# QUARTERBACK


# OWNERS AND SERVICE MANUAL

**The Jumping Bean Company / Bell-Fruit Games Ltd. / Mazooma Games Ltd.**

**Distributed By:**

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# WARRANTY

Seller warrants that its microprocessor unit and parts thereon, are and shall remain free from defects in material and workmanship under normal use and service for a period of six months from date of purchase.

Seller warrants that other products or parts thereof shall remain free from defects in material and workmanship under normal use and service for a period of 90 (ninety) days from date of purchase.

If the products described in this manual fail to conform to this warranty, seller's sole liability shall be at it's option to repair, replace or credit buyer's account for such products which are returned to seller during said warranty period, provided:

a) Buyer promptly notifies seller in writing upon discovery that the said products are defective.

b) Such products are returned prepaid to seller's plant.

c) Seller's examination of said products discloses to seller's satisfaction that such alleged defects existed and were not caused by accident, neglect, alteration, improper repair, installation or improper testing.

d) Only seller's recommended or approved electronic components are used as service replacements.

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Tel: 0115 9706707

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# SAFETY INSTRUCTIONS

3.1 Product Safety

An equally wide range of manufacturers supplies the wide range of components used in the machine. It is therefore impracticable for this document to provide comprehensive safety data for each product used. Manufacturers data sheets can be supplied upon request.

All the items contained within the machine are used within their specification limits and in accordance with sound engineering practice.

3.2 Electrical Safety General

All machines are tested for electrical safety prior to being despatched. The tests are for Earth Bond and Insulation. It is recommended that these tests are repeated annually or whenever safety critical parts and connections are replaced.

Disconnect the mains power supply before attempting to dismantle or repair any part of the machine.

Always observe high voltage and hazard warning labels.

Be aware of capacitors fitted to the machine PSU. Use only the specified fuses stated in the machine and in this manual.

Always refit safety covers and safety earth wires connected to metal parts.

Earth/Insulation specifications for BFG machines are: -

Insulation > 2 Megohms @ 500V dc.
Earth Bond < 0.25 ohms @ 25 amps.

# SAFETY INSTRUCTIONS

3.3 Chemical Safety

Attention is drawn to the possible effect of accidental damage to components where they contain chemicals that may be hazardous. Components that fall into this category are: -

**Electrolytic Capacitors**
**Nickel Cadmium Batteries**
**Semi-Conductors containing Beryllium Oxide and Gallium Arsenide**
**Opto-Electronic devices using Gallium Phosphide**

As the chemicals are corrosive or flammable, particular care must be exercised in case of spillage. Any part of the body that accidentally comes into contact with these chemicals must be thoroughly washed in cold running water, particularly if the eyes are affected. Medical advice should be sought.

3.4 Fire Safety

Outer casings of the majority of the components used are made of heat resistant material. Excessive electrical overload conditions may generate sufficient heat to ignite chemical substances within the components themselves or adjacent components, harnesses etc.

**NOTE: It is imperative that only identical value components are used as replacements for the original equipment supplied and that correct polarity of assembly is observed when applicable.**

# SAFETY INSTRUCTIONS

3.4 Fire Safety (continued)

Materials that fall into the Fire Hazard category are: -

**Chipboard and MDF** - releases Formaldehyde vapours when ignited, causes discomfort to the eyes and mucous membranes.

**Plastic Laminates -** plastic and rubber mouldings, wire insulation etc., release noxious fumes, which if inhaled may cause irritation depending on the sensitivity of the individual.

**Glass** - extreme heat will cause the glass to crack thereby causing injury.

**Electrolytic Capacitors** and **Batteries -** may explode if subjected to fire.

**Foamex** – flammable.

3.5 Disposal of Hazardous Components

As a general rule, electronic components should not be incinerated due to the possible danger of noxious fumes being released, or components exploding due to a build up of internal pressures created by expanding gases.

# INSTALLATION INSTRUCTIONS & DAILY CHECKS

4.1 General

It is the policy to ensure that all products are designed, manufactured, tested and released to conform to statutory safety requirements. In support of this policy the information contained within this manual is intended as a guide to the safe installation, reliable working and efficient operation of the machine supplied.

Therefore prior to installation or when servicing, reference to the service manual and all **WARNING LABELS** provided is strongly recommended. Failure to observe any information may result in a safety hazard.

**CAUTION**: Under no circumstances should any major form of installation, repair, adjustment or maintenance be attempted by any other than qualified personnel.

4.2 Physical Check

Ensure that the machine is positioned on a level stable surface and remove all of the transit packaging. Open all doors and check that all parts are secured, electrical connectors are correctly mated and that no components or assemblies have been damaged in transit.

4.3 Internal Electrical Connectors

The introduction of insulation displacement connectors (IDC) and the use of lighter cables emphasise the need for care when removing and replacing connectors.

When removing connections, pull on the connector and not the wires; when replacing connections ensure that (i) the harness housing is being connected to the correct wafer (ii) the housing is the correctly oriented (Observe positions of polarising pins).

4.4 Electrical Supply **WARNING: This Apparatus must be EARTHED.**

Connect the machine to the mains supply (110/120Vac) using an approved plug. The mains lead is factory fitted to the machine.

**IMPORTANT**: The wires in the mains lead are coloured in accordance with the following code.

| | | |
|---|---|---|
| GREEN AND YELLOW | : | EARTH |
| BLUE | : | NEUTRAL |
| BROWN | : | LIVE |

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

1. EARTH: The wire coloured GREEN and YELLOW must be connected to the terminal marked 'E' or by the safety earth symbol or coloured GREEN, or GREEN and YELLOW.
2. NEUTRAL: The wire coloured BLUE must be connected to the terminal marked 'N' or coloured BLACK.
3. LIVE: The wire coloured BROWN must be connected to the terminal marked 'L' or coloured RED.

4.5 DIL Switch Settings at Power Up

On machine power up, please ensure that all DIL switches are in the OFF position bar DIL switch 16 which should be on.

4.6 Dimensions

| | |
|---|---|
| Height | 1840 mm |
| Width | 710 mm |
| Depth | 709 mm |
| Weight | 135 Kg |

4.7 Fitting Top Display

If the Top Display is separate from the machine, remove any packing material and position the top display on cabinet top. Make sure electrical connections are in the correct position.

The top sign electrical connection is in play section two.

Use M6 nuts and washers supplied to secure top display to cabinet top.

4.8 Abbreviations:

- **Coin Entry** - slot in the coin entry panel where player may insert a coin to play.
- **Coin chute** - metal chute that guides a token from the escalator hopper to the centre pin perspex.
- **Centre pin perspex** - large perspex panel fitted with scatter pins that guide the coin down onto the pusher pad.
- **Pusher pad** - the moving pad assembly located at the rear of the playfield.
- **Playfield** - flat bed holding the coins to be pushed into the win chute.
- **Win chute** - large metal form located under front edge of playfield to guide falling tokens to the escalator hopper.

# INSTALLATION INSTRUCTIONS & DAILY CHECKS

4.9 Daily Checks:

- Check the machine is clean inside and outside
- Check all the lamps are working.
- Check pusher pads are moving.
- Check coin chutes are clear of any jammed coins or foreign matter.

# Game Description

## 5.1 Description

The standard pusher has a playfield with a reciprocating pusher that continuously moves back and forwards and a swinging arm chute to direct the coins. All coins accepted increments the game credits on the alphanumeric display. No coins inserted go to the playfield.

All coins that are fed on the playfield are dispensed from the escalator hopper and all coins pushed over the playfield are counted the returned to the escalator hopper in a continuous loop.

The player has a “Fire” button to dispense the required number of coins to the playfield and a “Skill stop” button which enables the player to place his coin on the playfield in the desired position with the swinging arm.

Any coins pushed forward over the front of the playfield are counted then banked as wins on the alphanumeric display. Coins falling down the sides are “lose holes” and are returned to the escalator hopper without being counted.

If the machine is tilted during play, any coins counted during this period are not banked as wins. When the machine stabilises, these coins are returned to the playfield.

Banked wins may only be collected when the machine is out of credit.

All coins are paid with separate hoppers in the normal way.

A serial meter monitors accountancy.

# Operator adjustments

6.1 Pendulum tilt assembly.

There is one pendulum tilt assembly located inside the cabinet, near the top to the left of the back door.

(See figure 2).

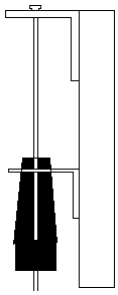


Figure 2 - pendulum tilt.

This swinging weight type assembly is designed to detect moving or tipping of the machine and needs no adjustment as long as the weight is central to the circular contact and is free to move.

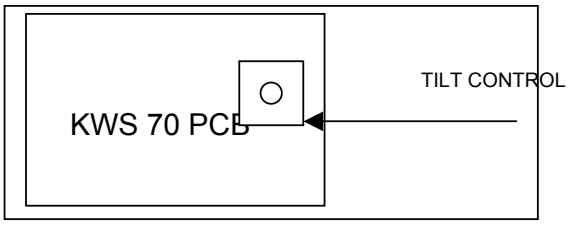
6.2 Adjustment of “lose” hole size.

The “lose” holes are located one each side of the front edge of the play-field, are factory set. It is not recommended changing this setting

6.3 Adjustment of Tilt time.

The tilt time period can be adjusted as follows:

- Remove the bottom service door from section one.
- Locate the small PCB mounted near to the isolating switch.
- With a small screwdriver, turn the small control anti-clockwise to increase the tilt time.
- The factory setting is ten seconds.




6.4 Playfield Riser.

Located at the play-field front edge.

The angle of the hinged chromium plated riser is factory set according to the coin of play.

Loosening the lock nut and turning the screw at the center of the riser can adjust this angle.

Turning the screw clockwise causes a steeper angle. An increased angle causes an increase in coin build-up and vice versa.

# Fault - finding guide.

7.1 The machine does not work

**Check**

- Mains wall outlet is switched "on".
- "On/off" switch on the power supply.
- Damage to mains inlet cable.
- Fuse 1 (T10A) located on the power in line.

7.2 The tilt does not work.

When the machine is tilted (pendulum tilt in top) "TILT" is displayed on the alphanumeric for 30 seconds.

**Check**

- The tilt contacts are not dirty or so far apart they do not to touch when the machine is banged.
- The orange/green and black wires are connected.

7.3 The tilt will not stop.

**Check**

- The tilt contacts are not bent together.
- The pendulum tilt is operating

7.4 No ticket pays out

**Check**

- There are tickets at ticket dispenser.
- There are no ticket jams.
- Electrical connections to ticket dispenser.
- Check the coin count hopper is functioning correctly

7.5 The halogen lamps do not work.

The 12v 50w halogen lamps are connected to the torroidal transformer on the centre lighting shelf behind the power supply unit. The lamps are wired in pairs and each pair is protected by an in line fuse.

**Check;**

- The 5-ampere inline fuses and wiring connections

## Regulated Parameter Settings

A test facility is provided to set certain machines parameters. The following tests are only applicable to machines with an alphanumeric fitted.
During test, the front door must remain open, the machine must not be in credit or the counters will not operate.

To enter the test routines,

- open the front door of the machine
- ensure DIL switch 16 is on
- ensure all other DIL switches are OFF
- press the green test switch once.

The following rules apply to all tests:

1. To scroll down through the parameter settings press the left-hand button.
2. To scroll up through the parameter settings press the centre button.
3. To enter any of the parameter settings press the right hand button.
4. To set any of the parameter settings press the right hand button.
5. To exit any of the parameter settings press the right hand button.

Each test is identified as follows:

i) SET STAKE
ii) SET TICKET/PNTR
iii) SET MERCY TICKET
iv) SET PRIZE LEFT
v) SET PRIZE RIGHT
vi) DISPLY VIB
vii) SET VIB LEVEL
viii) AUTO LOAD BED

# Regulated Parameter Settings

SET STAKE

The parameter set here regulates the number of games per price of play. In this instance the limit can be set as follows

1 game/25cents up to and including 25 games/25cents.

SET TICKET/PNTR

Entering this setting allows the selection of the ticket printer ON or OFF. The display toggles between ON and OFF using the left-hand and center buttons respectively.

SET MERCY TICKET

The parameter set here regulates the number of tickets per price of play (25c).
Selecting 0 on the display sets the mercy ticket OFF.
Selecting between 1 and 10 on the display regulates the number of tickets per price of play (25c).

SET PRIZE LEFT

The parameter set here regulates the number of points required by the player to obtain a prize from the left-hand vend unit.
This point selection can be regulated between 100 and 10,000 points.

SET PRIZE RIGHT

The parameter set here regulates the number of points required by the player to obtain a prize from the right-hand vend unit.
This point selection can be regulated between 100 and 10,000 points.

DISPLAY VIB

The display indicates the vibration readout.
On entering this procedure, VIB CTR is displayed. Jolting the machine will give a feel/indication of the vibration sensitivity and the required setting.

# Regulated Parameter Settings

SET VIB LEVEL

The parameter set here regulates the vibration setting.

This sensitivity level can be set between 50 and 150.

AUTO LOAD BED

This procedure is used to initially auto-load the coin bed. The bed will auto-fill via the escalator hopper until 100 coins have been sensed falling off the playfield.

## Regulated Test Sequences & Procedures

A test facility is provided to check the machines inputs and outputs.

The following tests are only applicable to machines with an alphanumeric fitted. During test, the front door must remain open, the machine must not be in credit or the counters will not operate.
To enter the test routines open the front door of the machine and press the green test switch once.

The following rules apply to all tests:

1. To step forward through tests press the left-hand button.
2. To step backwards through tests press the centre button.
3. To select any tests press the right hand button.
4. To exit from any test press the right hand button.

Each test is identified as follows:

| | | |
|---|---|---|
| TEST 1.1 COIN IN | TEST 7.1 COMMS | TEST 10.1 LAMPS |
| TEST 1.3 NOTES IN | TEST 8.1 AUDIO | TEST 10.3 CLEAR NVR |
| TEST 3.2 LAMPS | TEST 8.2 VOLUME | TEST 10.4 COIN DATA |
| TEST 6.1 METERS | | |

**TEST 1.1 COIN IN**

At test commencement, it is advisable to have the top door open.

On entering this test, the left-hand and the right hand buttons will flash.
In this state all coins are accepted and sent to the cash box or the appropriate hopper.

On placing a coin in the acceptor the alphanumeric will display one of the following messages (illustrated in bold text);

| Coin Entered | Displayed Alphanumeric Message |
|---|---|
| 25c | **??????** |

Pressing the left-hand button once will cause a reject of all coinage on acceptor entry.
Pressing the left-hand button once again reverts the coin acceptance back to its initial state.

Pressing the center button will set Divert mode. Only coins that can be diverted from their respective hopper will display the **DIV** message.

| Coin Entered | Displayed Alphanumeric Message |
|---|---|
| 25c | **??????DIV** |

Pressing the button 2nd from the left once again reverts the coin acceptance back to its initial state.

Pressing the right hand button exits the test and advances to
TEST 1.3 NOTES IN

**TEST 1.3 NOTES IN**

On entering this test, the left hand and the right hand buttons will flash.

The alphanumeric will display **1.3 NOTES IN**

Inserting a note into the note acceptor the following steps apply;

$1 Note Insert

a) note accepted
b) audio bleep confirming acceptance
c) note returned
d) Alphanumeric displays **1.3 1D ACC**

$2 Note Insert

a) note accepted
b) audio bleep confirming acceptance
c) note returned
d) Alphanumeric displays **1.3 2D ACC**

$5 Note Insert

a) note accepted
b) audio bleep confirming acceptance
c) note returned
d) Alphanumeric displays **1.3 5D ACC**

Pressing the left hand button will,

i) inhibit note acceptance
ii) extinguish the lamps above the note acceptor
iii) display on the alphanumeric **1.3 NOTES IN INH**

Pressing the left hand button once more will revert back to note acceptance.

Pressing the right hand button exits the test and advances to TEST 3.2 LAMPS

**TEST 3.2 LAMPS**

On entering this test the alphanumeric displays **3.2 FLASH** and all lamps will continually flash.

Pressing the left-hand button stops all but one lamp flashing.

On each individual press the left-hand button toggles between a single and all lamps flashing.

The alphanumeric now displays (for example) **3.2 000 CANCEL**

where **000** = lamp number,

and **CANCEL** = the text illuminated by the lamp

The buttons 2nd and 3rd from the right on the panel are active;

i) pressing the button 2nd from the right steps the display to the next lamp in sequence.

ii) pressing the button 3rd from the right steps the display to the previous lamp in sequence

Pressing the right hand button exits the test and advances to TEST 6.1 METERS

**TEST 6.1 METERS**

On entering this test only the left and right hand buttons flash.

The alphanumeric displays **6.1 METERS**.

Pressing the left-hand button initiates the SEC (Starpoint Electronic Counter) meter testing. The alphanumeric displays one of the following two messages;

**6.1 METER OK (implying the SEC meter test passes)**

**6.2 METER FAULT (implying the SEC meter test fails)**

Pressing the right hand button exits the test and advances to TEST 7.1 COMMS

**TEST 7.1 COMMS**

On entering this test the alphanumeric briefly displays **COMMS PORT 1** to indicate the port being tested.

If nothing is connected to this port, the display indicates **PORT FAIL**

If a Data Pack is connected to this port, the display indicates **DPAK PASS**

If pins 2 and 3 are shorted on the 25-way connector on the MPU, the display indicates **PORT PASS**

Pressing the right hand button exits the test and advances to TEST 8.1 AUDIO

**TEST 8.1 AUDIO**

On entering this test a sound sample is audible. This sample is tested on each of the eight sound channels.

For each channel tested the alphanumeric will display the channel being tested.

e.g. For a test of channel 5, the alphanumeric displays **8.1 SOUND CHAN 5**

Pressing the right hand button exits the test and advances to TEST 8.2 VOLUME

**TEST 8.2 VOLUME**

On entering this test the right-hand and second from the left-hand buttons flash. The left-hand button may also flash. This is dependent on the volume level already set on the machine (no volume and the left-hand button will not illuminate).

Control of the volume is as follows;

i) Pressing the button second from the left increases the volume

ii) Pressing the left-hand button decreases the volume

During this test the alphanumeric displays the percentage volume set. 100% can be indicated.

e.g. A volume set at 3 % will be displayed as **8.2 VOL MAIN 3PC**

Pressing the right hand button exits the test and advances to TEST 10.1 LAMPS

**TEST 10.1 LAMPS**

On entering this test all lamps machine lamps begin to flicker.

(This test works in conjunction with Output Allocations in Section Two)

Pressing the button second from the left stops the lamps flashing and the alphanumeric displays **10.1 ST 0 DAT 0**.

Throughout the test, the display indicates the strobe and data information for the lamp illuminated.

The buttons on the panel have the following test functions;

i) the button second from the left steps through the strobe information for each lamp.

2. the button fifth from the left illuminates all the lamps on a strobe line. This is used in conjunction with the button second from the left to step through the strobes.

iii) the button fourth from the left steps through the data information for each lamp. It also cancels the effects of pressing the button fifth from the left.

iv) the button third from the left causes all lamps to flash. It also cancels the effects of pressing the button fifth from the left.

Pressing the right hand button exits the test and advances to TEST 10.4 COIN DATA

**TEST 10.4 COIN DATA**

On entering this test the right-hand and second from the left-hand buttons flash.

The Alphanumeric will display **25c IN "A"**

where **"A"** = the number of quarters in the machine.

Pressing the button second from the left will sequentially step through the coin data as follows;

| | | | |
|---|---|---|---|
| 1. | **25c IN "A"** | 3. | **2D IN "A"** |
| 2. | **1D IN "A"** | 4. | **5D IN "A"** |

Pressing the right hand button exits the test and advances to TEST 10.5 GAME DATA

To clear the coin data re-enter test 10.4. Turn the refill key to the ON position.

'10.4 CLEAR DATA?' will be displayed, the buttons will illuminate and should be depressed in order, left to right.

'10.4 DATA CLEARED' will now be displayed.

The button lamps will now extinguish and the machine advances to TEST 1.1 COIN IN

Turn the refill key OFF.

## DEMONSTRATION MODE

With the front door open press the Start button and 50 credits will be displayed on the LED or alphanumeric display.

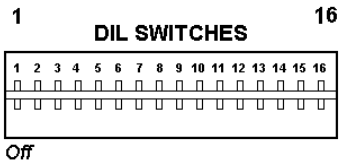
On entering the Demonstration mode a number of options are available:-

a) The game can be played normally.

b) By holding down the cancel button and any hold button the reel relating to the hold button can be stepped down to any position. All the reels will then be held for the next game. The reels can also be stepped up by holding down the cancel and collect button simultaneously and then the relative hold button.

## DIL Switch Settings and Functions

There is a bank of DIL switches on the MPU board, set horizontally, numbered 1 to 16 from left to right. Their functions are as follows:




SWITCH SETTINGS

| | | OFF | ON |
|---|---|---|---|
| 1 | ..... | | |
| 2 | **THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES** | | |
| 3 | **THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES** | | |
| 4 | ..... | | |
| 5 | ..... | | |
| 6 | ..... | | |
| 7 | ..... | | |
| 8 | ..... | | |
| 9 | ..... | | |
| 10 | **THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES** | | |
| 11 | Sound Effect In Attract Mode | On | Off |
| 12 | Invert Swing Arm Action | Move Arm | Stop Arm |
| 13 | **THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES** | | |
| 14 | **THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES** | | |
| 15 | **THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES** | | |
| 16 | Menu Set Up | Off | Enter |

## DIL Switch Settings and Functions

The standard settings for our machines will be with all 16 switches OFF. However, this can be varied to suit local conditions, as follows:

1. Not used.

2. THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES

3. THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES

4. Not Used

5. Not Used

6. Not Used

7. Not Used

8. Not Used

9. Not Used

10. THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES

11. Sound Effect In Attract Mode

With the DIL switch OFF, the sound effects are available.
With the switch ON, the sound effects are NOT available.

12. Invert Swing Arm Action

With the DIL switch OFF, the arm movement is available.
With the switch ON, the arm movement stops.

## DIL Switch Settings and Functions

13. THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES

14. THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES

15. THIS DIL SWITCH MUST REMAIN IN THE OFF POSITION AT ALL TIMES

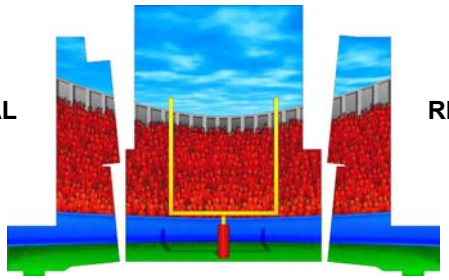
16. Menu Set Up

With the switch in the OFF the MENU is unavailable.

With the switch in the ON position the MENU can be entered.

# Machine BOM (Illustrated)

LH VERTICAL COVER
91.017.740



RH VERTICAL COVER
91.017.739

CENTRE PANEL SCREENED
91.017.735

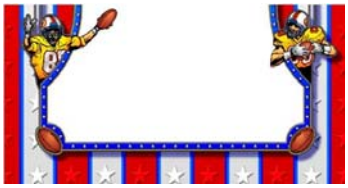

TICKET FRONT PANEL
91.017.736


LH SIDE COVER
91.017.738


RH SIDE COVER
91.017.737

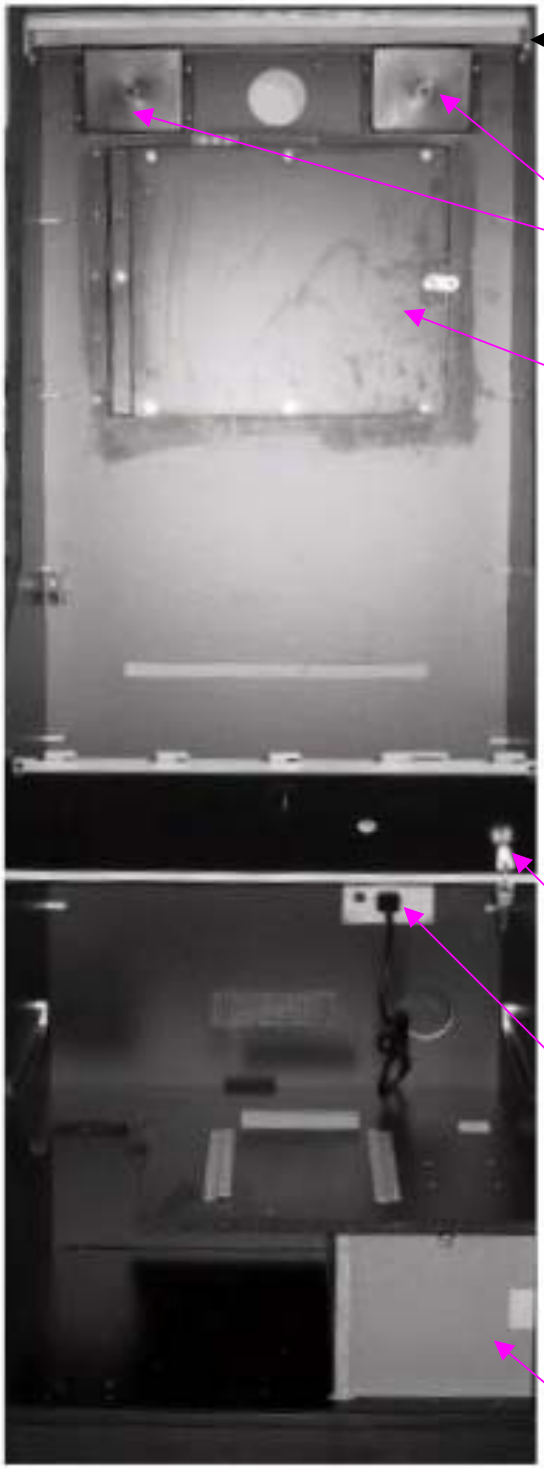

UPPER GLASS SCREENED
92.933.539

SKILL CHUTE FRONT
91.017.736



PLAYFIELD GLASS SCREENED
92.933.541

# Machine BOM (Illustrated)



99955067 – CABINET ASSEMBLY

91451392 – REAR VENTS

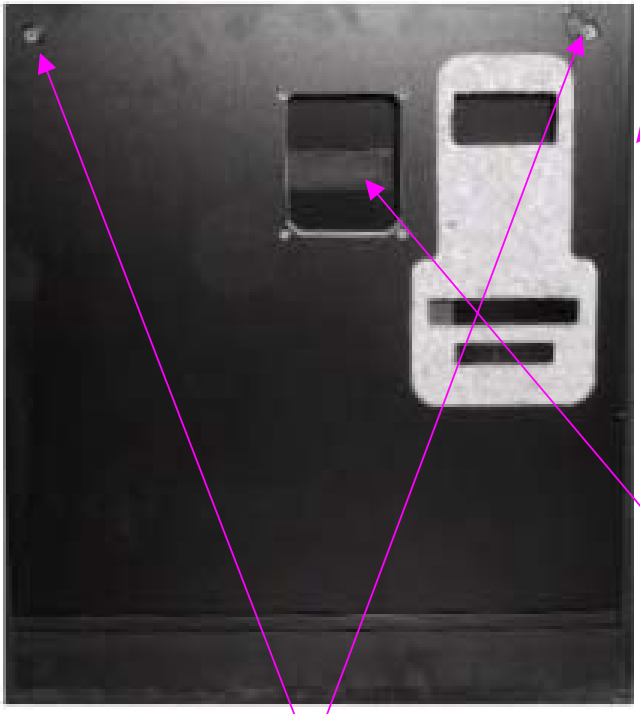
99255067 – REAR DOOR ASSEMBLY

48879101 - LOCK - INLINE KEY/SW - SAME KEY 2/F

96912231 - MAINS IN ASSY ECLIPSE

99095028 – CASH BOX DOOR ASSEMBLY (INNER)

# Machine BOM (Illustrated)



99095067 – OUTER CASH BOX DOOR ASSEMBLY

Note Readers (not shown)

90520138 - PLATE CARD READER MTG (INTERCARD)

90520139 - PLATE CARD READER MTG (RECO)

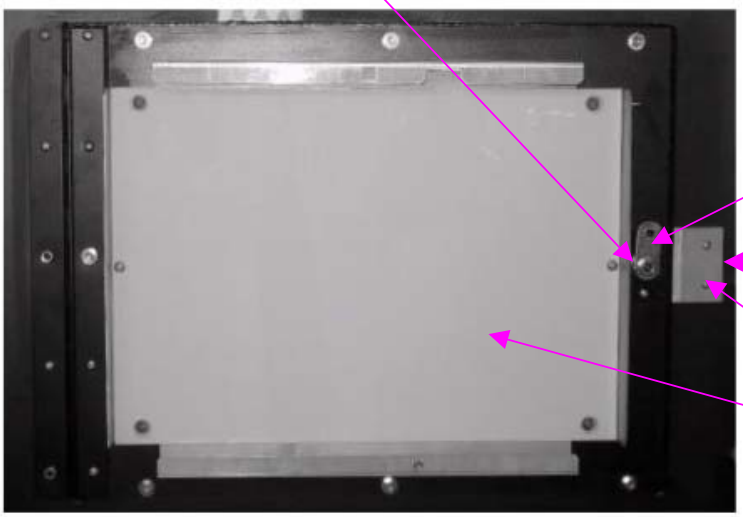
90520140 - PLATE CARD READER MTG (KDE)

90520141 - CHASSIS CARD READER MTG (KDE)

90520142 - PLATE CARD READER MTG (DKS)

90520143 - PLATE USA CARD READER BLANKING

48811100 - LOCKS (SET OF 4) BATTON RADIAL LOCKS



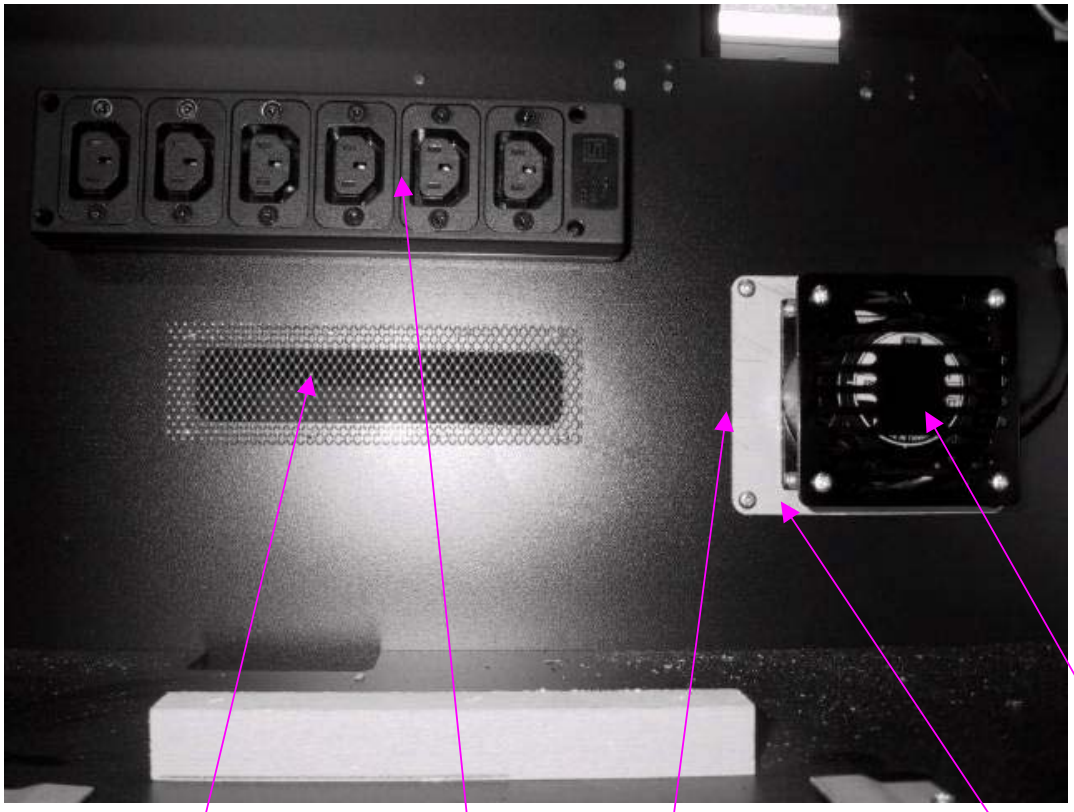
40272 - CAM

94849102 – LATCH SPACER BLOCK (WOODEN)

90306231 - LATCH PLATE

90522807 - MPU BASE ECLIPSE 2001

# Machine BOM (Illustrated)



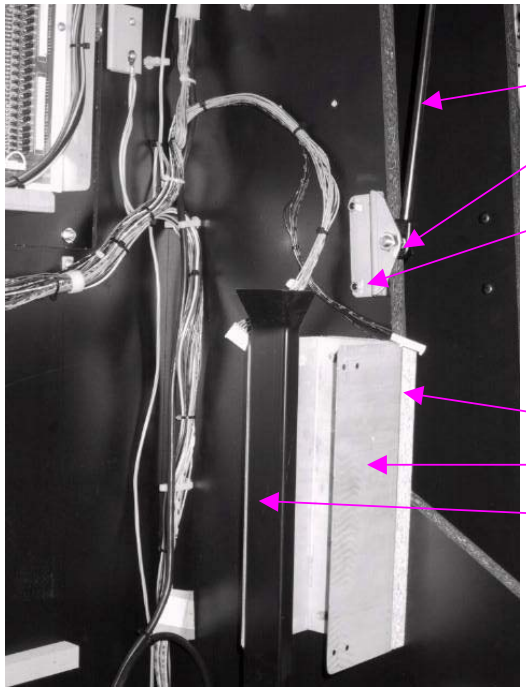
90306196 - GRILL

96912100 - MAINS DISTRIBUTION ASSY

90307068 - VENT GRILL PLATE FAN

90307484 - FAN MOUNTING PLATE& STUDS

51730009 - TERMINATED FAN 80X80X38MM MAINS 230V



49117010 - GAS STRUT 310 NEWTONS 255MM STROKE

49117000 - GAS STRUT BALL END

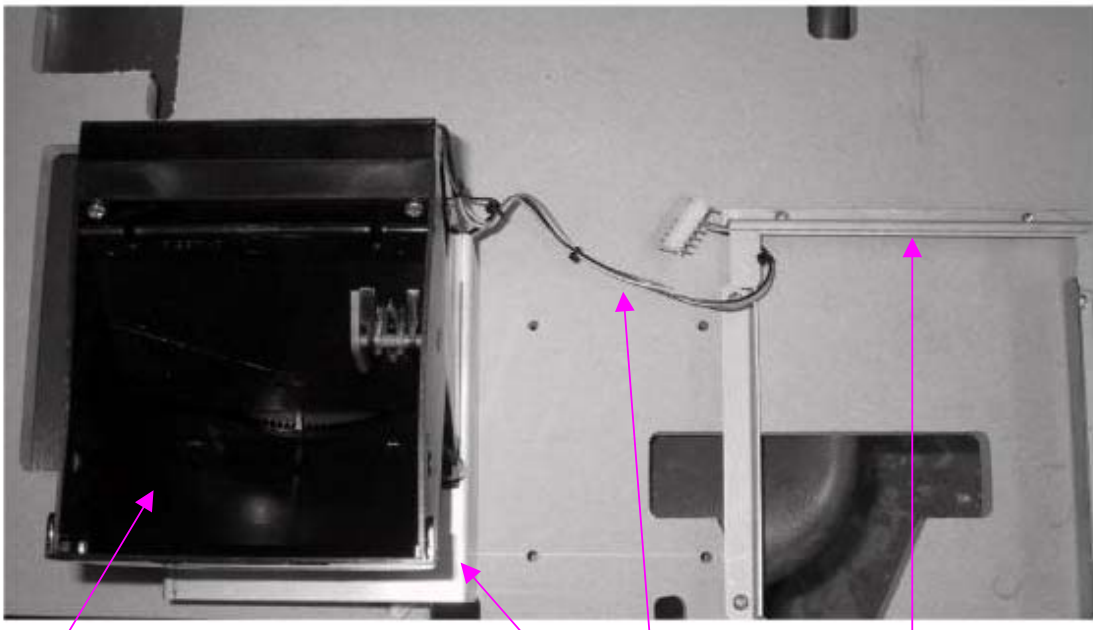
90857992 - STRUT MOUNTING BKT STD ECLIPSE

94895065 - SPACER CHUTE BRACKET

90850048 - BRACKET HOPPER CHUTES FIXING

91802102 - COIN CHUTE CASH BOX

# Machine BOM (Illustrated)



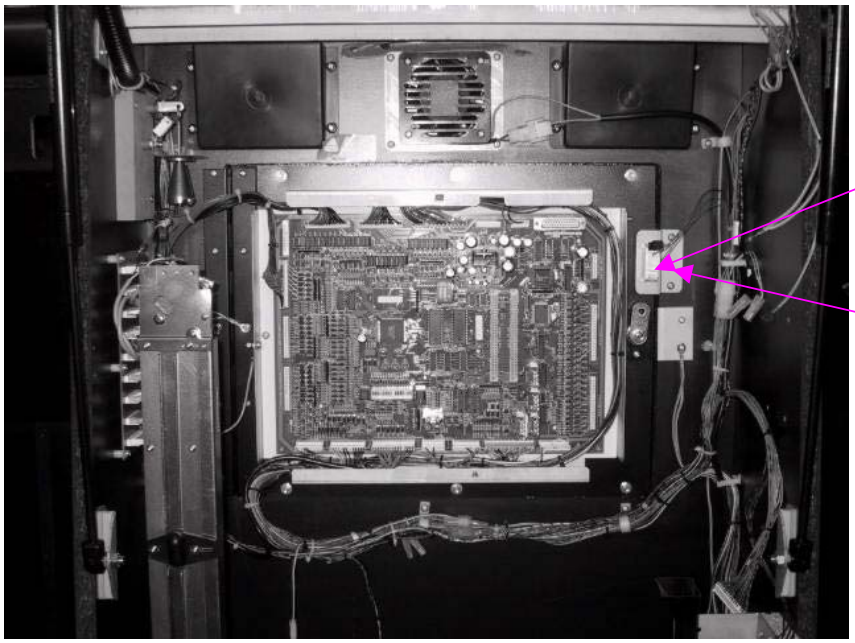
51520287 - HOPPER 'U' MEDIUM BOWL

90520146 - CHASSIS HOPPER USA SINGLE PUSHER

96876316 - HOPPER HARNESS

90873843 - P/O PRINTER GUIDE BRACKET

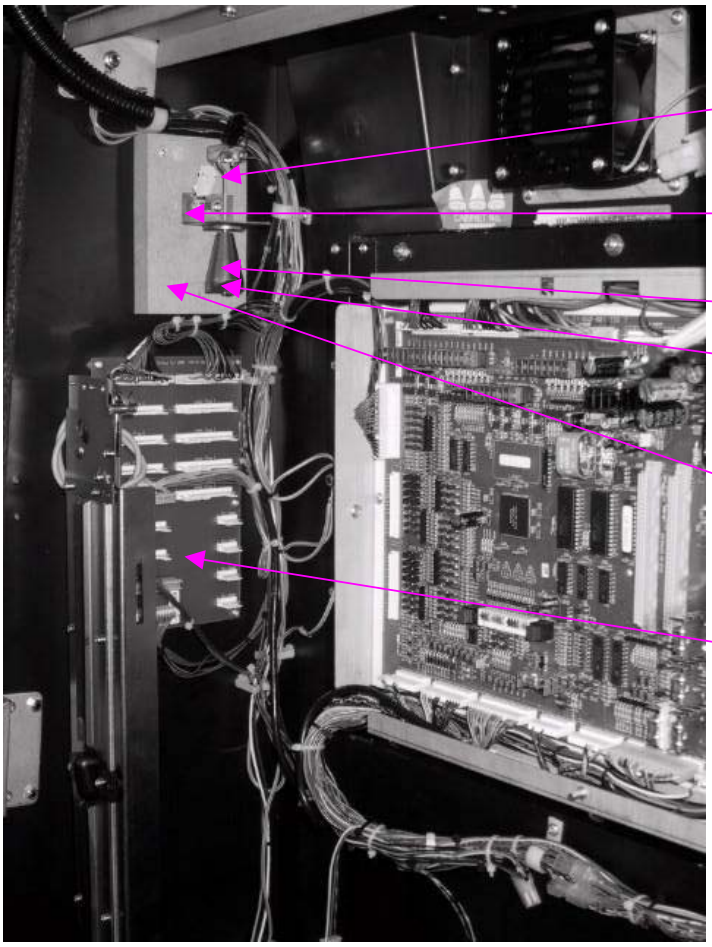
90864314 - DOOR SECURITY BRACKET



57520010 - PUSH SW DP
CHERRY UE79-68A

90850104 - BRACKET
ACCESS DOOR SWITCH

# Machine BOM (Illustrated)



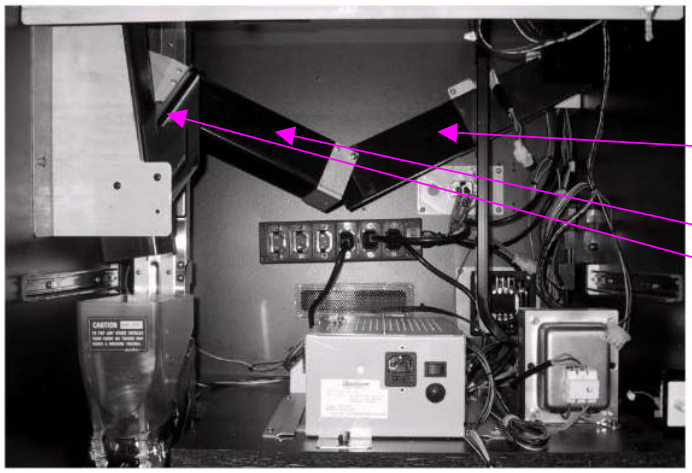
90623374 - WEIGHT WIRE
90623375 - CONTACT WIRE

90850016 - BRACKET TILT BOARD MOUNTING

90442238 - TILT WEIGHT
90442240 - STEEL BALL- 3/8" DIA

94895081 – TILT MOUNTING BLOCK

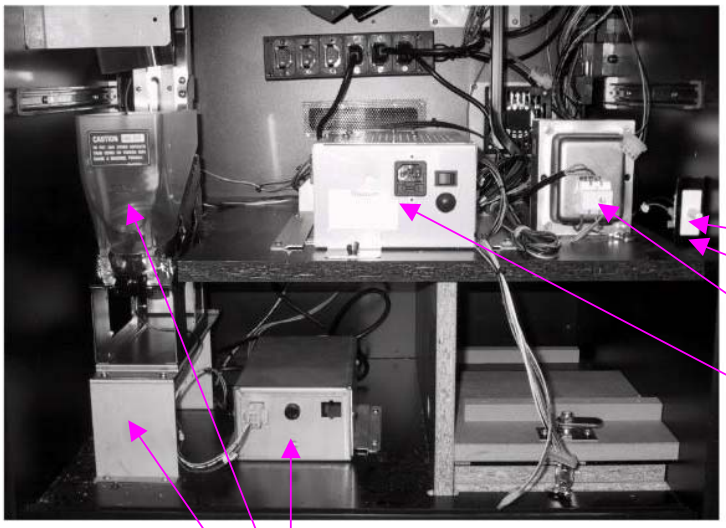
36119001 – VEND INTERFACE PCBA



91802100 - LOSE CHUTE RH ANGLED (K159)

91802098 - COIN CHUTE LH LOSE
90850065 - BRACKET LH LOSE CHUTE

# Machine BOM (Illustrated)



57520040 – DOOR SWITCH (PUSH/PULL)

90851150 - DOUBLE POLE SWITCH BRKT

53713347 - TRANSFORMER 500va

96941333 - POWER SUPPLY (STADIUM)

96941341 - POWER SUPPLY ESCALATOR HOPPER

51520306 - 10P ESCALATOR HPR ASHAI SEIKO

90850111 - ESCALATOR HPR MOUNTING BRACKET ASSY

# Machine BOM

| Part Number | Description |
|---|---|
| 36801004 | PCBA AUXILLARY SCP4 8 MEG SOUND PROM |
| 36821001 | PCBA DOT MATRIX ALPHA FUTABA 12.5MM |
| 41709 | 45 DEG ANGLE SPADE TERMINAL AMP |
| 48011101 | PLASTIC RIVET 4MM DIA MOSS 39158 or 32517 |
| 48011106 | 4MM PLASTIC RIVET BLK RICHCO SR4080 |
| 48011106 | 4MM PLASTIC RIVET BLK RICHCO SR4080 |
| 48011107 | 4MM PLASTIC RIVET BLK RICHCO SR4050 |
| 49412001 | BLIND HOLE SUPPORT RICHCO |
| 49412212 | SPACER RICHCO SS10-2 6.4MM LONG |
| 49420010 | LINEAR GUIDECZ0201-3094 |
| 49433001 | LOCATION PAD |
| 51802086 | OPTIC PCBA 15RM STD1155 |
| 51802131 | 90MM OPTIC A2404 |
| 51802134 | MOTOR 200STEP & LOOM GAMESMAN G4-471 |
| 51900003 | MOTOR 240V 24RPM PANASONIC G SERIES |
| 52910200 | SPEAKER 4 OHM 15WATTPF-365-504 |
| 53100002 | TICKET DISPENSER DELTRONIC DL455 |
| 54151102 | MATE & LOCK SOCKET PIN |
| 54750214 | 2W PLUG HOUSING MATE & LOCK 350777-1 |
| 54750315 | 03W MINI MATE-N-LOK FEMALE RS115-1777 |
| 55806304 | INSULATING BOOT TYPE C MAINS FILTER |
| 56129060 | LAMP DICHROIC 12V/35W 50MM DIAMETER |
| 56609036 | 5MM WEDGE L/HLDR & CLEAR BULB AMP IDC |
| 57081161 | GPB310/5KKH TRANS YELLOW ASSY |
| 57081181 | GPB340/5 KKH TRANS YELLOW ASSY |
| 57520010 | PUSH SW DP CHERRY UE79-68A |
| 57611004 | MOMENTARY ROCKER SWITCH |
| 73799002 | INLINE DIODE HOLDER (IDC) BLK |
| 73799003 | INLINE LINK HOLDER (IDC) WHITE |
| 75781170 | IC SGS 27C4001-12F1 EPRO M  STM |

# Machine BOM

| Part Number | Description |
|---|---|
| 75781181 | IC 8 MEG OPT EPROM M27C801-100B1 DIL |
| 77020080 | PANEL MOUNTED RED LED 12V FEPL 5W12 |
| 78500006 | MAINS FILTER SCHAFFNER FN 9222-6-06 |
| 90307360 | SPACER PLATE LOCK LATCH BRACKET |
| 90307506 | WADDING RETAINING PLATE |
| 90442242 | SPACER |
| 90467001 | HINGE REAR PANEL DOOR |
| 90467297 | HINGE CASTING ECLIPSE |
| 90520073 | PLATE PUSHER TRACK/MOTOR |
| 90520074 | PLATE MOTOR |
| 90520075 | PLATE PLAYFIELD |
| 90520076 | PLATE PUSHER |
| 90520087 | COVER R/H SIDE BLOCK (11427) |
| 90520088 | COVER L/H SIDE BLOCK (11428) |
| 90520089 | PLATE C/BOX DOOR LAMP MTG U.S. (11435) |
| 90520136 | PLATE ACCESS DOOR COVER |
| 90520137 | PLATE NOTE VALIDATOR BEZEL (MARS) |
| 90520147 | RISER ASSY USA SINGLE PUSHER |
| 90623003 | SPACER MOTOR |
| 90623004 | ARM DRIVE |
| 90623005 | BLOCK DRIVE (NYLON) |
| 90623006 | BLOCK PUSHER (NYLON) |
| 90623007 | BLOCK CENTRE (NYLON) |
| 90623008 | BOSS DRIVE |
| 90623009 | COUPLING DRIVE |
| 90623010 | RAIL GUIDE |
| 90623011 | BLOCK SIDE (NYLON) |
| 90623012 | BEARING FLANGE HOUSED (RS109-927) |
| 90623013 | SPACER M3 x 30MM BRASS (RS222-446) |
| 90850044 | BRACKET DOOR CLOAKING STRIP |

# Machine BOM

| Part Number | Description |
|---|---|
| 90850045 | BRACKER ESCALATOR TRACK SUPPORT |
| 90850050 | BRACKET RH CENTRE SUPPORT RAIL |
| 90850051 | BRACKET LH CENTRE SUPPORT RAIL |
| 90850052 | BRACKET PUSHER FRONT |
| 90850053 | BRACKET CENTRE PERSPEX SUPPORT |
| 90850054 | BRACKET RH PLAYFIELD SIDE |
| 90850055 | BRACKET LH PLAYFIELD SIDE |
| 90850056 | BRACKET STEPPER MOTOR |
| 90850057 | BRACKET ESCALATOR SUPPORT |
| 90850058 | BRACKET PLAYFIELD SUPPORT |
| 90850062 | BRACKET OPTIC SENSOR MOUNTING (11437) |
| 90850063 | BRACKET LAMP & V/F SECURING |
| 90850067 | BRACKET RH LOSE CHUTE ASSY |
| 90850080 | BRACKET LOSE HOLE ADJUSTER |
| 90850081 | BRACKET CENTRE PERSPEX RETAINING |
| 90850088 | BRACKET WIN CHUTE |
| 90850091 | BRACKET HALOGEN LAMP |
| 90850105 | BRACKET N/VAL CLAMP (MEI SERIES 2000) |
| 90850106 | BRACKET ESCALATOR HOPPER TRACK SUPPORT |
| 90854300 | DOOR SWITCH COVER BRACKET |
| 90864315 | CLOAKING BRACKET DISPLAY DOOR |
| 90866584 | LATCH COVER BRACKET & STUDS |
| 90866585 | PSU LOCATION BRACKET ECLIPSE |
| 90866632 | TILT BRACKET |
| 90867583 | LATCH BRACKET |
| 90873610 | MOMENTARY SWITCH BRACKET |
| 90873668 | LOCATION BRKT PAYSLIDE PSU |
| 90873774 | VAC FORM SECURING BRACKET |
| 90873777 | LOCK LATCH BRACKET & STUD |
| 90873777 | LOCK LATCH BRACKET & STUD |

# Machine BOM

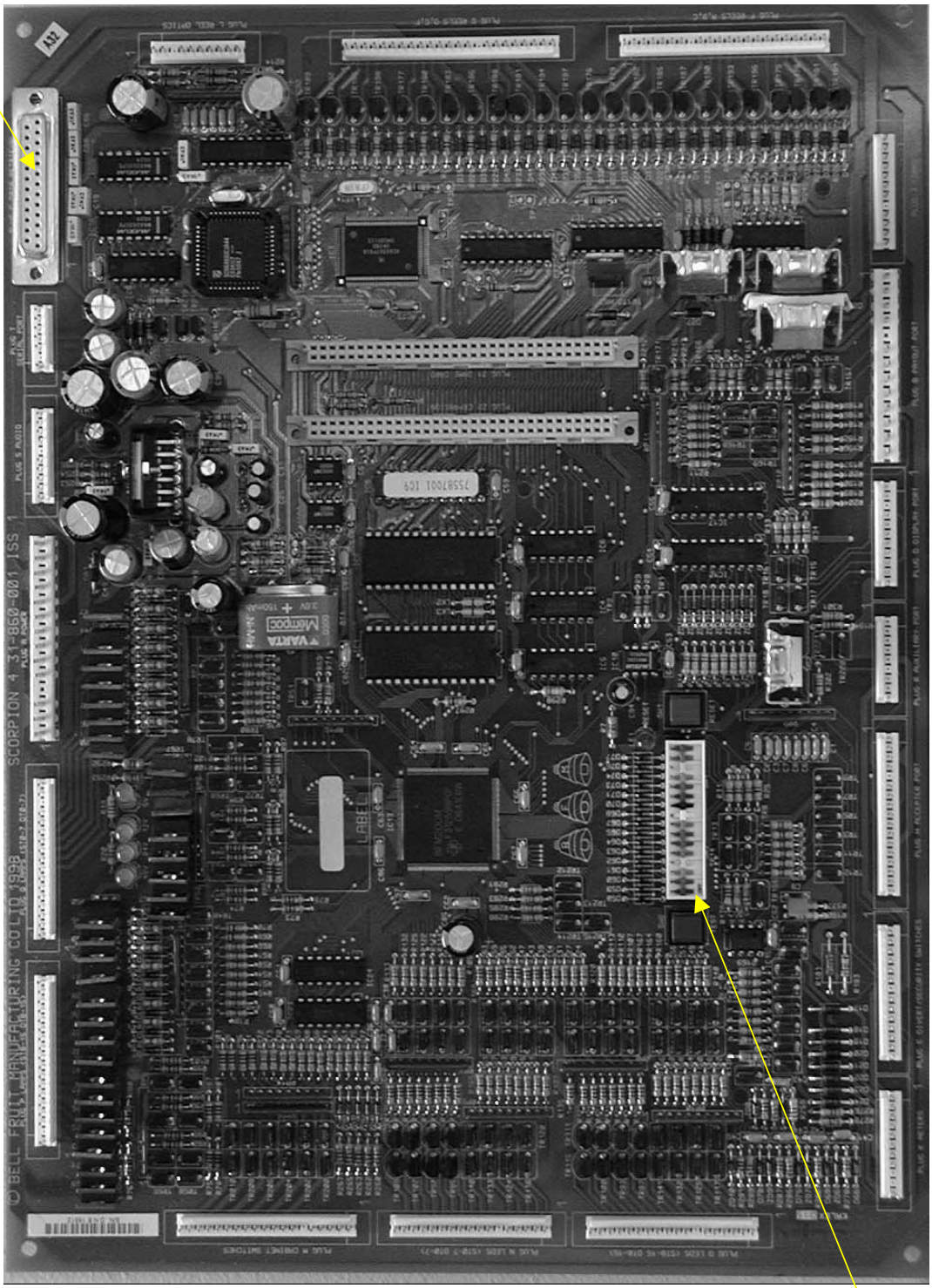
| Part Number | Description |
|---|---|
| 90873778 | LOCK ACTUATOR BRKT |
| 90873842 | P/O PRINTER FASCIA BRACKET |
| 91010034 | FRONT PERSPEX |
| 91010035 | SIDE STRIP |
| 91010036 | COIN SKIMMER |
| 91017746 | DOOR DECAL JUMPING BEAN |
| 91017846 | 25C PLAY DECAL QUARTERBACK PUSHER |
| 91017847 | 50C PLAY DECAL QUARTERBACK PUSHER |
| 91017848 | $1 PLAY DECAL QUARTERBACK PUSHER |
| 91017849 | POINTS FOR PRIZES DECAL QUARTERBACK PUSHER |
| 91017850 | FIGURE DECAL QUARTERBACK PUSHER |
| 91017936 | TICKET FRONT PANEL USA QUARTERBACK |
| 9101793 | 5c A SHOT DECAL USA QUARTERBACK |
| 91451467 | SHROUD COVER - TRICOLOUR LED |
| 91451484 | MPU INSULATING PLATE |
| 91682502 | PUSHER PAD (2720) |
| 91771095 | CASHBOX - 180MM HIGH |
| 91771234 | MAINS DISTRIBUTION COVER |
| 91771361 | SKILL CHUTE FORMING |
| 91771363 | WIN CHUTE FORMING |
| 91772524 | DISP MASK FORMING USA QUARTERBACK |
| 91802095 | TOP COIN CHUTE |
| 91802097 | COIN CHUTE RH LOSE |
| 92207123 | G'MANUAL 93738211 USA QUARTERBACK |
| 92477370 | LEGEND PLATES,3/ST, QUATERBACK |
| 92751546 | LABEL - EARTHING POINT 2000/RL |
| 92751454 | LABEL - PATENTS |
| 92751511 | APPLIANCE TEST LOG |
| 92751840 | LABEL – POWER SUPPLY |
| 92752030 | 110V WARNING LABEL |

# Machine BOM

| Part Number | Description |
|---|---|
| 92752040 | 230V WARNING LABEL |
| 92752128 | SCORPION 4 LAYOUT |
| 92752129 | JUMPING BEAN COPYRIGHT LABEL |
| 92920692 | MIRROR |
| 94895057 | TILT BOARD |
| 94895064 | HOPPER SHELF |
| 94895066 | PLAYFIELD PANEL |
| 94895067 | COIN CHUTE SPACER |
| 96832547 | LEAD ASSY MAINS DIST BOX SUPPLY |
| 96832577 | MAINS LEAD 925MM LONG R/A SOCKET |
| 96875553 | ALPHANUMERIC HARNESS ASSY |
| 96875919 | MPU/PSU (HI MPU) HARNESS |
| 96876308 | TICKET DISPENSER ILLUMINATION HARNESS |
| 96876310 | MAIN HARNESS |
| 96876311 | MOTOR/OPTICS HARNESS |
| 96876312 | ESCALATOR SENSOR HARNESS |
| 96876313 | HOPPER SENSOR HARNESS |
| 96876314 | COIN MECH EXTENSION HARNESS |
| 96876315 | FAN ASSEMBLY HARNESS |
| 96876317 | HALOGEN LAMP SUPPLY HARNESS |
| 96876318 | PAD MOTOR ASSY HARNESS |
| 96876319 | HALOGEN SPRING CLIP HARNESS |
| 96876320 | VIBRATION SENSOR HARNESS |
| 96876321 | EARTH HARNESS |
| 96876322 | 115V MAINS IN LEAD |
| 96876323 | 115V DIST TO TX LEAD |
| 96876324 | 240V STEP UP TX TO DIST LEAD |
| 96876325 | 240V FAN & MOTOR LEAD |
| 96876326 | 240V DIST TO STADIUM PSU LEAD |
| 96876327 | 240V DIST TO ESCALATOR PSU LEAD |

# Machine BOM

| Part Number | Description |
|---|---|
| 96876328 | 240V DIST TO HALOGEN TX LEAD |
| 96876329 | BUTTON PANEL/ROCKER SWITCH HARNESS |
| 96876330 | BILL ACCEPTOR HARNESS |
| 96876331 | MPU INTERFACE HARNESS |
| 97042606 | DOOR FRAME ASSY TRANS RED |
| 97854317 | MAINS PLATE & STUD ASSY ECLIPSE |
| 97854322 | LATCH & SWTS BKT & CLINCH NUT ASSY |


Data Retrieval RS232
plug L Arm & Token Sensors
plug G Vend Outputs
plug F Arm Drives
plug J Hopper Data
plug F Serial i/p
plug B Hopper Drives
plug S Audio
plug D Alpha Display
plug A Power
plug R 12v Supply
plug H Coin Acceptor
plug Q Lamps
plug E Meter Outputs
plug P Lamps
plug K Meter Outputs
plug M Switch Inputs
plug N Not Used
plug O Not Used
DIL Switches