

Operating and Safety Instructions.....	2
Product Safety.....	2
Electrical Safety.....	2
Connection.	2
Parts list.....	3
Conversion instructions.	4
Removal of existing glass and wooden mask.	4
Fitting the High Flyer Kit.	5
Button Layout	6
Setting-up.....	6
Award Structure	7
DIL Switch Settings.....	8
Stake, Prize and Percentage Settings	9
Demonstration mode.....	10
Test Routine.	10
Test 1 – Lamp Test.....	11
Test 2 – Meter test.....	11
Test 3 – Switch test	12
Test 4 – Reel test.....	12
Test 5 – Coin test	13
Test 6 – Percentage test.....	13
Test 7 – RS232 test	13
Test 8 – Display test.....	13
Test 9 – Payout test.	13
Test 10 – Alarm log.....	13
Alarm codes	14
Test 11 - Sound test.....	14
Test 12 – Volume Adjustment	14
Machine Description.....	15
Cabinet.....	15
ME 129 Coin Routing	15
Coin Payout.....	15
Coin Tube Capacities.....	16
Meters.....	16
Software Meters (electronic).....	16
Reel Set-up.....	17
Lamp Allocation.....	18
Switch Matrix.....	21
MPU Connections.....	22
Power Supply fuse specification.	25

Operating and Safety Instructions

Product Safety

Every effort has been made to ensure this product has been designed with safety in mind.

Components used within this product are used within the manufacturers stated specification limits. Under no circumstances should replacement parts other than those specified or supplied by the manufacturer be used within this machine.

Electrical Safety

This machine must not be used unless it is correctly earthed and should be connected to a mains supply of 220v/240v at a frequency of 50Hz.

All machines leaving the manufacturer are subject to electrical safety tests. These tests consist of earth-bond and insulation tests. These tests should be carried out on a regular basis, or when a critical part is replaced.

Only suitably qualified or adequately instructed person should carry out work on the internal parts of this machine.

Connection.

A three-pin plug fitted with a fuse rated at 13 Amps should be fitted to the supply cable. A minimum rating of 7A can be fitted if required. Any value lower than this is not recommended due to transformer surge on reset. The supply cable should not exceed a length of 2 metres.

Parts list

High Flyer is designed to fit the list of Bell Fruit Manufacturing Trident 2 base machines on the front cover.

If the High Flyer kit is to be fitted on a machine other than the ones stated then additional parts may-be required depending on the base machine.

On receipt of your kit please check the content against the following list, and notify our Spares Department *immediately* of any shortages on: 01222 377402

Part	Part number
Top Glass	AT 1004
Reel Glass	AL 1004
High Flyer Name glass	AN 1000
Reel band 1	AR 1015
Reel band 2	AR 1016
Reel band 3	AR 1017
Reel Band 4	AR 1018
£5 cash disclaimer	AD 1053
£8 cash disclaimer	AD 1056
£8 token disclaimer	AD 1054
£10 cash disclaimer	AD 1057
5/10p £5 reel glass decal	AD 1067
5/10p £8 reel glass decal	AD 1066
5/10p £10 reel glass decal	AD 1065
20/25p £5 reel glass decal	AD 1064
20/25p £8 reel glass decal	AD 1063
20/25p £10 reel glass decal	AD 1062
£5 top glass triangular decal	AD 1061
£8 top glass triangular decal	AD 1060
£10 top glass triangular decal	AD 1059
Price of play strip decal	AD 1058
Button Legends x8	AB 1004
Switch settings sticker	
Top glass lamp mask loomed	
Reel glass lamp mask loomed	
Programme x 1	
Sound EPROM x 1	
R.P.B button assembly (change number)	
Meter bracket x1	
Angle brackets x2 (1 for POP, 1 for disclaimer)	
Instruction manual	
Coin mechanism blanking plate	
Mylar button diffusers x7	
4mm Counter sunk bolts x3 (inc. wing-nuts & washers)	
5mm counter sunk x2 (inc. washers & nuts)	

Conversion instructions.

Prior to commencement ensure that the machine to be converted is in good working order.

Removal of the existing glass and wooden mask.

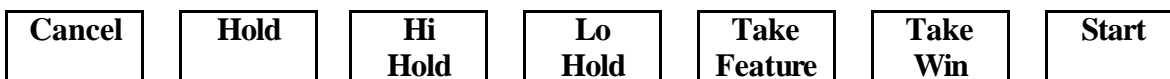
- 1) Remove payout tubes and coin handling to allow easier access to the interior of the machine.
- 2) Lower the reel shelf and remove reels.
- 3) Disconnect the lamp looms attached to the lamp interface board and existing connectors. Keep the headers that connect the top lamps to the lower lamps, as these will be needed for the new loom.
- 4) Unplug and remove the alphanumeric display and keep safe.
- 5) Unclip the button panel.
- 6) Undo all 2BA nuts securing the left and right hand side extrusions retaining the top glass.
- 7) Undo the 2BA nuts securing the central extrusion.
- 8) Go to the front of the machine and remove the fixing bracket securing the reel glass to the wooden mask (located at the base of the glass).
- 9) Remove the reel glass and the top glass along with the extrusions. With these gone the wooden mask retaining screws will be visible.
- 10) Unscrew the four retaining screws on the bottom wood and remove from the machine. Repeat this with the top wood.
- 11) To remove the existing name glass (located under the button panel), remove the three screws on the right hand side of the lower extrusion. Bend this very slightly to remove the old name glass.
- 12) The final step is to remove the 4 reel bands. To do this carefully pull them away from the reel drum.

If the machine has a BFM 5p accept credit board fitted this must be removed otherwise incorrect crediting of coins will occur.

Fitting the High Flyer Kit.

- 1) Fit the 2 x 5mm bolts in the High Flyer wooden mask into the holes located by the space provided for the top reel.
- 2) Fit the 4mm counter-sunk bolts into the holes, which secure the triangular cutout for the decal.
- 3) Fit the top wooden mask and secure using the four retaining screws previously removed.
- 4) Fit a 4mm counter-sunk bolt into the hole provided in the lower wooden mask to secure the decal cutout. Then secure the mask into the machine with the retaining screws.
- 5) Fit the HI/LO number vacuum form.
- 6) Fit the extrusion to the left and right hand side of the top glass and fit into the machine.
- 7) Refit and secure the central extrusion.
- 8) Fit the left and right hand side extrusion to the reel glass and refit into the machine.
- 9) Secure the reel glass with the fixing bracket, which was removed in step 8 of "Removal of existing glass". This will prevent the reel glass from sliding down.
- 10) Remove the switches and the buttons. Remove the lens caps, and replace the legends and the diffusers (for button layouts see the diagram on the next page).
- 11) Refit the buttons and switches. The R.P.B button assembly is then fitted into the hole provided in the top glass.
- 12) To fit the High Flyer name glass reverse step 11 of "Removal of existing glass".
- 13) Secure the 4th reel mounting bracket using the 5mm nuts and washers.
- 14) Fit the terminals provided on the top lamp loom to the Change Number switch. The terminal with the Pink wire is fitted to the Normally Open terminal and the Pink/Brown is fitted to Common (the base of the switch).
- 15) Fit the Blue/Black and the Grey coloured wired terminal to either side of the lamp terminals.
- 16) The trailing connector is then fitted to the switch interface board, which is located in the middle of the right hand side of the cabinet.
- 17) Fit the HI and LO lamp holders into the respective position on the HI/LO number vacuum form.
- 18) Fit the Push to Reject lamp holder in to the relevant position on the coin entry bezel.
- 19) Connect the top lamps to the lower lamps with the header removed in step 3 of "Removal of existing glass".
- 20) Connect the remaining lamp loom plugs to the lamp interface board.
- 21) The reel bands are now ready to be fitted. Identification of the reel bands can be found on the clear tail or by the diagram on page 17. in the technical description section.
To fit the reel bands locate the notch in the reel band and align this with the lug on the reel drum (on the end of the spoke with the optic tab fitted). Secure the end of the strip.
- 22) Refit the reels into the machine.
- 23) Fit the Sound EPROM (with the notch of the EPROM pointing down) in position IC 9 on the BFM Scorpion 2 MPU. Check that there is a link in position LK2 above the EPROM.
- 24) Fit the game EPROM into the socket provided on the PROM Card. The prom card is then fitted in to slot Z1 (the left-hand slot) on the MPU.

Button Layout



Setting-up

No connector or component must be removed or reconnected whilst the power is turned on.

Check that all connectors, assemblies, and wiring harness are correctly engaged inside the machine.

Set the DIL switch options on the MPU board to the correct position, set the token cash switch to the desired position and fit the relevant decals.

If there is no token/cash switch currently fitted in the host machine, one can be obtained from our spares department. A shorting link between the two connectors could also be used.

Please make sure that the connector with the diode fitted is not cut or removed in any way, as this will cause a short circuit within the switch matrix.

Run through the test procedure.

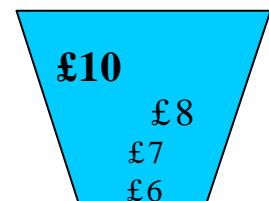
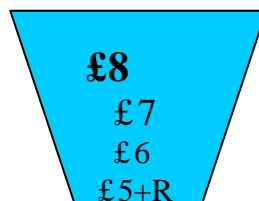
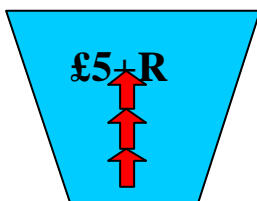
Award Structure

Reel Glass

£5-5/10p	£8-5/10p	£10-5/10p	£5-20/25p	£8-20/25p	£10-20/25p
£5+R	£8	£10	£5+R	£8	£10
£4	£4	£4	£4	£4	£4
£3	£3	£3	£3	£3	£3
£2	£2	£2	£2.40	£2.40	£2.40
£1	£1	£1	£2	£2	£2
60p	60p	60p	£1.40	£1.40	£1.40
40p	40p	40p	£1	£1	£1
20p	20p	20p	60p	60p	60p

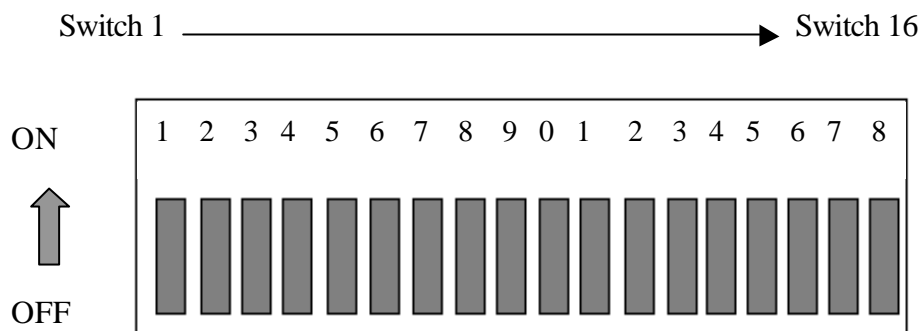
Top Glass

The three decals to be fitted on the top glass cover all price of play.



DIL Switch Settings

Located on the Scorpion 2 MPU is a bank of DIL switches. The switches are numbered 1 to 16 from left to right.



The functions are as follows: -

SWITCH	OFF	ON
1	Not used	
2	Alarm if coin jammed	Alarm inhibited
3	Normal payout	Direct payout
4	Pay coins normal	20p priority payout
5	Non lock up tube if coins low	Lock up if coins low
6	15RM reel (red carrier)	16RM reel (cream carrier)
7	Multi-coin play	Single coin play
8	Normal mode	£8 cash if in token mode*
9	Not used	
10	Price of play (see next page)	
11	Price of play (see next page)	
12	Low token or £5 cash mode*	High token or £10 cash *
13	Percentage selection	
14	Percentage selection	
15	Percentage selection	
16	Percentage selection	

*To obtain the desired jackpot, see table on next page.

Stake, Prize and Percentage Settings

Token / Cash switch (in host machine)	DIL switch 8	DIL switch 12	Outcome
Cash	OFF	OFF	£5 cash
Token	ON	OFF	£8 cash
Token	OFF	OFF	£8 token
Cash	OFF	ON	£10 cash

Switch 10	Switch 11	Outcome
OFF	OFF	5p
OFF	ON	10p
ON	OFF	20p
ON	ON	25p

Switch 13	Switch 14	Switch 15	Switch 16	%
OFF	OFF	OFF	OFF	70
ON	OFF	OFF	OFF	72
OFF	ON	OFF	OFF	74
ON	ON	OFF	OFF	76
OFF	OFF	ON	OFF	78
ON	OFF	ON	OFF	80
OFF	ON	ON	OFF	82
ON	ON	ON	OFF	84
OFF	OFF	OFF	ON	86
ON	OFF	OFF	ON	88
OFF	ON	OFF	ON	90
ON	ON	OFF	ON	92
OFF	OFF	ON	ON	94
ON	OFF	ON	ON	96
OFF	ON	ON	ON	98
ON	ON	ON	ON	99

Demonstration mode

A demonstration mode is provided which enables the game to be played or tested without having the need to insert coins and without any actual payout of prizes.

To enter the demonstration mode, open the back door and press the green test button once. To achieve £5 worth of credits press the Start button. By holding down the Cancel button and any of the Hold buttons the reels can be stepped down or stepped up by holding down the Take feature button, to induce reel wins or to play the feature.

Once on the desired balloon, the position can be incremented by pressing the Start button.

If the MPU does not recognise any activity after approximately 20 seconds the machine enters the attract mode. Credits can then be achieved by pressing the Start button again.

Test Routine.

To enter the test routine the back door must be open and the green test button on the MPU pressed twice.

The test routine will start on the lamp test. To step to the next test press the Hold/Lo button. To step to a previous test press the first Hold button. The relevant test will be displayed on the alphanumerical display. To activate the desired test the Start button is then pressed. Pressing the Cancel button once escapes that test. If the Cancel button is pressed twice the machine enters the demonstration mode.

<u>Test Number</u>	<u>Test procedure</u>
1	Lamp test
2	Meter test
3	Switch test
4	Reel test
5	Coin input test
6	Percentage test
7	RS232
8	Display test
9	Coin payout test
10	Alarm log
11	Sound test
12	Volume adjust

Test 1 – Lamp Test

On pressing the Start button the button panel (group1) will illuminate. Each press of the Start button will illuminate the next group.

Group 1- Button panel

Group 2- Reels

Group 3- Reel glass

Group 4- Top glass features

Group 5- Name panel

Pressing the first Hold button will flash all lamps except the coin lights. To exit all lamps flash, press the Hold button again.

To enter the step lamp test, press the Take Feature button once. This will step through the lamps in the current group. Pressing the Take Feature button again will stop the step lamp test. Pressing the Hold/Lo button will enable the step lamp test to be stepped manually.

Test 2 – Meter test

On pressing the Start button, each meter will pulse five times in the following order: - Cash in, Token in, Cash out, Token out, token refill.

All the meters operate in 10p units.

Once all three meters have been pulsed the machine will automatically advance to test 3.

Test 3 – Switch test

To enter the test press Start.

On the press of each button, its corresponding lamp will illuminate and a tone will sound.

The DIL switches on the MPU will light the relevant position on the balloons if in the on position.

DIL Switch	Position
2	2 Knockouts
3	3 Knockouts
4	4 Knockouts
5	5 Knockouts
6	6 Knockouts
7	7 Knockouts
8	8 Knockouts
10	1 Win spin
11	£1 repeat chance
12	Step to nearest win
13	2 win spins
14	£2 + repeat chance
15	3 win spins
16	£4 + repeat chance

Switch	Position
£1 tube high	C
20p tube high	L
Token 1 (front) high	I
Token 2 (rear) high	M
£1 low	R
20p low	E
Token 1 Low	P
Token 2 low	E
Token cash switch in cash pos	Cash number
Back door	Cash dash
Front door	Reel roulette
Token refill lock	High flyer
Test switch	Win series

Turning the Refill key will activate the High Flyer position.

Pressing the green test switch will illuminate the Win series light.

The back door and front door switches, when open, will illuminate the Cash Dash and the Reel Roulette lights respectively.

When the token cash switch is in the cash position then the Cash Number position will light.

When the level sensors are in “tube full” position then the corresponding light will illuminate.

To exit this test, press the Start and Cancel buttons simultaneously.

Test 4 – Reel test

On pressing the Start button, the reels will spin to the jackpot symbols. The optic flag should be in the sensor and the LED's off. The appropriate win value will be displayed on the alphanumerical display.

The reels can be stepped up or down by holding the relevant buttons.

Press Cancel to exit.

Test 5 – Coin test

Press Start to activate the test. This will allow all coins to be accepted. By pressing Start again this will lock out all coins.

Once a coin is accepted the machine will show the value on the alphanumerical display.

To payout coins advance to test 9.

Cancel to exit.

Test 6 – Percentage test

On pressing the Start button the aiming and the actual percentage will be displayed on the alphanumerical display.

Press Cancel to exit.

Test 7 – RS232 test

If the RS232 Data port is not present the alpha will display FAIL.

This test will automatically advance to test 8.

Test 8 – Display test.

On pressing the Start button each segment of the alphanumeric will light from left to right. This test will automatically advance to test 9.

Test 9 – Payout test.

On pressing the lit buttons the relevant solenoid will pulse. To continually pulse, keep the button pressed. When the solenoid is active the respective information is displayed on the alphanumerical display.

Hold button 1 = 20p

Hold/Hi button = £ 1

Hold/Lo button = Token 2 (rear)

Take Feature = Token 1 (front)

Cancel to exit.

Test 10 – Alarm log

On pressing the Start button the alarm log number will be shown on the left-hand side of the display, the alarm code on the right.

By pressing the Hold/Hi and the first Hold button you can increase or decrease the log number respectively.

By depressing the Start button for five seconds the alarm log can be cleared.

Alarm codes

<u>Code</u>	<u>Fault</u>	<u>Causes (in order of probability)</u>
0.1	Ram clear/checksum failure	Faulty battery, change of program, M.P.U
0.2	Mode change	Price of play or jackpot change
0.3	Manual ram clear	
1.1	£1 coin input	Coin jam. Coin mech., coin loom,
1.2	50p coin input	As above
1.3	20p coin input	As above
1.4	10p coin input	As above
1.5	Token input	As above
1.9	Anti-strim alarm	Coin mech., coin loom, M.P.U
2.1	Reel 1 fault	Set-up, opto, loom, motor, M.P.U
2.2	Reel 2 fault	As above
2.3	Reel 3 fault	As above
2.4	Reel 4 fault	As above
7.1	E.D.C failure	Datport unit not fitted, M.P.U, no -12v
9.1	Incorrect switch settings	Adjust switch settings, faulty MPU
9.2 – 9.8	Faulty processor	Faulty MPU, programme card

CANCEL TO EXIT

Test 11 - Sound test

On pressing the **Start** button the sample number will be listed on the alphanumerical display. To activate the sample press Start.

To increase use **Hold/Hi**, to decrease use **Hold**. On pressing the **Hold/Hi** button the machine will automatically play each tune.

Test 12 – Volume Adjustment

Once this test is active the volume can be increased by pressing the Hold/Hi button and decreased by pressing the Hold/Lo button.

The volume can also be adjusted with the doors closed, via the refill key. With both doors closed insert and turn the refill key, then press the Start button. The Hold/Hi and Hold/Lo buttons can then be used to increase or decrease the volume. The relevant information is displayed on the alphanumerical.

Technical Data

Machine Description

Cabinet

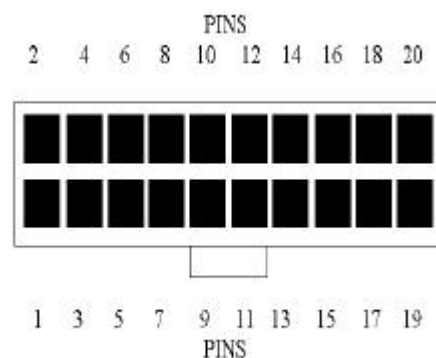
Cabinet name: Trident 2
Manufacturer: Bell Fruit Manufacturing
Technology: BFM Scorpion 2
Height: 1785mm
Width: 632mm
Depth: 600mm
Weight: 110Kg

ME 129 Coin Routing

This machine uses a 20 way routing plug. The pins are identified with the notch of the routing plug facing downward and the wire links facing you.

To achieve the correct routing, link pins: -

1 + 19*
2 + 15*
2 + 17*
3 + 9
5 + 7
8 + 18
10 + 20
11 + 13
14 + 16



*Please note that links 1 + 19, 2 + 15, and 2 + 17 each have a diode fitted between them with the cathode (the striped end) at pins 1 and 2.

Coin Payout

1 x 20p Coin Controls compact 50v AC.
1 x £1 Coin Controls compact 50v AC.
2 x 20p Token Coin Controls compact 50vAC (if fitted).
6 x Cream Starpoint 3CLD AA level sensors for £1 and Token tubes.
2 x Red Starpoint 3CLD AA level sensor for 20p tube.

Note that the rear token tube will fill first then when the level sensor is activated the front tube will then fill. The front tube will pay first.

Coin Tube Capacities

The coin tube capacities are listed below with the level sensor positions.

Coin Tube	Capacity	Low sensor	High sensor
20p	£ 30	£ 3.80	£ 30
£ 1	£ 70	£ 12	£ 70
20p token front (1)	£ 44.60	£ 5.40	£ 44.60
20p token rear (2)	£ 25.40	£ 9.60	£ 25.40

Meters

5 x 12v DC

Software Meters (electronic)

In all there are 91 meters, but there are useful meters that have been incorporated for the operators benefit. These are Cash in, Cash out, Token in, Token out, Games played, Token refilled, and Cash refilled. For the desired meter refer to the table below.

To access the software meters open the back door and press the Green test button once. The machine will go into demonstration mode. Next turn the refill key to the on position.

The alphanumerical display will show meter number 0. To display the next meter press the **Hold/Hi** button, to display the previous meter press the **Hold** button. To clear the meters, press and hold the **Start/Feature** button. A countdown sequence will be initiated and can be aborted by releasing the **Start** button. One the countdown reaches zero the meters will be cleared.

Meter No.	Description	Divide by

Note that the software will be cleared down every time the RAM has been reset and the percentage or price of play has been altered.

Reel Set-up

High Flyer can be fitted with 4 x Starpoint 15RM (red carrier frame) or 4 x Starpoint 16RM reel motors (cream carrier frame).

The lamp modules for the 3 main reels have to be set to 90 degrees. The fourth reel has the lamp module set at 0 degrees.

With DIL switch 6 set to desired position (Off = 15RM, ON = 16RM) the four reel modules can be set up by following the seven steps below.

Step 1) With the machine turned off, press and hold the green test button on the MPU.

Step 2) Keeping the button pressed turn the machine on.

Step 3) Turn the reel module by hand until the optic tab is as near to the opto sensors as possible.

Step 4) Release the screws securing the motor and turn the motor so the optic tab is in the centre of the opto sensor. Once the optic sensor is in the centre, the red LED on the back of the reel module should extinguish.

Step 5) Secure the motor adjustment screws.

Step 6) Switch the machine off.

Step 7) Switch the machine back on. The machine is now ready for use.

The reel bands can be identified by the number printed on the top of the reel band or by the diagram below.

Reel 1	Reel 2	Reel 3	Reel 4
Balloon + 2 Red bars	Balloon Red bars + 3	Balloon Red bars + 3	1 + Red balloon 5 + Green balloon

Lamp Allocation

For allocation of strobe and data pin connections refer to the MPU connections on page 24.

Lamp	Strobe	Data	Function	Group
0	0	0	Cancel button	1
1		1	Hold	
2		2	Hold/Hi	
3		3	Hold/Lo	
4		4	Take feature	
5		5	Take win	
7		7	Start	
8	1	0	3 Nudges	3
9		1	4 Nudges	
10		2	5 Nudges	
11		3	6 Nudges	
12		4	7 Nudges	
13		5	8 Nudges	
14		6	9 Nudges	
15		7	10 Nudges	
16	2	0	Oranges	
17		1	Mixed 7's	
18		2	Blue Bar	
19		3	Red Bars	
20		4	Yellow bar	
21		5	Blue 7's	
22		6	Red 7's	
23		7	Balloon	
24	3	0	Reel 1 bottom	2
25		1	Reel 1 centre	
26		2	Reel 1 top	
27		3	Reel 2 bottom	
28		4	Reel 2 centre	
29		5	Reel 2 top	
31		7	Stars	3
32	4	0	Reel 3 bottom	2
33		1	Reel 3 centre	
34		2	Reel 3 top	
35		3	Reel 4 bottom	
36		4	Reel 4 centre	
37		5	Reel 4 top	
40	5	0	Oranges	3
41		1	Mixed 7's	
42		2	Blue Bar	
43		3	Red Bars	
44		4	Yellow bar	
45		5	Blue 7's	
46		6	Red 7's	
47		7	Balloon	
48	6	0	Oranges award	
49		1	Mixed 7's award	
50		2	Blue Bar award	
51		3	Red Bars award	
52		4	Yellow bar award	
53		5	Blue 7's award	
54		6	Red 7's award	
55		7	Balloon award	

56	7	0	20p	3
57		1	40p	
58		2	60p	
59		3	£1	
60		4	£1.40	
61		5	£2	
62		6	£2.40	
63		7	99 Nudges	
128	0	8	R	4
129		9	E	
130		10	T	
131		11	A	
132		12	E	
133		13	P	
134		14	E	
135		15	R	
136	1	8		
137		9	R	
138		10	E	
139		11	B	
140		12	M	
141		13	I	
142		14	L	
143		15	C	
144	2	8	1	
145		9	4	
146		10	2	
147		11	5	
148		12	6	
149		13	3	
150		14	9	
151		15	8	
152	3	8		
153		9	Balloon	
154		10	Balloon	
192	8	8	£3	
193		9	£4	
194		10	£5	
195		11	Ladder pos11	
196		12	Ladder pos12	
197		13	Ladder pos13	
198		14	Ladder pos14	
199		15	Ladder pos14	
200	9	8	Cash Picker	
201		9	Bumper cash	
202		10	Reel skill	
203		11	Cash Number	
204		12	Reel Roulette	
205		13	Cash Dash	
206		14	3 change number	
207		15	Hi	

208	10	8	Top jackpot	
209		9	Top jackpot	
210		10	Game – yellow	
211		11	High flyer	
212		12	Feature – yellow	
213		13	£2 + rep	
215		15	3 win spins	
216	11	8	Change button	2
217		9	1 number change	3
218		10	2 number change	
219		11	1 win spin	
220		12	£1 + Rep	
221		13	Step to nearest	
223		15	£4 + Rep	
224	12	8	Lo	
225		9	7	
226		10	Knockouts	
227		11	Knockouts	
228		12	Coin reject	
229		13	Skill – green	
230		14	Game - green	
231	15	T/T		
232	13	8	Skill cash	
233		9	Skill nudge	
234		10	Jackpot repeater	
235		11	High flyer name	
236		12	High flyer name	
237		13	High flyer name	
238		14	High flyer name	
239	15	High flyer name		

Switch Matrix

Switch	Strobe	Data	Function	Strobe wire colour	Data wire colour
1	1	0	Cancel	Orange/white	Orange/Black
2		1	Hold		Orange/Brown
3		2	Hold/Hi		Orange/Red
4		3	Hold/Lo		Orange/Yellow
5		4	Take Feature		Orange/Green
6	2	0	Take win	Orange/white	Orange/Black
7		1			Orange/Brown
8		2	Start		Orange/Red
9		3	Change number		Orange/Yellow
10		4			Orange/Green
11	3	0	Front door	Orange/white	Orange/Black
12		1	Back door		Orange/Brown
13		2	Refill		Orange/Red
14		3	Token/cash		Orange/Yellow
15		4			Orange/Green
16	4	0	£ 1 tube low	Orange/blue	Orange/Black
17		1	20p tube low		Orange/Brown
18		2	Token front low		Orange/Red
19		3	Token rear low		Orange/Yellow
20		4			Orange/Green
31	7	0	£ 1 tube high	Orange/violet	Orange/Black
32		1	20p tube high		Orange/Brown
33		2	Tok front high		Orange/Red
34		3	Tok rear high		Orange/Yellow

MPU Connections

Plug A 13 Way		Power supply
Pin	Function	
1	+12V unregulated	
2	+12V unregulated	
3	+12V unregulated	
4	Polarised	
5	50V ac common	
6	55V dc	
7	+12V validator	
8	Ground	
9	Ground	
10	Ground	
11	55V dc	
12	50V ac	
13	12v unsmoothed	

Plug B 9 Way		Payslides
Pin	Function	
1	Triac 4 (blue)	
2	Triac 3 (green)	
3	Polarised	
4	Triac 2 (pink)	
5	Triac 1*	
6	Not used	
7	Not used	
8	50V ac common *	
9	50v ac (orange)	

Plug D. 6 Way		Alphanumeric
Pin	Function	
1	+12V	
2	Clock	
3	Polarised	
4	Data	
5	Reset	
6	Ground	

Plug F. Reel mech. drives 8Way		Plug G. reel mech. drives 8Way		Plug H Reel mech. drives 8Way	
Pin	Function	Pin	Function	Pin	Function
1	Phase 0	1	Phase 0	1	Phase 0
2	Polarised	2	Phase 1	2	Phase 1
3	Phase 1	3	Polarised	3	Phase 2
4	Phase 2	4	Phase 2	4	Polarised
5	Phase 3	5	Phase 3	5	Phase 3
6	+12V	6	+12V	6	+12V
7	+12V	7	+12V	7	+12V
8	+12V	8	+12V	8	+12V

Plug J. Reel mech. drives 8Way		Plug K. reel mech. drives 8Way		Plug L Reel mech. drives 8Way	
Pin	Function	Pin	Function	Pin	Function
1	Phase 0	1	Phase 0	1	Phase 0
2	Phase 1	2	Phase 1	2	Phase 1
3	Phase 2	3	Phase 2	3	Phase 2
4	Phase 3	4	Phase 3	4	Phase 3
5	Polarised	5	+12V	5	+12V
6	+12V	6	Polarised	6	+12V
7	+12V	7	+12V	7	Polarised
8	+12V	8	+12V	8	+12V

Plug N Coin Validator 15Way	
Pin	Function
1	Coin 5 input
2	Coin 1 inhibit
3	Coin 2 inhibit
4	Coin 3 inhibit
5	Ground
6	+12V
7	Coin 4 inhibit
8	Coin 4 input
9	Polarised
10	Coin 3 input
11	Coin 2 input
12	Polarised
13	Coin 1 input
14	+12V
15	Coin 5 inhibit

Plug O Aux. Outputs 7 Way ME129 Seperator	
Pin	Function
1	+12v (Not used)
2	0v (Black)
3	Output 1 (Gn/Org)
4	Output 2 (Gn/Blu)
5	Polarised
6	Output 3 (Gn/Vi)
7	Output 4 (Gn/Grey)

Plug P	
Reel Mech. lamps	
10Way	
Pin	Function
1	Lamp data 0
2	Lamp data 1
3	Lamp data 2
4	Lamp data 3
5	Lamp data 4
6	Lamp data 5
7	Polarised
8	Lamp strobe 3
9	Lamp strobe 4
10	Lamp strobe 5

Plug Q	
Meters	
11Way	
Pin	Function
1	+12V
2	Meter 0
3	Meter 1
4	Meter 2
5	Meter 3*
6	Meter 4*
7	Meter 5*
8	Meter 6*
9	Polarised
10	Polarised
11	Meter 7*

Plug S	
Reel Mech. Inputs	
10Way	
Pin	Function
1	+5V
2	Ground
3	Polarised
4	Data 1
5	Data 2
6	Data 3
7	Data 4
8	Data 5
9	Polarised
10	Data 6

Plug T	
Switch Matrix	
16 Way	
Pin	Function
1	Data 1
2	Data 2
3	Data 3
4	Data 4
5	Data 5
6	-
7	-
8	Polarised
9	Strobe 1
10	Strobe 2
11	Polarised
12	Strobe 3
13	Strobe 4
14	Strobe 5
15	Strobe 6
16	Strobe 7

Plug V	
Audio output	
6Way	
Pin	Function
1	Audio out
2	Ground
3	Ground
4	+12V
5	Polarised
6	Audio In

MPU Connections

Plug W 17 way		Plug X 17 way	
Lamp Matrix		Lamp Matrix	
Pin	Function	Pin	Function
1	Data 8	1	Data 0
2	Polarised	2	Data 1
3	Data 9	3	Data 2
4	Data 10	4	Data 3
5	Data 11	5	Data 4
6	Data 12	6	Data 5
7	Data 13	7	Data 6
8	Data 14	8	Data 7
9	Data 15	9	Strobe 0
10	Strobe 8	10	Strobe 1
11	Strobe 9	11	Strobe 2
12	Strobe 10	12	Strobe 3
13	Strobe 11	13	Strobe 4
14	Strobe 12	14	Strobe 5
15	Strobe 13	15	Polarised
16	Strobe 14	16	Strobe 6
17	Strobe 15	17	Strobe 7

Power Supply fuse specification.

Voltage	Fuse	Supplies
220/240V AC	Anti-surge 5A	Transformer input
12V DC	Quick Blow 3.15A	Coin Validator
12V DC	Quick Blow 10A	MPU
12V DC	Quick Blow 10A	Reel Mechanism
12V DC	Quick Blow 10A	Display
55V DC	Quick Blow 6.3A	Lamps
50V AC	Quick Blow 5A	Payslides