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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 5 Amps, should be fitted to the supply cable. The supply cable should not exceed a length of 2 metres.

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 and fit the relevant payout award decals.

Run through the test procedure.

Game Description.

Overview

SAFECRACKER is a 4-reel club machine using BELLFRUIT SCORPION2 technology in a new M.D.M. Leisure designed cabinet

It is available on 5p £75, 5p £100, 10p £100, 10p £150, 20p £200, 20p £250, 25p £250, 10p/20p dual £200, and 10p/25p dual £250. All are selected via the onboard DIL switches.

The machine has the facility to be switched between Fixed Cashpots or Accumulating Cashpots.

For machines using Accumulating Cashpots, the machine will allow the Cashpots to reach jackpot value.

For fixed Cashpot machines, the fixed award will change depending on which price of play is selected.

Game

On pressing the **Start** button the four reels spin off, barring those that have been held. When the reels stop, if a winning combination appears the player can collect the amount displayed or can gamble the amount for a higher amount using the HI/ LO gamble.

If any 3 feature **faces** are on the win line the player enters the outer board feature.

Any four faces will pay the **Deposit box**.

The jackpot is given when the blue **Jackpot sevens** are on the win line.

Outer board feature

Play is commenced from the lower right hand **20p start** (which automatically banks 20p). The player then moves around the board with the use of the **safe dial** on the reel glass, accumulating the wins the player lands on.

If the player lands on the **Alarm** position the player will **Scarper**, running around collecting a random amount of cash.

Landing on a **Take a chance** square gives random features. The alphanumeric display will display what feature the player has a chance to collect, or whether to carry on around the board. These features include *Super Sevens*, *Super pick-a-win*, *Pick-a-win*, *Cash attack*, *Cash flow*, *Cash link*, and *Win series*.

When the player lands on **Turn on camera**, the camera is activated. Then when the player lands on a security camera square, the monitors are activated and the player has one chance to stop on one monitor. Two of, which are fuzzy, screens (get away), one Scarper, and one caught red handed.

Game Description continued.

Land on **Crack combination** four times to collect the deposit box.

The player has to collect four sticks of **TNT** to blow the vault open and get into the inner board feature. If the player lands on **Vault empty**, he or she has won the amount already accumulated and the game is over.

Random Features

The random features include *Super Sevens*, *Super pick-a-win*, *Pick-a-win*, *Cash attack*, *Cash flow*, *Cash link*, and *Win series*.

Super 7's: -

The reels spin to a group of sevens, either three or four of a kind.

Super pick a win: -

The reels spin to a random four of kind win.

Pick a win: -

The reel spins to a random three of a kind win.

Cash attack: -

Random cash values are lit on the outer and inner board feature. The player stops on the cash amount via the start button. Each amount is banked. When the player lands on **TNT** the game is over.

Cash flow: -

Values of cash scroll across the alphanumeric display. The player then stops the values via the **Start** button.

Cash link: -

A link is produced on the money values on the lower section of the bottom glass. The player then presses the **Start** button to link the values.

Win Series: -

The reels spin to random wins, which are accumulated.

Payout award structure.

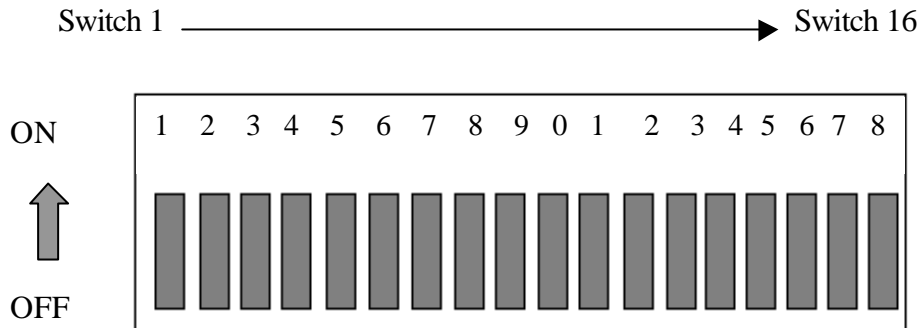
The necessary decals should be fitted to display the correct award structure. See the tables below.

5p	5p	10p	10p	20p	20p	25p
£75	£100	£100	£150	£200	£250	£250
Pays Deposit Box	Pays Deposit Box	Pays Deposit Box	Pays Deposit Box	Pays Deposit Box	Pays Deposit Box	Pays Deposit Box
£40	£40	£50	£50	£100	£100	£150
£20	£20	£30	£30	£75	£75	£100
£15	£15	£20	£20	£40	£40	£50
£7	£7	£10	£10	£20	£20	£30
£5	£5	£7	£7	£10	£10	£20
£3	£3	£5	£5	£7	£7	£10
£2	£2	£3	£3	£5	£5	£7
£1	£1	£2	£2	£3	£3	£4
40p	40p	£1	£1	£2	£2	£2
20p	20p	40p	40p	£1	£1	£1

10p	20p	10p	25p
£100	£200	£100	£250
Pays Deposit Box		Pays Deposit Box	
£50	£100	£50	£150
£30	£75	£30	£100
£20	£40	£20	£50
10p	20p	10p	25p
£10	£20	£10	£30
37	£10	37	£20
£5	£7	£5	£10
£3	£5	£3	£7
£2	£3	£2	£4
£1	£2	£1	£2
40p	£1	40p	£1

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 mech. jammed	Coin Alarm inhibit
3	Jackpot selection normal	Jackpot selection HIGH
4	Lock up tube if coins low	Non lock up if coins low
5	Accumulating cashpots	Fixed Cashpot
6	Cash pot normal fill	Cash pot fast fill
7	Multi-coin play	Single coin play
8	15RM reel (red carrier)	16RM Reel (cream carrier)
9	Not used	
10	Price of play	
11	Price of play	
12	Single Price of play	Dual stake on
13	Percentage selection	
14	Percentage selection	
15	Percentage selection	
16	Percentage selection	

For percentage and price of play selection see next page.

Price of Play and Percentage Settings

For price of play and percentage selection see the tables below.

To enable 5p £100, 10p £150, and 20p £250 DIL switch 3 has to be in the ON position.

Switch 3	Switch 10	Switch 11	Switch 12	Outcome
OFF	OFF	OFF	OFF	5p £75
ON	OFF	OFF	OFF	5p £100
OFF	ON	OFF	OFF	10p £100
ON	ON	OFF	OFF	10p £150
OFF	OFF	ON	OFF	20p £200
ON	OFF	ON	OFF	20p £250
OFF	ON	ON	OFF	25p £250
ON	ON	ON	OFF	25p £250
OFF	OFF	OFF	ON	10/20p £100/£200
ON	OFF	OFF	ON	10/20p £150/£250
OFF	ON	OFF	ON	10/25p £100/£250

Any price of play or jackpot switches selected other than the aforementioned may result in an incorrect price of play or jackpot.

Switch 13	Switch 14	Switch 15	Switch 16	%
OFF	OFF	OFF	OFF	72
ON	OFF	OFF	OFF	74
OFF	ON	OFF	OFF	76
ON	ON	OFF	OFF	78
OFF	OFF	ON	OFF	80
ON	OFF	ON	OFF	82
OFF	ON	ON	OFF	84
ON	ON	ON	OFF	86
OFF	OFF	OFF	ON	88
ON	OFF	OFF	ON	90
OFF	ON	OFF	ON	92
ON	ON	OFF	ON	94
OFF	OFF	ON	ON	96
ON	OFF	ON	ON	97
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/Collect button and any of the Hold buttons the reels can be stepped down to induce reel wins or to play the feature.

Once on the feature board, by holding down the Hold/Hi button the numbers on the safe dial can be rotated to allow the player to move the relevant position around the board.

If the MPU does not recognise any activity after approximately 20 seconds the machine enters the attract mode.

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/Hi button. To step to a previous test press the first Hold button. The relevant test will be displayed on the alphanumeric display. To activate the desired test the Start button is then pressed. Pressing the Cancel/Collect button once escapes that test. If the Cancel/Collect 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- Safe Cracker name and award structure

Pressing the Hold/Lo button will flash all lamps except the “Push to reject” coin light. To exit all lamps flash, press the Hold/Lo button again.

To enter the step lamp test, press the Hold/Hi button once. This will step through the lamps in the current group. Pressing the Hold/hi button again will stop the step lamp test, pressing the button a third time 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, Cash out, Cash refill.

All the meters operate in 10p units.

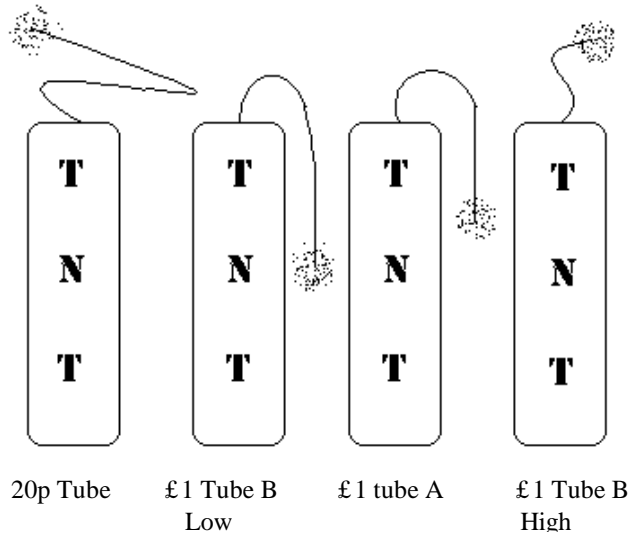
Once all three meters have been pulsed the machine will automatically advance to test 3.

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.

When activating the level sensors the relevant lamp will light and a tone will sound, see diagram below.



The DIL switches on the MPU will light the outer feature board squares, see the table below: -

DIL Switch	Feature Square
2	20p (Start)
3	80p
4	TNT
5	40p
6	Security camera
7	60p
8	20p
10	Turn on camera
11	Alarm bell
12	TNT
13	40p
14	Take a chance
15	£1
16	Security camera

Turning the Refill key will activate the HI light on the safe dial.

Pressing the green test switch will illuminate the LO light on the safe dial.

The back door and front door switches, when open, will illuminate the 40p and the TNT light respectively on the top of the outer board feature.

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 appropriate win value will be displayed on the alphanumerical display. The reels can be stepped down by holding the relevant Hold 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. Once this has finished the 7-segment display will also light each segment at a time.

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 depressed. When the solenoid is active the respective information is displayed on the alphanumerical display.

Hold button 1 = 20p tube

Hold button 2 = £1 one (centre tube)

Hold/Hi button = £1 tube two (left hand tube)

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

Code	Fault	Causes (in order of probability)
0.1	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
1.9	Anti-strim alarm	Coin mech., coin loom, M.P.U
2.1	Reel 1 fault	Set-up, opto, loom, motor, backboard, 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

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.

Technical Data

Machine Description

Cabinet Dimensions

Height: 1735mm

Weight: 675mm

Depth: 610mm

Weight: Max 140Kg

ME 126 Coin Routing

This machine uses an 18 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 + 2

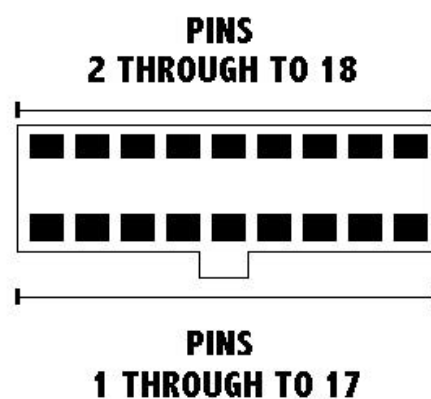
3 + 4

5 + 6

7 + 14

8 + 13

12 + 15



Coin Payout

1 x 20p Coin Controls compact 50v AC

2 x £1 Coin controls compact 50v AC

3 x Grey Starpoint 3CLD AA level sensors for £1 tubes

1 x Red Starpoint 3CLD AA level sensor for 20p tube

Coin Tube Capacities

20p tube - £ 35.60

£1 tube one (centre tube) - £ 144

£1 tube two (left hand) - £ 166

Meters

3 x 12v DC

Software Meters (electronic)

In all there are 72 meters, but there are four useful meters that have been incorporated for the operators benefit. These are Cash in, Cash out, Games played, 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/Feature** 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

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

The lamp module has to be set to 57.5 degrees (the marker between 55 and 60).

With DIL switch 8 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 depressed 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 of dots located on the front of the reel band or by the diagram below.

Reel 1	Reel 2	Reel 3	Reel 4
Orange Plum Face	Plum Orange Grape	Plum Orange Grape	Orange Plum Face

Lamp Allocation

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

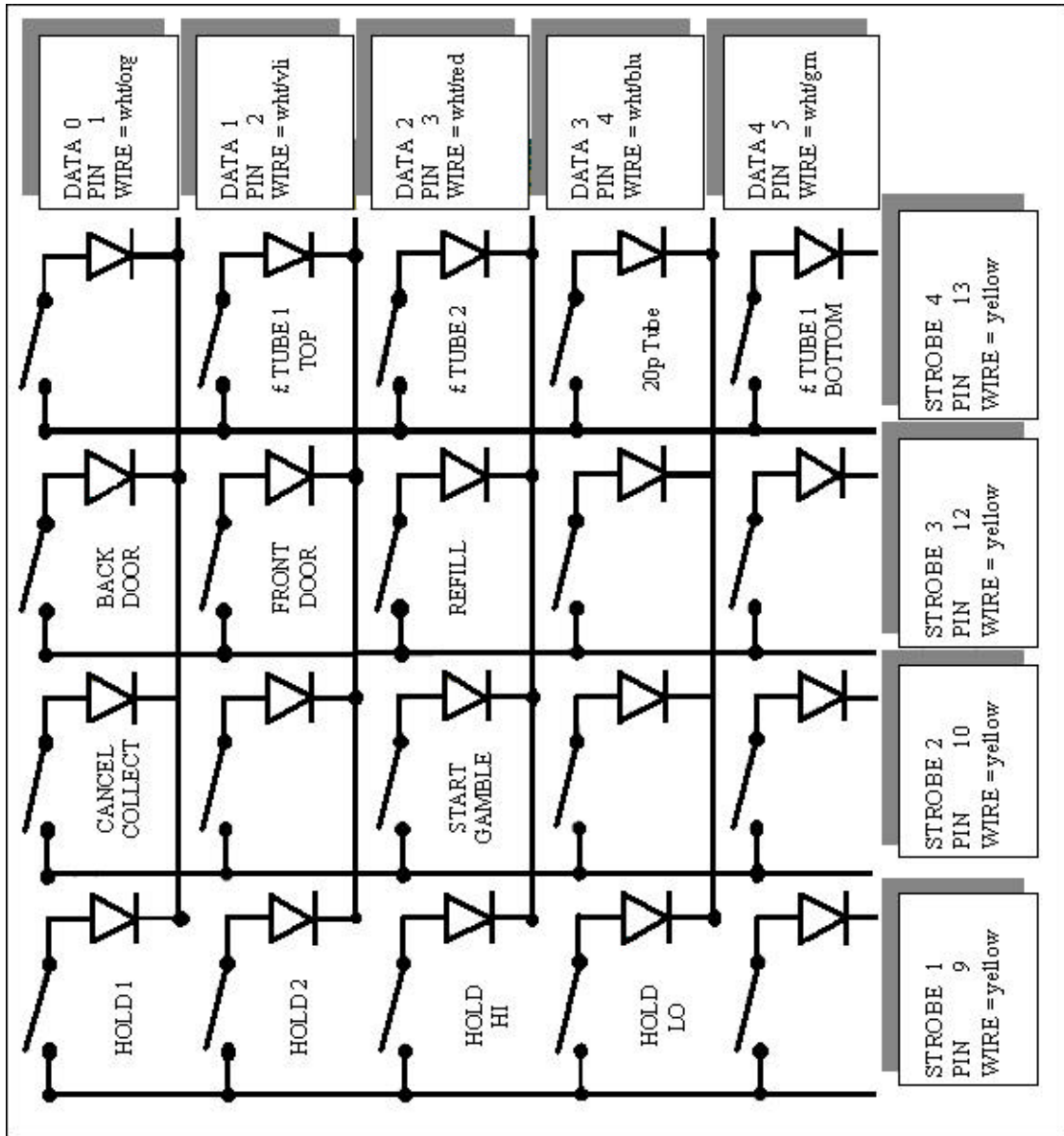
Lamp	Strobe	Data	Function	Group	
0	0	0	Hold	1	
1		1	Hold		
2		2	Hold/HI		
3		3	Hold/LO		
5		5	Cancel/collect		
7		7	Start/Feature		
8	1	0	Safe dial 10		3
9		1	Safe dial 9		
10		2	Safe dial 8		
11		3	Safe dial 7		
12		4	Safe dial 6		
13		5	Safe dial HI		
14		6	Nudges		
16	2	0	Safe dial 5		
17		1	Safe dial 4		
18		2	Safe dial 3		
19		3	Safe dial 2		
20		4	Safe dial 1		
21		5	Safe dial LO		
22		6	Nudges		
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		
32	4	0	Reel 3 bottom		
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	Nudges 4		3
41		1	Nudges 3		
42		2	Nudges 2		
43		3	Nudges 1		
44		4	£250		
45		5	£200		
46		6	£150		
47		7	£100		
48	6	0	£75		
49		1	£40		
50		2	£20		
51		3	£10		
52		4	£5		
53		5	£3		
54		6	£1		
55		7	20p		

56	7	0	£50	3
57		1	£30	
58		2	£15	
59		3	£7	
60		4	£4	
61		5	£2	
62		6	40p	
63		7	Lose	
64	8	0	Deposit box units	None
65		1	A	
66		2	B	
67		3	C	
68		4	D	
69		5	E	
70		6	F	
71		7	G	
72	9	0	Deposit box Ten	
73		1	A	
74		2	B	
75		3	C	
76		4	D	
77		5	E	
78		6	F	
79		7	G	
80	10	0	Deposit box hundreds	
81		1	A	
82		2	B	
83		3	C	
84		4	D	
85		5	E	
86		6	F	
87		7	G	
88	11	0	Deposit box thousands	
89		1	A	
90		2	B	
91		3	C	
92		4	D	
93		5	E	
94		6	F	
95		7	G	
96	12	0	Reserve box units	
97		1	A	
98		2	B	
99		3	C	
100		4	D	
101		5	E	
102		6	F	
103		7	G	
104	13	0	Reserve box tens	
105		1	A	
106		2	B	
107		3	C	
108		4	D	
109		5	E	
110		6	F	
111		7	G	

112	14	0	Reserve box hundreds	NONE	
113		1	A		
114		2	B		
115		3	C		
116		4	D		
117		5	E		
118		6	F		
119		7	G		
120	15	0	Reserve box thou'		
121		1	A		
122		2	B		
123		3	C		
124		4	D		
125		5	E		
126		6	F		
127		7	G		
129	0	9	Jackpot lamp 3	5	
130		10	Award panel 6 row 3		
131		11	Award panel 5 row 3		
132		12	Award panel 4 row 3		
133		13	Award panel 3 row 3		
134		14	Award panel 2 row 3		
135		15	Award panel 1 row 3		
137	1	9	Jackpot lamp 2		
138		10	Award panel 6 row 2		
139		11	Award panel 5 row 2		
140		12	Award panel 4 row 2		
141		13	Award panel 3 row 2		
142		14	Award panel 2 row 2		
143		15	Award panel 1 row 2		
144	2	8	Safecracker 7		
145		9	Jackpot lamp 1		4
146		10	Award panel 6 row 1		5
147		11	Award panel 5 row 1		
148		12	Award panel 4 row 1		
149		13	Award panel 3 row 1		
150		14	Award panel 2 row 1		
151		15	Award panel 1 row 1		
152	3	8	Safecracker 6	5	
153		9	Insufficient coins		
157		13	Combination 9		4
158		14	Combination 7		
159		15	Any 3		
160	4	8	Safecracker 5	5	
165		13	Combination 5		4
166		14	Combination 2		
167		15	Faces 3		
168		5	8		Safecracker 4
174	14		Large security 2	4	
175	15		Faces 2		
176	6	8	Safecracker 3	5	
182		14	Large security 1		4
183		15	Faces 1		
184		7	8		Safecracker 2
190	14		Screen 2	4	
191	15		Screen 4		

Lamp	Strobe	Data	Function	Group
192	8	8	Safecracker 1	5
198		14	Screen 1	4
199		15	Screen 3	
200	9	8	Alarm pos.18	
201		9	80p pos.19	
202		10	Crack comb' pos.20	
203		11	TNT pos.21	
204		12	£ 1 pos.22	
205		13	Security pos. 23	
206		14	Take a chance pos.24	
207		15	20p pos.1	
208	10	8	60p pos.17	
209		9	Vault £ 3 pos.10	
210		10	Vault £ 5 pos.11	
211		11	Vault £ 3 pos.12	
212		12	Vault TNT pos.4	
213		13	Vault £ 1 pos.1	
215		15	80p pos.2	
216	11	8	TNT pos.16	
217		9	Vault camera pos.9	
220		12	Vault TNT pos.3	
221		13	Vault £ 10 pos.2	
223		15	TNT pos.3	
224	12	8	40p pos.15	
225		9	Vault £ 10 pos.18	
228		12	Vault TNT pos.2	
229		13	Vault £ 2 pos.3	
231		15	40p pos.4	
232	13	8	Camera pos.14	
233		9	Vault crack comb.	
234		10	Vault £ 1 pos.6	
235		11	Vault £ 5 pos.5	
236		12	Vault TNT pos.1	
237		13	Vault empty pos.4	
239		15	Security pos.5	
240	14	8	£1 pos.13	
241		9	Take a chance pos.12	
242		10	40p pos.11	
243		11	TNT pos.10	
244		12	Alarm pos.9	
245		13	Turn on camera pos.8	
246		14	20p pos.7	
247		15	60p pos.6	

Switch Matrix



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 £ 1 2 left hand)	
2	Triac 3 (green £ 1 1 right hand)	
3	Polarised	
4	Triac 2 (pink 20p)	
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 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

MPU Connections

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