

# Arcade III Changer

Model: 182-5000 and 182-5100  
Manual  
Version 1.4 / February 2009



GAMING, AMUSEMENT AND INDUSTRIAL COMPONENTS

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## 1. Introduction

Congratulations with the purchase of your changer. With this product changing money is simple and flexible. De changer has a note reader to change notes to coins or tokens. De changer has 1 or 2 hoppers inside, which are used to dispense coins. The changer has a 6 digit display showing progress of payment. When not changing money the display shows which notes are excepted by the machine and which coins are returned. When the changer becomes empty this will be shown on the display.

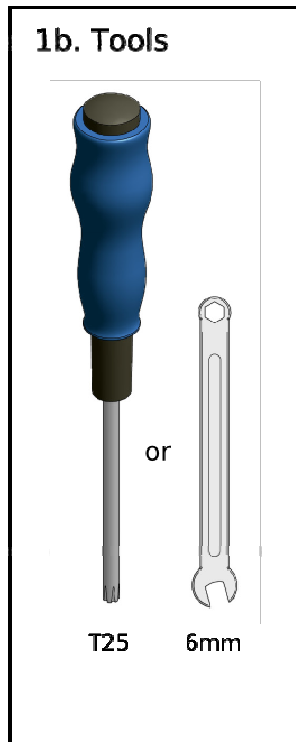
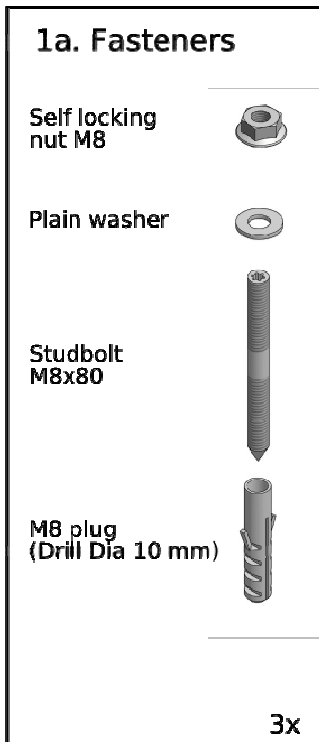
The changer can be configured to you wishes. Using 4 buttons the changer can be programmed for a large number of payout schemes. You do not need a PC for this.

The changer contains a complete registration of all payout actions. If the changer loses power during payout for less than 1 hour, payout is automatically resumed after the power is restored.

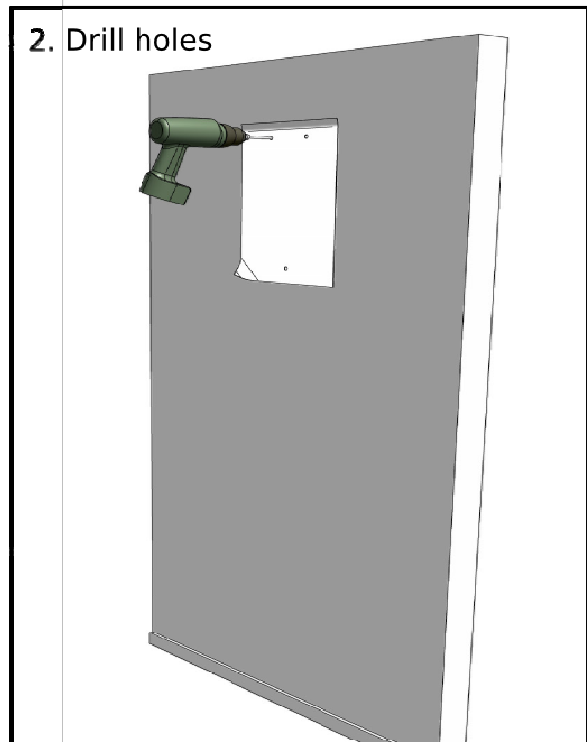
## 2. Mounting the changer

1. Open the machine, remove the hopper unit, notes receptacle, the note reader. Remove the connector from the note reader.
2. See appendix for a visual mounting instruction.
3. Use included drill instruction for correct placement of holes.
4. Mount changer on a flat wall surface using included plugs and dowel crews. We advise a maximum height of 1.6 m from floor to top of the changer.
5. Hang changer on dowel crews and fasten using included M8 nuts.
6. Reconnect note reader cable. Place note reader, note receptacle and hopper unit back in changer.

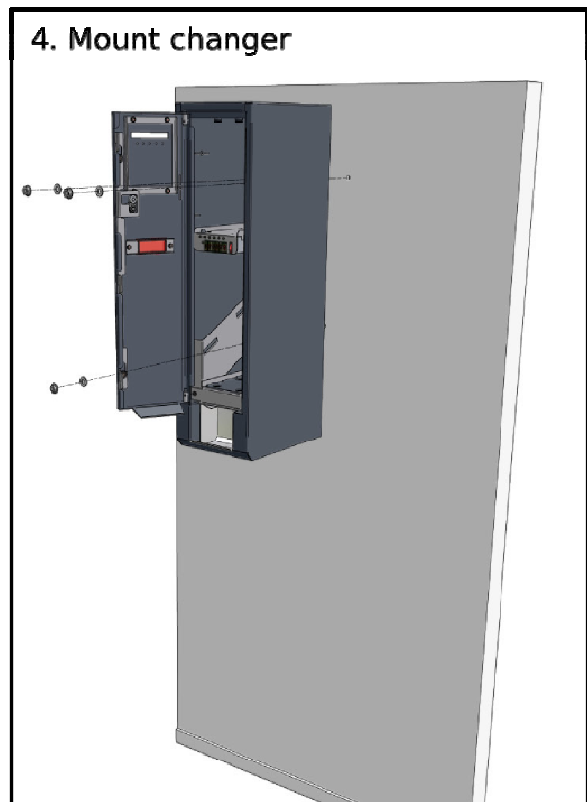
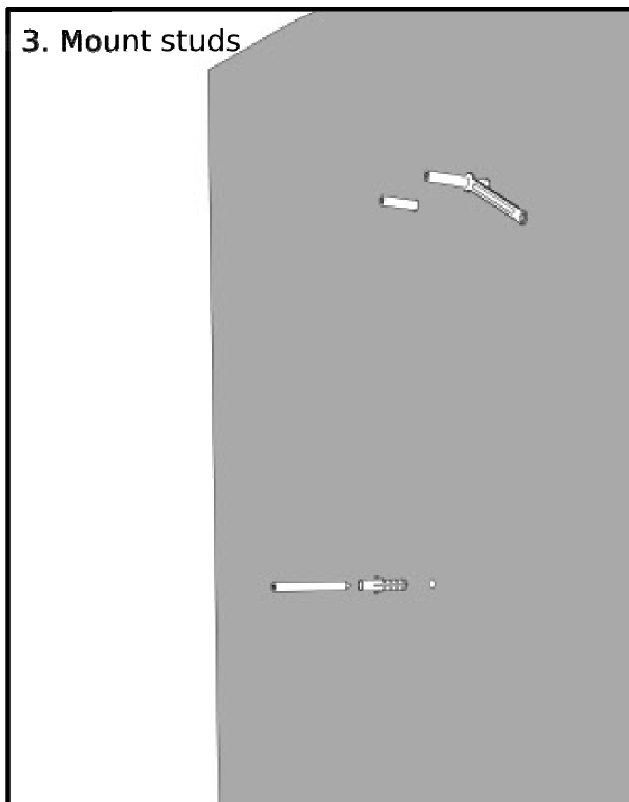
**Attention: Check if 220V cable leads through cut out in top or bottom of the changer housing.**



Tools not included



Drill upper holes around shoulder height



Use torx screw driver or 6mm wrench to fasten studbolts in plugs.

### 3. Changer operation

When changer is turned on the following is displayed **888888**. You can check if all display segments operate properly. After this the display shows information about which notes can be accepted by the changer. If the hopper(s) are filled with coins the changer is ready for use. When the changer is nearly empty no more notes will be accepted by the note reader. The following message will be displayed **CHANGER 00 15 00 EMPTY** (CHANGER IS EMPTY). Hopper(s) have to be refilled to resume operation. When during operation a hopper gets completely empty the following message will be displayed **HOPPER 0.000 00 15 00 EMPTY** (HOPPER (COIN VALUE) IS EMPTY). The empty hopper has to be refilled. Once refilled press the red marked button to complete coin payout.

### 4. Changer quick setup

When you want to change the payout method there are 5 different standard payout settings. To change the setting turn of the changer. Press and hold the green marked button. Turn on the changer and hold the green button until you see **INIT DATA** appear in the display. You can now release the green button. When you now press the green marked button you will see **INIT E2** in the display. This means the hopper is programmed for 10, 20 and 50 euro notes with a 2 euro coin payout from one Evolution hopper. When the green marked button is pressed again you will see **INIT E1 2** appear in the display. This means the changer is programmed to accept 5, 10, 20 and 50 euro notes with a payout of 1 and 2 euro coins from 2 Cube hoppers. When the green marked button is pressed again you will see **INIT E1** in the display. This means the changers is programmed for 5, 10, 20 and 50 euro notes with a payout of 1 euro from 1 Evolution hopper. The two following settings are not relevant to this changers configuration **INIT E2** and **INIT E50**. When the desired setting is selected you press red marked button to confirm. The display will show **INIT**. After this the display will show a ticker with information regarding notes and which will be accepted by the changer and which coins are payed out. The changer is now ready for use.

**Attention: On the coin acceptor you can select to enable or disable acceptance of desired coin denominations. This is done by a dipswitch on the coin acceptor see paragraph 6.3.**

### 5. Programming the changer

The following chapters (5 - 15) are meant as a guide when default changer settings are not to your satisfaction. Before you start programming the changer, make sure the hopper is configured for the desired coins and the note reader is ready to accept the correct notes. You are now ready to program the changer. During programming the display is used to inform you about the selected setting and its corresponding value.

The following colour marked buttons are used during programming.

Blue: Go to settings mode or proceed to next setting.

Yellow: Change or lower the value of current setting

Green: Change or increase the value of current setting (when green and yellow are pressed simultaneously the value is reset to zero.)

Red: Confirmation of pin code, exit of menu or confirmation of settings.

**Attention: Settings can only be changed after a pin code (see 6) has been entered!**

#### 5.1. Enter pin code (password)

Enter the menu by pressing the blue marked button. Press this button multiple times until the message **ENTER PASSWORD 0000** appears in the display. If the pin code is set to the default value (default value is 0000) accept the selected pin value by pressing red. You can now press blue to proceed to the next menu item. If a different pin code than the default has to be entered you can use the green button to change the value of the first digit. Use the yellow button to move to the next digit. The point to the bottom right of the digit marks the currently active digit. When all digits have the desired value press red to confirm the pin code. The display now shows:

**PASSWORD GOOD** (PASSWORD GOOD) when the code is right

**PASSWORD FALSE** (PASSWORD FALSE) when the code is wrong.

**Attention: The password is shown on the display. Beware of other people watching.**

## 5.2. Units

With this setting you can choose to enable decimal point notation in the display. After entering the pin code (see 6) press the blue marked button until you see **UNIT 1.5** **000.00** (UNITS 2 DECIMALS) or **UNIT 1.5** **00000** (UNITS NO DECIMALS) in the display. Use the green marked button to change the setting. Use the blue marked button to continue to the next menu item. If you are done with programming press the red marked button twice to save settings and exit the menu.

## 5.3. Coins or tokens

During payout the display can show either remaining value to be paid or the number of coins remaining to be paid. After entering the pin code (see 6) press the blue marked button until **DISPLAY** **NO MONEY** (DISPLAY MONEY) or **DISPLAY** **COINS** (DISPLAY COINS) appears in the display. Use the green marked button to change the setting. Use the blue marked button to continue to the next setting. If you are done with programming press the red marked button twice to save settings and exit the menu.

## 5.4. Hopper type

With this menu item it is possible to select the correct hopper type(s). After entering the pin code (see 6) press the blue marked button until **HOPPER** **TYPE** **EVO** (HOPPER TYPE EVO) or **HOPPER** **TYPE** **CUBE** (HOPPER TYPE CUBE) appears in the display. Use the green marked button to change the setting. Use the blue marked button to continue to the next setting. If you are done with programming press the red marked button twice to save settings and exit the menu.

## 5.5. Hopper coin value

With this you can set the value of the coins that are paid out. After entering the pin code (see 6) press blue until **HOPPER 1** **000.00** (HOPPER 1) appears in the display. The value of the coin present in hopper 1 (front Cube hopper or Evolution hopper) can now be set. For increasing the value use the green marked button and for decreasing the yellow. When pressing blue **HOPPER 2** (HOPPER 2) now appears in the display. The value of the coin in hopper 2 (rear Cube hopper) can now be set. With Evolution this is set to **OFF** (OFF = 0). Press blue again to move to the next menu item or press the red marked button twice to exit the menu.

## 5.6. Setting the totalizer

The changer has a totalizer function. This function is normally used in combination with a coin acceptor. With this you can change a combination of smaller value coins to one or more coins of higher value. You can set the changer to remember the remaining amount for the next payout or reset this to zero. After entering the pin code (see 6) press the blue marked button until you see **TOTALIZER** **HOPPER 1** **OFF** (TOTALIZER HOPPER 1) in the display. Now the value of the totalizer can be set. To raise the value use the green marked button and to lower the value use the yellow marked button. When you now press the blue marked button **TOTALIZER** **HOPPER 2** **OFF** (TOTALIZER HOPPER 2) appears in the display. This can be set in a similar way. When the blue marked button is pressed the following appears in the display, **TOTALIZER** **MINIMUM VALUE** **000.00** (TOTALIZER MINIMUM VALUE). A remaining amount after payout that is lower than this value is not remembered for the next payout. To raise the value use the green marked button and to lower the value use the yellow marked button. Press blue again to move to the next menu item or press the red marked button twice to exit the menu.

## 5.7. Setting notes

You can set the value of a maximum of 4 notes. After entering the pin code (see 6) press the blue marked button until **NOTE 1** **VALUE** **000.00** (NOTE 1 VALUE XX.XX) appears in the display. Now the value of note 1 can be set. To raise the value use the green marked button and to lower the value use the yellow marked button. When you now press the blue marked button **TYPE** **00000** (TYPE XXX) appears in the display. With this you can enter the currency symbol, with a maximum of 3 characters. For example the E for Euro or blank space can be used. The following characters cannot be used. k, m, w, x and z. An "m" usually get replaced by an "n" and a "w" by a "U". With the green marked button you can change the character. By pressing the yellow marked button you can skip to the next character. The red dot to the bottom left of the character indicates which character is currently activated. When pressing the blue marked button using the same method notes 2, 3 and 4 can be set. When a note is not used this value of the note must be set to zero. Press blue again to move to the next menu item or press the red marked button twice to exit the menu.

### 5.8. Setting payout

The payout method can be changed to fit your desired application. After entering the pin code (see 6) press the blue marked button until **N 1H 100** **000000** (NOTE 1 HOPPER 1) appears in the display. With this you can set the number of coins for note 1 out of hopper 1. To raise the value use the green marked button and to lower the value use the yellow marked button. When you now press the blue marked button you see **N 1H 200** **000000** (NOTE 1 HOPPER 2) in the display, only when there are two hoppers present in the changer. With this you can set the number of coins from hopper 2 for note 1. When you now press the blue marked button you will see **N 2H 100** **000000** (NOTE 2 HOPPER 1) in the display. You can now set the number of coins from hopper 1 for note 2. Using the same method you can set values for note 2, 3 and 4. Press blue again to move to the next menu item or press the red marked button twice to exit the menu.

### 5.9. Setting the low level alarm

The changer can display a warning message when the hoppers are nearing empty. When using plastic coins this setting always has to be off. After entering the pin code (see 6) press the blue marked button until **ALARM** **H8 12--** (ALARM HOPPER 1/2) appears in the display. You can now change the low level alarm to on or off using the green marked button. When the number is visible the hopper low level alarm is active. When you see a dash the low level alarm is off. With the yellow marked button you can skip to the next number. The dot to the lower right of the number indicates which one is currently active.

When **ALARM** **H8 12--** (ALARM HOPPER 1/2) is shown in the display both hopper 1 and hopper 2 will show a warning message in the changer display when the hopper nears empty state. The changer will stop accepting notes.

When **ALARM** **H8 1---** (ALARM HOPPER 1) is shown in the display hopper 1 will show a message in the changer display before the hopper becomes completely empty. The changer will stop accepting notes. Hopper 2 will continue paying out until it is completely empty.

When **ALARM** **H8 -2--** (ALARM HOPPER 2) is shown in the display, hopper 2 will show a message in the changer display before the hopper becomes completely empty. The changer will stop accepting notes. Hopper 1 will continue paying out until it is completely empty.

When **ALARM** **H8 ----** (ALARM HOPPER --) is shown in the display then hopper 1 and hopper 2 will pay out until one of the hoppers is completely empty. In most cases one hopper will become empty and a payout will not be able to fully succeed. Now you can press blue again to move to the next menu item or press the red marked button twice to exit the menu.

### 5.10. Exit menu

To exit the menu press the red marked button. The following message appears **QUIT ?** (QUIT ?) in the display. Confirm this message by again pressing the red marked button or press the blue marked button to return to the menu. You should now see a ticker in the display with information about which notes are accepted in which notes are paid out. The changer is now ready for operation.

The changer notices when the coin value is not equal to the note value. When the payout is too small you get a warning in the display for the note you enter at that moment. The warning message shows the total amount that is paid out. When this is as desired press red to confirm to exit the menu. When the payout is higher than the note value you get a warning message. The warning message shows the total amount that is paid out. When this is as desired press red to confirm to exit the menu. The display will show **80NVS0000E2** when a specific note is inserted.

### 5.11. Emptying hoppers

Enter the menu by pressing the blue marked button, the display now shows **ArCRdE** **NV 200** (Arcade NV 2.00). Pressing the white marked button for hopper 1 or the grey marked button for hopper 2 will empty either hopper 1 or hopper 2 respectively. When the white or gray marked button are pressed without entering the menu 1 coin will be paid out. The overpay alarm will then be activated. The display shows **CHANGE** **Error** (CHANGE ERROR). To correct this press the blue marked button twice. When the hopper(s) are empty press the red marked button twice to return to normal operation.

**Attention: Counters do not register coins using this method to empty the hopper(s).**

**5.12. Display and reset counters**

After entering the pin code (see 6) press the blue marked button until **LAST NOTE** appears in the display. This shows the last entered note. When you now press the blue marked button **LAST PAID** appears in the display. This shows the total payout of hopper 1 and hopper 2 of the last payout. When you now press the blue marked button again **TOTALS RESET** appears in the display. With this you can reset all counters all at once. By now pressing the yellow and green marked buttons **RESET DONE** appears in the display. All counters are now reset to zero. When the you now press the blue marked button **TOTAL IN** appears in the display. This shows the total of all notes entered in the changer. When you now press both the yellow and green marked button at the same time its value is reset to zero. When you now press the blue marked button again **NOTE 1 TOTAL** appears in the display, this is the total of note 1. When you now press both the yellow and green marked button at the same time its value is reset to zero. When you now press the blue marked button the same can be done for note 2, 3 and 4. When you now press the blue marked button **HOPPER 1 TOTAL** appears in the display. This shows the total paid out value by hopper 1. When you now press both the yellow and green marked button at the same time its value is reset to zero. When you now press the blue marked button hopper 2 pay out value can be checked and reset. When all counters are checked or reset press the red marked button twice to return to normal changer operation.

If you enter the quick menu, by pressing the blue marked button (without pin code) the counters can be checked but not reset.

**5.13. Display warning messages**

<b>CHANGER IS EMPTY</b> CHANGER IS EMPTY	One of the hoppers is almost empty. Refill the empty hopper and press the red marked button
<b>HOPPER WAARDE IS EMPTY</b> HOPPER WAARDE IS EMPTY	One of the hoppers is totally empty. Refill the empty hopper and press the red marked button to complete the payout
<b>CHANGE Error</b> CHANGE ERROR	Overpay warning is activated when the PCB becomes defective. This message is also shown when you (accidentally) press the white or gray button before you have entered the menu. 1 coin will exit the hopper. To return to normal operation press the blue marked button.

**5.14. Trouble shooting**

No display	Check power cord. Is it plugged in wall socket. Is it plugged into the machine. Check the changer on/off switch. Check power connector on main board.
Does not accept notes	Note or piece of paper stuck in note reader. Connector note reader loose. Connector on main board is loose. Hopper(s) is empty.
Does not pay out	Hopper(s) is empty. Connector hopper loose.
Note acceptance problems	Note reader needs to be cleaned.
Over pays or under pays	Hopper sensor needs to be cleaned.

## 6. The note reader

The note reader has a diagnostics mode. This mode can be activated using a button. The button is located to the left side of the note reader (as seen from front side).

The button on the note reader has two functions.

- Diagnostics of note reader state using LED lighting.
- Configuration of the note reader using the configuration note.

See configuration modes for more information regarding the configuration of the note reader. When in diagnostics mode the LED's on the front of the note reader indicate the state of the device by differing blinking patterns. To enter diagnostics mode press the button on the left side of the note reader (as seen from the front) longer than 1 sec. but less than 5 sec. The Led lighting now displays note reader state information. The blinking pattern and according state can be shown in the table. The note reader will exit diagnostics mode automatically after 30 sec, or by pressing the diagnostics button between 1 an 5 sec.

**ATTENTION: When the diagnostics button is pressed longer than 10 sec. the note reader will enter configuration mode. The note reader will now wait for a configuration note to enter the note reader. When you enter this mode by accident wait 30 sec. to start over.**

The table below shows blinking codes of note reader states. The note reader will show the error code will wait 3 sec. and reshown the error code.

<b>Blink code</b>	<b>Note reader status</b>	<b>Possible solution</b>
LED's always OFF	Note reader has no power.	Check power supply
LED's always ON	No errors detected	
1x flash	Blockage inside note reader	Remove the top half of the note reader. Check the transport mechanism for blockage and clean if necessary
2x flash	Not used	None
3x flash	Not used	None
4x flash	Not used	None
5x flash	Note reader is defective	Replace note reader
6x flash	Machine control wire has put note reader in do not accept state	Refill hoppers and exit from menu.
10x flash	Configuration mode has been entered. (possibly pressed button by accident)	Enter configuration note into the note reader or turn changer off and the on. See configuration for details.
Repetitive fast flashing	Note reader senses a manipulation attempt or the anti-manipulation sensor (OAS) is dirty.	Remove top part of the note reader and clean the anti-manipulation sensor (OAS). The location of the sensor is on the top part between the second and third wheels on the outer most part of the track (left and right). It is recommended to clean all sensors on top and bottom of the reader.

### 6.1. Note reader maintenance

The note reader is a relatively maintenance free product. Regular cleaning is all that is necessary for proper note validation. To clean the note reader, access the reader as follows. Turn off the changer. Remove the note receptacle. Remove the note reader with bracket by pulling the note reader toward you and then downward. Remove the connector from the note reader. You can now remove the note reader from the bracket pulling the black tab and simultaneously moving the unit downwards.

## 6.2. Opening the note reader

Hold your left index finger on the black top part and press your right index finger in the rectangular hole unlocking the whole tray. Now press with your left finger until the tray slides cleanly out of the note reader.

You can now clean all sensors inside the note reader. Clean the note track with a soft cloth. For cleaning you can use a standard glass cleaner, don't use any other cleaning fluids.

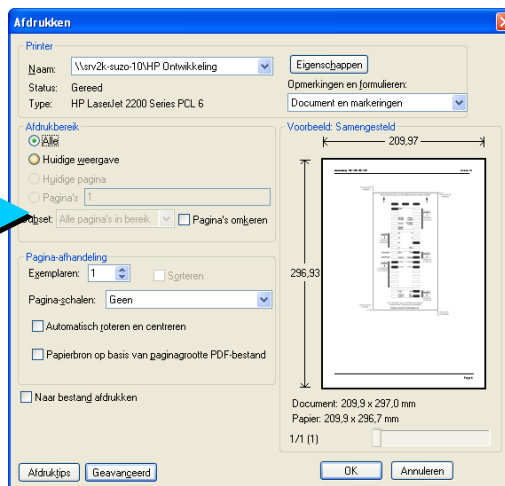
**ATTENTION: Pay special attention to the gray oval plastic parts in the top and bottom of the track and the optical anti-manipulation sensor (OAS). The OAS sensors are located between the second and third wheels on the left and right side of the track. All the sensors need to be cleaned for proper operation.**

**Don't use oil or silicon spray on the note reader**

## 6.3. Configuration mode

The note reader can be configured with a configuration note (see next page). By filling in the correct boxes with a black marker. Notes can be configured to accept or not-accept. All standard settings are marked black except for "SECTION 4" these can be customized. For the desired note mark the box with black when the note needs to be accepted. Leave the box blank when you don't want the note to be accepted.

Attention do not scale page when printing



The configuration mode can be activated by pressing the button to the left side of the note reader (as seen from the front side). To enter the configuration mode hold this button for more than 10 sec. until the front LED's start blinking (10x). The note reader is now ready to accept the configuration note. Insert the note until the LED's start blinking multiple times. This can take a few tries. When successful the note reader will return to normal operation (the note reader lighting returns to normal).

Insert this end first. Use black felt-tipped ink. Fill ovals completely.

↑ ↑

**section 1**  
Select only one Interface Type

Pulse  Always Enabled  Encrypted CC-Talk  Parallel Binary

RS-232/CC-Talk

**section 2**  
Pulses per Dollar (sum of selected values)

64  4  32  2  16  1  8  None

Example: For 50 ppd, fill in the ovals for 32, 16, and 2, (32+16+2 = 50)

Pulse Speed:  Slow  Fast

Lighted Bezel:  Solid On  Flashing

**section 3**

**section 4**  
Select Notes to Enable

Note 1  Note 2  Note 3  Note 4  Note 5  Note 6  Note 7  Note 8  Note 9  Note 10  Note 11  Note 12

Example: To accept USA \$1, \$5, and \$10, fill in the ovals for Note1, Note2, and Note3

Security Level:  High  Low

Insert Direction:  Face up, Left 1st  All 4 Ways

**section 5**

This configuration card should be printed on standard copy paper, and must be exactly 152mm (6.0 inches) long.

*Trilogy by Pyramid Technologies, Inc.*

Cut

Cut to proper width on both sides, according to model:

T52xx Series (66mm)

T53xx & T54xx Series (72 / 74mm)

T51xx Series (85mm)

Cut

Print this on A4 paper for correct size.



## **Cube hopper (182-5000)**

### **7.1. Disassembly**

*How to remove the disc*

1. Slide the red button on the back to “down” position.
2. Remove the coin cup by sliding it upwards and lift the cup from the platform.
3. You are now able to remove the disc from the platform.

*How to remove the coin insert plate*

1. Remove the cup and disc from the platform as described above.
2. Remove the outlet bridge by pulling it up firmly.
3. Gently lift up the coin insert plate using a small screwdriver.

*How to re-configure the Cube Hopper*

1. Remove the coin cup.
2. Remove the disc and/or coin insert plate (if necessary) and replace them with the ones necessary to achieve the desired configuration. Before placing the new disc onto the platform:
  - a. Please check that the correct coin insert plate is mounted on the platform under the bridge. (See Reference Chart)
  - b. Don't forget to put the black Teflon bearing in the centre of the platform. Make sure that the metal ring in the disc is present as well.
3. Bring the coin cup onto the platform and slide the red button to the up position to lock it in place.

**NOTE: Please look up the correct configuration for your hopper in the Reference Chart.**

### **7.2. Maintenance**

**Important: shut-off power from the host machine before starting any cleaning activities.**

*Removing and re-installing the hopper*

The hopper can easily be removed by pressing on the red release button on the mounting plate and then removing the connector.

*Re-installing the hopper:*

First plug the connector into the Hopper at the reverse side and slide it into the two red hooks on the mounting bracket, then press the red button with lever slightly backwards and push the hopper onto the bracket.

*Cleaning and Materials*

All reachable places where the coins pass through the hopper should be cleaned at least every 6 months or after counting 500,000 coins (whichever situation occurs first) with a moist cloth with dry silicon spray (Part No. 20-0124-1). In particular the opto coupler needs to be kept clean. Dirt could obstruct or disrupt the optic signal, resulting in unreliable coin counting.

### 7.3. Generic hopper coin configuration

The cube hopper can be used for a great number of different coins. The only things that have to be changed are the coin insert plate and the hopper disk. See charts below for the possible configurations.

Coin insert plate			
Diameter		Part No.	Mark
MIN (mm)	MAX (mm)		
18,00	18,99	10-0238-11	(11)
19,00	22,09	10-0238	(A1)
22,10	23,89	10-0238-1	(B1)
23,90	25,59	10-0238-2	(B2)
25,60	27,89	10-0238-3	(C1)
27,90	30,09	10-0238-4	(C2)
30,10	31,00	10-0238-5	(5)

Hopper disk										
Diameter		Coin thickness								
MIN (mm)	MAX (mm)	1.30 -1.45mm			1.50 -2.09mm			2.10 -3.20mm		
		No.	Disk Part Nr.	Mark	No.	Disk Part Nr.	Mark	No.	Disk Part Nr.	Mark
18,00	18,99	-22	10-0240-22	22	-15	10-0240-2	2	-18	10-0240-3	3
19,00	22,09		10-0240-22	22	-20	10-0240-2	2	-30	10-0240-3	3
22,10	23,89		10-0240-44	44	-40	10-0240-4	4	-50	10-0240-5	5
23,90	25,59		10-0240-44	44	-41	10-0240-4	4	-51	10-0240-5	5
25,60	27,89				-83	10-0240-8	8	-93	10-0240-9	9
27,90	30,09				-84	10-0240-8	8	-94	10-0240-9	9
30,10	31,00				-85	10-0240-8	8	-95	10-0240-9	9

### 7.4. Euro special configuration

For 0,20 to 2 euro coins there is a special tuned versions of the hopper. This allows the hopper to operate with a wider range of euro coins.

Euro hoppers				
Coins	Part no	Coin insert plate	Disk	Bridge
€ 0,20	10-1700-25	10-0238-7*	10-0240-99	10-0239
€ 0,50	10-1700-99	10-0238-1	10-0240-99	10-0239-3
€ 1,00	10-1700-99	10-0238-1	10-0240-99	10-0239-3
€ 2,00	10-1700-99	10-0238-1	10-0240-99	10-0239-3

\*Special insert plate for 0.20 euro ct

## 8. Evolution hopper (182-5100)

### 8.1. Coin Sizes

Track type	Coin sizes	Color	Part. nr.
Standard (€2, €1, €0.50, €0.20)	21.01 – 30.00 mm x 1.25 – 3.30 mm	Red	EV01000
Euro (€2, €1, €0.50, €0.20, €0.10, €0.05)	19.00 – 26.40 mm x 1.50 – 2.50 mm	Yellow	EV01003
Euro small (€0.10, €0.05, €0.02, €0.01)	16.25 – 20.90 mm x 1.00 – 3.10 mm	Green	EV01004

Table 2: Coin size Vs Track type

### 8.2. Coins With Holes

The Evolution Hopper will work with most coins/tokens with holes depending on the size of the hole in relation to the diameter. To make sure whether your desired coin is qualified within the specifications of the Evolution Hopper please contact the Suzo-Happ technical department

The exit window has been designed so that more coins with holes will be counted correctly.

No adjustments are necessary to cope with standard and small coins.

### 8.3. Dirty opto

If the opto becomes dirty, the red led on the board starts flashing, indicating that it needs to be cleaned. The opto-sensor remains operating reliably. If the opto-sensor becomes even more dirty, the security output becomes high. The opto-sensor remains operational. If opto is completely blocked the red led will light up continuously. This can be caused by a blocked coin in the coin exit window.

### 8.4. Security

- The IR-led transmits pulses with a random duty-cycle between 16 – 20%.
- When light is received when no IR-pulse is being transmitted, (exit window is 'blinded' by external light), the hopper will stop immediately if it was running, the security led will go off and the security output will go high (error state).
- If the opto-sensor is interrupted for more than 1 second, the hopper will also stop and go into error state. If the coin exit becomes unblocked again and the hopper start conditions are still met, the hopper will resume running.

## 9. Electrical specification

### Absolute Maximum Classification

Item	Unit	Min	Typical	Max	Remarks
Working temperature	°c	0	-	60	
Storage temperature	°c	-30	-	80	
Relative humidity	%		-	90	
Altitude	M	-	-	2000	

### Input characteristic

Description	Signal	Unit	Min	Typical	Max	Remarks
Power		Vac	100		240	
Power consumption	during payout	W	40		60	
Power consumption	Stand by	W	12		15	Max with display on

## **10. Warranty**

We thank you for the purchase of this Suzo product. If you require warranty for this product you can contact Suzo International. Before contacting Suzo we advise to carefully read the product manual.

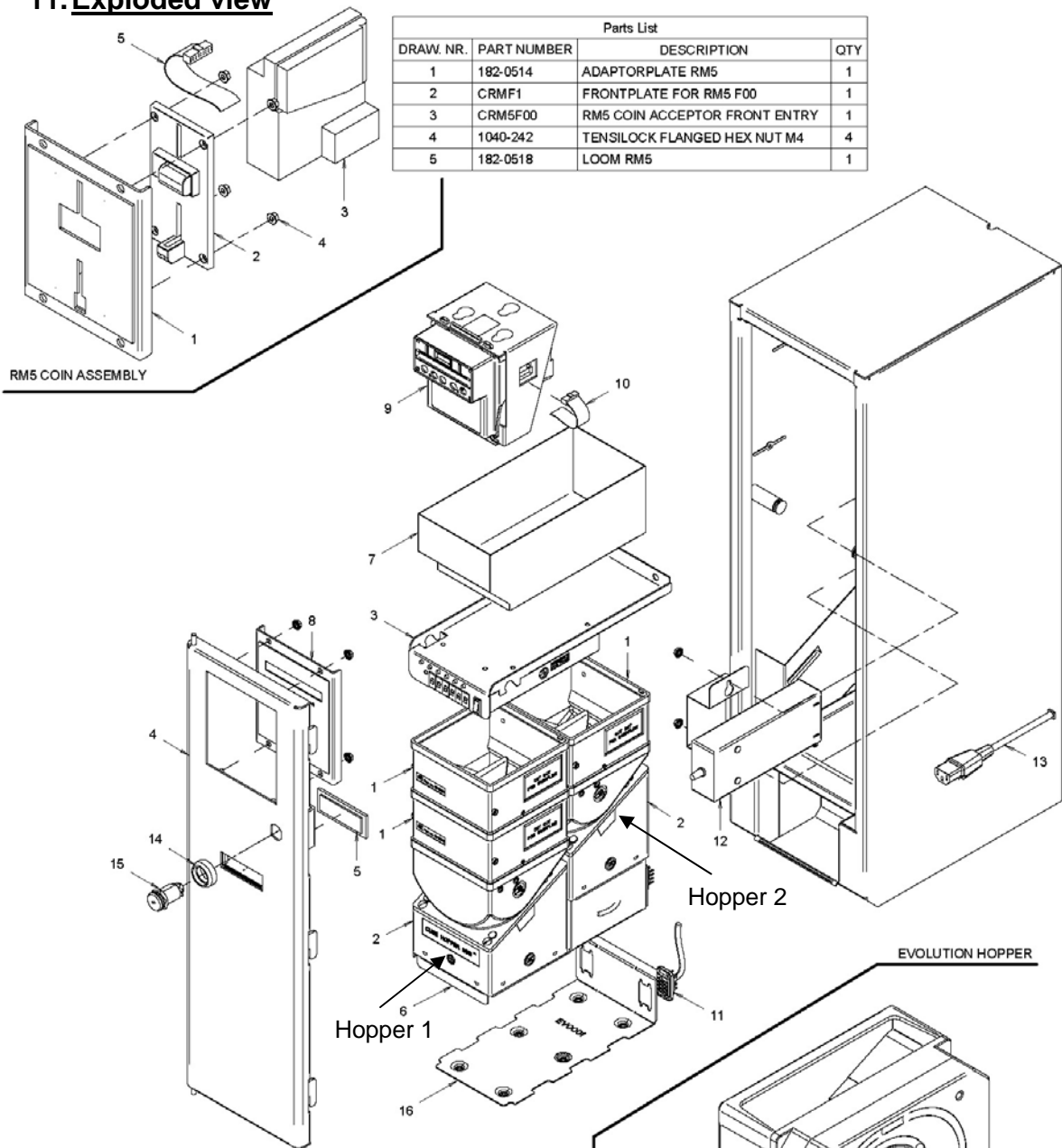
### **10.1. Your warranty**

Suzo guaranties that the product for the period of ONE YEAR from the original purchase date will be free of material or fabrication errors. When material or fabrication errors do occur (as judged by Suzo) within the warranty period, Suzo will replace or repair the defective parts without labour or parts cost. The following restrictions apply. All replaced products or parts become property of Suzo International.

### **10.2. Conditions**

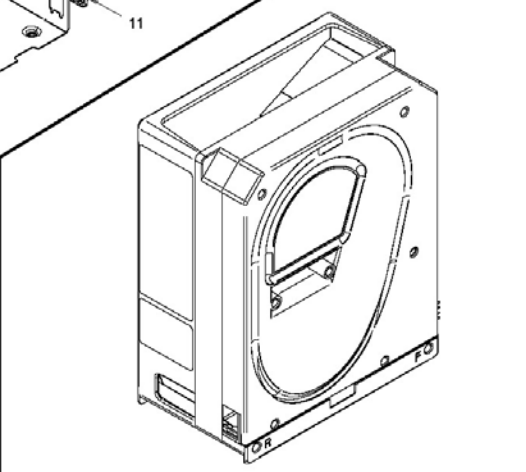
1. Warranty can only apply when the original invoice (with model number and purchase date) together with the defective product is presented within the warranty period.
2. Suzo is under no obligation to perform warranty when invoice is not present or unreadable.
3. Warranty does not apply when model number of serial of product are changed, removed or made unreadable.
4. Warranty does not cover the risk to the product during transportation to and from Suzo International
5. Warranty does not cover:
  - a. Regular maintenance or replacement of parts due to normal wear.
  - b. Damage of defects caused by operation or treatment of the product not considered as normal use.
  - c. Damage or adaptations to the product caused by faulty operation or use that is not within the machines original capabilities.
6. Warranty is only performed at the Suzo Technical office unless other official agreements apply for instance as agreed upon in a maintenance contract.

### 11. Exploded view



Parts List			
DRAW. NR.	PART NUMBER	DESCRIPTION	QTY
1	182-0514	ADAPTORPLATE RM5	1
2	CRMF1	FRONTPLATE FOR RM5 F00	1
3	CRM5F00	RM5 COIN ACCEPTOR FRONT ENTRY	1
4	1040-242	TENSILOCK FLANGED HEX NUT M4	4
5	182-0518	LOOM RM5	1

Parts List			
DRAW. NR.	PART NUMBER	DESCRIPTION	QTY
1	10-0200	EXTENSION FOR CUBE HOPPER	3
2	10-1700-99	CUBE HOPPER	2
3	182-0506	MAIN BOARD UNIT	1
4	182-0507	DOOR	1
5	182-0508	RED PLASTIC LENS	1
6	182-0509	CUBE HOPPER BASE INCLUDING HARNESS	1
7	182-0511	CASHBOX	1
8	182-0513	TRILOGY BRACKET	1
9	182-0516	TRILOGY NOTE READER ASSY	1
10	182-0517	LOOM TRILOGY	1
11	182-0519	CABLE LOOM EV0001-MAINBOARD	1
12	182-0520	POWER SUPPLY 24V 130W	1
13	22-0012	POWER CABLE 3 MTR R/A 3WIRE	1
14	22-0904	SECURITY COLLAR 11.3MM HIGH	1
15	D1118KD	DESMO CASINO LOCK 28.5MM	1
16	EV0001-1	EVOLUTION BRACKET	1



Parts List			
DRAW. NR.	PART NUMBER	DESCRIPTION	QTY
1	EV11003	STANDARD HOP. 19-26,4MM FRONT	1