The Classic AMERICAN ROAD TRIP

Designed in the UK exclusively for

SEGA®

By

gameconcepts

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Classic American Road Trip - The game

The aim of the game is for the player(s) to move from the start destination of Hollywood to the final (Jackpot) destination at Chicago. Once the player has arrived at Chicago the Jackpot payout is won, either in direct ticket payout (25-500 tickets) or a jackpot coin splash depending on the machine configuration.

To advance to the next destination the player must skilfully time the release of their coin / token so that it falls through 1 of the 7 channels at the bottom of the pin-Perspex while that channels LED is hit. Once a lit channel has been triggered the corresponding postcard will light & route destination LED change colour (pin-Perspex) The destination number plate (Left hand artwork in the playfield area) illuminates the relevant destination achieved & a destination sound is triggered.

At random intervals during the game a 'Bonus coin splash' is awarded which dispenses multiple coins down the pin-Perspex to push even more coins over the edge.
Note: During a coin splash the channel LED's are disabled

All coins that fall from the playfield are counted & tickets dispensed accordingly.
The game is very flexible & has the option to give multiple coin releases per coin inserted as well as a single or multiple tickets to be issued for each coin that falls from the playfield. Setting the machine payout percentage is done via the Base 41 / Menu PCB located behind the main door.
All of the game options including sound / alarm volume are altered using this PCB, please reference section 3.3 of this manual & the detailed menu option sheet at the back of this manual for further details.

1. **COMMISIONING**

1.1 Receipt of Machine

Upon receipt of machine carefully remove all protective packaging and establish machine on a flat and level floor. Take care to protect the machine from sudden shocks etc. when lifting or manhandling. **DO NOT attempt to move the machine using the Blue Perspex panels as a hand hold / leverage point.**
The machine should only be situated indoors, and should not be subjected to any other environments. Ensure any ventilation grills / fans have at least 4" (100mm) clearance from other surfaces to permit adequate cooling.

1.2 Electrical Connection

The Classic American Road Trip cabinet should be connected to the mains supply via a suitable lead to suit your installation requirements. A standard U.K or European lead is supplied, depending on destination. If in any doubt, consult a qualified electrician.

Mains wiring:
- Live   Brown
- Neutral   Blue
- Earth   Green/Yellow

THIS MACHINE MUST BE EARTHED

Machine	**Classic American Road Trip**				
Voltage:	**230**	VAC	Freq:	**50**	Hz
Power:		W	Amps:		A
Overall weight					
Kg		lbs			
???		**???**			

1.3   Electrical Supply

There are two On/Off switches for the machine, The internal switch is located in the lower compartment on the right hand wall, above the switch is the mains protection fuse (4A). The second switch is located above the mains inlet point on the rear of the cabinet. Once connected to a suitable mains supply both switches must be switched "ON" for the machine to operate.

1.4 Initial Operation

Once power has been connected and the machine switched ON the Playfield lighting, Top-sign lighting, foot-well lighting, Perspex panel lighting and pusher box will operate.
The Classic American Road Trip incorporates a bucket lift system to carry coins from the lower hoppers to the top hoppers, upon power-up the bucket lift will operate to empty any coins currently in the buckets into the top hoppers before returning to it's "home" (down) position.
After a short time if the machine is not being played the machine will enter attract mode activating various lights & sounds to attract prospective players.

1.5   Floating the hoppers / preparing the playfield

The floating of the hoppers is a manual process and the operator will require access to the Topsign & Playfield areas (9117 keys).
Remove the Topsign artwork and place 300 coins in each of the top hoppers. Remove the Playfield glass window and remove the small side artwork panels either side of the play-field & drop 500 coins down each of the chutes.
Insert coins into the riser at the front of the playfield and carefully scatter approximately 800 coins across the playfield.
Re-fit the Topsign artwork playfield artwork & Playfield Glass then play an additional 100 coins down each of the coin slides.
The Classic American Road Trip is now floated & ready to play.
Please note that it may take several days of play for the Playfield to 'settle' into normal play after which it may be necessary to add additional coins to the lower hoppers. If any of the   hoppers are low the menu LCD display will indicate which of the hopper(s) are low on coins (refer to section 3.3).

2.   Access & Maintenance

WARNING - DANGEROUS VOLTAGES EXIST WITHIN THIS MACHINE

2.1   Access to the machine

Playfield
The playfield area is accessible by removing the playfield glass, release the lock (9117 key), lift and remove the glass taking care not to damage the Perspex side windows.

Front / Ticket Door
Release the locks and remove the door (9117 Keys). The door must not be tilted but pulled forward.

Top sign area (front)
Release the lock (9117 key) tilt forward and lift the artwork clear.

Back Door
Release the locks (A444 keys), hinge the door out at the top and lift clear. There may be 2 additional fixing screws fitted that will need removing to allow the door to be removed.

Cashbox
There is a secure door located below the lower cabinet, which can be fully removed by releasing the lock at the top **(**RXXX key), hinge out and lift clear. The cash box is located within.

2.2   General Care - Cleaning

Classic American Road Trip is a robust and reliable machine, which looked after will give years of profitable service. Regular cleaning is the key to optimum condition and performance.
To maintain all visible surfaces in an 'as new condition':

1.   Plastic - use a general purpose (non aggressive) water based detergent and finish with a quality furniture polish.

2.   Laminated Cabinet trims - clean with an all-purpose non-aggressive cleaner and finish to a high gloss using a furniture polish.

3.   Glass and Chrome - clean with a quality window cleaning solution.

Do not use caustic or abrasive cleaners. Always use cleaning products in accordance with the manufacturer's instructions.

2.3 Maintenance schedule

It is recommended an initial inspection be carried out after approximately one months usage, to check for any signs of wear on the moving parts. Adjust as required, and thereafter inspect as per the following maintenance schedule:
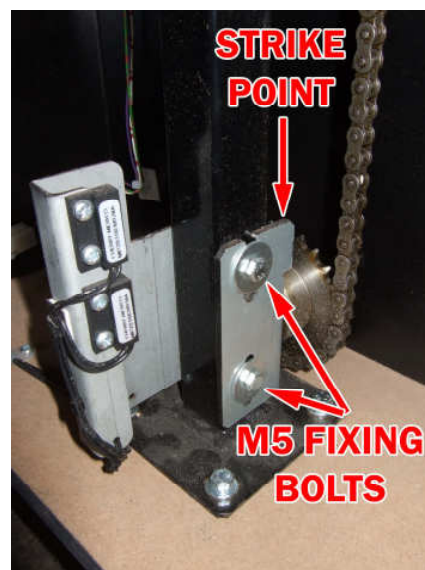
Item	Weekly	Monthly	6 Monthly	Annually
Clean & polish win-chute with suitable furniture polish	✔			
Check / adjust (if required) Bucket lift chain tension		✔		
H-Section - Oil Bearings, polish chute work			✔	
Hoppers - Clean			✔	
Pin-Perspex - Strip & clean				✔

2.4 Component Maintenance

2.4.1 - Bucket lift Chain adjustment:
The chain that drives the bucket system is adjusted by loosening the 2 x Nyloc lock-nuts & slightly loosening the 2 x M5 bolts fitted to the lower bracket of the bucket system. Once these have been loosened use a hammer tap down on the metal plate (strike point) that protrudes from the bracket. (reference photos). The chain should be tensioned just enough to remove any slack from the chain & should not be over-tightened as this will cause excessive wear to the system.
Once the required tension has been applied, re-tighten the bolts followed by the Nyloc lock-nuts. If too much tension has been applied loosen the 2 x M5 bolts further, this will allow the chain to re-slacken.

Bucket system - bottom bracket

2.4.2 - H-Section:

The H-Section contains the count hopper & diverter system that directs coins to both the Right & Left bottom buckets. It is important to keep this system functioning correctly as this unit is vital in maintaining the correct flow of coins to enable the game to function correctly. To remove the H-Section form the machine undo & remove the single wing-bolt / thumb-screw that secures the unit in the cabinet. The H-Section can now be drawn back & removed from the machine. Enough cable has been included to allow the unit to be placed on the floor without the need for disconnecting the wiring harness. If you do wish to disconnect the wiring harness ensure that the machine is turned OFF before disconnection / re-connection. Failure to do so **will** damage / destroy the count hopper opto.
Once removed apply a small amount of light oil to the 2 x oil-lite bearings on which the chute-work pivots.
Using a suitable furniture polish clean the chute, this will allow the coins to slide freely to whichever side the chute is directed.

2.4.3 - Hoppers:

There are 5 x SH400 hoppers used on the Road Trip (4 in the cash-out version). The SH400 hoppers are extremely reliable & require little servicing. However over time contaminants from the coins / tokens of play need to be cleaned from the hopper bowl & low-level plates. Failure to keep these plates clean can lead to 'false errors' being detected by the machine which can result in alarms being triggered &/or coins to be diverted to the wrong hopper. Before removing any of the hoppers make sure the machine is switched off & disconnected from the mains. It is recommended that you remove clean & re-fit one hopper at a time as each hopper is fitted with a unique metal chute for that particular hoppers location.
Once removed release the hopper bowl & clean the inside of the hopper bowl with a suitable cleaning fluid / cloth before re-fitting.
Ensure that any cables unplugged / removed are re-connected prior to the machine being powered up, fitting a cable with the machine powered up can irreparably damage a hopper opto.

2.4.4 - Pin-Perspex - Cleaning:

Over time the pin-Perspex will become contaminated due to the constant flow through of coins & will need to be stripped down & cleaned.
The pin-Perspex can be cleaned in the machine but in order to gain access to the fixing screws for the front clear Perspex the 2 side artwork panels containing the number plates light-box & jackpot display will need to be removed.
To remove these panels carefully pull the top of the panel so that the artwork "flex's" from its retaining grooves. Once removed the fixing screws are easily accessible. The coin scraper & supporting pillars will also need to be removed to remove the clear front Perspex.
Once cleaned re-fit the scraper to the correct height (allowing only 1 coin to pass beneath the scraper). To refit the side panels slot the side of the panel into the groove on the front of the pin-Perspex & 'flex' the panel into the opposing grove on the blue acrylic panel. If the 'number plate' panel proves difficult to refit, loosen the 6 screws that retain the light-box to allow the artwork panel to 'flex' more freely.
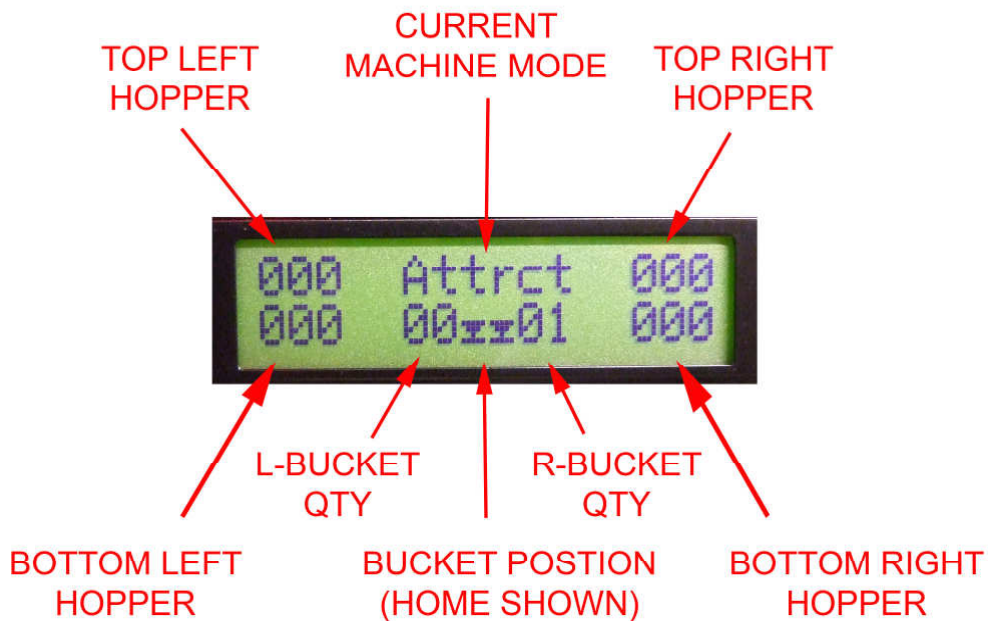
3. **GAME OPERATION**

3.1 Attract Mode

When not in play the game will play attract sounds and the Perspex LED, Play buttons (if fitted) & Route locations will flash to alert potential players to the machine.
During this time any coins falling from the playfield will not be counted & no tickets dispensed. Every 30 seconds or so the count hopper will run to clear any coins that have fallen from the playfield.

3.2 Active Play Mode

When a coin is inserted via either the fast feed coin entries or coin mech (if fitted) the count hopper will actively run to count any coins that fall from the playfield Once coin is inserted / played off the corresponding lower hopper will dispense a coin into the bucket system. The corresponding top hopper will release a coin down the pin Perspex to the pusher box. The diverter system will remain in 'play mode' until 30 seconds (default) after the last coin has been played unless the machines slam tilts / pendulum tilt are activated.

3.3 Menu System
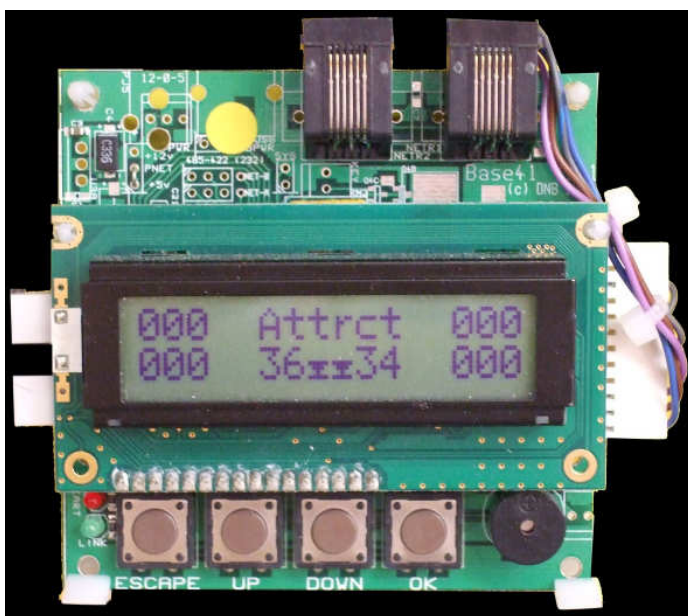
The Classic American Road Trip has an LCD Menu housed behind the main front door. All user adjustable settings are made via the LCD / selection buttons.
When the menu is in 'play mode' the LCD display shows the status of the hoppers, any alarms and the quantity of coins currently held in the buckets ready for transportation.

Menu Display – Play Mode
*Note** 000 = normal – no fault / idle*

Menu system cont...

Menu (Base41) PCB

Any user adjustable settings are made using the push buttons on the Menu PCB.
The ESCAPE button switches the menu from Play mode to Operator mode. The operator can then use the UP/DOWN buttons to scroll through the menu until the setting they wish to change is displayed. To change a setting press the OK button which will then allow the item to be changed, then using the UP/DOWN buttons alter the level to the required setting. Once the required value has been set press the OK button again to lock in the new setting.
Pressing the ESCAPE button at any time will turn the menu system back into PLAY mode.
 Although most of the settings are user adjustable it is recommended that the factory defaults remain unchanged with the exception of the Music Volume, Sound Effects Volume, Alarm Volume, Diverter Time & Payout %.
It is recommended that you contact Sega / Game Concepts for more information should you wish to deviate from the recommended factory settings on all other menu options.
A fuller breakdown of the menu options can be found at the end of this service manual. Please note that not all options may be visible as the menu options displayed will only be relevant to your machine configuration.

3.4   Hopper Dump / De-float

Fully de-floating the machine is mostly an automated sequence. Firstly remove the main (ticket) door & H-Section. Place a suitable container in place of the H-section to catch all of the coins being dispensed. Drag all of the coins from the playfield over the edge into the win chute, the coins will fall through the bottom of the win chute into the previously placed container. Activate the menu system & scroll through until the "Hopper Dump" option is displayed. Follow the on-screen instructions to commence the dump sequence. During the dump the play left / right buttons can be used to either slow the speed of the coins being dispensed or pause the dump sequence. Once the dump sequence has completed the machine will automatically exit back to the main menu

Coins released at full speed

Press left or right play button

Coins released at half speed

Press left or right play button

Dump sequence paused

Press left or right play button

Hopper Dump Play Button control sequence

3.5 Coin Mech (if fitted)

Classic American Road Trip has the option to accept UK / European coins to add credits to the game so that the game may be played without using the fast feed half pipes.
Once credits have been added the player can then use the LEFT / RIGHT play buttons to play the game.
The SR3 coin mech is factory configured to accept all coins with a value of that higher than the price of play. No further adjustment is recommended.
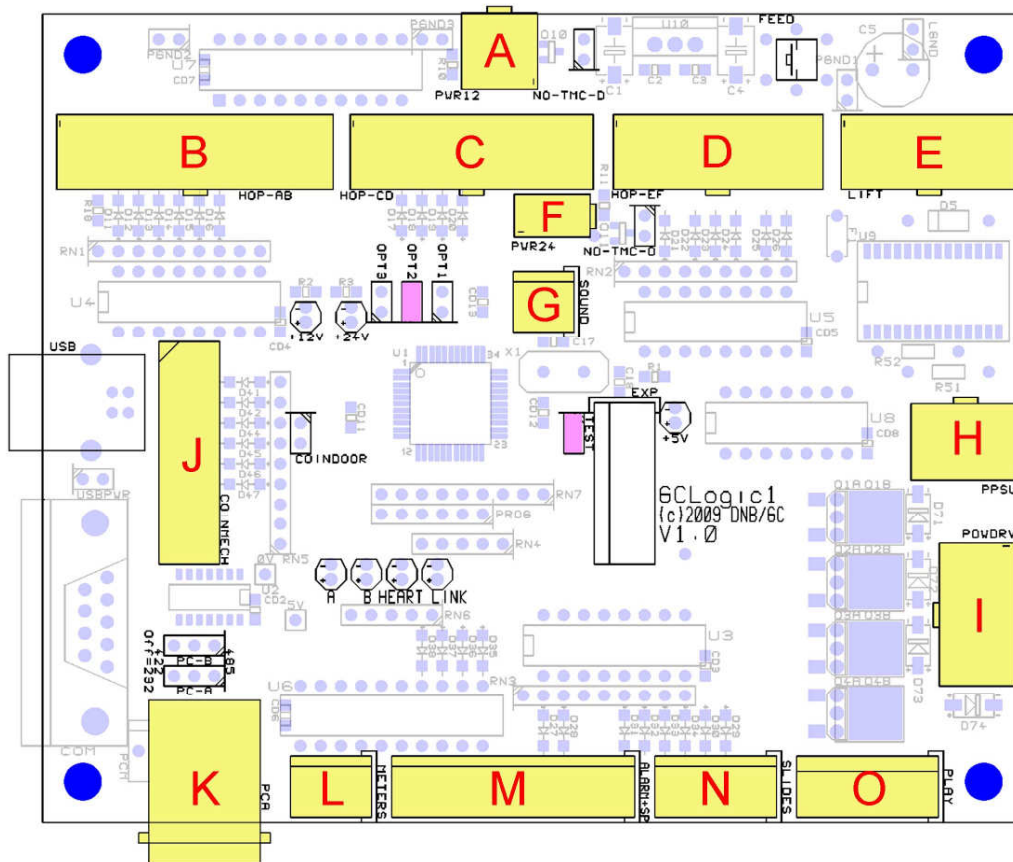The default switch settings for the UK10p, 2p & Euro 20c are detailed below.

ACCEPT / INHIBIT SWITCHES

SR3 Switch Settings - 10p Game - Factory (default) settings

	Switch Bank							
	1	2	3	4	5	6	7	8
Inhibit (on / Up)	1	1						1
Enable (off / Down)			1	1	1	1	1	

UK Coins Accepted			20p	50p	£1	£2
EU Coins Accepted						

UK Denomination	5p	10p	20p	50p	£1	£2	UK	
Euro Denomination	5c	10c	20c	50c	€1	€2		EU

SR3 Switch Settings - 2p Game - Factory (default) settings

	Switch Bank							
	1	2	3	4	5	6	7	8
Inhibit (on / Up)	1							1
Enable (off / Down)		1	1	1	1	1	1	

UK Coins Accepted	10p	20p	50p	£1	£2	
EU Coins Accepted						

UK Denomination	5p	10p	20p	50p	£1	£2	UK	
Euro Denomination	5c	10c	20c	50c	€1	€2		EU

SR3 Switch Settings - 20c Game - Factory (default) settings

	Switch Bank							
	1	2	3	4	5	6	7	8
Inhibit (on / Up)	1	1	1				1	
Enable (off / Down)				1	1	1		1

UK Coins Accepted						
EU Coins Accepted				50c	€1	€2

UK Denomination	5p	10p	20p	50p	£1	£2	UK	
Euro Denomination	5c	10c	20c	50c	€1	€2		EU

3.6 Logic PCB

The Logic PCB is housed in the lower compartment between the PSU Box and the left hand wall. There are no user adjustable settings on the PCB

Key to Logic Board Connections:

A (PWR12) – 12V Input from PSU
B (HOP-AB) – Top Hoppers
C (HOP-CD) – Bottom Hoppers
D (HOP-EF) – Count Hopper & Ticket Mech (if fitted)
E (LIFT) – Bucket lift system
F (PWR24) – 24V Input from PSU
G (SOUND) – Link to external soundboard
H (PPSU) - High power inputs from PSU (used for powering devices linked to "I")
I (POWDRV) – High power drive outputs (power supplied from "H")
J (COINMECH) – Coin Mech / Swipe System connection
K (PCA) – RJ11 Link to Base41 (Menu PCB)
L (METERS) – Hardware Meters
M (ALARM+SP) – System alarm inputs + paycup LED (if fitted)
N (SLIDES) – Coin Slides input from Coin in sensor PCB
O (PLAY) – Play Left / Right Buttons & Lamps

Link-jumps:
OPT2 – Fitting a link enables the user to access & adjust the Factory Settings (normally locked out settings) on the Base41/Menu PCB

Section 4: Fault-finding & Spares

4.1 - Error Codes
Should an error occur the machine will show an 'error code' on the 2-digit credit display. The display will flash "Er" (dim) + error code (bright). If more than one error is present the display flips through the error list.
Viewing the LCD menu behind the main door will give a fuller text (please see section 3.3 of this manual for details on the LCD display).

Error Codes:
H+ 'arrow' - Hopper, as pointed to
Co - Count Hopper
Tc - Ticket Mech
Lf - Bucket Lift
PS - Pusher
TL - Tilt
SL - Slides

4.2 - Fault Finding
Hopper Errors: (disconnect power from machine before servicing)

Symptom	Cause / fault	Remedy
Hopper Jammed (not dispensing coins)	Damaged coin / physical jam	Remove obstruction (If hopper constantly jams refer to SH400 Manual for re-calibration)
Hopper dispenses several coins then stops indicating a 'jam'	Coin opto 'blown', usually caused by connecting hopper with machine still powered up.	Replace coin opto
Coins are being dispensed only from one side.	Hopper is low on coins. Hopper low level plates dirty Hopper low level wires disconnected	Add additional coins to hopper Remove hopper, clean plates & hopper bowl Re-connect low level wires

Ticket Mech Errors:

Symptom	Cause / fault	Remedy
Tickets not being dispensed	Empty ticket bin No power to Ticket mech	Refill ticket bin Check wiring
Some tickets are dispensed but then "Ticket alarm" is triggered	Ticket Notch not being detected	Check wiring, if ok, then possibly faulty Logic Board - replace

Bucket lift Errors: (disconnect power from machine before servicing)

Symptom	Cause / fault	Remedy
Bucket system does not lift	Chain loose / come off Wiring to motor disconnected Physical Jam	Re-fit chain / re-tension Re-connect wires (orange to top) Remove physical jam
Bucket system over-runs limit switches & hits metalwork	Limit switches unplugged / faulty Magnets not triggering limit switches.	Check connections / test / replace Adjust position of magnets to trigger limit switches at correct points.

Pusher Box errors:

Symptom	Cause / fault	Remedy
Pusher box moving but alarm sounds	Pusher sensor unplugged Pusher sensor faulty Sensor not detecting magnet	Check wiring Replace Sensor Adjust position of sensor to detect magnet.
Pusher box not moving	Mains power to motor disconnected Fuse blown Physical jam (motor 'judders')	Check & reconnect (on top of PSU) Replace fuse Remove physical jam

Tilt errors:

Symptom	Cause / fault	Remedy
Tilt alarm does not clear	One or more of the 3 slam sensors permanently 'made' Pendulum tilt permanently 'made'	Check & separate contacts

4.3 - Spares Listing

This spares list is by no means fully comprehensive, & if the item you require is not listed, please contact Game Concepts / Crompton's Genuine spares on: +44(0)1843 593335.

ITEM	STOCK NUMBER	
12V MR16 LED Bulb	S131023	***Important note*** DO NOT fit non-LED MR16 (Halogen / Dichroic) bulbs to this machine as serious damage may occur.
SH400 Hopper (10p / 2p)	S070214	(Please state machine price of play 10p / 2p)
SH400 Opto sensor	S070231	
SR3 Coin Mech	S070232	(Please state machine price of play / currency)
Soundboard	S130681	
12V Switch mode PSU	PS130695	
24V Switch mode PSU	S130845	
Stop / Kill switch loom	BSS-1074	
Pusher Box Sensor Loom	BSS-1094	
Coin Entry Sensor PCB	S131021	
Logic PCB	S131024	(Please state machine price of play / currency)
Menu PCB	S131025	
Runway Lights PCB	S131026	
LED Driver PCB	S131027	
7 Segment Display PCB	S131028	
Accuride Slide	SL3178	
24V Solenoid	S130616	
Flag Opto PCB	130606A	
Route PCB	131034	
Jackpot 3-digit 7-seg PCB	131033	

Notes: