

Table of Contents

1. **Copyright**
2. **Warranty**
3. **Safety Instructions.**
 - 3.1 Product Safety
 - 3.2 Electrical Safety General
 - 3.3 Chemical Safety
 - 3.4 Fire Safety
 - 3.5 Disposal of Hazardous Components
4. **Installation Instructions & Daily Checks**
 - 4.1 General
 - 4.2 Physical check
 - 4.3 Internal Electrical connections
 - 4.4 Electrical Supply
 - 4.5 Dimensions
 - 4.6 Fitting the Top Display.
 - 4.7 Abbreviations
 - 4.8 Daily Checks
5. **Machine description & Coin prime .**
 - 5.1 Description
 - 5.2 Coin floating

Table of Contents

6. Operator Adjustments.

- 6.1 Pendulum Tilt Assembly
- 6.2 Slam Tilt Assembly
- 6.3 Adjustment of Lose Hole size
- 6.4 Adjustment of Tilt Time
- 6.5 Playfield Riser
- 6.6 Sound Volume Control
- 6.7 Ticket pay out adjustment.

7. Fault finding guide.

- 7.1 Machine does not work
- 7.2 Pusher motor not running
- 7.3 One of the cabinet tubes is "out" or flickers
- 7.4 Top display does not light
- 7.5 The top display does not go off during tilt
- 7.6 The tilt does not work
- 7.7 The tilt will not stop
- 7.8 No ticket layout
- 7.9 The halogen lamps do not work

8. Printed Circuit boards.

- 8.1 KWS 70 Tilt board
- 8.2 FLO 615
- 8.3 FL 0717 Ticket layout control

9. Machine BOM (including Illustrations)

COPYRIGHT

The Jumping Bean Company / Bell-Fruit Games Ltd. / Mazooma Games Ltd. possess exclusive copyright in the SOFTWARE & HARDWARE contained within this machine. Purchasers have no authority to reproduce any part of The Jumping Bean Company / Mazooma Games Ltd. software, including copying of EPROMS, unless permission is granted in writing.

The Jumping Bean Company / Bell-Fruit Games Ltd. / Mazooma Games Ltd. also retains various intellectual property rights in the form of LETTERS PATENT, REGISTERED DESIGNS and TRADE MARKS (both in force and pending) applicable to this machine. The purchaser's right to use these is restricted to operation of the machine in its original form, or in modified form ONLY IF such modifications have been carried out under

The Jumping Bean Company / Bell-Fruit Games Ltd. / Mazooma Games Ltd. express written licence to do so. Particular note should be taken of any patent numbers identified within the artwork design or game manual of this machine.

Copyright also exists in the ARTWORK DESIGNS for this machine. No part of this artwork may be reproduced in any way without written authority.

The THREE BELLS DEVICE, JUMPING BEAN DEVICE & SCORPION 4 TM are REGISTERED TRADEMARKS of Bell-Fruit Games Ltd.

PERSONS WISHING TO MAKE USE OF ANY OF THE INTELLECTUAL PROPERTY ABOVE SHOULD CONTACT MAZOOMA GAMES LTD IN THE FIRST INSTANCE

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) Seller is promptly notified in writing upon discovery by Buyer 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.

In no event shall seller be liable for loss of profits, loss of use, incidental or consequential damages.

Except for any express Warranty set forth in a written Contract between Seller and Buyer which Contract is expressed to supersede the terms of this warranty, all implied warranties and conditions as to quality or fitness for any particular purpose are hereby expressly excluded.

No employee of the Seller has any authority to waive or amend the terms of this warranty that shall be deemed accepted by the Buyer on acceptance of the products referred to above.

ALL WARRANTY CLAIMS FOR THIS MACHINE WILL BE DEALT WITH BY THE BELL-FRUIT GAMES AFTERSALES DEPARTMENT.

Tel: 0115 9706707

E-MAIL: technical@bellfruitgames.co.uk

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 re pair 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).

INSTALLATION INSTRUCTIONS & DAILY CHECKS

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 colored RED.

INSTALLATION INSTRUCTIONS & DAILY CHECKS

4.5	<u>Dimensions</u>	Height with Top Display	2.27 metres
		Height without Top Display	1.86 metres
		Depth	1.68 metres
		Width	1.68 metres
		Weight	420 Kilos

4.6 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.

4.7 Abbreviations :

- **Coin Entry** - one or more slots in the coin entry panel where player may insert coin of play.
- **Coin chute** - metal chute that guides the coin from coin entry slot to 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 coins to the pay tray.

INSTALLATION INSTRUCTIONS & DAILY CHECKS

4.8 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.

Machine description and Coin prime.

5.1 Description

For this element of the operators' manual, the parts are listed below in number order:

5.2 Coin floating.

Switch on the machine and make sure all is working correctly.

Carefully remove the glass doors and store in a safe position.

Spread coins over the playfield and pusher pad in each play section so that there is a build up of coins at the win chute edge.

It will be necessary to feed a number of coins through each coin slot to settle the playfield area ready for play.

Operator adjustments

6.1 Pendulum tilt assembly.

There is one pendulum tilt assembly located inside the top cabinet behind the coin entry panel number 1 section.

(See figure 2).

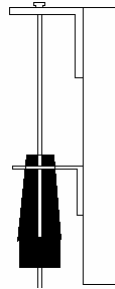


Figure 2 - pendulum tilt.

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 Slam tilt assembly.

There is one slam tilt assembly in each play-section located on the back of each bottom service door.

This is accessible by removing the bottom service door.

This consists of a weighted contact fixed against the door panel surface, designed to detect banging of the cabinet or service door (See figure 3).

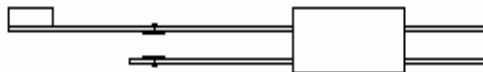


Figure 3 – Slam tilt contact.

Operator adjustments

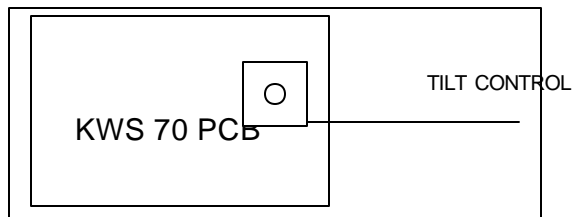
6.3 Adjustment of “lose” hole size.

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

6.4 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.



6.5 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.

This angle can be adjusted by loosening the lock nut and turning the screw at the center of the riser.

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

Operator adjustments

6.6 Sound Volume Control.

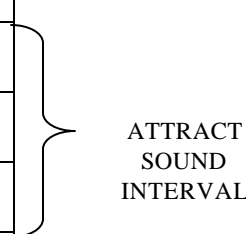
The soundboard is located in play section two.

Remove the bottom service door and the soundboard can be seen mounted on the support leg, on the left-hand side of the cabinet.

Turn the small control knob anti-clockwise to increase the volume of the sound effects.

The 6-way switch bank at the bottom of the board is as follows (See figure 4).

1	2	3	4	5	6	Effect
ON	OFF	OFF	OFF	?	?	15 seconds
OFF	ON	OFF	OFF	?	?	30 seconds
OFF	OFF	ON	OFF	?	?	60 seconds
OFF	OFF	OFF	ON	?	?	120 seconds
?	?	?	?	ON	?	See A.
?	?	?	?	OFF	?	See B.
?	?	?	?	OFF	ON	See C.
?	?	?	?	OFF	OFF	See D.



ATTRACT
SOUND
INTERVAL

Figure 4: 6 – way Switch Bank.

A – The Attract sound will not be triggered.

B – The Attract sound will be triggered at the set time interval.

C – The Attract will be one tune only.

D – The Attract will alternate between two tunes.

Operator adjustments

6.7 Ticket Pay out Adjustment.

The PCB that controls the ticket pay out is located behind the right hand side lower door panel. This PCB is adjacent to the count meters. The following description gives details of connections to the PCB FL0717 and dip switch settings.

FL 0717 – Ticket Control PCB

CN1 6 way MiniFit Jnr PCB plug

Pin 1.	0V dc supply – logic
Pin 2.	–
Pin 3.	12V dc supply
Pin 4.	10V dc supply
Pin 5.	0V dc supply – power
Pin 6.	24V dc supply

CN2 8 way MiniFit Jnr PCB plug

Pin 1.	0V output
Pin2.	0V output
Pin3.	Tilt signal input
Pin 4.	Coin 2 signal input
Pin 5.	Spare input
Pin 6.	Spare input
Pin 7.	Coin 3 signal input
Pin 8.	Coin 1 signal input

Operator adjustments

CN3 10 way MiniFit Jnr PCB Plug

Pin 1.	24V output
Pin 2.	Hopper count output
Pin 3.	Ticket notch output
Pin 4.	12V output
Pin 5.	12V output
Pin 6.	Hopper enable output
Pin 7.	5V output
Pin 8.	Ticket enable output
Pin 9.	0V output
Pin 10.	0V output

CN4 12 way MiniFit Jnr PCB plug

Pin 1.	Spare output
Pin 2.	Low lamp output
Pin 3.	12V output
Pin 4.	Cash box counter output
Pin 5.	Ticket counter output
Pin 6.	Coin counter output
Pin 7.	Coin in sound output
Pin 8.	Win sound output
Pin 9.	Error sound output
Pin 10.	Tilt signal output
Pin 11.	0V output
Pin 12.	0V output

Operator adjustments

Dip Switch Settings

SW1 poles	1	2	3	4	Ticket : Coin ratio
	off	off	off	off	1
	on	off	off	off	2
	off	on	off	off	3
	on	on	off	off	4
	off	off	on	off	5
	on	off	on	off	6
	off	on	on	off	7
	on	on	on	off	8
	off	off	off	on	9
	on	off	off	on	10
	off	on	off	on	11
	on	on	off	on	12
	off	off	on	on	13
	on	off	on	on	14
	off	on	on	on	15
	on	on	on	on	16

SW2 poles	5	6	7	Ticket on Coin in
	off	off	off	0
	on	off	off	1
	off	on	off	2
	on	on	off	3
	off	off	on	4
	on	off	on	5
	off	on	on	6
	on	on	on	7

Operator adjustments

<u>SW1 pole</u>	<u>8</u>	<u>Hopper type</u>
	Off	Money Controls Universal
	On	Asahi Seiko SA595

Fault - finding guide.

7.1 The machine does not work

Check

- Mains wall outlet is switched "on".
- "On/off" switch in play section 1 is switched "on".
- Damage to mains inlet cable.
- Fuse 1 (T10A) located on switch and fuse board assembly.
- Check the machine is correctly set to top or bottom feed.

7.2 Pusher motor not running.

Check

- Fuse 2 on switch/fuse panel.

7.3 One of the cabinet tubes is "out" or flickers

These tubes are wired individually i.e. each tube has its own choke & starter located behind the vertical centre printed plexiglass panel assembly. Flickering can sometimes be the starter, but is more often a worn out tube. You can always swap starters to test them.

Check

- The starter base connections.
- The tube end connections.

Fault - finding guide.

7.4 The top display does not light.

KWS 70 PCB, located on the switch and fuse board assembly controls the top display lights.

When KWS 70 PCB detects a pulse from the tilt contacts at pin 1 (orange/red wire) it turns "off" the output pin 9 (grey wire),

This wire being connected to the control pin of the solid state relay, which is supplying the high voltage for the top display, switches off, so the display goes "off" in tilt.

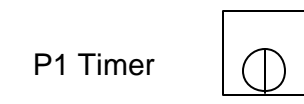
The high voltage wire from the solid state relay is brown with red marker.

Check

- The plug connection of the switch and fuse board assembly.
- Top display connection plug located inside the coin entry door.
- The pendulum tilt inside the cabinet behind coin entry door section 1 and the slam switches behind each lower door.
- Test KWS 70 PCB pin 9 by temporarily shorting to 0V. GND. (Black wire).
Replace KWS 70 PCB.

7.5 The top display does not go off during tilt

As KWS 70 PCB controls the top sign, it is likely to be a faulty KWS 70 PCB or faulty solid state relay. Adjust P1 timer control on KWS 70 PCB to shorten the tilt time.



Fault - finding guide.

7.6 The tilt does not work.

When the machine is tilted (pendulum tilt in top cabinet or slam switches behind each lower door) the top sign and top cabinet lighting is switched off. The sound board is triggered and the ticket payout is disabled. KWS 70 PCB is responsible for detecting the tilt input and outputting a low going pulse to trigger the sound board and trigger each FLO 717 game pcb in each section.

Check

- The tilt contacts are not dirty or so far apart they do not touch when the machine is banged.
- The orange/red wire, which is connected, to every tilt contact ending up at the tilt detects input pin 1 of KWS 70 PCB.
- Has KWS 70 PCB got a dc Supply? (Red / Black)
- The red wire is 16V DC, and the black wire is 0V. GND.
- Test the KWS 70 PCB on the switch/ fuse panel by substituting with a known working KWS 70 pcb.

7.7 The tilt will not stop.

Check

- The tilt contacts are not bent together.
- The pendulum tilt is operating
- Try adjusting P1 on KWS 70 PCB.
- Replace KWS 70 PCB with another KWS 70 PCB from a good working section.

Fault - finding guide.

7.8 No ticket pays out

Check

- There are tickets at ticket dispenser.
- There are no ticket jams.
- Electrical connections to ticket dispenser.
- Check the center perspex micro switch or loom is all working.
- Check the coin count hopper is functioning correctly
- Check the PCB FL0717 (use PCB from section of machine that is working correctly to test section with fault)

7.9 The halogen lamps do not work.

The 12v 50w halogen lamps are connected to the toroidal transformer on the centre lighting shelf behind centre vertical printed plexiglass panel section 5. The lamps are wired in pairs and each pair is protected by an in line fuse.

For all lighting faults first check fuses 3 and 4 on the Switch / fuse panel and the fuse on the control board in the lower cabinet.

Check;

- The 5-ampere inline fuses and wiring connections

Printed Circuit Board List

8.1 KWS 70 PCB

- **Location** - Switch and fuse board. (Section 1).
- **Function** - Tilt board

8.2 FL 615 PCB: -

- **Location** - Left hand support panel inside bottom service door in section 2.
- **Function** – Sound Board

8.3 FL 0717 PCB

- **Location** - Behind each lower door panel on right hand side adjacent to count meters
- **Function** – Ticket pay out control

Machine BOM (Illustrated)



Playfield Divider
91.019.133



Coin Entry Panel 91.019.285



Ticket Door Panel 91.019.286



Back Perspex
91.019.284



Top Box Panel
91.019.130



Top Sign 91.019.137



LH Door
Decal
91.019.135



RH Door
Decal
91.019.136



Jumping Bean Decal
91.019.138

Machine BOM



MONOPOLY 8 STAGE PUSHER 93.738.204

PART NO	DESC	QTY
24807004	RUBBER CHANNEL 3MM 24/02/04	17.0
36110001	PCBA TILT CONTROL BOARD KWS 70	1.0
36111001	PCBA SOUND BOARD FL0615	1.0
36118001	PCBA METER ASSY 24/02/04	8.0
40001815	M8 x 15mm Pan Head Pozi Machine Screw	4.0
40051312	M3 x 12mm M/C SCREW COUNTERSUNK POZI	33.0
40051320	M3 x 20mm M/C SCREW C/S POZI	112.0
40051410	M4 x 10mm M/C SCREW COUNTERSUNK POZI	56.0
40051420	M4 x 20mm M/C SCREW COUNTERSUNK POZI	32.0
40051425	M4 x 25mm M/C SCREW COUNTERSUNK POZI	16.0
40052412	M4 x 12MM SET SCREW CHEESE HD SLOTTED	16.0
40052520	M5 x 20mm SET SCREW CHEESE HEAD	8.0
40053512	M5 x 12mm SET SCREW HEX HEAD	1.0
40053515	M5 x 15mm SET SCREW HEX HEAD	2.0
40053630	M6 x 30mm SET SCREW HEX HEAD	16.0
40053640	M6 x 40mm SET SCREW HEX HEAD	4.0
40053825	M8 x 25mm Set Screw Hex Head	4.0
40053845	M8 x 45mm SET SCREW HEX HEAD	4.0

Machine BOM

PART NO	DESC	QTY
40053845	M8 x 45mm SET SCREW HEX HEAD	4.0
40055310	M3 x 10mm M/C SCREW ROUND HEAD POZI	32.0
40056320	M3 x 20mm SET SCREW PAN HEAD POZI	280.0
40061312	M3 X 12MM CSK HEAD POZI SCREW	16.0
40131520	M5 x 20mm Hex Head Bolt 24/02/04	4.0
40131650	M6 x 50mm Hex Head Bolt 24/02/04	8.0
40131665	M6 x 65mm Hex Head Bolt 24/02/04	1.0
40131665	M6 x 65mm Hex Head Bolt 24/02/04	8.0
40145410	M4 x 10mm Carraige Bolt Black	32.0
40145530	M5 X 30mm Coachbolt Black	6.0
40145680	M6 x 80mm COACHBOLT BLACK FINISH	8.0
40145800	M8 x 100mm COACHBOLT BLACK FINISH	2.0
40237	No.8 x 5/8" Round Head T/F Pozi Woodscrew	10.0
40237	No.8 x 5/8" Round Head T/F Pozi Woodscrew	130.0
40300410	M4 X 10mm SOCKET HD CAP SCREW	4.0
40320410	M4 x 10mm SOCKET SCREW 24/02/04	4.0
40324	No. 8 x 3/4 Pozi Csk Woodscrew	17.0
40326	No.6 x 1/2" Pan Head Pozi Self Tap Screw	16.0
40330	NO6X1 CSK HD POZI T/F WOODSCREW	32.0
40330	NO6X1 CSK HD POZI T/F WOODSCREW	2.0
40338	NO8X1 1/4CSK HD POZI WOO DSCREW	4.0
40338	NO8X1 1/4CSK HD POZI WOO DSCREW	44.0
40513	No.6 x 5/8" Countersunk Pozi Wood Screw	10.0
40513	No.6 x 5/8" Countersunk Pozi Wood Screw	32.0
40620605	NO6X1/2 PAN HD TAMPER PROOF W/SCREW	56.0
40620605	NO6X1/2 PAN HD TAMPER PROOF W/SCREW	88.0
40626414	NO.4X3/4 RD HD POZI WOOD SCREW	16.0
40626414	NO.4X3/4 RD HD POZI WOOD SCREW	3.0
40626610	No.6 X 3/8" Pan Head Pozi Self Tap Screw	6.0
40626613	No 6 x 1 1/4" W/SCREW ROUND HEAD POZI	4.0
40646000	No8x5/8" WOOD SCREW RD HD SLOT BRGT ZINC	48.0
40646458	No 4 x 5/8" W/SCREW POZI CSK HEAD	24.0
41105	Rivet Avdel 1821-0406 1/8" Dia X 3/16"	80.0
41221	Fuseholder 20 x 5mm Panel Mounted	4.0
41221	Fuseholder 20 x 5mm Panel Mounted	4.0
41221	Fuseholder 20 x 5mm Panel Mounted	1.0
41382	Terry Clip 13mm Grip 24/02/04	16.0
41651	NO6 X 3/4 PAN HD POZI W/ SCREW	24.0
41709	45 DEG ANGLE SPADE TERMINAL AMP	2.0
41709	45 DEG ANGLE SPADE TERMINAL AMP	8.0
42714050	M5 Nyloc Nut 26/02/04	8.0
43152080	M8 PLAIN WASHER (17MM O/D) ZINC PLT	2.0
43152080	M8 PLAIN WASHER (17MM O/D) ZINC PLT	8.0
43152081	M8 PLAIN WASHER 25mm DIAMETER	2.0
43214030	M3 SPRING WASHER 24/02/04	32.0
43214040	M4 Spring Washer 01/03/04	8.0
43214040	M4 Spring Washer 01/03/04	96.0
43214050	M5 Spring Washer Singlecoil Square	35.0
43214060	M6 Spring Washer 24/02/04	12.0
43214060	M6 Spring Washer 24/02/04	12.0

Machine BOM

PART NO	DESC	QTY
43214060	M6 Spring Washer 24/02/04	4.0
43214080	M8 Spring Washer 01/03/04	12.0
43214080	M8 Spring Washer 01/03/04	4.0
43220006	M6 STARLOCK WASHER 01/03/04	9.0
43220010	M10 Retaining Washer Push On RS 172-391	1.0
44012000	CLAMPING 'P' CLIP 12mm INSIDE DIA.	2.0
44012066	P Clip 1/4" 26/02/04	16.0
44012070	P Clip 1/2" WHC-500-01	81.0
44055095	Cable Clip Self Adhesive 9.53mm Brandau ACC-02	18.0
44055095	Cable Clip Self Adhesive 9.53mm Brandau ACC-02	2.0
44112521	Cable Tie 144mm Long Insuloid T18I	1.0
44311501	Jubilee Clip 12-22mm 24/02/04	3.0
44380000	TERRY CLIP 25MM DIA SPRINGMASTER	2.0
44380000	TERRY CLIP 25MM DIA SPRINGMASTER	3.0
44380001	1" TERRY CLIP (COATED) RS289-590	6.0
48811127	SINGLE LOCK L&F 134003	8.0
48811127	SINGLE LOCK L&F 134003	16.0
48899903	KEY L&F REF 92301	4.0
48899904	KEY L&F REF 92201	2.0
49411000	CASTOR 65MM DIA POLYPROP	6.0
49411001	CASTOR 66MM DIA. LOCKABLE POLYPROP	2.0
49411002	Wheel Flexello WTP158 24/02/04	4.0
49415000	TOGGLE LATCH & CATCH RS 206-4602	8.0
49420001	Pulley Belt 8mm Red 24/02/04	1.0
49420008	TIMING PULLEY 20XL037 FLANGED 9MM BORE	2.0
49420009	TIMING BELT 100XL037	1.0
49420010	LINEAR GUIDE CZ0201-3094	16.0
49420016	Tamperproof Screwdriver Size 1 RS 444-7891	1.0
51520308	UNIVERSAL HOPPER COIN CONTROLS	8.0
51730011	FAN TERMINATED 110/120V	2.0
51900002	MOTOR 20 RPM 110/120V 60Hz	1.0
51900010	Motor 110 Volt 24 RPM 01/03/04	1.0
52292734	7 DIGIT COUNTER GREY 12V OEM	24.0
52910003	SPEAKER RS267-6902	4.0
53100000	TICKET DISPENSER DELTRONIC DL-1275	8.0
53713345	TRANSFORMER 110/120V - 9V, 12V, 18V	1.0
53713346	TRANSFORMER 110/120V	1.0
53713353	Transformer 120v@60Hz Out 11.8v 400VA Toroida	1.0
53816012	CHOKE 1 X 16 WATT 110/120V	8.0
54010000	Blade Terminal (Bent @ 45 degrees)	16.0
54030002	2 Way Terminal Block 15A Interlocking	1.0
54050330	3 Way Terminal Block 30 Amp	1.0
54050400	4W TERMINAL BLOCK 24/02/04	8.0
54050800	8W TERMINAL BLOCK 24/02/04	1.0
54051000	10W TERMINAL BLOCK 30A	1.0
54151101	MATE & LOCK PIN AMP	2.0
54151102	Mate-n-Lok Socket Crimp 926893-1	4.0
54750213	2 Way Recepticle Hsg Mate & Lock 350778-1	1.0
54750413	4 Way Plug Mate & Lock Amp 350779-1	1.0
54900610	FUSE 6.3A QUICK-BLOW 20MMX5MM BSI	1.0

Machine BOM

PART NO	DESC	QTY
54900810	FUSE 8AMP 20X5MM GLASS QUICK BLOW	1.0
54900811	FUSE 8 Amp 20 x 5 mm GLASS ANTI SURGE	1.0
54901012	FUSE 10A 20X5MM CERAMIC QUICK BLOW	2.0
54901013	FUSE 10A 20mm X 5mm TIME DELAY	1.0
54901160	FUSE LINK 16 Amp NSD16 RS 413-507	1.0
54940101	FUSEHOLDER RS 415-339	1.0
55806027	Heat Shrink Sleeving 6mm O/D 7 Meters / Roll	0.006
56129002	EDDISON LAMPHOLDER SCREW TYPE	8.0
56129006	ENERGY SAVER LAMP 110/120V	8.0
56129007	FLUORESCENT TUBE 21" X 5/8" 110/120V	8.0
56129009	M262 DICHROIC LAMP 12V 20W COOL BEAM	12.0
56605030	12v 2.2w MES CLEAR LAMP	8.0
56605031	RED INDICATOR LENS RS 589 799	8.0
56609000	MES LAMPHOLDER RS 589 777	8.0
57110002	SOLID STATE RELAY 110V	1.0
57330000	MICROSWITCH-OTEHALL SWITCHES BB 1/R-S10	40.0
57611002	SLAM TILT SWITCH 22-2201-11	8.0
57611003	DPST SWITCH RS 198-8462	1.0
6000320	M3X20MM PAN HEAD POZI SCREW	16.0
6000410	M4 X 10mm Pan Head Pozi Screw	16.0
6000410	M4 X 10mm Pan Head Pozi Screw	9.0
6000410	M4 X 10mm Pan Head Pozi Screw	2.0
6000412	M4 X 12mm Pan Head Pozi Screw	2.0
6000420	M4X20MM PAN HEAD POZI SCREW	8.0
6000425	M4 X 25mm Pan Head Pozi Screw	8.0
6010315	M3X15MM CSK HEAD POZI SCREW	32.0
6010525	M5 X 25mm Countersunk Head Pozi Screw	8.0
62003HN	M3 Hex Nut 24/02/04	32.0
62003NN	M3 Nyloc Nut 01/03/04	32.0
62003NN	M3 Nyloc Nut 01/03/04	273.0
62003NN	M3 Nyloc Nut 01/03/04	20.0
62004HN	M4 Hex Nut 01/03/04	8.0
62004HN	M4 Hex Nut 01/03/04	80.0
62004NN	M4 Nyloc Nut 01/03/04	80.0
62004NN	M4 Nyloc Nut 01/03/04	10.0
62005HN	M5 Hex Nut 01/03/04	49.0
62005HN	M5 Hex Nut 01/03/04	6.0
62005HN	M5 Hex Nut 01/03/04	4.0
62006HN	M6 Hex Nut 24/02/04	12.0
62006HN	M6 Hex Nut 24/02/04	24.0
62006HN	M6 Hex Nut 24/02/04	4.0
62006NN	M6 Nyloc Nut 24/02/04	16.0
62006NN	M6 Nyloc Nut 24/02/04	8.0
62008HN	M8 Hex Nut 01/03/04	2.0
62008HN	M8 Hex Nut 01/03/04	6.0
62008HN	M8 Hex Nut 01/03/04	8.0
62008NN	M8 Nyloc Nut 24/02/04	32.0
62103ND	M3 Plain Washer 01/03/04	305.0
62103ND	M3 Plain Washer 01/03/04	16.0
62104ND	M4 Plain Washer 01/03/04	120.0

Machine BOM

PART NO	DESC	QTY
62104ND	M4 Plain Washer 01/03/04	12.0
62104ND	M4 Plain Washer 01/03/04	6.0
62105MD	M5 Mudguard Washer 26/02/04	32.0
62105MD	M5 Mudguard Washer 26/02/04	6.0
62105MD	M5 Mudguard Washer 26/02/04	12.0
62105ND	M5 Plain Washer 01/03/04	20.0
62105ND	M5 Plain Washer 01/03/04	8.0
62106MD	M6 Mudguard Washer 01/03/04	20.0
62106MD	M6 Mudguard Washer 01/03/04	20.0
62106ND	M6 Plain Washer 01/03/04	12.0
62106ND	M6 Plain Washer 01/03/04	20.0
62106ND	M6 Plain Washer 01/03/04	4.0
71610414	Capacitor Metal-Poly 4700uf	1.0
71610414	Capacitor Metal-Poly 4700uf	3.0
73611000	RECTIFIER 50V 15A RS 183-4242	4.0
78500001	MAINS FILTER 110V 24/02/04	1.0
85010251	MACHINE & TOP BOX PACKING WITH PALLET	1.0
85105113	Foam Tape 10mm x 60M Roll ISA 5464	0.033
90301937	CONTROL BOARD COVER 24/02/04	1.0
90307068	Plate Fan Vent Grill 01/03/04	2.0
90307503	MOTOR PLATE 24/02/04	1.0
90307504	Plate LH Playfield Slide 24/02/04	8.0
90307505	Plate RH Playfield Slide 24/02/04	8.0
90307507	MOTOR PLATE 24/02/04	1.0
90307508	PUSHER TRACK PIT 24/02/04	8.0
90307509	PLAYFIELD PLATE 24/02/04	8.0
90442238	TILT WEIGHT 01/03/04	1.0
90442240	STEEL BALL- 3/8" DIA 01/03/04	8.0
90442241	SQUARE FLANGE BEARING SF1	2.0
90442242	SPACER 01/03/04	160.0
90464084	REAR BEZEL 01/03/04	8.0
90520111	COVER TRANSFORMER BOARD	1.0
90520112	PLATE HOPPER 24/02/04	8.0
90520118	Plate Coin Entry Back 24/02/04	8.0
90520128	Chassis Castor Fixing 24/02/04	1.0
90520132	RISER PLAYFIELD USA 8 PLAYER PUSHER	8.0
90520179	PLATE CASTOR 24/02/04	4.0
90520301	Plate Coin Entry Slide 24/02/04	8.0
90520302	Washer Lock 01/03/04	16.0
90520303	Plate Motor/Bearing 24/02/04	1.0
90520304	Plate Bearing 24/02/04	1.0
90520311	Grill Vent 24/02/04	8.0
90520347	Plate Flourescent Tube Mounting	8.0
90522808	REJECT TRAY 24/02/04	8.0
90623013	SPACER M3 x 30MM BRASS (RS222-446)	16.0
90623039	Coin Entry & Chute 01/03/04	8.0
90623040	Centre Shaft 24/02/04	1.0
90623041	Bearing UCFL205/14 24/02/04	2.0
90623042	Pulley SPZ 2"x1"x10mm Bore Tapped Boss	1.0

Machine BOM

PART NO	DESC	QTY
90623043	Pulley SPZ 5"x1"x7/8" Bore Tapped Boss	1.0
90623044	Spigot Pulley Belt Connector	1.0
90623373	DRIVE LINK 24/02/04	8.0
90623374	WEIGHT WIRE 01/03/04	1.0
90623375	Bracket Tilt Weight Contact	1.0
90803780	WIN CHUTE 24/02/04	8.0
90850016	BRACKET TILT BOARD MOUNTING	1.0
90850082	BRACKET ADJUSTABLE LOSE HOLE LH	8.0
90850083	BRACKET ADJUSTABLE LOSE HOLE RH 11417	8.0
90850086	BRACKET METER 24/02/04	8.0
90850247	Bracket Door Latch 24/02/04	16.0
90850248	Bracket Lamp 24/02/04	4.0
90850249	Bracket Transformer 24/02/04	2.0
90850250	Bracket Fuse 24/02/04	1.0
90850251	Bracket Chassis 24/02/04	4.0
90850253	Bracket Top Sign Drive 24/02/04	1.0
90850254	Bracket Speaker 24/02/04	2.0
90858022	CENTRE SUPPORT BRACKET	8.0
90864321	EARTH BRKT 24/02/04	1.0
90866621	FUSE BRKT 24/02/04	3.0
90866622	SWITCH/FUSE BRKT 24/02/04	1.0
90866623	Front Bezel 24/02/04	8.0
90866627	Bracket Corner Trim 24/02/04	8.0
90866632	Bracket Tilt Wire Support	1.0
90873869	Bracket Nylon Block 24/02/04	8.0
90873872	Bracket Halogen Lamp 24/02/04	8.0
91010039	SIDE STRIP USA PUSHER	16.0
91010041	FRONT PERSPEX 24/02/04	8.0
91010042	LH CHANNEL GUIDE 24/02/04	8.0
91010043	LH CENTRE CHANNEL 24/02/04	8.0
91010044	RH CENTRE CHANNEL 24/02/04	8.0
91010045	RH CHANNEL GUIDE 24/02/04	8.0
91010046	SIDE GUIDE BLOCK 24/02/04	16.0
91010047	SKIMMER 24/02/04	8.0
91017845	COIN ENTRY DECAL USA 8 STAGE PUSHER	16.0
91019130	Top Box Panel Monopoly (UK) 8 Player	8.0
91019133	Playfield Divider Monopoly (UK) 8 Player	8.0
91019135	LH Door Decal Monopoly (UK) 8 Player	8.0
91019136	RH Door Decal Monopoly (UK) 8 Player	8.0
91019137	Top Box Infill Panel Monopoly (UK) 8 Player	8.0
91019138	Jumping Bean Decal Monopoly (UK) 8 Player	24.0
91019284	Back Perspex Screened USA Monopoly Pusher	8.0
91019285	Coin Entry Panel USA Monopoly Pusher	8.0
91019286	Ticket Door Panel USA Monopoly Pusher	8.0
91056025	CONVOLUTED TUBE 250MM 10MM DIA	1.0
91682500	Nylon Pusher Block 24/02/04	16.0
91682501	Upper Nylon Block 24/02/04	16.0
91682506	Slide Block 01/03/04	8.0
91891369	Main Cabinet (Metallic Red) Moulding	1.0

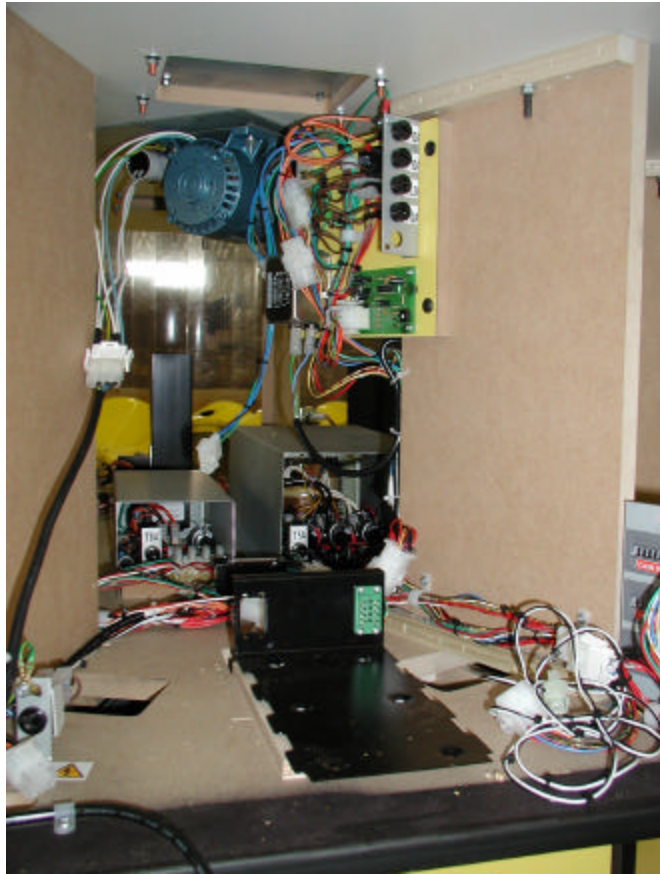
Machine BOM

PART NO	DESC	QTY
91891370	Cab Top (Metallic Red) Moulding	1.0
91891371	Top Box Extension Moulding (Metallic Red)	1.0
92010153	Top Sign Lid 24/02/04	2.0
92752113	HOPPER CHUTE LABEL 24/02/04	8.0
92752114	COINS IN LABEL 24/02/04	8.0
92752115	TICKETS LABEL 24/02/04	8.0
92752116	CASH BOX LABEL 24/02/04	8.0
92920679	MIRROR 300X135X4MM THICK	8.0
92926765	GLASS DOOR 24/02/04	8.0
94849103	SHORT SPACER - LOCK CAM	8.0
94849104	LONG SPACER - LOCK CAM	8.0
94895046	PLAYFIELD SUPPORT PANEL	8.0
94895047	CONTROL BOARD MTG PANEL	1.0
94895048	SWITH/FUSE MTG BOARD	1.0
94895049	PLAY FIELD PANEL 24/02/04	1.0
94895050	PLAYFIELD PAD 24/02/04	8.0
94895052	PUSHER PAD HIGH 24/02/04	4.0
94895053	PUSHER PAD LOW 24/02/04	4.0
94895054	CENTRE ELECTRICAL SHELF PANEL	1.0
94895058	TILT BOARD SUZO TYPE	1.0
94895059	CENTRE SHELF SUPPORT 24/02/04	4.0
94895077	HOPPER PAD 24/02/04	8.0
94895078	TRANSFORMER BOARD 24/02/04	1.0
94895080	PCB MOUNTING BOARD 24/02/04	8.0
94895112	Top Cabinet Board 24/02/04	1.0
94895113	Rotating Sign Lighting Board	1.0
94895114	Top Sign Top Board 24/02/04	1.0
96832592	Mains Lead UL USA Pusher	1.0
96876119	Hal Lamp Holder Harness UL	8.0
96876262	LOWER CABINET HARNESS	1.0
96876264	TRANSFORMER BOARD HARNESS	1.0
96876265	TICKET DOOR HARNESS 24/02/04	8.0
96876266	PIN PERSPEX HARNESS 24/02/04	8.0
96876283	FUSE TO FILTER HARNESS	1.0
96876284	SWITCH TO FUSE HARNESS	1.0
96876286	SPEAKER HARNESS 24/02/04	1.0
96876287	TILT / SPEAKER HARNESS	1.0
96876288	COUNT HOPPER HARNESS	8.0
96876289	SOUND BOARD HARNESS 24/02/04	1.0
96876290	MAIN PLAYFIELD HARNESS	8.0
96876291	POWER HARNESS 24/02/04	1.0
96876292	SWITCH & FUSE HARNESS	1.0
96876295	TOP FIELD LIGHTING HARNESS	1.0
96876705	Harness Control Board Centre Elect Shelf UL	1.0
96876706	Earth Harness LW280 UL 24/02/04	2.0
96876707	Switch Fuse Panel Top Box Harness UL	1.0
96876708	Lower Door Assy Harness LW271 UL	1.0
96876709	Top Box Illumination Harness UL	7.0
96876715	Dichroic Lamp Harness 12 volt UL	1.0

Machine BOM

PART NO	DESC	QTY
96876726	Control Board Harness UL 24/02/04	1.0
96876763	Board Assy Harness UL Rotating Top Box	1.0
96876764	Speaker Harness UL Rotating Top Box	1.0
96876765	Motor Lead UL Rotating Top Box	1.0
96876767	Fuse Harness UL Rotating Top Box	2.0
96876768	Hal Lamp Holder Harness UL Rotating Top Box	4.0
97651300	CASH BOX 24/02/04	8.0
97651301	DOUBLE TICKET BIN 01/03/04	8.0
97807027	Lose Tube Assy LH 24/02/04	8.0
97807028	Lose Tube Assy RH 24/02/04	8.0
97807031	CHUTE ASSY HOPPER/ CASH BOX TUBE	8.0
97807032	COIN CHUTE HOPPER 24/02/04	8.0
97854344	DRIVE SHAFT ASSY 24/02/04	1.0
97854346	Playfield Divider Side LH	8.0
97854347	Playfield Divider Side RH	8.0
97854348	PUSHER FRAME ASSY 24/02/04	8.0
97854349	PUSHER FRONT- HIGH 24/02/04	4.0
97854350	PUSHER FRONT- LOW 24/02/04	4.0
99094060	Cashbox Door Assy Yellow	8.0
99354061	CAB BASE ASSY USA PUSHER	1.0
99895079	TICKET DOOR ASSY USA PUSHER	8.0

Machine BOM (Illustrated)

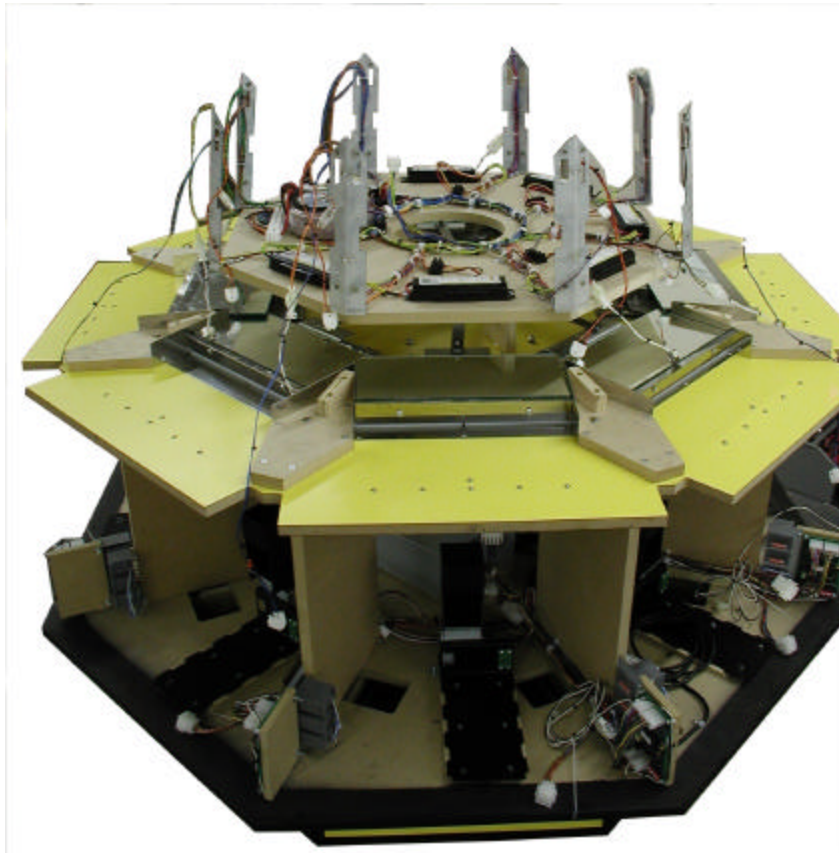


PCBA Tilt Board Control – 36110001
Fuseholder – 41221
Timing Belt – 49420009
4W Terminal Block – 54050400
Mate & Lock Pin – 54151101
2W Receptical Housing – 54750213
Motor – 51900002
Transformer – 53713346
Solid State Relay – 57110002
Capacitor – 71610414
Mains Filter 110v – 78500001
Motor Plate 90307503
Cover Transformer Board – 90520111
Switch/Fuse Brkt – 90866622
Switch/Fuse Mounting Board – 94895048
Control Board harness – 96876111
Lower cabinet Harness – 96876262

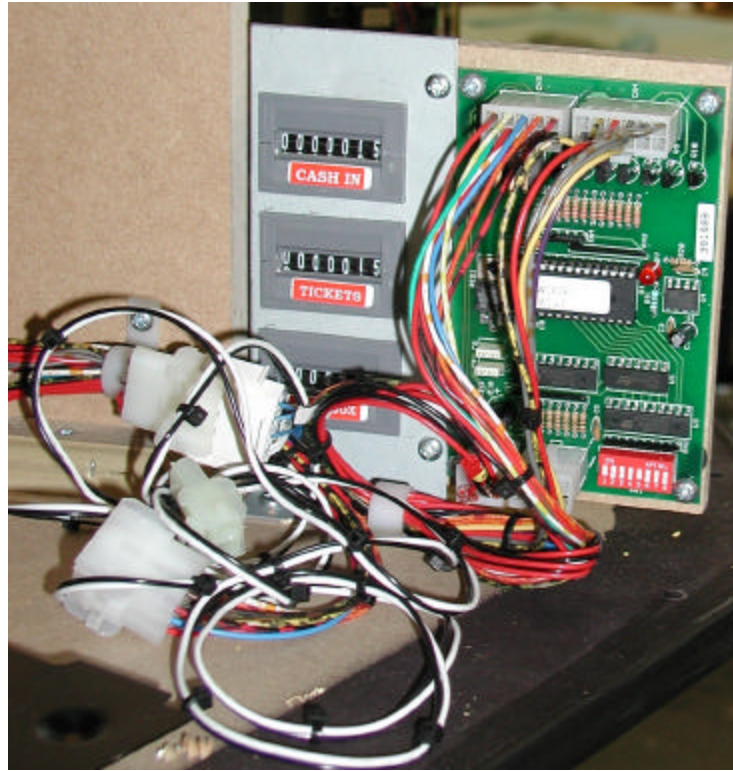
PCBA Sound Board - 36117001
Timing Pulley - 49420008
3W Terminal Block - 54050300
8W Terminal Block - 54050800
Mate & lock Socket - 54151102
4W Plug Hsg - 54750413
Transformer 53713345
Fuse 8A - 54900810
DPST Switch - 57611003
Rectifier - 73611000
Control Board Cover - 90301937
Motor plate - 90307507
Fuse Bracket - 90866621
Control Board Mounting Panel - 94895047
Transformer Board - 94895078
Switch/Fuse Harness - 96876112
Transformer Board Harness – 96876264

Machine BOM (Illustrated)

PCBA Meter – 36118001	Centre electrical Shelf Panel – 94895054
Linear Guide – 49420010	Centre Shelf Support - 94895059
5 Digit Counter – 5229251	Nylon Pusher Block – 91682500
Choke 1 x 16W – 5386012	10W Terminal Block - 54051000
Playfield Side LH – 90307504	Playfield Side RH - 90307505
Hopper Plate – 90520112	Playfield Plate - 90307509
Steel Ball – 90442240	Pusher Track Plate – 90307508
Bracket Meter – 90850086	Centre Support Bracket - 90858022
Transformer – 53713344	Coins In Label - 92752114
Tickets Label – 92752115	Cash Box Label - 92752116
Mirror – 92920679	Playfield Support Panel - 94895046
Playfield Panel – 94895049	Playfield Pad - 94895050
Pusher Pad High – 94895052	Pusher Pad Low - 94895053
Hopper Pad – 94895077	PCB Mounting Board - 94895080
Pusher frame Assy – 97854348	Chute Assy Hopper Cash Box - 97807031
Pusher Front High - 97854349	Harness Switch/Fuse Pnl-Top Box - 96876121
Pusher Front Low – 97854350	Harness Cntrl Board-Ctr Elec Shelf – 96876116
Cab Base Assy – 9935406	Harness Cab Top / Pin Perspex – 96876115

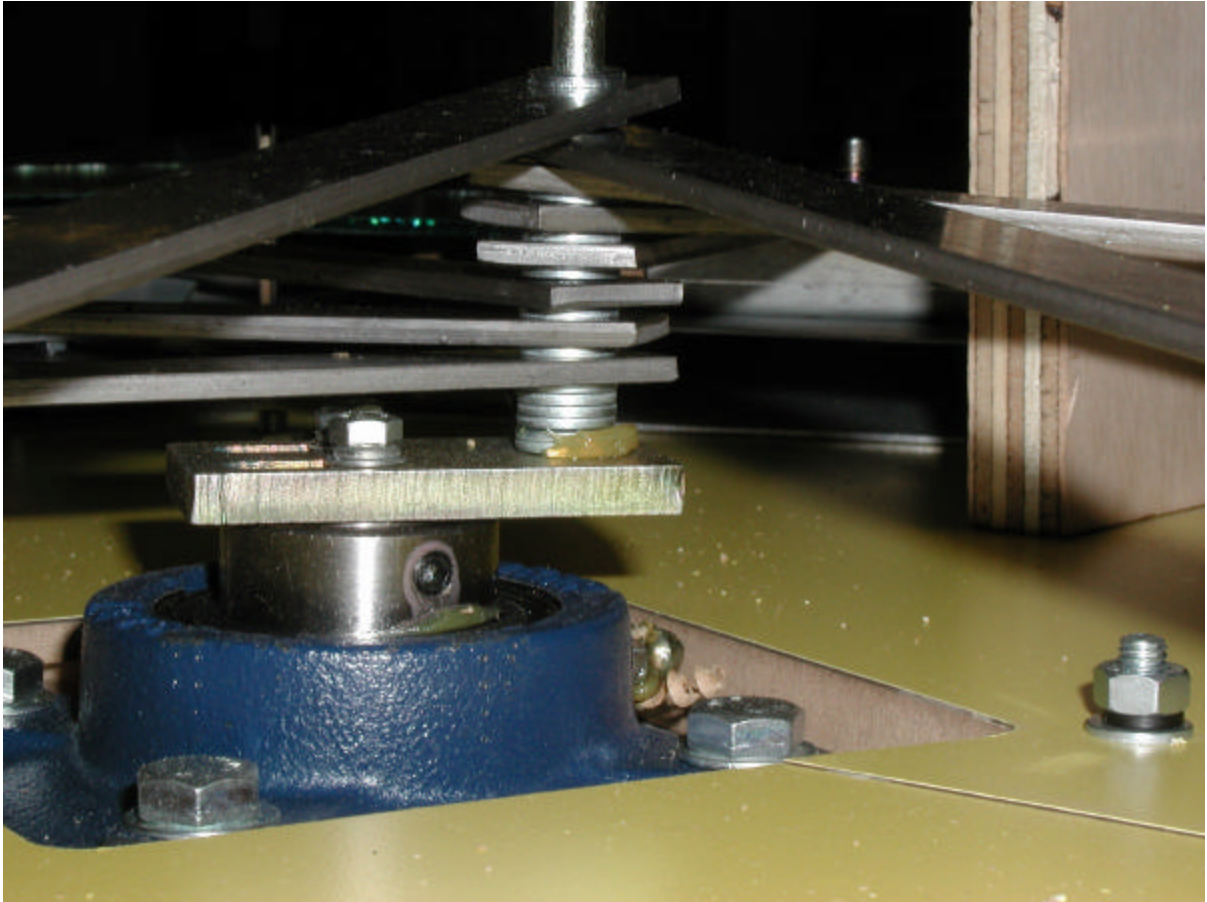


Machine BOM (Illustrated)



36118001	PCBA METER	8
5229251	5 DIGIT COUNTER 12V DC TRUEMETER	24
90850086	BRACKET METER	8
92752114	COINS IN LABEL	8
92752115	TICKETS LABEL	8
92752116	CASH BOX LABEL	8

Machine BOM (Illustrated)



90442241

SQUARE FLANGE BEARING SF1

90623373

DRIVE LINK

Machine BOM (Illustrated)



96832592

MAINS LEAD USA PUSHER