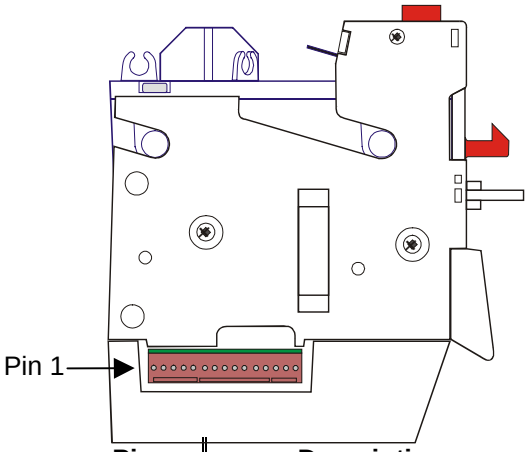
Parallel Interface



Pin	Description
1	$\overline{\text{Accept 1}}$
2	$\overline{\text{Accept 2}}$
3	$\overline{\text{Accept 3}}$
4	$\overline{\text{Accept 4}}$
5	$\overline{\text{Inhibit 1}}$
6	$\overline{\text{Inhibit 2}}$
7	$\overline{\text{Inhibit 3}}$
8	$\overline{\text{Inhibit 4}}$
9	ESCROW
10	ALARM
11	+12V Power
12	Supply Ground
13	V COM
14	Not Used
15	Not Used

Parallel Credit Codes

Note	Acc 1	Acc 2	Acc 3	Acc 4
1	**1**	0	0	0
2	0	**1**	0	0
3	0	0	**1**	0
4	0	0	0	**1**

Parallel Interface Details

Accept Outputs

Accept outputs are open collector.
A **1** indicates the Accept o/p is active (on = Low)

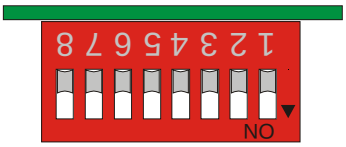
Inhibit Lines

The Inhibit inputs define whether a programmed note will be accepted or not.
If the Inhibit pin is not connected OR High (>4V) then the corresponding note will be rejected.

If the Inhibit pin is Low (<1V) then the corresponding note will be accepted if deemed to be true.

NB: The default setting is for ALL Inhibit inputs to be High and therefore notes will be rejected.

DIP Switch Settings



Switch	OFF	ON
1	Accept Note 1	Inhibit Note 1
2	Accept Note 2	Inhibit Note 2
3	Accept Note 3	Inhibit Note 3
4	Accept Note 4	Inhibit Note 4
5	TBD	TBD
6	Normal Operation	Resets the security code
7	Protocol Select (See Below)	Protocol Select (See Below)
8		

Switch 7	Switch 8	Function
Off	Off	Diagnostics Mode
On	Off	ccTalk Protocol
Off	On	Parallel Protocol
On	On	N/A

This document is the copyright of Money Controls Ltd and may not be reproduced in part or in total by any means, electronic or otherwise, without the written permission of Money Controls Ltd. Money Controls Ltd does not accept liability for any errors or omissions contained within this document. Money Controls Ltd shall not incur any penalties arising out of the adherence to, interpretation of, or reliance on, this standard. Money Controls Ltd will provide full support for this product when used as described within this document. Use in applications not covered or outside the scope of this document may not be supported. Money Controls Ltd. reserves the right to amend, improve or change the product referred to within this document or the document itself at any time.

©Money Controls 2004. All rights reserved.

Lumina Reference Data Sheet

Parallel Modes

There are 2 modes of operation utilising the Parallel protocol.
The following is based on the corresponding Inhibit line being low.

Non-Escrow Mode.

Once a note passes all the sensors and the readings taken match those stored in memory, the Lumina will accept the note. Once the note passes the rear clear sensors, an accept signal will be issued to the host machine.

Escrow Mode.

In Escrow Mode, the Escrow pin (9) will be held LOW (<1V) until a note is inserted and the Lumina decides it is a valid note. The Lumina will then issue a 'pre-accept' signal. Once the 'pre-accept' signal is read by the host machine, the host machine then decides whether to accept or reject the note.
To accept the note, the Escrow pin has to be taken high (>4V). After the note leaves the rear clear sensors the same accept signal is re-issued and the host machine will then credit for the amount accepted.
If the machine ignores the 'pre-accept' signal and keeps the Escrow pin low for more than 30 seconds, the note will be rejected.
The host machine can also switch the corresponding Inhibit pin high to reject the note, before the 30 second timeout has elapsed.

Once the Lumina decides a note is valid the Inhibit lines will be read. If the corresponding Inhibit line is high, the note will be rejected.

Standard Input DC characteristics

Characteristic	Value
V in Low (max)	+1V DC
V in High (min)	+4V DC

Parallel Interface Inputs

Pin	Description	Characteristic
1	Inhibit 1	Min 0V Max +5V
2	Inhibit 2	Min 0V Max +5V
3	Inhibit 3	Min 0V Max +5V
4	Inhibit 4	Min 0V Max +5V
10	Escrow	Min 0V Max +5V
14	Not Used	**DO NOT CONNECT**

Parallel Interface Outputs

All signal outputs are open collector.

Pin	Output	Characteristic
1	Accept 1	100mA Max. sink current.
2	Accept 2	100mA Max. sink current.
3	Accept 3	100mA Max. sink current.
4	Accept 4	100mA Max. sink current.
10	Alarm	100mA Max. sink current.
13	+5V Out	100mA Max. LOAD current

Electrical Interface Requirements

Power Supply

Voltage Nom:	+12V
Absolute:	Minimum +10V Maximum +15.75V
Ripple voltage:	Nominal 0 Volt pk-pk. Maximum 1 Volt pk-pk

Current Consumption

Nominal - Idle:	200mA
Nominal - Running:	400mA
Maximum Stalled:	2.0A

©Money Controls 2004. All rights reserved.