

# INSTALLATION GUIDE



## ALIO™ NOTE

CARD READER

## SAFETY INSTRUCTIONS AND COMPLIANCE

Before installing the Alio™ Note card reader, 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 install and set up the card reader.

### PROTECTING PERSONS AND EQUIPMENT

#### CAUTION

##### Risk of injury

- Turn off power to the machine before installing or removing the card reader.
- The installation work described in this guide may only be carried out by qualified technicians or CPI-trained and authorized personnel.

#### NOTICE

##### Risk of damage to the card reader

- The card reader control board is fitted with components that can be damaged by electrostatic discharge. Please observe ESD precautions for components exposed to the risk of electrostatic discharge. Installers should be properly grounded.
- The card reader must not be operated in the presence of flammable gases, fumes, or water.
- Keep water and other liquids away from the card reader. It is not suitable for use in areas where there could be direct contact with water jets.
- When transporting the device only use its original packaging. It is only in this way sufficiently protected.



Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



Please dispose of the device correctly at the end of its service life. Do not dispose of any part of the cashless reader by incineration. Details regarding the return and recycling of used units and consumables can be obtained from your local branch office.

We reserve the right to make technical modifications to the device, which are not covered by this guide!

### TECHNICAL SPECIFICATIONS

Voltage operating range	20–42 V DC
Full load amps (FLA)	200 mA max.
Power consumption	12 W
Temperature range	Operating temperature: -20–70 °C Storage temperature: -30–70 °C
Relative humidity	5–95% (non-condensing) maximum relative humidity of 50% at extreme temperatures

### COMPLIANCE

Alio™ Note card reader has been evaluated and is compliant with

- UL 756 – Coin and Currency Changes and Actuators
- CSA C22.2 No. 128 – Vending Machines.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by CPI could void the user's authority to operate the equipment.  
FCC ID: QP8ALIONOTEVZ

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**VERSION HISTORY**

Rev	Change	Chapters Concerned	Editor	Date
v1.0	First version	all	D. Sanders K. Roese	Nov. 18, 2021

**Document Data**

<b>Part Number</b>	250659086	<b>Release</b>	R2
<b>Edition</b>	November 18, 2021	<b>Part Change Number</b>	—

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## 2 ABOUT THIS INSTALLATION GUIDE



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

This installation guide is meant for qualified service technicians or CPI-trained and authorized personnel and describes the installation procedure of the Alio Note card reader.

### 2.1 SYMBOLS

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



**CAUTION**

Caution indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



**NOTICE**

Notice is used to address practices not related to physical injury, such as property damage.



Special notes intended to facilitate the use of the product.



Short guide that summarizes a chapter and provides links to subsections.

### 2.2 ADDITIONAL USEFUL TECHNICAL DOCUMENTATION

Apart from this installation guide, further documentation is available for the Alio Note card reader. All documentation can be downloaded from the [Crane Payment Innovations web site](#) as pdf file.

### 3 INSTALLATION



This chapter

- lists the card readers scope of delivery and the tools needed to install the card reader
- shows how to identify a card reader unit
- describes how to install the card reader

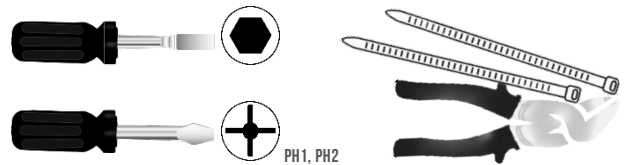
#### 3.1 PARTS INCLUDED

The card reader comes with an

- ▲ MDB cable (part no. 250670036C)
- ▲ DEX cable (part no. 215637033C)
- ▲ Mounting plate (part no. 250038091)
- ▲ Hardware bag
  - 4 machine thread fixing screws (part no. 203716001C)
  - 1 thread-forming fixing screw (part no. 204306001C)

#### 3.2 TOOLS REQUIRED

- ▲ Nut driver 11/32 in [9 mm]
- ▲ Phillips head screw drivers PH 1, PH 2
- ▲ Zip ties (optional)
- ▲ Snips (optional)



#### 3.3 CARD READER IDENTIFIER

The Alio Note card reader can be identified by its serial number on the product label. There are three optional positions for the product label: Above the bezel, on the bottom side of the card reader, or on the bottom side of the card reader's connection hub.

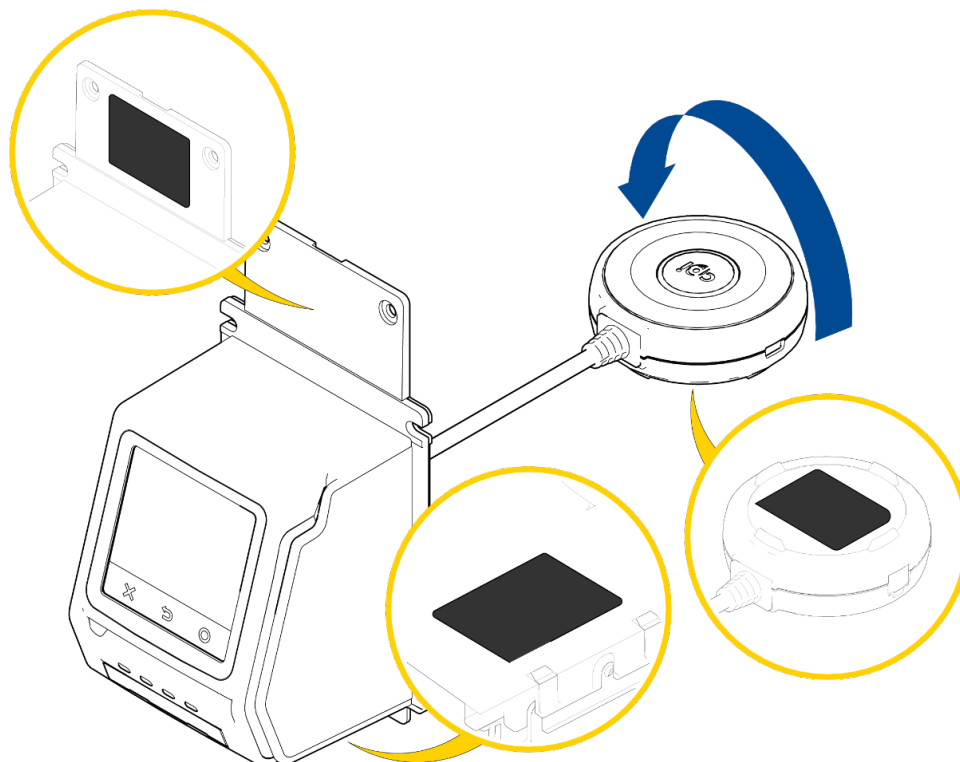


Fig. 1: Product label positions

**Serial Number Format:** WWYLCCPPPPP

- ▲ WW: Week of manufacture (01–52)
- ▲ Y: Year of manufacture (9 for 2019)
- ▲ L: Manufacturing location
- ▲ CC: Configuration code
- ▲ P: Sequential production number

### 3.4 INSTALLING THE ALIO NOTE CARD READER

Alio Note card reader is a cashless payment system that combines a telemeter, antenna, card reader and a full-color display into a single device and can be attached to Series 2000 and Talos note validators, both with or without recycler modules, and replace the bezel.

If the Alio Note card reader is supposed to replace a telemetry system in an already existing note validator, the note validator and the old telemeter and antenna have to be removed before the Alio Note card reader can be installed.

For all installation work on the card reader, note validator, or machine, please observe the following safety instructions:

**CAUTION**

**Risk of injury**

- Turn off power to the machine before installing or removing the card reader.
- The installation work described in this guide may only be carried out by qualified technicians or CPI-trained and authorized personnel.

**NOTICE**

**Risk of damage to the card reader**

- The card reader control board is fitted with components that can be damaged by electrostatic discharge. Please observe ESD precautions for components exposed to the risk of electrostatic discharge. Installers should be properly grounded.
- The card reader must not be operated in the presence of flammable gases, fumes, or water.
- Keep water and other liquids away from the card reader. It is not suitable for use in areas where there could be direct contact with water jets.
- When transporting the device only use its original packaging. It is only in this way sufficiently protected.

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**Note**

- The Alio Note card reader’s antenna is pre-installed inside the main housing and has not to be installed individually.

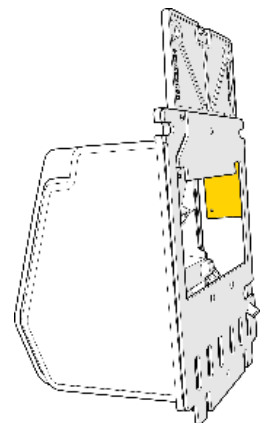


Fig. 2: Antenna location

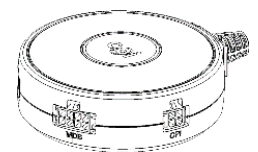


Fig. 3: Connection hub

- The Alio Note card reader’s connection hub is the small puck attached to the card reader and can be mounted inside the machine magnetically. This hub houses all connections for other vendor peripherals. Each connection is unique and labeled for easy routing.

- Please, confirm the asset, equipment or customer number and make sure you are at the correct machine before installing the card reader.

**3.4.1 REMOVING EXISTING OLD TELEMETER AND BEZEL FROM NOTE VALIDATOR**

- 1 Turn off power to the vending machine.
- 2 Use the nut driver to unscrew the four hex nuts from the note validator's mounting posts and remove note validator. Keep nuts for reassembly.
- 3 Disconnect the note validator's cabling.
- 4 Disconnect all connections to the telemeter.
- 5 Remove the antenna from the top of the vendor.
- 6 Seal the antenna hole in the machine (cp. your company's procedure).  
The hole is no longer needed because the antenna is contained within the new card reader bezel.
- 7 Remove screw fixing the note validator's control board cover and pull to remove. Keep the screw for reassembly.

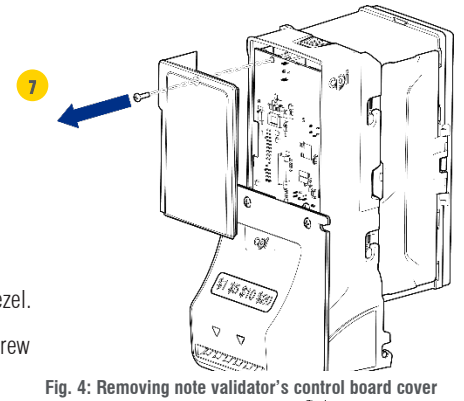


Fig. 4: Removing note validator's control board cover



The Series 2000 control board cover is not attached with a screw. When installing onto a Series 2000, slide the cover off of the chassis.

- 8 Disconnect the ribbon cable if the existing bezel is connected to the control board.
- 9 Unscrew four bezel screws and remove the bezel and its mounting plate.

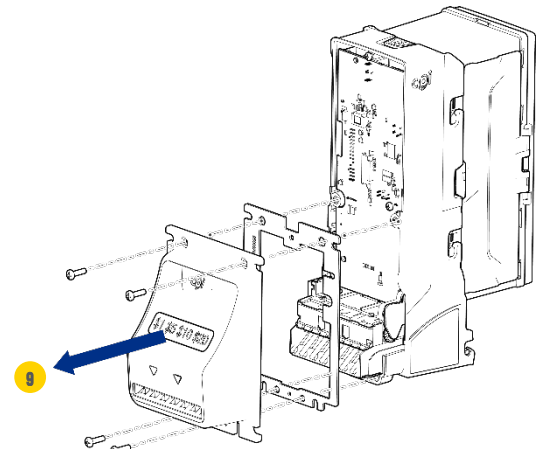


Fig. 5: Removing note validator bezel and mounting plate

**3.4.2 INSTALLING THE ALIO NOTE CARD READER**

- 10 Use two of four identical fixing screws enclosed in the hardware bag to fasten the card reader's mounting plate to the note validator.
- 11 Route card reader ribbon cable to the top and over the mounting plate.

**NOTICE**

Please make sure that the card reader's green ground cable is not pinched when fastening the card reader in the next step.

- 12 Use the two remaining fixing screws to fasten the card reader at the top and a smaller fixing screw to fasten the card reader to the note validator at the bottom.
- 13 Route the connection hub cable and the green ground cable through the cable management slot in the mounting plate.
- 14 Attach the card reader's ribbon cable to the note validator's control board.

**NOTICE**

Older note validators might not provide a suitable ribbon cable connector. In this case, do not remove the ribbon cable. Just route it up as shown in Fig. 6 and leave it in routed position.



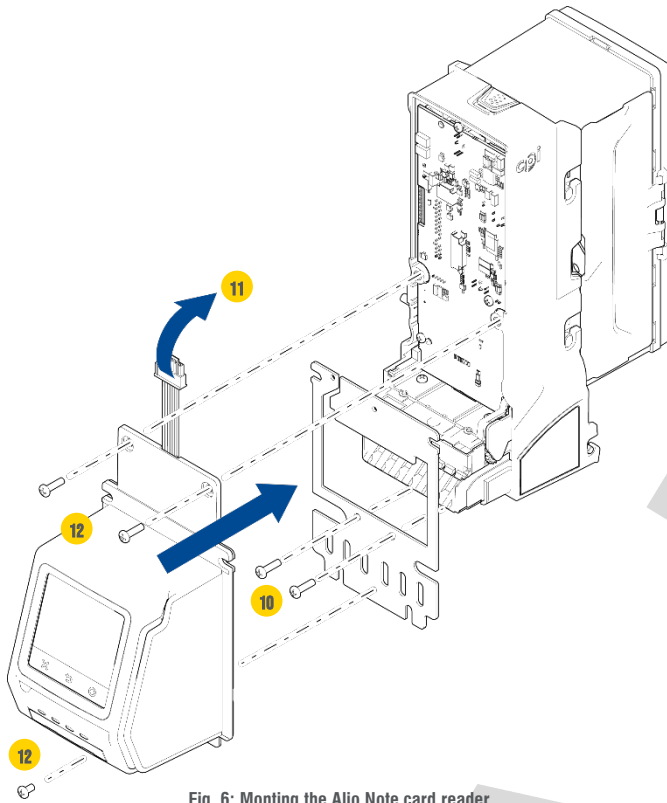


Fig. 6: Mounting the Alio Note card reader

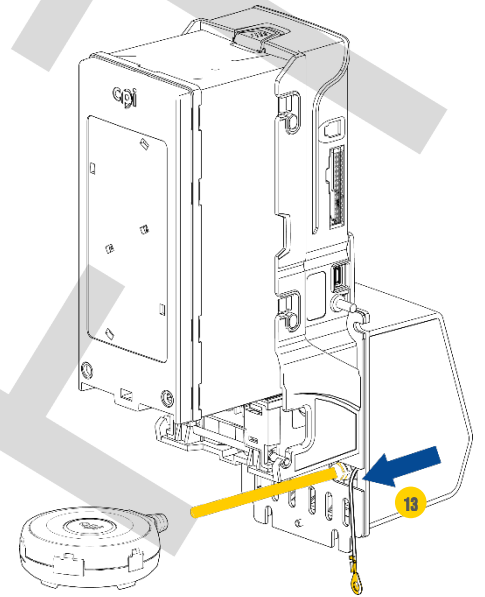


Fig. 7: Routing connection hub and ground cable

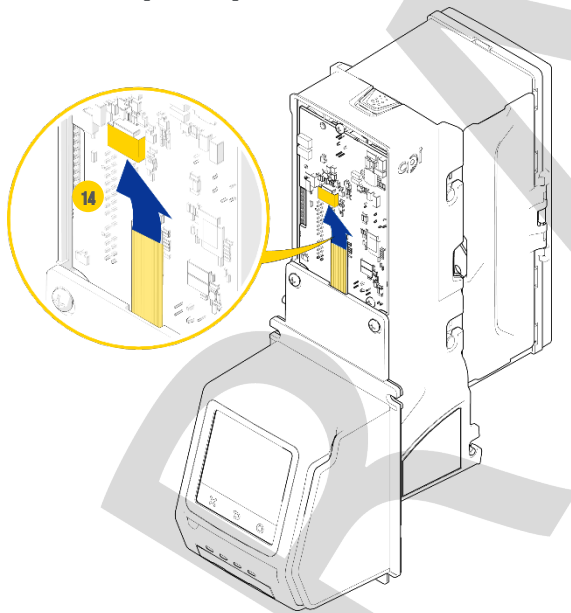


Fig. 8: Connecting card reader to note validator

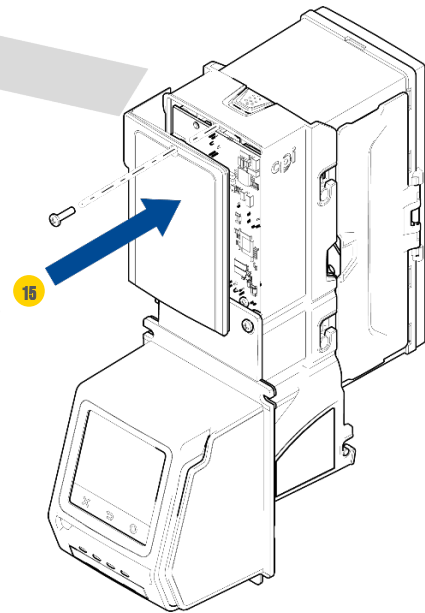


Fig. 9: Reattaching note validator's control board cover

**15** Reattach the control board cover.



The Series 2000 control board cover is not attached with a screw. When installing onto a Series 2000, slide the cover onto the chassis.

- 16 Mount card reader through the back of the vendor door, and secure using the four hex nuts on the vendor's mounting posts.
- 17 Secure green ground cable to a mounting post.

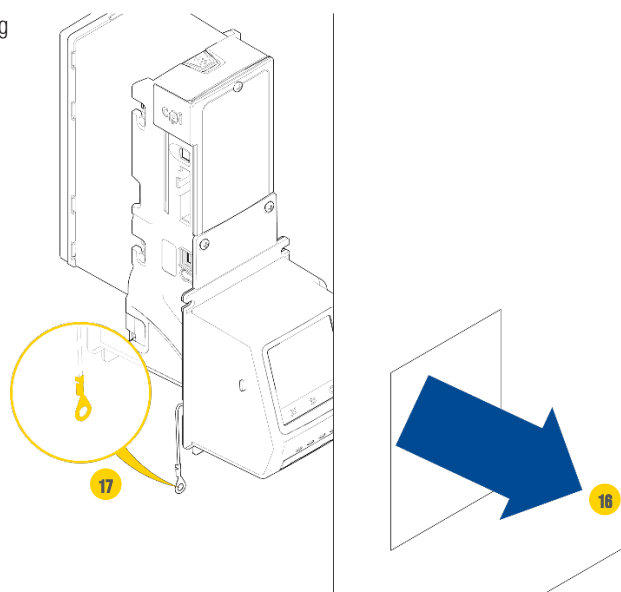


Fig. 10: Mounting card reader through vendor door

### 3.4.3 MOUNTING CONNECTION HUB AND CONNECTING OTHER VENDOR PERIPHERALS

- 18 Mount the card reader's connection hub magnetically inside the machine so that its center button and LED ring is accessible for operation and service.
- 19 Connect all other vendor peripherals to the connection hub as labelled and route all connections using zip ties and snips for cable management if necessary.
- 20 Restore power to the vending machine and follow your company's procedure for activating a telemeter. Alio Note card reader will connect to the cellular network.

### 3.5 AFTER INSTALLATION

The Alio Note card reader is fully configured for operation from the factory and once mechanically installed onto a Talos or Series 2000 note validator and powered. The card reader is ready to accept cards for transactions.

Detailed information of connection status can be viewed by pressing the red "X" button on the card reader display 5 times. The display will reconfigure to indicate the status.

## Published by

Crane Payment Innovations | CPI

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Malvern, PA 19355

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## CPI® Alio™ Note card reader installation guide for qualified service technicians or CPI-trained and authorized personnel

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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.

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