The **SMART POOL** board (**SP**) is a new generation battery powered control unit for pool tables and simple vending machines. In normal operation the system remains in a "standby" low power state until a coin is inserted – the **SP** board then "wakes-up" to accept the coin and register game credits. The credit can automatically or manually initiate a game.

Features

- Low power consumption from standard 12v batteries

- Multi-coin or token acceptance using industry standard coin mechs (NRI G13, Microcoin S5 and QL etc.)

- Coin "Wake-up" from NRI sensor or Microcoin faceplate

- 12v Motor or solenoid operation, with cam switch input

- LED credit available indicator drive

- Integral electronic fuse (Polyswitch) and protection against incorrect battery connections.

- Integrated dual function 2 row by 16 character LCD display – use as a credit display and for set-up menus. Clipped to the **SP** board as standard, can be unclipped and mounted remotely on the machine.

- Full audit with real-time clock.

- On board smart card socket for audit data collection, **SP** board set-up and full "in the field" software upgrade

- Smart Card Electronic Data Collection fully integrated with the JCA Systems Ltd *Site Manager* software suite:

  - Collect data from the **SP** board using a smart card (100+ readings capacity per card)
  - Read the card into the Site Manager software on a PC
  - Produce performance reports by machine or site
  - Print reports or export to Microsoft Excel ®

- Fully programmable operation with simple set-up using on board menu switch or a smart card and *Smart Pool Setup Utility* software on a PC. Smart card allows rapid and consistent set-up of machines

  - Play price
  - Auto play / manual start switch
  - Bonus levels (2)
  - Maximum credit level
  - Two Discount (Happy Hour) prices
  - Battery low level threshold
  - Standby LCD message on/off
  - Motor/solenoid selection and timings (smart card only)
  - Coin and Token Values (smart card only)
  - Set time and date (menus only)
  - Language selection (English or alternate)
  - Text messages (smart card only)

Technical Specification

Board Size	120mm x 100mm (provisional)
Fixing Holes(4)	110mm x 90mm (provisional) x 4mm diameter
Supply Voltage	10.0v to 15.0v DC
Standby Current	500uA (provisional) no standby LCD message
	2.5mA (provisional) with standby message on LCD
Active Current	100mA (5 secs per coin)
Coin Accept Current	700mA (150 milli-secs per coin)
Motor Output	Transistor drive, max current 1A at 12v DC
Meter Output	Transistor drive, max current 100mA at 12v DC

Operation

The SP board is normally in a low power "standby" state. It is woken up by a coin entry or the start switch being pressed.

Coins are accumulated up to the Game Price with extra games being awarded at programmable bonus levels. When games are available the optional Credit LED is illuminated. In AutoPlay mode the first game is dispensed as soon as the game price is accumulated. In Manual Play mode games are stored to be dispensed manually using the "Start" switch.

Two Discount Prices may be set for programmable times of day

Connections

PL1   **Coin Mech** – NRI G13 / Microcoin QL

PL2   **Coin Mech** – Microcoin S5

PL3   **NRI Wake-up Sensor.**
                   Mating Connector : Molex KK 0.1" part number 22-10-2065 with
                   crimps 08-50-0032

Pin	Function
1	5 volts (1mA max)
2	Wake-up (active low)
3	0 volts
4	0 volts
5	Reserved
6	Reserved

PL4   **Microcoin faceplate** sensor/wakeup
                   Mating Connector : Molex KK 0.1" part number 22-10-2045 with
                   crimps 08-50-0032

Pin	Function
1	Photo-transistor (active low)
2	0 volts
3	LED anode
4	0 volts

PL5   **Free Play Switch**
                   Mating Connector : Molex KK 0.1" part number 22-10-2035 with
                   crimps 08-50-0032

Pin	Function
1	Normally open contact
2	No connection
3	Common contact

PL6   **Power and Motor**
                   Mating connector : Molex KK 0.156" part number 09-91-1200 with
                   crimps 08-50-0106

Pin	Function
1	Battery positive (+12v)
2	Battery negative (0v)
3	Motor/Solenoid positive
4	Motor negative and motor cam switch common
5	Motor cam switch normally open contact
6	Coin Meter positive
7	Coin Meter negative
8	Start Button normally open contact
9	Start Button common contact
10	No connection – polarising key
11	No connection
12	LED Credit indicator

PL7   Factory programming only

Menu Operations

To access the menus press and hold the "Function/MENU" key for 5 seconds until the Time and date and then the Menus are displayed.

Menus are accessed and controlled with the single "Function" key with the length of press differentiating between tasks:

Function Key	Time held ON	Action
Short press (**S**)	< 1 second	Steps to next item in menu
Medium Press (**M**)	>1 second, < 5 seconds	Enters the next menu level/ sub menu, or displays / changes a value
Long Press (**L**) HOLD until display changes	> 5 seconds	Enters menus from normal operation, or exits from the current menu level

If the Function key is not pressed for 15 seconds the menus will exit, one level at a time.

Top level Menu Map

L

D	a	y	o	f	W	e	e	k							
	h	h	:	m	m		d	d	/	m	m	/	y	y	

		M	E	N	U						v	1	.	1	
P	l	a	y		P	r	i	c	e						

M →

S

		M	E	N	U						v	1	.	1	
B	o	n	u	s		1									

M →

S

		M	E	N	U						v	1	.	1	
B	o	n	u	s		2									

M →

S

		M	E	N	U						v	1	.	1	
A	u	t	o	p	l	a	y								

M →

S

		M	E	N	U						v	1	.	1	
D	i	s	c	o	u	n	t		1						

M →

S

		M	E	N	U						v	1	.	1	
D	i	s	c	o	u	n	t		2						

M →

S

		M	E	N	U						v	1	.	1	
C	l	o	c	k											

M →

S

		M	E	N	U						v	1	.	1	
D	i	s	p	l	a	y		A	u	d	i	t		1	

M →

S

		M	E	N	U						v	1	.	1	
D	i	s	p	l	a	y		A	u	d	i	t		2	

M →

S

		M	E	N	U						v	1	.	1	
L	a	n	g	u	a	g	e								

M →

S

		M	E	N	U						v	1	.	1	
C	l	e	a	r		C	o	u	n	t	s				

M →

S
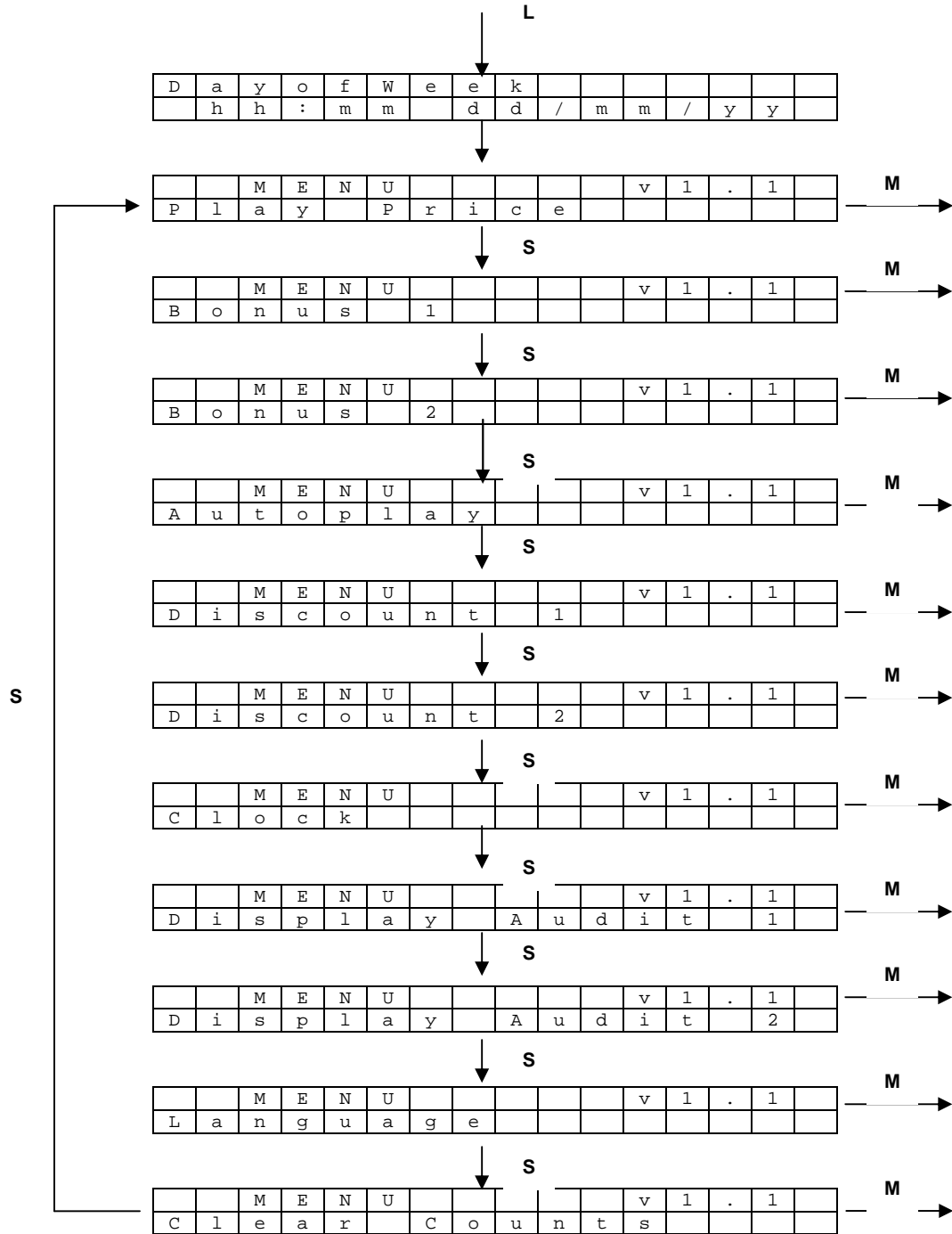
Set Play Price

		M	E	N	U				v	1	.	1	
P	l	a	y		P	r	i	c	e				

M

P	l	a	y		P	r	i	c	e				
					£	0	.	5	0				

S   Increase price by lowest coin value
M   Clear the Price
L   Exit this menu level

Setup Bonus Levels (1 or 2)

		M	E	N	U				v	1	.	1	
B	o	n	u	s		1							

C	r	e	d	i	t		L	e	v	e	l		0	1
							£	1	.	5	0			

S   Increase credit level by lowest coin value
M   Clear the credit level
L   Move on to Bonus Games display

B	o	n	u	s		G	a	m	e	s			0	1
						0	0	0	0	1				

S   Increment bonus games
M   Clear the bonus games
L   Exit this menu level

Autoplay Mode

		M	E	N	U				v	1	.	1	
A	u	t	o	p	l	a	y						

A	u	t	o	p	l	a	y						
						O	F	F					

S or M   Toggle ON / OFF
L   Exit this menu level

Set Discounts

| | | M | E | N | U | | | | | v | 1 | . | 1 | |
| D | i | s | c | o | u | n | t | | 1 | | | | | |

↓

| D | i | s | c | o | u | n | t | | 1 | | | | | |
| | | | | | | | O | F | F | | | | | |

S or M   Toggle ON / OFF
L   Move on to Discount price display

| D | i | s | c | o | u | n | t | | P | r | i | c | e | |
| | | | | | | | £ | 0 | . | 5 | 0 | | | |

S   Increase price by lowest coin value
M   Clear the Price
L   Move on to Discount Start display

| D | i | s | c | o | u | n | t | | S | t | a | r | t | |
| | | | | | | | h | h | : | m | m | | | |

S   Advance time by 10 minutes
M   Clear the time to 00:00
L   Move on to Discount End display

| D | i | s | c | o | u | n | t | | E | n | d | | | |
| | | | | | | | h | h | : | m | m | | | |

S   Advance time by 10 minutes
M   Clear the time to 00:00
L   Exit this menu level

| | | M | E | N | U | | | | | v | 1 | . | 1 | |
| C | l | o | c | k | | | | | | | | | | |

↓

| | | M | E | N | U | | | | | v | 1 | . | 1 | |
| D | i | s | p | l | a | y | | A | u | d | i | t | | 1 |

| | | M | E | N | U | | | | | v | 1 | . | 1 | |
| D | i | s | p | l | a | y | | A | u | d | i | t | | 2 |

		M	E	N	U				v	1	.	1	
L	a	n	g	u	a	g	e						

		M	E	N	U				v	1	.	1	
C	l	e	a	r		C	o	u	n	t	s		

Normal Mode

L

| Menu 3.2 | ← - - - - | Short display of software version number |

M

| Digits | → | Set Number of Digits |

S

M

| Enable | → | Counter Enable Sub-menu |

S

M

| Filter | → | Set Filter value |

S

M

| Configuration | → | Diagnostics, snapshot etc |

S

S

M

| Clear R-Count | → | Clear resettable Counters |

M

| Date | → |

M

| Month | → |

M

| Year | → | Set Date, Time and day of week |

M

| Hour | → |

M

| Minute | → |

M

| Day | → |

M

| H/W Snap | → | Select Hardware input (1 – 6 or none) to trigger snapshot |

M

| Alarm Enable | → | Select Parallel Inputs to log alarm event in Activity Log (ON/OFF) |

JCA SYSTEMS Limited