

INSTALLATION GUIDE



TALOS™ T6/T8

NOTE VALIDATOR

SAFETY INSTRUCTIONS AND COMPLIANCE

Before using the Talos™ T6/T8 note validator for the first time, please carefully read this installation guide, and in particular the safety instructions, at least once. This is to ensure that the contents of this installation guide have been understood and the reader knows how to operate the note validator.

INTENDED USE

The Talos™ T6/T8 note validator is intended for use in host machines, such as vending machines and kiosks. It is designed to fit into the standard note validator opening provided by the host machine manufacturers. Use the note validator exclusively for this purpose. Under no circumstances can the manufacturer be held liable for any damage or loss resulting from improper use of the equipment.

Changes or modifications not expressly approved by CPI could void the user's authority to operate the equipment.

The note validator has been built in accordance with state-of-the-art standards and the recognized safety directives. However, please observe the following safety instructions.

PROTECTING PERSONS AND EQUIPMENT



Risk of electric shock.

Ensure host machine power is OFF when installing, maintaining, or cleaning the Talos T6/T8 note validator.

Electric shock can cause serious injury or death.



Risk of fire.

Never use flammable cleaners.

Fire could result in serious injury or death.

COMPLIANCE

SAFETY

Talos™ T6/T8 note validator meets UL/CSA/IEC 62368-1, Audio, Video, Information, and Communications Technology equipment – Part 1 Safety requirements.

EMISSIONS

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesirable operation

Talos™ OPTION: Alio™ Note card reader bezel, FCC ID:QP8ALIONOTEVZ

The following European Directives have been applied to Talos™ 24/34 V and 12 V models:

2014/30/EU EMC Directive

2014/35/EU Low Voltage Directive

2011/65/EU ROHS Directive

EU Declaration of Conformity available on request. Please contact your CPI representative for details.



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1 ABOUT THIS INSTALLATION GUIDE



This chapter is designed to help the reader navigate easily within this installation guide.

1.1 TEXT CONVENTIONS

The following symbols are used throughout this installation guide to call attention to safety messages and important information related to the note validator.



Warning indicates a hazardous situation which, if not avoided, could result in death or serious injury.



This symbol indicates special notes intended to facilitate the use of the product.



This symbol indicates a chapter summary and provides links to subsections.

1.2 ADDITIONAL HELPFUL DOCUMENTS

Follow the steps below once logged into the [CPI Services](#) site to locate Talos™ T6/T8 note validator configuration coupons:

- 1 Select **Products** from the left navigation menu under My Library.
- 2 Select the **ADD A PRODUCT** tab in the center of the window.
- 3 Enter “Talos” in the **Search Product Library** field.
- 4 Locate the following listing. Select **Add to My Product**, followed by **View Downloads**.



- 5 Available documents for downloading display below the listing above.
- 6 Locate the configuration coupon in the list. Click the link to download the coupon.

2 ABOUT TALOS™ T6/T8 NOTE VALIDATOR



This chapter outlines:

- The note validation process
- Product specifications

2.1 NOTE VALIDATION PROCESS

The note validator performs the following processes to validate and accept or reject notes.

Process	Description
Note detection	Validator senses the note and prepares the drive motor.
Note transport	Drive belts pull the note into the machine.
Note recognition	Internal sensors scan the note to determine value.
Note validation	Note is held in escrow as it is validated for authenticity.
Credit or return	Credit is applied if the note is validated and stacked in the cassette. The note is returned to the customer if it is not validated and accepted

2.2 SPECIFICATIONS

Item	Description
Input voltage	115 VAC/24 VAC/12 VDC
Wattage	48 W
Temperature range	Operating temperature: -15° C to 60° C (5° F to 140° F) Shipping and storage temperature: -40° C to 70° C (-40° F to 158° F)
Relative humidity	85% relative humidity (non-condensing) with maximum relative humidity of 50% at 60° C (140° F) ³ <ul style="list-style-type: none"> • At idle: 5 W • In acceptance mode: 10 W • When there is a full stack in the note magazine: 50 W maximum When using the following interfaces: <ul style="list-style-type: none"> • MDB - Multi-Drop Bus interface (24 VDC; 24 VAC; 34 VDC input): 48 W • Extended Bi-Directional Serial (EBDS) or Non-Isolated Serial (NISR) or vending and gaming pulse interfaces (12 VDC input): 48 W • Extended Bi-Directional Serial (EBDS) or Non-Isolated Serial (NISR) or vending and gaming pulse interfaces (120 VAC, 50-60 Hz input): 48 W
Power consumption	
Note acceptance rate	95% or greater at nominal conditions
Note insertion	Lengthwise, 4 way (face up/down, either direction)
Transaction speed	Approximately 4 seconds – from note insertion to completed note stacking
Escrow	1 note
Interface	See Interfaces

3 INSTALLATION



This chapter outlines:

- How to unpack the note validator
- How to mount the note validator

3.1 UNPACKING THE NOTE VALIDATOR

Unpack the note validator and immediately inspect it for damage.

Keep the original packing materials for shipping or transporting the note validator.

Only the person or company receiving the note validator can file a claim against the carrier for concealed damages.

If the unit is damaged:

- 1 Return it to its original carton along with packing materials.
- 2 Notify the delivering carrier of damages and request immediate inspection.
- 3 Send a letter of intent to file a claim to the carrier within 72 hours from the time of delivery.
- 4 Send a copy of the letter to the shipper.

3.2 MOUNTING THE NOTE VALIDATOR

The Talos T6/T8 note validator is designed to fit into the standard note validator opening in most host machines and can be mounted on existing studs provided by original equipment manufacturers (OEMs).

Some host machines require brackets or faceplates to mount the unit properly. Refer to the host machine's operation manual or contact the distributor/OEM for more model-specific mounting information.

To mount the note validator in the host machine:

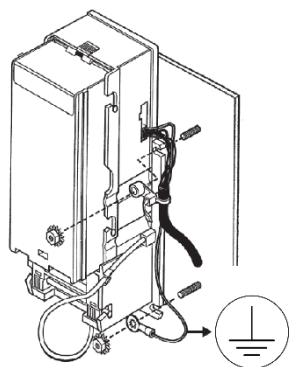


Risk of electric shock.

Ensure host machine power is OFF when installing, maintaining, or cleaning the Talos T6/T8 note validator.

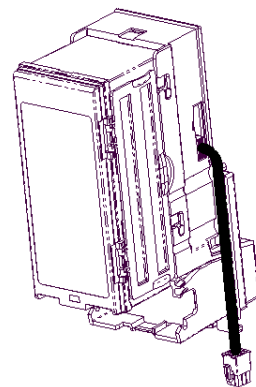
Electric shock can cause serious injury or death.

- 1 Turn off power to the host machine.
- 2 Mount the note validator on the mounting studs, through the opening on the front of the host machine, and secure it using the included hardware.
- 3 Connect the note validator to the appropriate interface harness.
 - Install the (12) pin connector into the bottom of the interface slot, matching connector keys to blank pin locations. See Figure 1.
 - Apply gentle pressure to connect; the pins will bend if forced.
 - A power cord (available separately — Part Number 01-12-139C, 115 V only) may be used for supplying power to the note validator and for routing pulse credits to a coin switch.



115 V Model

Figure 1



12 VDC and 24 VAC Models

- 4 On 115 V units, attach the ring terminal of the grounding wire to an earth ground location within the machine. Secure with appropriate hardware. See Figure 1. To provide strain relief, wrap the enclosed tie-wrap around the closest mounting stud, harness wires, and ground wire, then pull tie wrap tightly.
On 12 VDC and 24 VAC units, if a metal plate mount is used, connect the ground to the chassis of the host machine. Ensure that the host machine is properly grounded.



IMPORTANT NOTE TO OEMs: Step 4 must be performed prior to Machine Dielectric Voltage – Withstand Testing Hi-Pot.

- 5 Turn on power to the host machine.
- 6 Check the LEDs on the front of the note validator. The LEDs should be flashing. In some cases, the machine door must be closed first. If the LEDs are still not flashing, please refer to [Section 5](#) of this guide to properly configure the note validator.
- 7 Once the LEDs are flashing, test the validator with a note.
- 8 Insert the note into the validator. Confirm that the note stacks and credit is given.



If your machine uses a pulse interface, make sure that the “Pulse Width” and “Pulses Per Dollar” options are configured properly on the T6/T8 for proper credit. See [Section 5](#) of this guide.

- 9 Repeat this process for other enabled notes.
- 10 When the test is complete, remove the test notes from the note magazine.
- 11 The installation is now complete.

4 SETUP



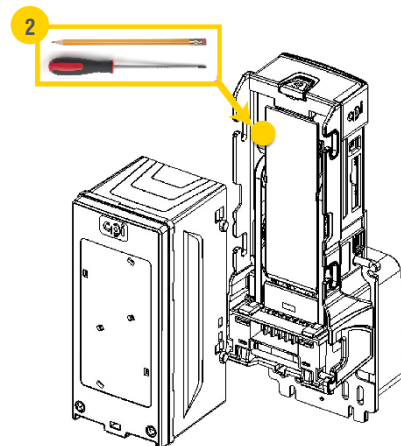
This chapter outlines:

- How to program the note validator with the configuration coupon
- How to enable notes and configuration coupons on the note validator

4.1 PROGRAMMING THE NOTE VALIDATOR WITH THE CONFIGURATION COUPON

To program the note validator with the configuration coupon:

- 1 Locate the printed configuration coupon that ships with the product. To obtain an additional or replacement copy see [chapter 1.2 "Additional Helpful Documents", p. 4](#) for instructions on how to download the configuration coupon referenced below. Follow the instructions in the configuration coupon document to complete and prepare the configuration coupon for the steps below.
- 2 Remove the note magazine, and then use a pencil or a screwdriver **2** to press the configuration button to enter configuration mode (LEDs rapidly flash for configuration mode).
- 3 Reattach the note magazine.
- 4 Insert the completed configuration coupon and verify the settings were accepted by counting the bezel flashes.



No. of Flashes	Meaning
10	Configuration coupon was accepted, and the unit is successfully programmed.
1 - 5	Coupon was rejected. The number of flashes corresponds to the coupon section that was improperly filled out. Try again.
7	Coupon was not read. Confirm the coupon is correct and try again.

- 5 The coupon selection is stored in the unit until it is reprogrammed, even if the power is off.

4.2 ENABLING NOTES AND VEND COUPONS ON THE NOTE VALIDATOR



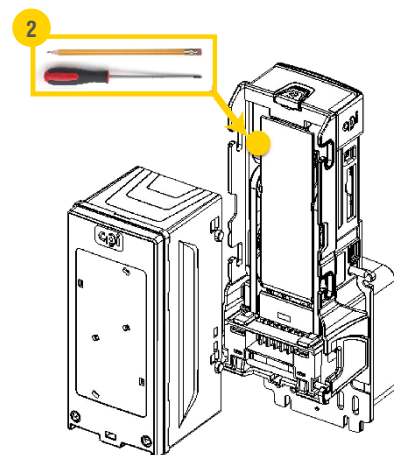
See chapter 4.1 “Programming the Note Validator with the Configuration Coupon”, p 8 for related instructions.

To enable or disable notes or vend coupons on the note validator:

- 1 Remove the note magazine.
- 2 Use a pencil or screwdriver **2** to press the configuration button to enter configuration mode.
- 3 Reattach the note magazine.
- 4 Insert the note or vend coupon.
- 5 The bezel LEDs flash when the note or vend coupon is returned.
- 6 Count the flashes to determine the outcome using the chart below.

No. of Flashes	Meaning
10	Note or vend coupon is successfully enabled.
7	Note validator is unable to read the note or vend coupon. Try again.
3	Note or vend coupon is disabled.

- 7 The unit will remain in configuration mode until there is 30 seconds of inactivity or the note magazine is removed and reinstalled. The unit then returns to normal operation.



5 INTERFACES



This chapter outlines:

- The compatible vending interface for the note validator

The interface refers to the transfer of electronic data to and from the note validator and the controlling device.

The controlling device in a vending machine is the Vending Machine Control (VMC).

The signals transferred to the note validator are control signals which may include:

- ▲ The control system is ready to accept money.
- ▲ The denomination of note to accept.
- ▲ Whether or not notes should be returned from escrow.

5.1 INTERFACE OPTIONS FOR THE NOTE VALIDATOR

Interface	Power Specification
Multi-Drop Bus (MDB)	24 V
Extended Bi-Directional Serial (EBDS)	115/24/12 V
Non-Isolated Serial (NISR)	115/24/12 V
Vending and gaming pulse interfaces	115/24/12 V

The following harnesses are available to support these interfaces:

Part Number	Description	Power Specification
250077006C	Power cable (low level pulse, serial interface)	115 VAC
250075007C	Power cable (low level pulse, serial interface)	24 VAC
01-12-139C	Power cable (gaming and EBDS interface)	115 VAC
250071043C	Multi-Drop Bus interface (MDB)	24 VAC
250070079C	Power cable (pulse interface)	12 VDC
250079049C	RS232 cable	N/A



These harnesses fit onto the male connectors located on the left side of the note validator (See Figure 1) and are designed to connect to the machine controller's or coin changer's note validator interface harness.



For pinout information see [Section 9](#).

For further information on either interface harnesses or mounting kits, please contact your supplier or go to [CPI Support](#) and select Service Partners to find a CPI Authorized Service Center near you.

6 CLEANING



This chapter outlines:

- Recommended cleaning aids for the note validator
- Cleaning instructions for the note validator

6.1 RECOMMENDED CLEANING AIDS



WARNING

Risk of fire.

Never use flammable cleaners.

Fire could result in serious injury or death.

The following cleaning aids are recommended for the Talos T6/T8 note validator:

- ▲ A soft cloth
- ▲ The soft cloth may be moistened with a mild, non-abrasive, and non-petroleum based cleaner

6.2 CLEANING PROCEDURES

The note validator can be cleaned while it is mounted in the host machine.

Follow the cleaning procedures below:



WARNING

Risk of electric shock.

Ensure host machine power is OFF when installing, maintaining, or cleaning the Talos T6/T8 note validator.

Electric shock can cause serious injury or death.

- 1 Remove power from the host machine.
- 2 Unlatch the note magazine on the note validator by pushing the latch located on the top of the unit toward the front of the unit.
- 3 Unhook and remove the note magazine on the note validator by holding the latch and lifting up and then back on the magazine.
- 4 Unlatch the lower housing assembly on the note validator by lifting up on the metal bar.
- 5 Remove the lower housing assembly on the note validator by holding the metal bar and pulling back.
- 6 Clean the note path in the note validator with a soft cloth. The soft cloth may be moistened with a mild, non-abrasive, and non-petroleum based cleaner.

7 TROUBLESHOOTING



This chapter outlines:

- Note validator conditions and recovery steps
- Bezel LED error flash codes and recovery steps

7.1 CONDITIONS AND RECOVERY STEPS


Condition	Recovery Steps
Note validator does not power up	<ol style="list-style-type: none"> 1. Check harnesses. <ul style="list-style-type: none"> – Cables may be loose or not properly connected. – Pins may be bent. 2. Check the source voltage. 3. Ensure power is supplied to the note validator.
Note validator has power, but it does not accept a note	<ol style="list-style-type: none"> 1. Check that the note validator is enabled. 2. Then check: <ul style="list-style-type: none"> – The VMC. – The coin manager and coin levels. Having low coin levels can cause the machine to disable the note validator. – Inventory levels. – That the host machine door is properly locked.

7.2 BEZEL LED ERROR FLASH CODES AND RECOVERY STEPS

When the unit is ready and enabled, bezel LEDs continuously flash.

If the bezel LEDs are off, the unit has an error.

To determine the error:

- 1 Partially insert and hold a note in the note path  until the bezel lights flash.
- 2 Count the bezel light flashes.



Refer to the chart below for conditions and recovery steps.

No. of Flashes	Condition	Recovery Steps
None	No power	Restore power to the note validator or host machine.
1 or 4	Note path in the note validator is blocked	<ol style="list-style-type: none"> 1. Check for jams. 2. Remove the note magazine and lower housing assembly from the note validator and inspect.
2	There is an issue with another vending component	<ol style="list-style-type: none"> 1. Ensure the note validator is enabled. 2. Then check: <ul style="list-style-type: none"> – The VMC. – The coin manager and coin levels. – Inventory levels. – That the host machine door is properly locked.
3	Lower housing assembly removed	<ol style="list-style-type: none"> 1. Check that the lower housing assembly in the note validator is seated. 2. Ensure the note path in the note validator is clean. See chapter 6 “Cleaning”, p. 11 for more information.
5	Note magazine removed from note validator	Reattach the note magazine in the note validator.
Continuous fast	Note validator stacker is full	Empty the note magazine in the note validator.
Continuous slow	Note validator is defective	Replace the note validator.

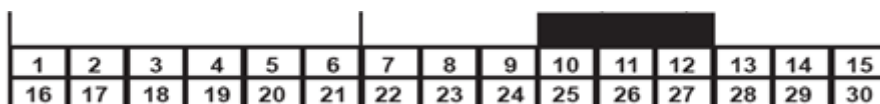
8 PINOUT INFORMATION



This chapter outlines:

- Pinout information for 30-pin Connector
- Power Harness
- Connector Assignment for the 9-pin Cable

8.1 PINOUT INFORMATION FOR 30-PIN CONNECTOR



Gaming and Lottery Pinouts Only			
Pinout	115 Volt AC model	24 Volt AC model	12 Volt DC model
Pin 1	credit relay common	same	same
Pin 2	reserved	credit relay (normally open)	credit relay (normally open)
Pin 3	reserved	24 VAC hot power	reserved
Pin 4	115 VAC neutral power	reserved	reserved
Pin 5	Reserved	key	key
Pin 6	Key	reserved	reserved
Pin 7	credit pulse	same	same
Pin 8	interrupt not*	same	same
Pin 9	serial/pulse not*	same	same
Pin 10	low level ground	same	same
Pin 11	serial data out	same	same
Pin 12	not used	same	same
Pin 13	not used	same	same
Pin 14	not used	same	same
Pin 15	not used	same	same
Pin 16	credit relay - open	DC return	12 VDC return
Pin 17	reserved	reserved	reserved
Pin 18	reserved	reserved	reserved
Pin 19	key	reserved	12 VDC hot power
Pin 20	115 VAC hot power	24 VAC neutral power	reserved
Pin 21	earth ground	key	key
Pin 22	out-of-service	same	same
Pin 23	reserved	same	same
Pin 24	accept enable not*	same	same
Pin 25	out-of-service power	same	same
Pin 26	send not*/serial in	same	same
Pin 27	reserved	same	same
Pin 28	reserved	same	same
Pin 29	reserved	same	same
Pin 30	reserved	same	Same

* "NOT" indicates that the input/output pin function is active LOW. Active LOW is a term used to describe the logic state of an integrated circuit (IC) pin. When an active LOW pin is low (signal ground), the function of that pin is active.

Vending Pinouts Only			
Pinout	115 Volt AC model	24 Volt AC/MDB model	12 Volt DC model
Pin 1	credit relay common	same	same
Pin 2	reserved	credit relay (normally open)	credit relay (normally open)
Pin 3	not used	24 vac hot power	reserved
Pin 4	115 VAC neutral power	no connection	reserved
Pin 5	not used	key	key
Pin 6	key	MDB master receive	MDB master receive
Pin 7	\$1 credit not*	same	same
Pin 8	interrupt not*	same	same
Pin 9	\$5 credit not*	same	same
Pin 10	low level ground	same	same
Pin 11	data not*	same	same
Pin 12	escrow, high	same	same
Pin 13	\$5 enable, high	same	same
Pin 14	\$2 enable, high	same, with MDB master transmit data (TXD)	same, with MDB master transmit data (TXD)
Pin 15	\$1 enable, high	same	same
Pin 16	credit relay - open	DC return	12 VDC return
Pin 17	reserved	not used	reserved
Pin 18	not used	not used	reserved
Pin 19	key		12 vdc hot power
Pin 20	115 VAC hot power	24 VAC neutral power	reserved
Pin 21	earth ground	key	key
Pin 22	out-of-service not*	same	same
Pin 23	reserved	MDB_34 VDC	reserved
Pin 24	accept enable not*	same	same
Pin 25	\$2 credit not*/out-of-service power	same	same
Pin 26	send not*	same	same
Pin 27	\$1 enable, low	same	same
Pin 28	\$2 enable, low	same with MDB common	\$2 enable, low
Pin 29	\$5 enable, low	Same	same
Pin 30	escrow, low	Same	same

* "NOT" indicates that the input/output pin function is active LOW. Active LOW is a term used to describe the logic state of an integrated circuit (IC) pin. When an active LOW pin is low (signal ground), the function of that pin is active.

8.2

POWER HARNESSES

Part Number	Power Specification
25007706C	115 VAC
250075007C	24 VAC
250070079C	12 VDC

8.3 CONNECTOR ASSIGNMENT FOR THE 9-PIN CABLE



Pinout	
*Pin 1	neutral inhibit
*Pin 2	neutral enable
*Pin 3	hot enable
Pin 4	115 VAC hot (power)
Pin 5	24 VAC/12 VDC hot (power)
Pin 6	115/24 VAC neutral
Pin 7	credit relay (normally open)
Pin 8	credit relay (common)
Pin 9	12 VDC neutral



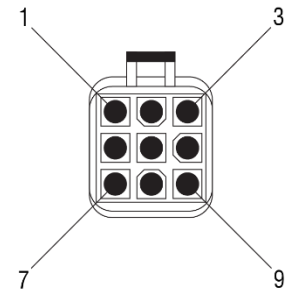
*Pins 1, 2, and 3 are legacy inputs and are no longer supported.

8.4 CUSTOMER SUPPLIED CABLES


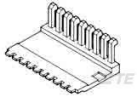
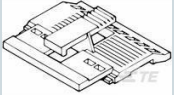
8.4.1 9-PIN CABLE

AMP MATE-N-LOK 9-pin Mating Connector	
AMP Part Number	Description
172161-1	9-pin Outer Shell 
170364-1	Male Pin 22-18 AWG 

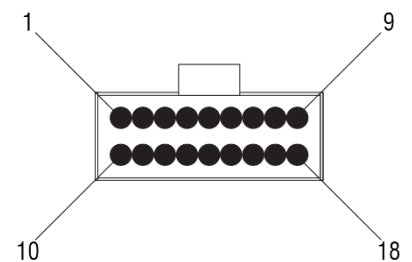
#22 Gauge Wire Recommended



8.4.2 18-PIN CABLE

AMP MODU 18-pin Mating Connector	
AMP Part Number	Description
102398-7	IDC Connector Housing 
102536-7	18-pin Back Cover 
102681-4	18-pin Front Cover 

#22 Gauge Wire Recommended



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Owner's Responsibility

Upon request, owner must show proof of purchase when submitting equipment for service during the warranty period. Owner will assume all freight charges for shipment of equipment to an authorized service center while under warranty, and to and from the service center when outside the warranty period. Owner is responsible for out-of-warranty repair expenses, chargeable at prevailing rates set by authorized service centers. Complete written information must be supplied to the authorized service center for all items returned, including serial and model number, and a description of the malfunction.

CPI Responsibility

During the warranty period, Crane Payment Innovations (CPI) will repair or replace any parts which fail to function properly because of defects in material or workmanship. CPI shall not be liable for any consequential damages as a result of defects in material or workmanship.

Damage due to electrical overload, negligence, accidents, misuse, abuse, vandalism, or an act of God is not covered by CPI warranty. Any alteration of the product after manufacture voids the warranty in its entirety.

The product to be repaired under warranty must be delivered to an authorized service center. Repairs or installation at the owner's location are not included in the warranty. During the warranty period, CPI will assume freight charges for return of the owner's equipment from the closest authorized service center via UPS or common carrier.

Technical Support

Go to [CPI Support](#) and select Technical Support for assistance. Go to [CPI Support](#) and select Service Partners to find a CPI Authorized Service Center near you for product service and repair. Parts and labor that are CPI responsibility will be provided without charge. Other service is at owner's expense.

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