

# Microcoin SP

# Product Manual

## Introduction

The Microcoin SP electronic coin validator is a stylish, space saving coin acceptor, delivering a tailored solution for short profile, front entry applications, where space and cost savings demand minimisation.

The SP is unique in its approach to design, technology and operation but does not compromise on function and performance

It has a radically stylish and appealing design, which houses several patented features such as its unique and revolutionary “parallel path” debris release system

At 155mm and 115mm in height respectively, the SP can be fitted to two traditionally dimensioned faceplates, which boast unique reject actions and secure fastening techniques.

The Microcoin SP is a global product, with the ability to work with international currencies and any application which requires its unique features

The Microcoin SP is designed to maximise coin acceptance and minimise the effects of fraud. Its security measures are formidable, with both electronic and mechanical systems in place to prevent cheats from tampering with the unit. Whilst the mechanical aspects of the SP deliver physical performance characteristics, the electronics deliver coin discrimination and validation performance characteristics.

The Microcoin SP is designed to minimise debris and coin jams. It has a patented “parallel path” debris release system, which splits the entire SP housing in a parallel action to clear most debris jams with a push of the reject button. A hinged housing design allows the SP to be completely opened in order to gain full access to the entire internal coin path for preventative maintenance and cleaning/debris clearance

The Microcoin SP will typically operate at around 98% acceptance rates at around 3 coins per second, whilst rejecting all known frauds.



## Features & Benefits

Features	Benefits
Uses patented coin validation technology	Superior coin & token discrimination Less frauds
16 coin categories	Can be programmed to hold up to 16 coins/tokens at any one time.
Hinged Housing Design	The housing may be completely opened to allow full access to the entire internal coin path for cleaning/debris clearance
Patented "Parallel Path" Debris Release system	The entire SP housing splits apart in a parallel action to clear most debris jams with a push of the reject button.
SPTalk customer programming	Flexibility to program in the field Do not need to return validator to manufacturer for reprogram End user can support product Potential to download new coin configuration data via the Internet
On board programming	Easy to use No tools required <ul style="list-style-type: none"> <li>• Adjust "Credit" value</li> <li>• Adjust coin sensitivity</li> <li>• Program up to 3 coins/tokens</li> <li>• Enable/disable coins</li> </ul>
High Coin Acceptance	Superior performance No user frustration with slow coin feed rates
Mechanical Dimensions	Standard 3.5" mechanical space
Standard interfaces	Provides standard 10 pin IDC parallel interface Provides credit (accumulator) operation
Serial Communications	SP can communicate via CCTalk protocols directly to a host machine, providing operational and audit information unheard of with standard parallel communications.
Anti-stringing protection	Electronic and mechanical anti-stringing features are incorporated into the Microcoin SP to prevent strimming attempts. <ol style="list-style-type: none"> <li>1. Mechanical gate</li> <li>2. Electronic direction sense</li> <li>3. Inhibit timer after a strim is detected</li> </ol>
Global applications	With the availability of world-wide coin configurations and standard faceplate fittings, the SP is suitable for global applications as "one product suits all"

## SP 115 and 155 Faceplate



Features	Benefits
Unique SP validator attachment	A simple “clip-on” action to attach the SP validator <ul style="list-style-type: none"> <li>• Easy</li> <li>• Secure</li> <li>• Cannot be dislodged</li> </ul>
Industry Compatible Faceplates	Retrofittable to most competitors Conforms to defacto industry standard dimensions Provides compact and ultra compact solutions <ul style="list-style-type: none"> <li>• 155mm high compact</li> <li>• 115mm high ultra compact</li> </ul>
Coin-in detect	Used for low power applications such as pool table battery operated systems. Allows Microcoin SP to remain dormant until a coin-in is detected.
Appearance	A stylish, appealing design which adds value to the host machine aesthetics

## Cleaning the Microcoin SP

In order to access the Microcoin SP for cleaning :

- Disconnect the power source to the validator by detaching any cables.
- Remove the validator from its mounting faceplate.
- Locate the embossed **OPEN** ↑ at the bottom right of the unit.
- Place a thumb in the **OPEN** aperture and firmly lever open the housing by pulling apart the two housing halves. This may feel tight as the locating lugs disengage from their slot positions.
- Clean with a damp lint free cloth. In extreme cases a mild detergent can be used. **DO NOT USE SOLVENTS.**
- To re-assemble the SP, place each locating lug into its respective notch and firmly push the housing down to snap the lugs back into their slot positions. Ensure that the reject boss is positioned beneath the housing.
- Test the reject action is functioning correctly by depressing the small lever at the bottom left hand side of the unit. The side plate should lift up and out and fall back into place when the lever is released.
- Re-attach the validator to the faceplate and press the reject button to ensure the debris release system is functioning properly.






























- Re-attach the power source and check that the tri-coloured LED (marked M on the label side) is a constant green. When the reject button is depressed the LED should go constant RED. When released it will change back to constant Green.

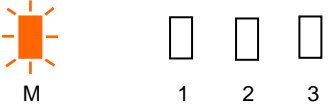
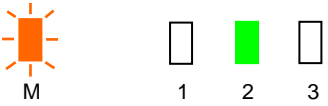
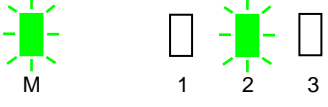
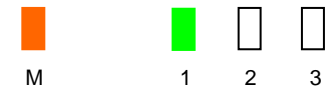

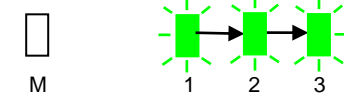
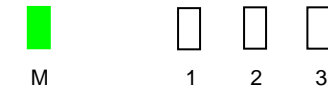
The Microcoin SP is now ready to accept coins.

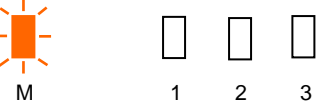
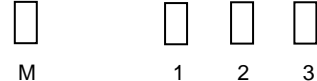
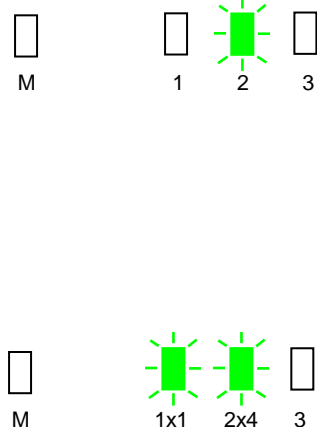
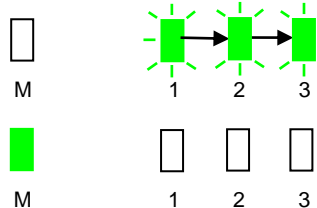
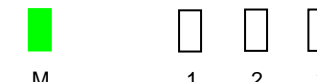

## On Board Programming Instructions

- ✓ The Microcoin SP can be programmed using its On-Board Programming, OBP, facility.
- ✓ Each OBP feature can be accessed by a series of button presses, using the OBP programming button, which is located below the LED indicators.
- ✓ If OBP is turned OFF in the config, then only coin enable/disable and discrimination settings are available
- ✓ Please use a **firm** and **rapid** button press to access each Mode. You will be shown a unique “M” Led flash sequence to indicate the selected Mode.

Feature	Description	Visual Indicators
<b><u>Enable Coin</u></b>	Press button x 1. “M” LED flashes <b>GREEN</b>	    1    2    3
	Pass coin to be enabled. If successful, “M” Led will go steady <b>GREEN</b>	    M    1    2    3
<b><u>Disable Coin</u></b>	Press button x 2. “M” LED flashes <b>RED</b>	    1    2    3
	Pass coin to be disabled. If successful, “M” Led will go steady <b>GREEN</b>	    M    1    2    3
<b><u>Edit Credit Value</u></b>	Press button x 4. “M” LED flashes <b>RED x 2</b>	    M    1    2    3
<b><i>Setting new value</i></b>	Pass any of the SP’s pre-programmed coins to add up to the value of the new credit setting. Note that LED 1-3 will scroll sequentially to indicate the successful addition of the rolled coin to the accumulating total.	   M    1    2    3
	Press button x 1 to set required credit	    M    1    2    3
<b><i>Reset credit value</i></b>	To reset the credit to zero, simply open the SP housing by pressing the reject lever and	

then release, whilst in this mode.

Feature	Description	Visual Indicators
<b><u>Program New Coin</u></b>	Press button x 5. "M" LED flashes <b>ORANGE</b> x 2	
<b>Select Category</b>	The first 3 coin categories are available for programming. Select your required category by button press, as indicated by LEDs 1-3 <i>Example shows Category 2 selected</i>	
<b>Teach Coin</b>	Program the coin by passing 10 sample coins. Use more than 10 coins for greater accuracy. - The Category LED will flash for each valid coin pass - The "M" LED will flash <b>GREEN</b> after 10 coins - <b>Press button x 1 to indicate last coin pass</b>	
<b>Select O/P Line</b>	"M" Led will become <b>ORANGE</b> and LED 1 will turn <b>GREEN</b> . - Select required coin output line from 1 to 5 starting from O/P Line 1, shown by LED 1 - LEDs 1-3 will illuminate sequentially to show O/P line selected. O/P lines 4 & 5 are shown by the sum of the LEDs. (Example : line 5 = 2 + 3)	 
<b>Set Coin Value</b>	Coin Value is set by passing any combination of pre-programmed coins to the required value. LEDs 1-3 will flash & scroll x 1 to indicate the addition of that coin value to the total value	
<b>Finish</b>	Briefly press button x 1 to complete. "M" LED will go steady <b>GREEN</b>	

Feature	Description	Visual Indicators
<b><u>Set Disc Band</u></b>	Press button x 3. "M" LED flashes <b>ORANGE</b>	
<b><u>Select coin</u></b>	Pass a valid and enabled coin to be adjusted "M" LED will go blank	
<b><u>LED Display Settings</u></b>	<p>LED 1-3 will flash 5 times indicating the current discrimination setting, typically LED 2.  <b>Narrow</b> setting will flash LED 1 x 5  <b>Factory</b> setting will flash LED 2 x 5 (<i>default</i>)  <b>Wide</b> setting will flash LED 3 x 5</p> <p>Each button press will proportionally alter the discrimination setting in a cyclic direction towards Wide and then back to Narrow. Notice LED's will flash 5 times in combination to indicate changes.</p> <p>Example shows setting just narrower than the Factory setting. Flashes = LED 1 x 1, LED 2 x 4</p>	
<b><u>Finish</u></b>	<p>To complete the setting, pass the coin again and LED 1-3 will scroll sequentially</p> <p>"M" LED will then go to steady <b>GREEN</b></p>	
<b><u>Escape</u></b>	<p>Press and hold button for more than 3 seconds and then release.</p> <ul style="list-style-type: none"> <li>- Escape allows you to exit any OBP function without making any changes.</li> <li>- A pause of more than 20 secs will automatically exit the OBP mode, again, without any changes</li> </ul> <p>"M" LED will go to steady <b>GREEN</b></p>	
<b><u>Error</u></b>	<p>If a program error occurs, all LEDs will flash x 2          SP will attempt to continue the OBP function from where the error occurred. If the problem persists, then escape the sequence. (see <b><u>Escape</u></b> above)</p>	

## Technical Data

### GENERAL DETAILS

#### DC Power Supply :

12-24 Vdc regulated  
 Range: + 11.5 to + 24 VDC  
 Quiescent current: 100 mA @ 12.0 Vdc  
 Peak current: 500 mA @ 12.0 Vdc

OR

#### AC Power Supply:

12-24 Vac Nominal  
 Range: 12-32 Vac

#### Coin Output:

The Coin credit pulse(s) can be assigned to any output line. Typically lines 1 to 5  
 Pulse width & duty cycle are programmable. Tolerance + 2mSec, - 2mSec  
 Logic Open Collector NPN, 200 mA

#### Enable/Inhibit Input:

The following SP Inhibit logic states and voltage limits can be set under software.

##### Default State

Inhibit  $2.0v < V_{inh} < V_{in}$  Supply  
 Enable  $V_{inh} < 0.8v$  or not connected

#### Credit Output :

The Credit, (or Accumulator output) can be assigned to any output line. Typically line 6  
 Logic Open Collector, NPN 200mA

#### Alarm Output :

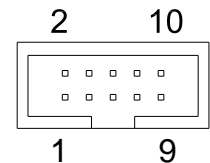
The Alarm output can be assigned to any output line. Typically line 7  
 Logic Open Collector NPN, 200mA

#### Sorter Output :

The Sorter output can be assigned to any output line. Typically lines 8,9&10 on the Utility Port  
 Logic Open Collector NPN, 200mA

### 10 WAY IDC PARALLEL PORT DESCRIPTION

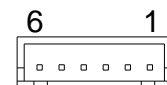
Pin No.	Industry Standard	SP Standard with Credit
1	0Vdc (Neutral-ac)	0Vdc (Neutral-ac)
2	+Vdc (Active-ac)	+Vdc (Active-ac)
3	Coin 5 Output	Coin 5 Output
4	Coin 6 Output	Credit Output (or Coin Output 6)
5	Alarm	Alarm (or Coin Output 7)
6	Inhibit	Inhibit
7	Coin 1 Output	Coin 1 Output
8	Coin 2 Output	Coin 2 Output
9	Coin 3 Output	Coin 3 Output
10	Coin 4 Output	Coin 4 Output



Connector to suit:  
 10 Pin 0.1" IDC

### 6 PIN JST UTILITY PORT DESCRIPTION

Pin No.	SP Standard with Sorter
1	$V_{in}$ Refer Model Description
2	Not Used
3	Sort Output 1 (or Output Line 8)
4	Sort Output 2 (or Output Line 9)
5	Gnd.
6	Sort Output 3 (or Output Line 10)



Connector to suit:  
 JST – XH-6