

**CD202**

**DUAL COLUMN CARD DISPENSER**



**Operators Manual  
(Manual – A)**

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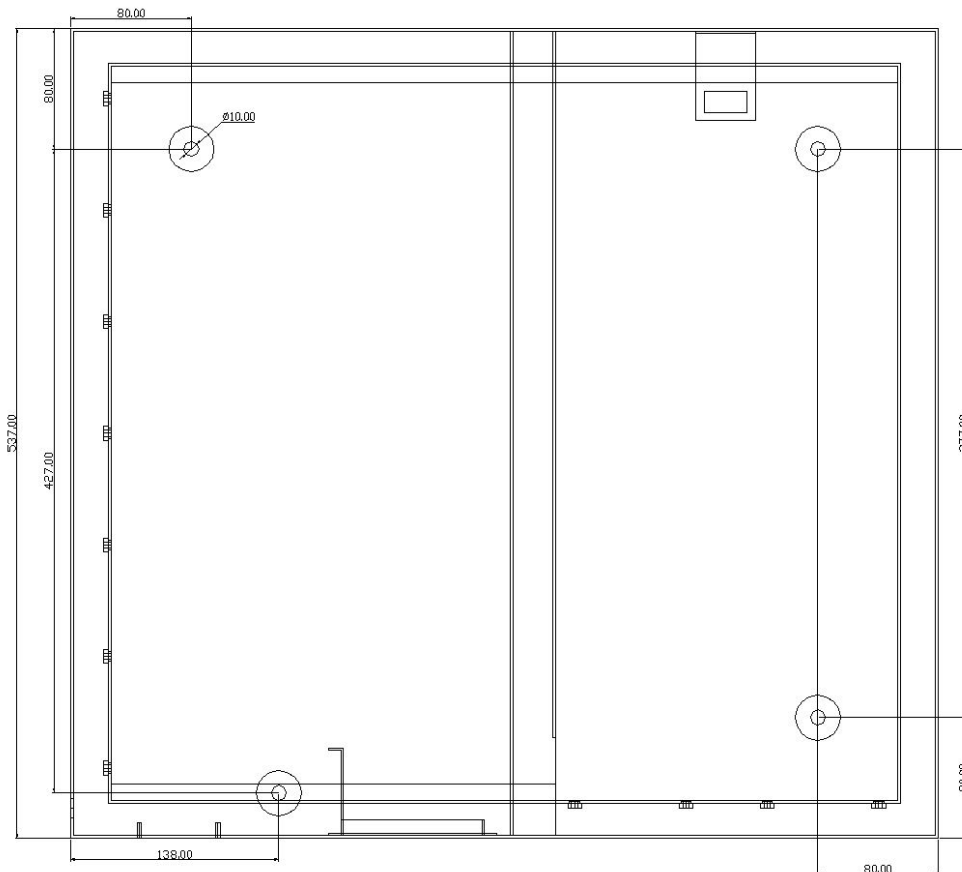
# A1 Scope

This manual (Manual-A) describes the mechanical details, user functions and operations specific to the CD202 Dual Dispenser Card Dispenser. This machines is fitted with the A47-026 logic board and so this manual should be read in conjunction with the A47-026 logic board manual (Manual-B) to gain details of the operation of the software and programming.

# A2 Specifications

Height: 537 mm  
Width: 576 mm  
Depth: 260 mm

Empty Weight: 27 kg  
Capacity: 1200 cards  
Power: 110/240V 1A AC 50Hz



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# A3 Installation

## 3.1 Unpacking and inspection

The CD202 is supplied protected for transport and should be carefully removed from its packaging and inspected. A small plastic bag containing two keys and this manual should be found within the packaging. All the packaging should be kept in case it is necessary to return the machine for service. Packing material is used inside the CD202 to protect the internal parts during transport. Ensure that all this material is removed.

## 3.2 Opening and Closing the Door

To access the internal parts of the machine the doors must be opened in the following way:

- 1 Insert the supplied key into one of the locks and turn the key one quarter turn **clockwise**  to release the lock. Remove the key.
- 2 Insert the key into the other the lock and turn the key one quarter turn **clockwise**  to release the lock. Remove the key.

### **WARNING:**

**After releasing both locks the right hand door it is free to fall. The door weighs several kg and care should be taken when lowering it. If it is allowed to drop freely the cabinet, hinge and dispensers may be damaged.**

- 3 Once the right hand door is lowered, it is possible to open the left hand door to access the note and coin acceptors, the logic board, and the cash boxes.
- 4 To close the door, ensure that the left hand door is fully closed and then raise the right hand door to the vertical.


## 3.3 Installation

When choosing a location for the CD202 it is important to remember that, when full, it can weigh in excess of 60 kg. Care should be taken that the walls and mounting points are robust enough to support the weight. All installations will be different and this manual can only give general guidance.

- 1) Open the CD202 and remove the cash bins from the machine in order to expose the mounting holes at the back of the cabinet.
- 2) Mark out and drill holes suitable for M10 bolts as shown in the diagram. Use rawlbolts designed for the task for solid masonry and suitable fixings for other surfaces.
- 3) Support the CD202 during the mounting process using M10 bolts at each mounting location.
- 4) Ensure that the cabinet is secure and remove any brick dust or other contamination that entered the cabinet during installation. Then refit the cash boxes.

## 3.4 Electrical Connections

After installation in the UK, the CD202 should be fitted with a standard BS1363 plug fused at 3 Amps using the following wiring colours:

- Brown - to the terminal marked L or Live or coloured Red
- Blue - to the terminal marked N or Neutral or coloured Black
- Yellow/Green - to the terminal marked  or E or Earth or coloured Green

# This equipment must be earthed

In other countries local rules should be observed.

## 3.5 Initial test of machine

After installation and connection of the CD202 to mains power (but before switching the power on) proceed as follows:

- 1) Open the door and perform a visual check of the internal parts, check the dispensers are fully home and the extension columns, coin box (if fitted) and note box (if fitted) are in position. Ensure that no foreign bodies or packing material are present.
- 2) Switch on the mains power to the CD202. Then switch the CD202 on at its main switch, which should illuminate.
- 3) Noises should be heard from the Note Validator (if fitted) as it tests itself. The main display will cycle through its test sequence and after a few moments the machine will go silent. The main display will show **Pr0** → **1641** to indicate that the door is open. 1641 is an example software program number and may differ for different machines. The A47 control board has 4 red LEDs on it. The 05v & 12v should illuminate.
- 4) Fill the dispensers as detailed in the relevant section of this manual and close the door.
- 5) The display will show **0000** (or local variations) and the note path entrance (if fitted) and coin path entrance (if fitted) will illuminate. If the machine is fitted with a real-time clock and the clock display is enabled then the time in hours and minutes will appear on the display. It is now ready for use.
- 6) Confirm the payout settings, operating mode and currency selections are correct by testing the CD202 with a range of different notes and coins. Confirm that the payouts are as required.

# A4 Anatomy of the Machine

The CD202 is divided internally into two regions:

1) Door Electronics Region

The inside surface of the main door is where most of the control electronics and the Coin Acceptor and Note Validator are mounted.

2) Dispensers

The Dispensers are mounted onto the rear of the right hand door. On top of the dispensers can be fitted a selection of extension columns with different capacities depending upon the machine variant.

3) Power Supply Unit

The Power Supply Unit is fitted in the bottom of the machine to the left of the coin bin.

## 4.1 Door Electronics Region

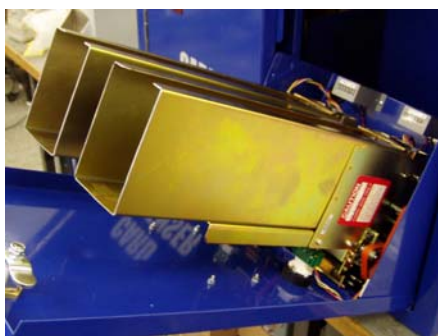


Note that some of the items shown in this image maybe optional and may not be fitted to any particular machine. The CD202 is fitted with two mechanical meters, one of note and one for coins.

The Coin Acceptor shown is the Mars CF 9520.

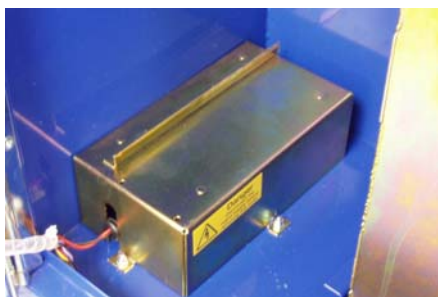
The White, Red and Black Programming Buttons can be clearly seen on the Display board.

## 4.2 Dispensers



The Image shows the dispenser region of a CD202 machine with Column Extensions.

## 4.3 Power Supply Unit



The Image shows the Power Supply Unit inside a CD202 machine.

# A5 Normal Operations

The CD202 needs no special servicing or maintenance. It may be switched off and on whenever necessary and will retain all settings and configuration. If power is removed during a payout that payout will not be restarted when the power is reconnected.

The operator controls the functions of the CD202 through the buttons mounted on the display board that is located on the inside of the door. Using these buttons the operator can:

- 1) Change the currency setting to enable different currencies to be accepted. Note that the Note Validator may need to be reprogrammed separately in order for it to accept other currencies;
- 2) Test the Coin Acceptor and Note Validator;
- 3) Change the way coin and notes are accepted and routed within the machine;
- 4) Test and configure the Hoppers;
- 5) Determine the cause of machine faults;
- 6) Change the payments system to alter the coins that are paid out;
- 7) Read and reset audits;
- 8) Control the machine environment.

The CD202 is fully programmable on site and gives the operator considerable flexibility in setting how many packets will be paid out under different circumstances. Details of all programming and control functions are given in the A47-026 logic board manual (Manual-B).

# A6 Filling Dispensers

1. The dispensers used in the CD202 use a micro-switch in the base of the card stack to detect the presence of cards. The cards must have sufficient weight to press down on the micro-switch and operate it. A Metal I-bar weight is supplied to ensure that the card stack is heavy enough to operate the switch correctly. This I-Bar weight **MUST** be placed on top of the card stack at all times.

To refill a dispenser proceed as follows:

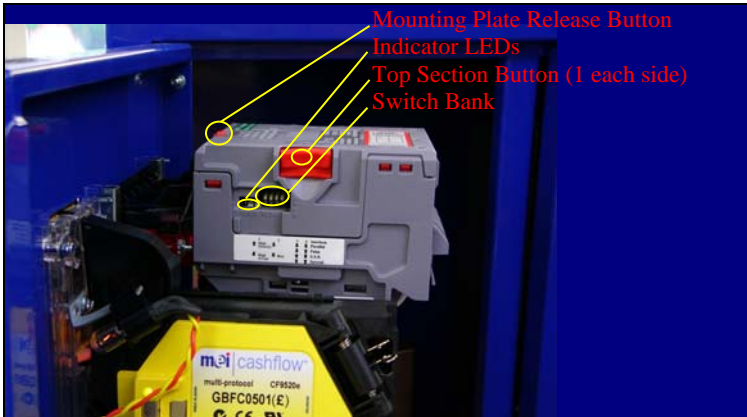
- 1) If the CD202 has stopped during a payout and indicated a dispenser-timeout (error codes 13, or 23) or dispenser low (error codes 12 or 22) error **DO NOT TURN THE POWER OFF**. If the CD202 has indicated a dispenser low error at switch on, or some other time when no payout is in progress, or if the dispensers are being topped up without being empty first then it is recommended that the power be switched off at the main switch inside the CD202 before filling.
- 2) Unlock and open the machine.
- 3) Lower the right hand door.
- 4) Remove the I-Bar weight.
- 5) Fill the Extension Column with cards being careful to ensure no foreign matter comes between the cards.
- 6) Replace the I-Bar weight on top of the card stack.
- 7) Record the card counts shown on each of the meters built into the front of the dispenser control box for auditing purposes.
- 8) The A47-026D logic board used in the CD202 records audits electronically. If audits are being maintained then follow the instructions given in the section "Filling the Dispensers" in the Manual B that accompanies this manual.
- 9) When the door is closed any partial payout will be completed and the CD200 is ready for use.

# A7 Note Acceptor Maintenance

The CD202 may be fitted with either Innovative Technology NV8 or NV10 note acceptors, or Astro-Systems GBA note acceptors.

## 7.1 Servicing Innovative Technology NV8 / NV10 note acceptors

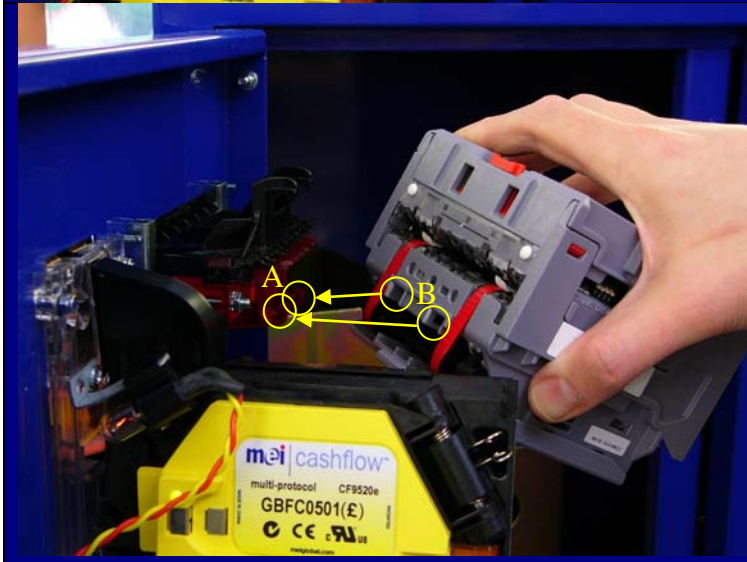
The pictures below show a NV10 note acceptor mounted in a machine that may not exactly match with the look of the CD202. The pictures should be treated as a general guide.



This picture shows a NV10 note acceptor in position on a machine. Before removing the acceptor, switch the mains power off at the machine's main switch and unplug the note acceptor's connecting cable (not shown in this picture).


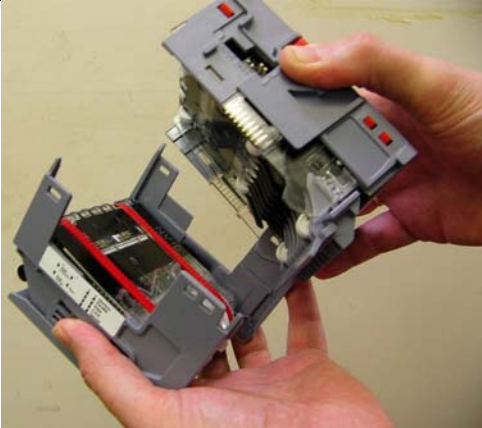


To remove the acceptor press the "Mounting Plate Release Button" towards and then down, as shown by the arrow 1. Then hinge the validator down as shown by arrow 2. Finally pull the validator gently off its mounting point in the direction shown by arrow 3.



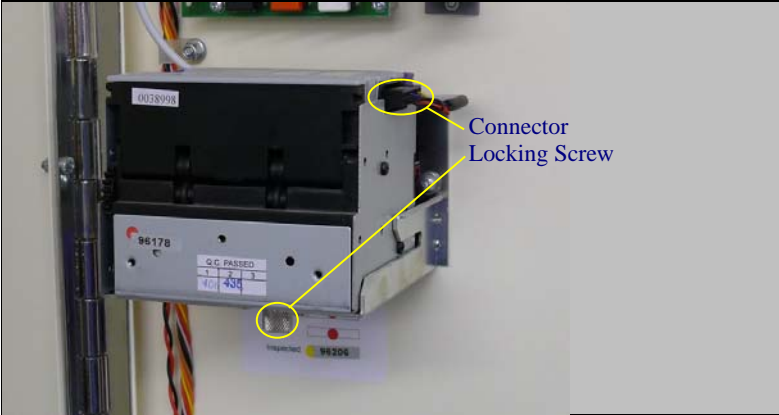

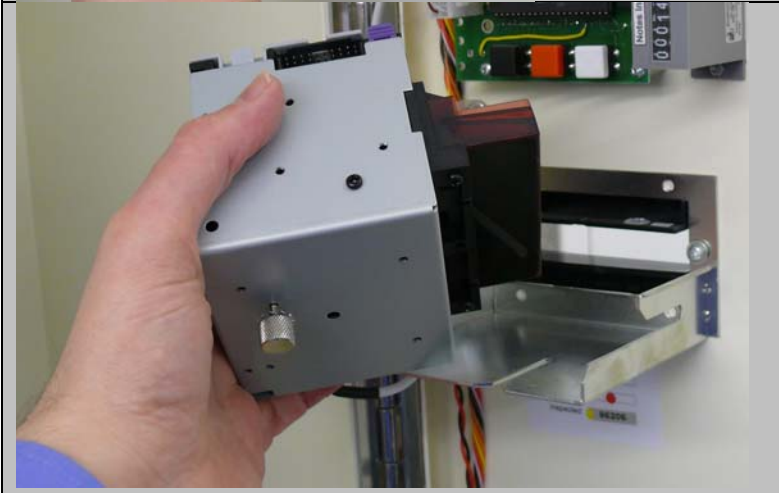
To refit the NV10 acceptor first locate the two red plastic hooks in the mounting plate (A) within the two holes in the front of the acceptor (B). Using these as a hinge, swing the acceptor to the horizontal until the "Mounting Plate Release Button" clicks into place. Finally reconnect the note acceptor's connecting cable.

It will sometimes be necessary to clean the note path within the NV8 or NV10 note acceptor. Access to the note path is easily gained after the acceptor has been removed from the machine. Liquids should not be used when cleaning the note path. A dry cloth or blower brush can be used to remove dust and deposits. If the note path parts are damaged or scratched then the acceptor should be returned for service.


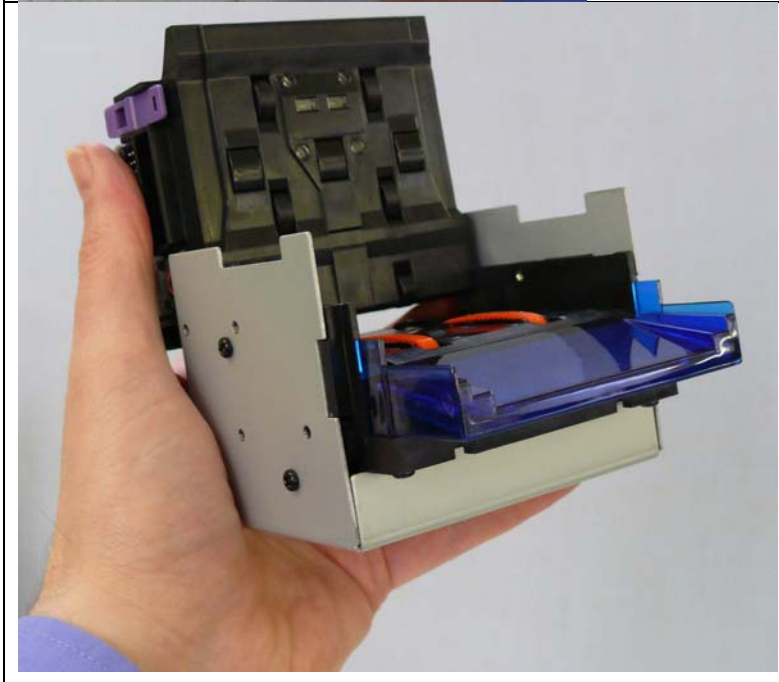
	<p>Hold the lower part of the acceptor in one hand and the upper part of the acceptor with the other hand, by its two release buttons. Press the buttons down and in.</p>
	<p>Separate the two halves of the acceptor to expose the red drive belts (in the lower half), the drive wheels (in the upper half) and the note path itself. Assembly is the reverse of disassembly. Be careful that no dust or foreign objects interfere with the two sets of electrical connection pins (eight pins each side) when reassembling the two halves.</p>

## 7.2 Servicing Astro-Systems GBA note acceptors

The pictures below show a GBA note acceptor mounted in a machine that may not exactly match with the look of the CD202. The pictures should be treated as a general guide.

	<p>This picture shows a GBA note acceptor in position on a machine. Before removing the acceptor, switch the mains power off at the machine's main switch and unplug the note acceptor's connecting cable.</p>
	<p>To remove the acceptor turn the Locking Screw a couple of turns anti-clockwise to release it. Do not attempt to completely unscrew the Locking Screw.</p>
	<p>The GBA validator slides off its mounting plate.</p>

It will sometimes be necessary to clean the note path within the GBA note acceptor. Access to the note path is easily gained after the acceptor has been removed from the machine. Liquids should not be used when cleaning the note path. A dry cloth or blower brush can be used to remove dust and deposits. If the note path parts are damaged or scratched then the acceptor should be returned for service.

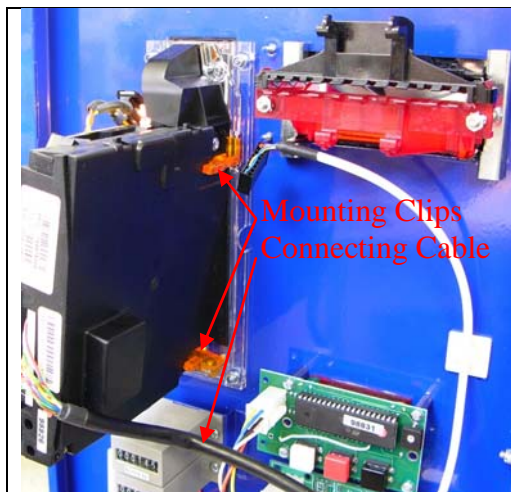
	<p>Locate the two purple coloured release buttons and press them together as indicated in the picture.</p>
	<p>The GBA hinges open along its back edge to reveal the note path.</p>

# A8 Coin Acceptor Maintenance

The CD202 is usually fitted with a Mars CashFlow CF9520 coin acceptor.

## 8.1 Servicing a Mars CashFlow CF9520 coin acceptor

The pictures below show a coin acceptor mounted in a machine that may not exactly match with the look of the CD202. The pictures should be treated as a general guide. In some models with note acceptors it may be easier if the note acceptor is removed in order to gain better access to the clips that lock the coin acceptor into place. See Section A7 of this manual for details on note acceptor removal.



This picture shows a CF9520 coin acceptor in position on a machine. Before removing the acceptor, switch the mains power off at the machine's main switch and unplug the coin acceptor's connecting cable.



In order to remove the Coin Acceptor squeeze the two amber plastic clips towards each other between fore-finger and thumb while supporting the coin acceptor with the other hand. The clips must be bent some 3mm before the coin acceptor will be released. This requires some force and care must be taken to ensure the clips are not damaged in the process. Replacement clips are available from the factory. It may be easier to bend the clips one at a time and release the coin acceptor from one end before the other end.



To replace the coin acceptor, position the front face of the acceptor against the mounting plate so that the two plastic pegs in the mounting plate align with the two holes in the front of the acceptor (as shown in the picture). Then press the acceptor against the mounting plate until both amber clips spring into place and the acceptor is held firmly. After replacement it should be possible to press the coin reject button (on the outside of the machine door) in by about 1mm BEFORE the coin acceptor side gate begins to move. If the coin acceptor is not in the correct position and the side gate is held slightly open then the coin acceptor will not operate correctly and will not accept coins.

It will sometimes be necessary to clean the coin path within the CF9520 coin acceptor. Access to the coin path is easily gained after the acceptor has been removed from the machine. Liquids should not be used when cleaning the coin path. A dry cloth or blower brush can be used to remove dust and deposits. If the coin path parts are damaged or scratched then the acceptor should be returned for service.



Once the coin acceptor is removed from the machine the side gate may be opened to expose the upper part of the coin path just by forcing against its return spring. To expose the lower part of the coin path the side plate must be removed. The side plate is held by single screw that may be removed with an appropriate screwdriver. Be careful when replacing the side plate not to damage the plastic mouldings by over-tightening the screw.