

COIN - MULTI

MULTI-CHANNEL CREDIT BOARD

Control from one to four independent credit channels
from a single coin acceptor

Simple to connect:

Single standard connection to coin mechanism;
Simple connection to optional LED display;
Simple screw connections to power, external lamps
and buttons, and machine.

Manual credit button on-board;

Coin counter output for audit and metering.

Optional relay outputs.

Full control of Electronic Coin Acceptor Lamp:

ON - indicates machine "ready",
OFF - indicates machine "out-of-service";
FLASH - indicates more coins are required.

Audit available through optional display.

Extensive range of coin/credit combinations:

15 different pence-per-credit settings.

Advanced coin acceptor processing:

Handles the £2 coin as 4x50p
Handles the £2 coin on the B channel
Automatically detects BACTA binary acceptors

Full handshake with machine:

Credits only issued when the machine is ready.

Interface to four digit LED displays:

Ability to display the amount of money entered
since the last credit (the partial credit);

Individual channel credit pulse format

Two credit pulse speeds (1/10 and 1/2 second),
14 time periods (from 1 second to 10 minutes);

Continuous self test;

Invalid configuration detection with fail-safe and
warning indicator;

Features

- Connects directly to Mars CF, ME, MS, Coin Controls SR5, SR3, C120 and NRI G40 or G13 and other coin acceptors. Automatic detection of 16-coin BACTA coin acceptors.
- Up to four independent outputs with individual machine ready signals, start buttons, price-per-play and pulse type/time period settings.
- Supports coin mechanism anti-stripping protection;
- Contact factory for other currencies;
- Never loses partial credit;
- Common ground coin acceptor technique for maximum flexibility.
- Credit time periods accurate to better than 1%.

User (field programmable) options	Factory set options
Pence-per-play setting (15 settings)	Currency, coin values
Credit pulse speed (2 settings from factory range)	Relay output as alternative to transistor output
Credit pulse time (14 settings from factory range)	Polarity of Machine Ready signal
Machine Ready signal enable/disable	Single or continuous credit mode
	Automatic or button controlled credit mode

Contact the factory for Non U.K. coinsets and currencies.

Switch settings

Function	Switch Bank 'S1' Pole							
	1	2	3	4	5	6	7	8
Disable Programming	OFF							
Enable Programming	ON							
Program Channel 1			OFF	OFF				
Program Channel 2			OFF	ON				
Program Channel 3			ON	OFF				
Program Channel 4			ON	ON				
Program time period		ON						
0 1/10 second pulse					OFF	OFF	OFF	OFF
1 1/2 second pulse					OFF	OFF	OFF	ON
2 1 second time period					OFF	OFF	ON	OFF
3 15 second time period					OFF	OFF	ON	ON
4 30 second time period					OFF	ON	OFF	OFF
5 45 second time period					OFF	ON	OFF	ON
6 1 minute time period					OFF	ON	ON	OFF
7 2 minute time period					OFF	ON	ON	ON
8 3 minute time period					ON	OFF	OFF	OFF
9 4 minute time period					ON	OFF	OFF	ON
A 5 minute time period					ON	OFF	ON	OFF
B 6 minute time period					ON	OFF	ON	ON
C 7 minute time period					ON	ON	OFF	OFF
D 8 minute time period					ON	ON	OFF	ON
E 9 minute time period					ON	ON	ON	OFF
F 10 minute time period					ON	ON	ON	ON
Program price-per-play		OFF						
0 Unused					OFF	OFF	OFF	OFF
1 10p per credit					OFF	OFF	OFF	ON
2 20p per credit					OFF	OFF	ON	OFF
3 30p per credit					OFF	OFF	ON	ON
4 40p per credit					OFF	ON	OFF	OFF
5 50p per credit					OFF	ON	OFF	ON
6 60p per credit					OFF	ON	ON	OFF
7 70p per credit					OFF	ON	ON	ON
8 80p per credit					ON	OFF	OFF	OFF
9 90p per credit					ON	OFF	OFF	ON
A 100p per credit					ON	OFF	ON	OFF
B 110p per credit					ON	OFF	ON	ON
C 120p per credit					ON	ON	OFF	OFF
D 130p per credit					ON	ON	OFF	ON
E 140p per credit					ON	ON	ON	OFF
F 150p per credit					ON	ON	ON	ON

Pin connections

- L1-4 Start Lamps. 12V 1.2W lamp maximum. Connect the other side of the lamp to +12V.
- B1-4 Start Buttons. Normal Open contact and connect the other side of the contact to GROUND.
- I1-4 Machine Readies. Zero-voltage contact grounded when the machine is ready for a credit.
- C1-4 Output Commons. If a relay is fitted this is the COM contact. Otherwise this is +12V.
- O1-4 Main Outputs. If a relay is fitted this is the N/O contact. Otherwise it is a output that can sink 200mA (at 12V).
- LP Coin Lamp. Connect the other side of the lamp to +12V.
- MT Coin Meter '-'. Connect the Coin Meter '+' to +12V.
- +12 Main +12V supply to the board (and coin acceptor)
- GND Main power supply common ground.

Programming

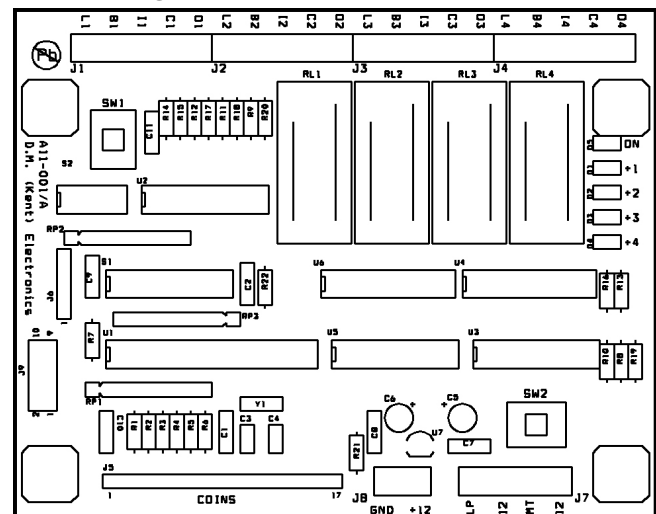
- Use S1 poles 3 & 4 to select the channel that is to be programmed.
- Use S1 pole 2 to select whether the time (ON) or price (OFF) is to be programmed.
- Use S1 poles 5, 6, 7 & 8 to choose the value to be set.
- Switch S1 pole 1 ON to enable programming. If a display is fitted it will show the selected programming. The first digit will show the selected channel that will be programmed (1..4). The second digit will show 't' (for time period), or 'P' (for price). The third digit will show the current setting for the value (0..9 A..F). The fourth digit will show the new setting for the value (0..9 A..F).
- Press and the release the program button SW1 to store the new program setting.
- Switch S1 pole 1 OFF to disable programming. If a display is fitted it will return to displaying the amount of cash held in the board.

Machine Ready Settings

Function	Switch Bank 'S2' Pole			
	1	2	3	4
Channel 1 Ready Enable	OFF			
Channel 1 Ready Disable	ON			
Channel 2 Ready Enable		OFF		
Channel 2 Ready Disable		ON		
Channel 3 Ready Enable			OFF	
Channel 3 Ready Disable			ON	
Channel 4 Ready Enable				OFF
Channel 4 Ready Disable				ON

If the external machine provides a machine ready signal that is "short-to-ground" when the machine is ready and "open" when the machine is busy then connect it to 'I1', 'I2', 'I3', or 'I4' as appropriate and enable the Channel Ready with Switch Bank 'S2'. If the machine does not provide such a signal then disable the Channel Ready with Switch Bank 'S2'.

Drawing



Mounting holes on 103mm x 66mm centres
Board dimensions 114mm x 91mm

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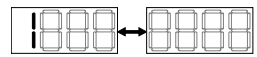
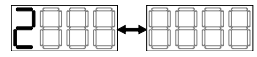
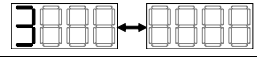
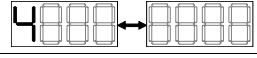

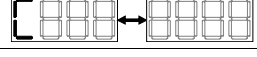

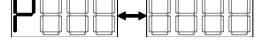
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Manual Credit

If the manual credit button is pressed (for less than 2 seconds) and released one credit will be immediately generated on each of the outputs. The state of the Machine Ready signal and Button for the channels will be ignored.

On-board Audit

- 1 If the manual credit button is pressed for more than 2 seconds the board will cancel any existing credits and stored cash and the outputs will be switched off. When the button is released the board will enter audit mode. Each time the button is pressed the board will display the next item in the audit as follows:

Display	Function
	Number of credits paid by channel 1 (paid + test credits)
	Number of credits paid by channel 2 (paid + test credits)
	Number of credits paid by channel 3 (paid + test credits)
	Number of credits paid by channel 4 (paid + test credits)
	Number of test credits paid by pressing the manual credit button
	High half of amount of cash taken.
	Low half of amount of cash taken.
	Number of power cycles.

Notes concerning the audit:

- 1) The amount of cash taken by the board is displayed in two halves.
As an example, if the high half is 1234 and the low half is 5678 then the amount of cash taken by the board is 123456.78
Remember that the low half number is 4 digits. If the high half is 12 and the low half is 34 then the amount of cash taken by the board is 1200.34 (not 12.34)
- 2) The number of power cycles is incremented by one each time the board powers up.

Factory set options

- 1 As standard the COIN-MULTI will be expect the coin acceptor to accept the UK coins 5p, 10p, 20p, 50p, £1 and £2. Contact the factory for other currencies (Euro, US dollar, etc.) and other coins such as UK 1p, 2p or US 25c.
- 2 As standard the COIN-MULTI is supplied with transistor outputs capable of driving most electronic and electromechanical games. Contact the factory to request single pole, normally open relay contact outputs for any combination of credit channels.
- 3 As standard the COIN-MULTI will not pay a credit on a channel unless the channel's button is pressed. Contact the factory if credits should be paid on any channel automatically (as soon as enough cash is entered), or if holding the button down should pay credits continuously.
- 4 As standard the COIN-MULTI will pay a credit if the Machine Ready signal is held to ground (ready mode), or will ignore the Machine Ready signal if the appropriate pole of S2 is ON (no handshake). Contact the factory for inverted Machine Ready signal, whereby the COIN-MULTI will pay a credit if the Machine Ready signal is held away from ground (busy mode).