CCU TECHNICAL DATA SHEET

APPLICATIONS

CCU with Sentinel

The CCU is designed to work with the Sentinel 30 range of validators in single or dual currency mode. All connections to the validator are directly from the CCU, connections to the host machine being via the 6 way connector. If it is required that the host machine controls inhibits directly then the inhibit wiring will need to be modified to suit the application. Please contact Coin Controls for advice.

SWITCH SETTINGS FOR CCU

Totalising switch

As each coin is accepted, the number of credits generated by the coin are calculated by dividing the coin value by the price per credit.The result is added to the credit total.

In non-totalise mode,if the coin is 20p or 10p, any money remaining after the credit calculation is added to the next 20/10p entered before the next credit calculation is performed.

If the coin is £1 or 50p then the additional credits will also be added to the credit total.

In totalise mode all 20p and 10p coins are added together. Whenever this total exceeds £1 or 50p then the corresponding additional credits are added to the credit total. A time limit is placed on the totalisation to prevent the money total from being passed from one user to the next.

S11 ON - Totalise mode
S11 OFF - Non-totalise mode

Currency select switch

Most coin sets have a fixed ratio of 100,50,20,10 e.g. 100p,50p,20p,10p, but a small number of coin sets possess a different ratio e.g.100 cents,25 cents,10 cents,5 cents. On the CCU an option switch is available to allow an operator to select the coin set required.

When the standard coin set is selected, the meter output pulses are in units of 10p. For the non-standard coin set, the meter output pulses are in units of 5c.

S12 ON - Non-standard coin set (100,25,10,5)
S12 OFF - Standard coin set (100,50,20,10)

Inhibit switches

The inhibit switches are connected directly to the Sentinel.There are individual switches for I1-I4 and I5,6 and I7,8.

NOTE:When Sentinel is used in dual currency mode, and I5,6 & I7,8 are enabled by setting SW 17 and 18 ON, then both currencies must have the same coin ratios.

S13 - Coin 1
S14 - Coin 2
S15 - Coin 3
S16 - Coin 4
S17 - Coins 5&6
S18 - Coins 7&8

Switch ON - Coin Enabled
Switch OFF - Coin Inhibited

4.4 Price Setting

The price setting switches are arranged in three groups:-

5 switches for the basic price per credit

3 switches for the number of additional credits bought by the highest value coin,e.g.£1

2 switches for the number of additional credits bought by the second highest value coin,e.g.50p.

Price per game for 100,50,20,10 coin set

SW5	SW4	SW3	SW2	SW1	Units/game
ON	ON	ON	ON	X	5
ON	ON	ON	OFF	X	10
ON	ON	OFF	ON	X	20
ON	ON	OFF	OFF	X	30
ON	OFF	ON	ON	X	40
ON	OFF	ON	OFF	X	50
ON	OFF	OFF	ON	X	60
ON	OFF	OFF	OFF	X	70
OFF	ON	ON	ON	X	80
OFF	ON	ON	OFF	X	90
OFF	ON	OFF	ON	X	100
OFF	ON	OFF	OFF	X	110
OFF	OFF	ON	ON	X	120
OFF	OFF	ON	OFF	X	130
OFF	OFF	OFF	ON	X	140
OFF	OFF	OFF	OFF	X	150

X = dont care

Price per game for 100,25,10,5 coin set

SW5	SW4	SW3	SW2	SW1	Units/game
ON	ON	ON	ON	ON	5
ON	ON	ON	ON	OFF	10
ON	ON	ON	OFF	ON	15
ON	ON	ON	OFF	OFF	20
ON	ON	OFF	ON	ON	25
ON	ON	OFF	ON	OFF	30
ON	ON	OFF	OFF	ON	35
ON	ON	OFF	OFF	OFF	40
ON	OFF	ON	ON	ON	45
ON	OFF	ON	ON	OFF	50
ON	OFF	ON	OFF	ON	55
ON	OFF	ON	OFF	OFF	60
ON	OFF	OFF	ON	ON	65
ON	OFF	OFF	ON	OFF	70
ON	OFF	OFF	OFF	ON	75
ON	OFF	OFF	OFF	OFF	80
OFF	ON	ON	ON	ON	85
OFF	ON	ON	ON	OFF	90
OFF	ON	ON	OFF	ON	95
OFF	ON	ON	OFF	OFF	100
OFF	ON	OFF	ON	ON	105
OFF	ON	OFF	ON	OFF	110
OFF	ON	OFF	OFF	ON	115
OFF	ON	OFF	OFF	OFF	120
OFF	OFF	ON	ON	ON	125
OFF	OFF	ON	ON	OFF	130
OFF	OFF	ON	OFF	ON	135
OFF	OFF	ON	OFF	OFF	140
OFF	OFF	OFF	ON	ON	145
OFF	OFF	OFF	ON	OFF	150
OFF	OFF	OFF	OFF	ON	155
OFF	OFF	OFF	OFF	OFF	160

Additional games for highest value coin (Coin 1)

SW8	SW7	SW6	Function
ON	ON	ON	no additonal games
ON	ON	OFF	1 additional game
ON	OFF	ON	2 additional games
ON	OFF	OFF	3 additional games
OFF	ON	ON	4 additional games
OFF	ON	OFF	5 additional games
OFF	OFF	ON	6 additional games
OFF	OFF	OFF	7 additional games

Additional games for second highest coin (Coin 2)

SW10	SW9	Function
ON	ON	no additional games
ON	OFF	1 additional game
OFF	ON	2 additional games
OFF	OFF	3 additional games

4.6 Example:

If an operator wants to program a machine for 20p/game, 3 games for 50p, 7 games for £1 using a 100,50,20,10 coin set and allowing all coins to be totalised then he will set the switches as follows:-

S11 - ON this will put the CCU into Totalise mode
S12 - OFF to select the 100,50,20,10 coin set

SW5	SW4	SW3	SW2	SW1 -	
ON	ON	OFF	ON	X	selects 20p/game

This setting will automatically generate 5 games when £1 is entered, therefore SW6,7,8 need to be set to give 2 additional games i.e.

SW8	SW7	SW6
ON	OFF	ON

Similarly 2 games will automatically be generated whenever 50p is entered, therefore SW9 and 10 need to be set to give 1 additional game i.e.

SW10	SW9
ON	OFF

ELECTRICAL SPECIFICATIONS

15 WAY CONNECTOR

Pin	Colour	Use
1	Orange	Accept output common + 5V
2	Yellow	Coin 1 Accept input
3	-	Key
4	Green	Coin 2 Accept input
5	Brown	Coin 3 Accept input
6	-	Not used
7	Grey	Coin 4 Accept input
8	Pink	Coin 4 Inhibit output
9	Red	Mech Board supply +12V
10	Black	Mech Board ground
11	White	Coin 3 Inhibit output
12	Purple	Coin 2 Inhibit output
13	Blue	Coin 1 Inhibit output
14	Black/White	Coin 5/6 Inhibit output
15	Red/Green	Coin 7/8 Inhibit output

6 WAY CONNECTOR

Pin	Colour	Use
1	Brown	Meter drive output
2	-	Key
3	White	Credit output N/O
4	Green	Credit output common
5	Black	Supply ground
6	Orange	Supply + 12V

	Min.	Typ.	Max.	Units
CCU Supply Voltage	11	12	15	V d.c.
Supply Current		90	160	mA
Operating Temperature	0		50	deg.C

NOTE

The power supply requirements for the validator in use with the CCU must be added to the above values for PSU loading calculations.

Meter Output (open collector drive to 0V)

The open collector output is capable of sinking 200mA at 1V. The pulse length is 100ms, with a duty cycle of 50% for multiple pulse outputs.

Credit Output

This is relay, contact rated at 1A (at 24V DC) or 0.5A (at 120V AC). The pulse length is 100ms with a duty cycle of 33% for multiple pulse outputs.

Contact current @ V=24Vd.c.			1.0	A
Contact current @ V=120Va.c.			0.5	A
Output ON time	85	100	115	msec
Output OFF time	170	200	230	msec