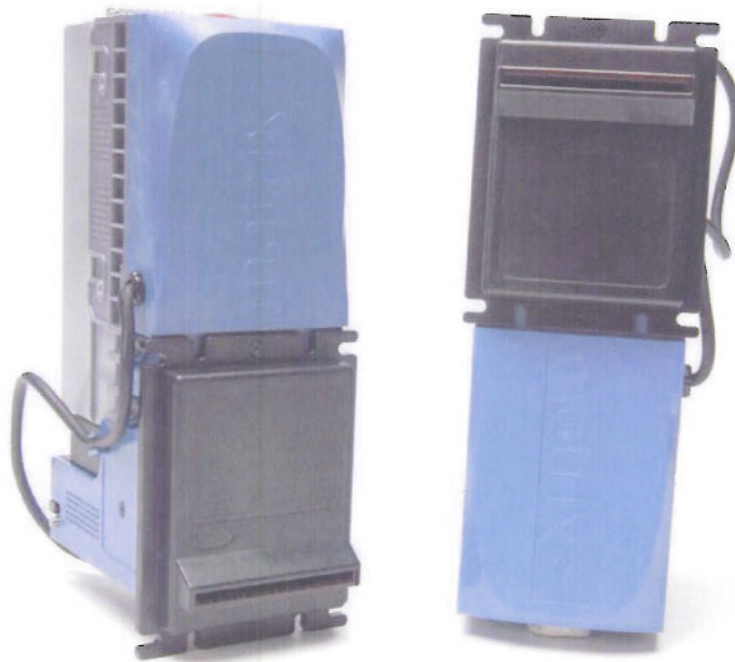


matrix

Operation Manual

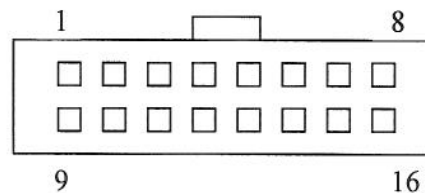


Interface Descriptions

6a *Pulse Interface:* The *Pulse* Interface provides a corresponding signal on the output line that designates the particular note validated.

IF Cable: VA-WIRA05
Input Power: 12 VDC

Connector Viewed Facing Validator



Pin 1: +12 VDC
Pin 2: Ground/Earth (power)
Pin 4: Credit Pulse Output (open collector to Ground/Earth)
Pin 5: Alarm Output (open collector to Ground/Earth)
Pin 6: Enable Input (tied to Ground/Earth to enable validator)
Pin 12: Busy (open collector to Ground/Earth. Active LOW when busy)

Pulses/Denomination: Factory set per customer specification or via PDA utilizing *Matrix Tools*.

Pulse Output Rate: High: 50 msec ON/50 msec OFF
Low: 50 msec ON/300 msec OFF

Always Enabled: The *Matrix* can be configured to ignore the enable input status and operate *always enabled*.

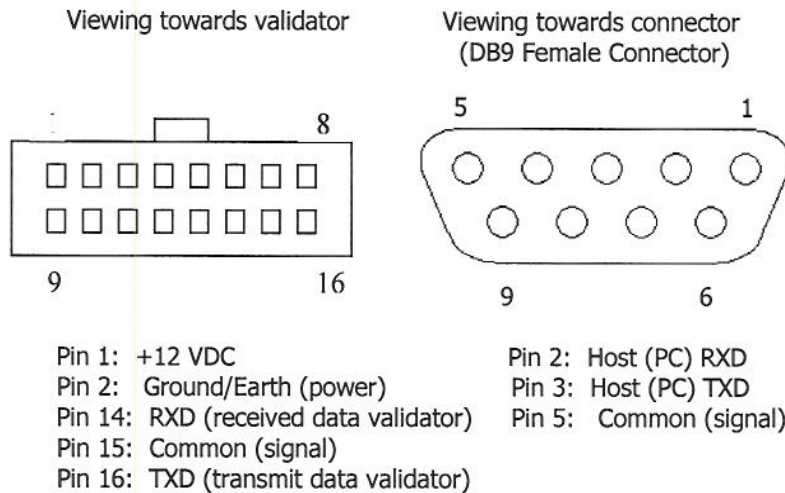
6b *Parallel Interface:* The Parallel interface provides specific output lines for designating which note has been validated. This interface also provides for escrow and alarm functions.

Pin 1: +12 VDC
Pin 2: Ground/Earth (power)
Pin 3: Vend Line 5 (open collector to Ground/Earth)
Pin 4: Vend Line 6 (open collector to Ground/Earth)
Pin 5: Alarm Output (open collector to Ground/Earth. Prog. Logic)
Pin 6: Enable Input (tie to Ground/Earth to enable validator)
Pin 7: Vend Line 1 (open collector to Ground/Earth)
Pin 8: Vend Line 2 (open collector to Ground/Earth)
Pin 9: Vend Line 3 (open collector to Ground/Earth)
Pin 10: Vend Line 4 (open collector to Ground/Earth)
Pin 11: Escrow Line
Pin 12: Busy Line

Interface Descriptions

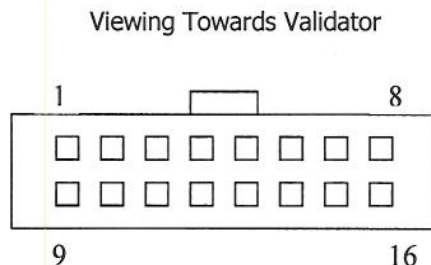
7a 'True' RS232: The 'True' RS232 interface provides for comms between a Host (PC) and Slave (validator). This interface operates at 'True' RS232 levels and allows direct connection between the validator and PC comm. port without the need for special interface harness/loom. 9600 bps, 1 start bit, 1 stop bit, 7 data bit format.

IF Cable: VA-WIRA09
Input Voltage: 12 VDC
Interface Module: VA-PCBA09



7b TTL RS232: The TTL RS232 interface operates at TTL levels, 9600 bps, 1 start bit, 1 stop bit and 7 data bits.

IF Cable: VA-WIRA05
Input Voltage: +12 VDC



Pin1: +12 VDC
Pin 2: Ground/Earth (power)
Pin14: TTL RXD (receive data to validator)
Pin 15: Common
Pin 16: TTL TXD (transmit data from validator)

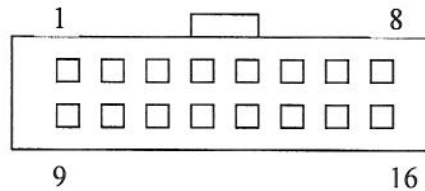
For complete technical detail on the RS232 interface, refer to manual VTIRS-6

Interface Descriptions

8a Serial Interface: The Serial interface is a MEI compatible, bi-directional interface. It operates at 600 bps, 1 start bit, 1 stop bit and 8 data bits.

I/F Cable: VA-WIRA05
Input Voltage: 12 VDC

Viewing Towards Acceptor



- Pin 1: +12 VDC
- Pin 2: Ground/Earth (power)
- Pin 5: Alarm Output (open collector to Ground/Earth. Programmable Logic)
- Pin 6: Enable Input (tie to Ground/Earth to enable validator)
- Pin 7: Interrupt (request to send data to host)
- Pin 12: Busy (open collector to Ground/Earth, active LOW when busy)
- Pin 13: Send (host ready)
- Pin 16: TXD (transmit data from validator)

For expanded technical information on the Serial Interface, please refer to manual VTISER-1

8b 'C-C Talk' Interface: Information to be added

Interface Descriptions

9a USB Interface: Information to be added

Interface Module: VA-PCBA14

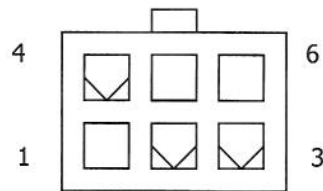
9b MDB Interface: The Multi Drop Bus (MDB) meets all NAMA standards for functionality.

I/F Cable: VA-WIRA06

Input Voltage: 34 VDC (24 – 42 VDC)

Interface Module: VA-PCBA04

Viewing Toward Connector



Pin 1: +34 VDC

Pin 2: Ground/Earth (power)


Pin 4: Master Receive

Pin 5: Master Transmit

Pin 6: Communications Common

Diagnostic Codes

The diagnostic codes for the *Matrix* are related to the diagnostic LED found on the rear of the *Matrix* bill validator. The codes are listed below.




**QUICK
REFERENCE**

Diagnostic LED / Acceptor Status


○	LED off	No Power
●	Still	Acceptor Ready
●	Still	Disabled by Master / VMC
●	Still	Acceptor Busy
●	1 Flash	Note Jam/Lower Head Removed
●	2 Flashes	Cassette Full
●	3 Flashes	Cassette Missing
●	4 Flashes	Unit Failure - Replace

Programming:

Enable a Note
Press Pushbutton once. Insert the note you want to Enable.


Fast Pulse Enable a Note


Disable a Note
Press Pushbutton twice. Insert the note you want to Disable.


Fast Pulse Disable a Note

After note is inserted, it will be rejected and **Green LED** will show if successful. If unsuccessful, **Red LED** will show, retry by using another note.

System Reset:
Press and hold Pushbutton for 5 seconds, then release.

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System Reset: Hold Reset/Diagnostic Button Down for 5 Seconds.