| S17 | COIN 516 |  |  |
| S18 | COIN 718 |  |  |

## PINOUT INFORMATION

## PIN COLOUR

| 1. YEL/BLK | $10 p$ | MICROSWITCH OR N.P.N OPEN COLLECTOR INPUT. |
| :--- | :--- | :--- |
| 2. NIC | 10 p | MICROSWITCH OR N.P.N. OPEN COLLECTOR INPUT. |
| 3. WHT/BLU | 10 p | PNP INPUT (MS 111/SENTINEL) |
| 4. N/C | 20 p | INPUT (MICROSWITCH) |
| 5. WHT/GRN | 20 p | INPUT (MS 111/SENTINEL) |
| 6. N/C | 50 p | INPUT (MICROSWITCH) |
| 7. WHT/BLK | 50 p | INPUT (MS 111/SENTINEL) |
| 8. N/C | $£ 1$ | INPUT (MICROSWITCH) |
| 9. WHT/YEL | $\mathfrak{£ 1}$ | INPUT (MS 111/SENTINEL) |
| 10. BLU/BLK | 0 | VOLTS (10p INHIBIT) |
| 11. BLU/YEL | 0 | VOLTS (20p INHIBIT) |
| 12. BLU/ORG | 0 | VOLTS (50p INHIBIT) |
| 13. BLU/WHT | 0 | VOLTS (£1 INHIBIT) |
| 14. BLACK | 0 | VOLTS |
| 15. BLACK | 0 | VOLTS |
| 1. N/C | 0 | VOLTS |
| 17. N/C | 0 | VOLTS |
| 18. ORANGE | $+12 v$ | DC |
| 19. ORANGE | $+12 v$ | DC |
| 20. ORANGE | $+12 v$ | DC |
| 21. BLU/VIO | - POSITIVE COMMON FOR MS111/SENTINEL |  |
| 22. WHT/RED | METER OUTPUT (NPN OPEN COLLECTOR) |  |
| 23. ORG/BLK | CREDIT OUTPUT (NPN OPEN COLLECTOR) |  |
| 24. N/C | 0 | VOLTS |

NOTES:- 1) Use 0 volts for negative common if plugging into MS 125 seperator unit.
2) Ensure that there is no coin meter connected across any input, eg. via a microswitch or an adaptor card.
NOTE: On most unigame adaptors pin 10 is linked to pin 24 , and pin 11 is linked to pin 25 , these links should be removed completely. Then short pin 11 to pin 12 on the adaptor card. This then uses the output from the credit board meter drive.
3) The meter will always total cash in $10 p$ units regardless of any credit setting.
4) More than one coin mech may be fed into the PCB.

| e.g. A) | S 10 | (up to four) |
| ---: | :--- | :--- |
| B) | S 10 | X MS 111 |
| C) | S 10 | X MS 125 |
| D) | S 10 | X Sentinel |

5) Most credit boards are supplied with a standard credit loom. (Part No 16315) fitted with a male 6 way amp mate ' $N$ ' lock connector.

Pinouts are shown below.
PIN COLOUR FUNCTION

| 1. ORANGE | $+12 v$ | DC SUPPLY |
| :--- | :--- | :--- |
| 2. PINK | $+5 v$ | DC (LAMP SUPPLY) |
| 3. N/C |  |  |
| 4. WHT/RED | TO COIN METER |  |
| 5. BLACK | Ov DC |  |
| 6. ORG/BLK | COIN INPUT TO GAME PCB. |  |

## DIP SWITCH SETTINGS V-2

| FUNCTION | $\underline{1}$ | $\underline{2}$ | $\underline{3}$ | $\underline{4}$ | $\underline{5}$ | $\underline{6}$ | $\underline{7}$ | $\underline{8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Bonus Games |  | Not used |  |  |  |  |  |  |


| None | on | on |
| :--- | :--- | :--- |
| For every 50p | off | on |
| For every $£ 1$ | on | off |
| For every $£ 2$ | off | off |


| 1 Pulse per credit | on |
| :--- | :--- |
| 2 Pulses per credit | off |

Price per play

| 10 p | on | on | on |
| :--- | :--- | :--- | :--- |
| 20 p | off | on | on |
| 30 p | on | off | on |
| 40 p | off | off | on |
| 50 p | on | on | off |
| 60 p | off | on | off |
| $£ 1$ | on | off | off |
| £2 | off | off | off |

Please Note:- A bonus game will only be awarded if the game price of play is less than the bonus value set. Also if a mixture of coins are inserted, the time interval between coins inserted must be of less than 5 seconds for the bonus to be awarded.

EXAMPLES OF SETTINGS (FOR £1 INSERTED).

| Price of Play | Bonus Games | Credits | Bonus | Total |
| :---: | :---: | :---: | :---: | :---: |
| 10p | off | 10 | None | 10 |
| 10p | For every 50p | 10 | 2 | 12 |
| 10p | For every £1 | 10 | 1 | 11 |
| 20p | off | 5 | None | 5 |
| 20p | For every 50p | 5 | 2 | 7 |
| 20p | For every £1 | 5 | 1 | 6 |
| 30p | off | 3 | None | 3 |
| 30p | For every 50p | 3 | 2 | 5 |
| 30p | For every £1 | 3 | 1 | 4 |
| 40p | off | 2 | None | 3 |
| 40p | For every 50p | 2 | 2 | 4 |
| 40p | For every £1 | 2 | 1 | 3 |
| 50p | off | 2 | None | 2 |
| 50p | For every $£ 1$ | 2 |  | 3 |




ITEM
DESCRIPTION
Gun Assy
GRIP A

## GRIP B

GUN BODY A
GUN BODY B
SLIDE GRIP BASE
SLIDE GRIP A
SLIDE GRIP B
BASE COVER L
BASE COVER R


DESCRIPTION
Gun Assy

1

2

3
4
5
6

7

8
9
10

## MASK

SUB SHAFT
SIDE BRACKET R
OILES DRYMET FLANGE BUSH LFF-1510
STOPPER RUBBER A
SIDE BRACKET L
OILES FLANGE BUSH 80F-0905
SHAFT BRACKET
UP BASE
OILES FLANGE BUSH
80F-1810
STOPPER RUBBER B
WASHER
UNDER BASE
GEAR A
GEAR BRACKET
GEAR B
VOLUME BRACKET
VARIABLE RESISTER EWSWI1L F20E53 B-5K
SPACER 5L
TENSION SPRING


Gun Assy

DESCRIPTION
SOLENOID BRACKET
RUBBER LEG ..... K-24
FRAME
PLUNGER
CUSHION RUBBER
SOLENOID SPRING
SOLENOID
DIODE ..... IN4003
L BRACKET
TRIGGER BRACKET
TRIGGER
TRIGGER SPACER
TRIGGER SPRING
SLIDE BASE
SLIDE BUSH
SLIDE SHAFT
SLIDE STOPPER RUBBER
RETURN SPRING
SPRING SPACER
PUSH BUMPER ..... RB-516
STOPPER BRACKET
MICRO SWITCH SS-5GL2
MAGNET BRACKET
MAGNET
MAGNET COVER
K HARNESS
-

## ELECTROCOIN AFTERSALES \& SERVICE LTD

The above company has been formed as part of the Electrocoin Automatics Group at the Cardiff factory to provide the AfterSales Service necessary to support the variety of machines manufactured by Electrocoin Automatics Ltd. The company will be responsible for servicing both Spares and Technical requirements for all U.K. manufactured Electrocoin machines, all "Famous Games" products, and all Board Games distributed by Electrocoin Ltd.

Normal working hours are Monday to Friday 08.00 to 17.30 and Saturday morning 08.00 to 12.30 .

AfterSales \& Service Tel No: 0222373059 during working hours, 0836536195 after hours/weekends.
Please contact the following staff for:-

PARTS ENQUIRIES - GARY SCOBLE
TECHNICAL INFORMATION - IAN COLLEY
ACCOUNTS ENQUIRIES - JULIE TIPPER
WORKSHOP MANAGER - MIKE CALLAN
CREDIT CONTROLLER - STEPHEN HARRIS

PLEASE REMEMBER. TO HELP US HELP YOU, PROMPT RETURN OF FAULTY PARTS IS ESSENTIAL.

Assuring you of the best attention at all times.

JEFF LANGLEY
General Manager

ELECTROCOIN AFTERSALES \& SERVICE LTD.

## スペースガンからの改造 <br> Fof space coun


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