

COIN - PLUS, DT

VIDEO CREDIT BOARD

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;

External manual credit facility.

Coin counter output for audit and metering.

Optional relay output.

Optional attract mode.

Full control of Electronic Coin Acceptor Lamp:

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

Full control of Coin Acceptor Coin Inhibit:

When the machine is busy coins can be rejected;
Individual coin types can be permanently rejected. Control of inhibit signal polarity.

Extensive range of coin/credit combinations:

15 different pence-per-credit settings.

Handles the £2 coin in both 4x50p and £2-on-B modes.

Accumulator bonus:

three bonus plans;
five bonus levels.

Coin bonus facility for any combination of coins.

Full handshake with machine:

Credits only issued when the machine is ready;
The machine can stop coins being accepted.

Interface to two or four digit LED displays:

Ability to display the amount of money entered since the last credit (the partial credit);
Ability to display number of credits waiting to be issued;

Dual speed credit pulse.

Continuous self test;

Invalid configuration detection with fail-safe and warning indicator;

Features

- Connects directly to Mars CF, ME, MS and Coin Controls C220 series coin acceptors.
- Interface available for Asahi Seiko, NRI, Coin Controls C120 and other coin acceptors.
- Drives credit machines such as card dispensers, cranes, video and arcade games in credit pulse output mode with full machine handshake;
- Can directly drive ticket/token/coin dispensers (contact factory for details);
- Supports coin mechanism anti-strimming protection;
- Bonus table resets 25 seconds after last coin is entered;
- Contact factory for other currencies;
- Never loses partial credit;
- Common ground coin acceptor technique for maximum flexibility (Early MS mechs pull up to supply and do not work);

User (field programmable) options	Factory set options
Pence-per-play setting (none or 15 settings)	Currency
bonus plan (no bonuses or 3 settings)	Optional two or four digit LED display which can display credits or accumulated cash
Coin bonus selection (ON or OFF)	Ready, Busy or no machine handshake
Credit pulse speed (2 settings from factory range)	Number of bonus credits in coin bonus mode
Polarity of coin acceptor inhibit signals	Relay output in addition to transistor output
	Attract mode

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The Pence per Credit and Bonus Tables shown here are for UK coins 10p, 20p, 50p, £1, £2.
Contact the factory for other coinsets and currencies.

Switch settings

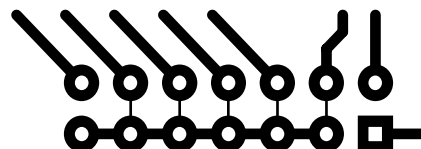
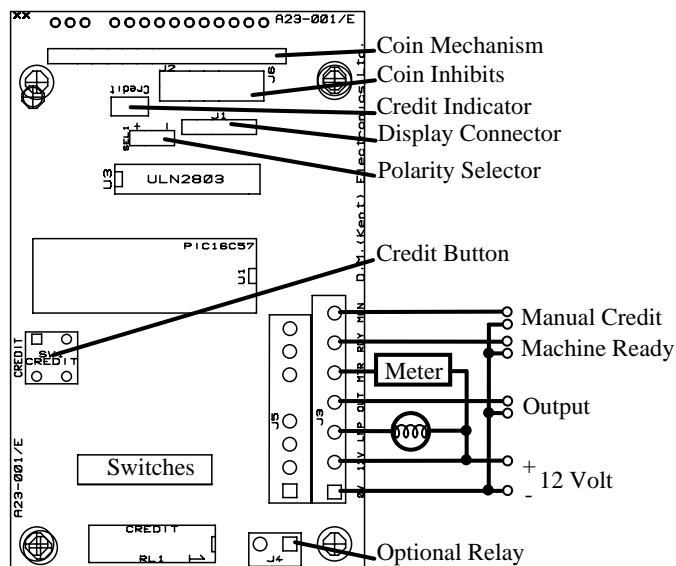
Function	Sw1	Sw2	Sw3	Sw4
Fast credit pulse	ON			
Slow credit pulse	OFF			
No bonuses		OFF	OFF	OFF
Use coin bonuses		ON	OFF	OFF
Use bonus plan 1		OFF	ON	OFF
Use bonus plan 2		OFF	OFF	ON
Use bonus plan 3		OFF	ON	ON

Function	Sw5	Sw6	Sw7	Sw8
Disable Pence per Credit	OFF	OFF	OFF	OFF
10p per credit	ON	OFF	OFF	OFF
20p per credit	OFF	ON	OFF	OFF
30p per credit	ON	ON	OFF	OFF
40p per credit	OFF	OFF	ON	OFF
50p per credit	ON	OFF	ON	OFF
60p per credit	OFF	ON	ON	OFF
70p per credit	ON	ON	ON	OFF
80p per credit	OFF	OFF	OFF	ON
90p per credit	ON	OFF	OFF	ON
£1.00 per credit	OFF	ON	OFF	ON
£1.20 per credit	ON	ON	OFF	ON
£1.50 per credit	OFF	OFF	ON	ON
£1.80 per credit	ON	OFF	ON	ON
£2.00 per credit	OFF	ON	ON	ON
£2.50 per credit	ON	ON	ON	ON

Bonus Table

Price Per Play	Bonus Plan	Number of Bonus Credits given at:				
		50p	£1	£2	£3	£4
10p	1	1	2	5	8	11
	2	1	3	7	11	15
	3	2	5	12	18	25
20p	1	1	1	3	5	7
	2	1	2	5	8	11
	3	2	4	10	15	21
30p	1	1	1	3	5	7
	2	1	2	6	8	13
	3	2	4	9	14	19
40p	1	0	1	2	4	5
	2	1	2	5	8	11
	3	1	3	7	11	15
50p	1	0	0	1	2	3
	2	0	1	2	4	6
	3	0	1	3	6	7
60p	1	0	0	1	2	4
	2	0	1	2	3	5
	3	0	2	3	5	8
70p	1	0	0	2	3	4
	2	0	1	3	4	7
	3	0	2	4	6	9
80p	1	0	0	1	2	3
	2	0	1	2	4	5
	3	0	1	3	5	7
90p	1	0	0	1	2	3
	2	0	0	1	3	5
	3	0	0	2	4	6
£1.00	1	0	0	0	1	2
	2	0	0	1	2	3
	3	0	0	1	3	5
£1.20	1	0	0	0	1	2
	2	0	0	1	1	3
	3	0	0	1	2	4
£1.50	1	0	0	0	1	2
	2	0	0	1	1	3
	3	0	0	1	2	4
£1.80	1	0	0	0	1	2
	2	0	0	1	1	3
	3	0	0	1	2	4
£2.00	1	0	0	0	0	1
	2	0	0	0	1	1
	3	0	0	0	1	2
£2.50	1	0	0	0	0	1
	2	0	0	0	1	1
	3	0	0	0	1	2

Drawing



Cut link to Inhibit Coin: £2 £1 50p 20p 10p

Polarity Selection

- + Mars Electronics International: CF, ME, MS Series
Coin Controls: C120, C220, C435 Series
 - Asahi Seiko: all models.
- Warning: when using a C120 do not use the loom supplied with the Mech. as it will not work and will cause damage to the board.**

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Issues addressed by COIN+DT

All credit boards must correctly handle a number of real-world situations. The COIN+DT directly handles all the following situations:

- Partial credit is not lost. Every coin the user offers to the credit board counts towards the issuing of basic credits in the fixed pence-per-play facility.
- Partial bonuses time out. Whole bonus credits are paid out as soon as they are earned. Any partial bonus credits are not paid out and are lost 25 seconds after the last coin is entered. This ensures that no user gets unfair benefit from a previous user.
- Complete handshaking between the COIN+DT, the coin validator and the machine ensures that the machine will be issued with credits only when it is ready and the coin validator only accepts coins when the COIN+DT is ready. A factory set software option allows for the COIN+DT to prevent coin acceptance when the machine is operating. Another factory set software option sets whether the handshake is machine ready or machine busy.
- Multi-pulse coin validators are directly handled by COIN+DT. No interface hardware is required to accept the new £2 coin directly from Mars Cashflow series coin validators or other coin validators re-programmed to issue multi-pulses.
- All credit boards must have some upper limit on credits held within the board. COIN+DT locks the coin mechanism and prevents coin acceptance when these limits are reached. COIN+DT will not loose basic, partial or bonus credits and will correctly issue credits even if overloaded. Bonus credits will still time out correctly after 25 seconds.

Maximum number of credits held waiting to be paid at any time:

6808 basic credits + 255 bonus credits at 10p per credit;

910 basic credits + 255 bonus credits at £1.00 per credit;

517 basic credits + 255 bonus credits at £2.50 per credit;

In total £655.35 may be held within the COIN+DT at any time. However the COIN+DT will prevent further coin acceptance whenever the display overflows. (99 or 9999 credits, £9.90 or £99.99 depending upon the display option).