900X

Copies & Prints Vend Station

Version 3.7

www.sem.ca

April 2017 ***Part #: i01081***

Content

Introduction

Thank you for purchasing the 9900X Coin-op from SEM inc.!

Multifunction copiers now offer you multiple selections for paper size, color, duplex printing, scans to email, fax, etc. The 9900X Series has been designed for this generation of copiers while bringing you a simpler programming, and a simpler way to connect your system to a copier.

The 9900X payment system can also be connected to a PC where different applications run such as a Print Release Software or a Account Value-Adding station.

The SEM Intuitive Programming System drives a large trilingual 4-line, 20-character blue display. At any time, this system guides you thru the parameters and informs you on the next action required.

Connecting the 9900X Series Vend Station is a Plug & Play operation and with the introduction of the SEM Copier Type System, the only thing you need to worry about is getting the proper harness and setting your vend prices.

Using the latest technology in payment systems, the 9900X Series is an international device capable of functioning with many currencies around the world. Furthermore, version 3.7 now allows connecting a credit/debit card reader or a proprietary cashless system, and a coin changer and bill acceptor.

Another version of this vend station equipped with a card dispenser at the base uses the same X6 circuit. That vend station is Model 9910X. If you have the 9910X, a short manual applying strictly to the card dispensing functions comes with it.(*#: i01086)*.

Definition of the terms used in this manual

Below is the description of all the terms used in this manual. Take a moment to be acquainted with those terms. You will see them often in the manual.

Terms	Meanings
Audit	Accounting information.
Bill acceptor	The bill acceptor is a device capable of discriminating between good and bad bills. The bills accepted will vary according the country.
Bill box	Bill cassette where all the bills are stacked
Black	The black button on the circuit board for the coin-op.
Blind time	This is the time between two genuine debit pulses. If a value is programmed in the blind time, the Station will ignore any pulses coming from the copier if this pulse comes within the time set.
Blue	The blue button on the circuit board for the Vend station.
By-pass, Free copy	Small cam-style lock on the top left corner of the Vend Station enabling free access to the copier.
Card reader	A card reader enables you to accept a payment card. The card can be with a magnetic stripe or a smart chip. The reader can be Serial or MDB type. If MDB, it will connect to the same MDB port used by the coin changer. If serial, it connects to J6 on the main board. Or it can be an MDB credit card reader.
CC reader	CC refers to a Credit Card (Visa/MasterCard/Debit)
Coin box	Metal box into which any coins not going into the coin changer tubes will fall.
Coin changer	The coin changer is the apparatus that receives the coins from the customer, validates it, sorts it, and gives change back if needed. The coin changer varies according to the country or your needs. It can have 3, 4, 5, or 6 tubes of change.
Coin/Card return	A.K.A. escrow, refers to the button a customer pushes to get his change back or release a jammed coin or get his card back.
Coin-op	A.K.A. vend station it represents the entire apparatus and all its peripherals.
Disable	Permission to make a copy is denied by the coin-op.

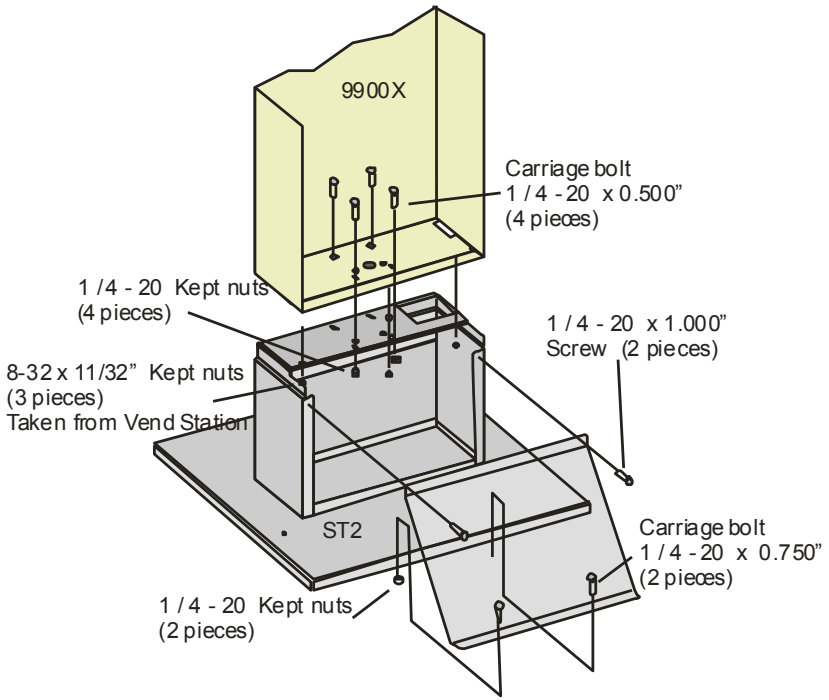
Duplex	Double-sided copy
Enable	Permission given by the Vend Station to the copier to make a copy. It can also refer to the two wires the Vend Station is shorting to instruct the copier about the possibility to make a copy.
Exit delay	Time delay between the coin return order and the dispensing of coins. Any debit pulse arriving to the Vend Station during this delay will be deducted from the change payout.
Flow chart	Diagram showing you the path to follow in the Vend Station menus to reach your destination faster.
Green	The green button on the main circuit board of the Vend Station
Harness	Refers to the cable going from the Vend Station to the copier. It will vary depending the brand and type of copier.
MDB	Multi Drop Bus. Communication protocol used in the vending industry between all the peripherals. All MDB peripherals connect into a single port, each having its own built-in identity. The MDB protocol is international making this Vend Station capable of functioning with many currencies of the World.
Peripherals	The peripherals of the Vend Station refer to the coin changer, the bill acceptor, and the card reader.
Plug lock	The small lock cylinder inside the T-handle.
Pulse (debit pulse)	This is the signal the copier sends to the Vend Station instructing it that a copy has been made.
Pulse length	This is the minimum time a pulse should last in order to be taken into account by the Vend Station. If the pulse is shorter, the Vend Station sees it but ignores it.
Red	The red button on the main circuit board for the Vend Station.
Simplex	One-sided copy
T-handle	The handle you must unscrew to access inside the vend station.
Tube	Refers to the coin tubes of the coin changer. Their value will vary depending the country currency and the coin changer's configuration.
Vend station	A.K.A. coin-op, it represents the entire apparatus and all its peripherals.

Installing your Vend Station

Installing your Copies & Prints Vend Station does not require any specialized skills or tools. The 9900X is too heavy to be attached directly onto a copier like before. Only three options are available. You can either install it on the ST2 Floor Stand, the FL2 Protective Cage, or directly on a wall.

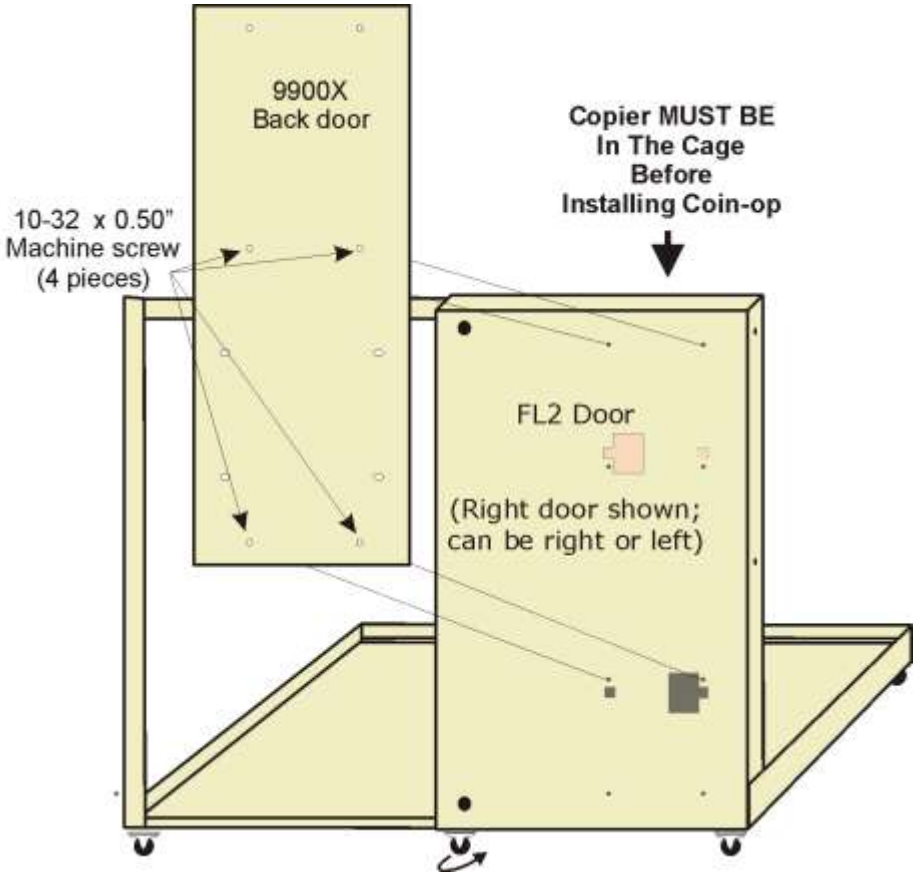
To install it on the ST2:

1. Put the cabinet lying down on the floor (be careful not to damage the Lexan + there should be no change in the coin changer's tubes).
2. Remove the harnesses (power & communication) from the loops.
3. Unscrew all three 8-32 11/32" nuts. Keep them aside.
4. Remove the back plate of the pedestal.
5. Pass the harnesses in the square hole starting with the power cord and transformer followed by the copier harness.
6. Place cabinet on top of the ST2 floor stand.
7. Pass the four ¼ x 20 carriage bolts included with the floor stand in their respective holes.
8. Re-install the harness loop with its cables.
9. Re-install the three 8-32 11/32 nuts.
10. Tighten all nuts (8-32 & ¼ x 20)
11. Reinstall the back plate removed at step #4.
12. The floor stand can be anchored in the floor for added security.



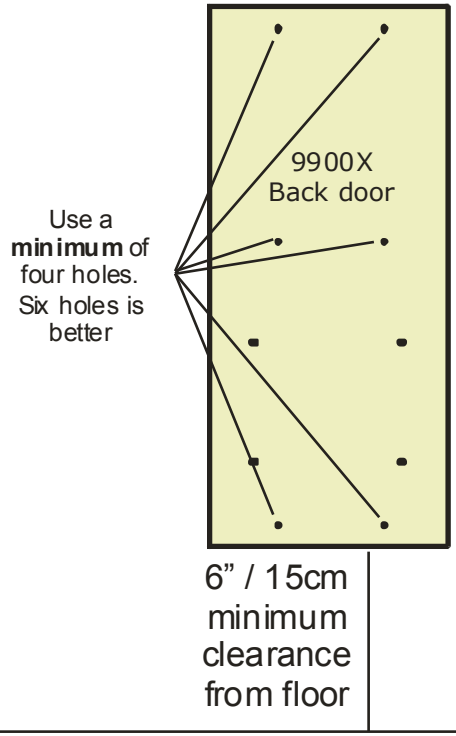
To install it on an FL2 Protective Cage:

1. Make sure small swivel wheel is under the FL2 door. Do not install the Vend Station if wheel is missing. Installing the Vend Station on a door without the wheel will damage the FL2 frame and door when you open it.
2. Install the copier in the FL2 cage before installing Vend Station on door. Failure to comply will result in the entire cage to tumble forward as the Vend Station is heavier than the FL2 cage floor.
3. Remove bottom plates on FL2 door to pass power transformer and copier harness.
4. Make sure no sharp metal parts can damage the harnesses.
5. Open the back door of the Vend Station.
6. Locate the holes.
7. Place back door flat on the FL2 door (you may ask for help to hold the Vend Station)
8. Screw in all four 10-32 x ½" machine screws.
9. Tighten them all.
10. Open the FL2 door to see if it operates correctly.
11. Pass the cable so that they do not interfere with anything.



To install it on a wall:

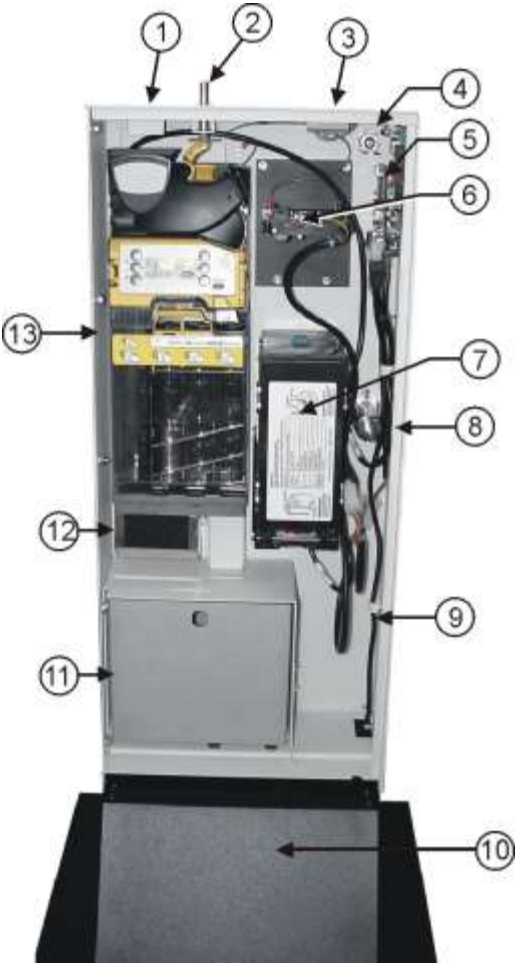
1. **Make sure the wall is solid enough to hold the entire weight of the Vend Station.** Remember to take into consideration the weight of a coin box full of change. Make sure the wall is solid enough so that nobody can rip away the Vend Station and steal it. Remember that a Vend Station full of coins and bills can stir up the covetousness of many.
2. Make sure you are using the proper anchoring devices matching the type of wall. In case of doubt, consult a specialist.
3. Use a minimum of four holes. For a safer installation, use six holes.
4. Secure the power cord and copier harness so that nobody, including the cleaning person, can damage them.



Description of your Print & Copy Vend Station

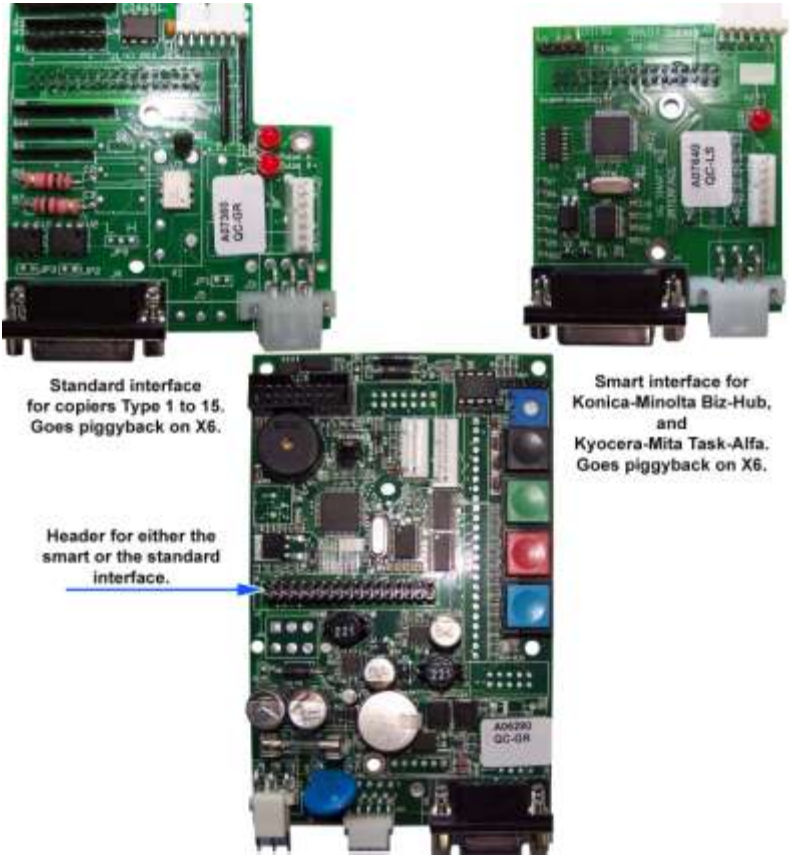
1) Coin insertion slot large enough for largest coins on the market
2) Coin/Card push button (a.k.a escrow)
3) 4-line, 20-character bright blue display
4) By-pass lock for free access to copier
5) NAMA-size plate and opening for optional card reader (proprietary or Credit Card reader)
6) T-handle with plug lock
7) Large escrow pocket offering easy access to customers
8) Bill acceptor (optional)
9) ST-2 floor stand (optional)

Inside your 9900X Vend Station



1) Coin insertion slot
2) Coin/Card return push button (a.k.a. escrow)
3) LCD Display
4) Bypass cam lock
5) X6 Main circuit & programming buttons
6) Smart card system installed in upper NAMA hole (optional)
7) Bill acceptor installed in lower NAMA hole (optional)
8) T-handle locking system
9) Power and copier harnesses
10) ST2 floor stand (optional)
11) Coin box (X-Large box available, see details page 46)
12) Escrow bucket
13) Coin changer (optional 5-tube coin changer shown here)

The X6 Circuit and its Interfaces



The 9900X Vend Station uses the X6 circuit platform. The platform requires an additional interface. The interface goes piggyback on the platform.

The Standard Interface enables you to connect your vend station to any copier not using a serial port for communication with an external device. It is the case for probably 95% of the copiers on the market. It communicates with high and low signals. In the programming of your coin-op, the copier types available will range from Type 1 to Type 15. (please see page 27)

The Smart Interface (optional) enables you to connect your vend station to a copier using a serial communication. At the time of printing, only the following copiers are using serial communication:

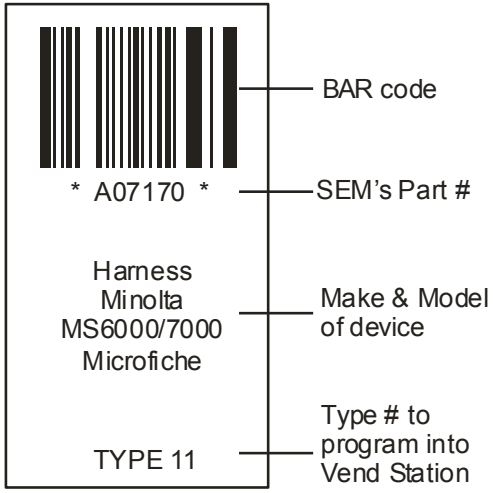
- Konica-Minolta Biz-Hub Series, B&W or Colour
- Kyocera-Mita Task Alfa

Only those two types of copiers will be visible in the copier types with the Smart Interface. You cannot select a Type 1 copier with the Smart Interface.

Connecting your Vend Station using the Copier Type System

SEM Inc. has developed an exclusive and intuitive way to connect your Vend Station to your copier. When ordering your Vend Station, you MUST specify for which copier it is intended for. If you change your copier after the Vend Station has been installed and if this change requires an harness change, you will need to purchase a new harness.

Each harness comes with its own label onto which will be indicated the part number, the description of the copier it goes to and the type number you have to program into the Vend Station in the section “Copiers Parameter 3 of 6” on page 27.



This Copier Type System refers only to the programming of the Vend Station. It does not designate a specific brand or model of copier. For example, many black & white copiers, offering only one price, will be designated as Type One. However, the connector and pin-out will differ from one copier to the other.

If you did not specify the exact copier model when ordering or if you are moving this Vend Station to another copier, please be aware that the **Black** and **Green** wires on the harness are for the loop giving permission (enable) to make a copy while the **Red** and **White** wires are for the debit pulse coming from the copier and going to the Vend Station.

Note that a second price line is available. You catch this debit pulse using the **Orange** and **Blue** wires. Copier type will then be Type 2.

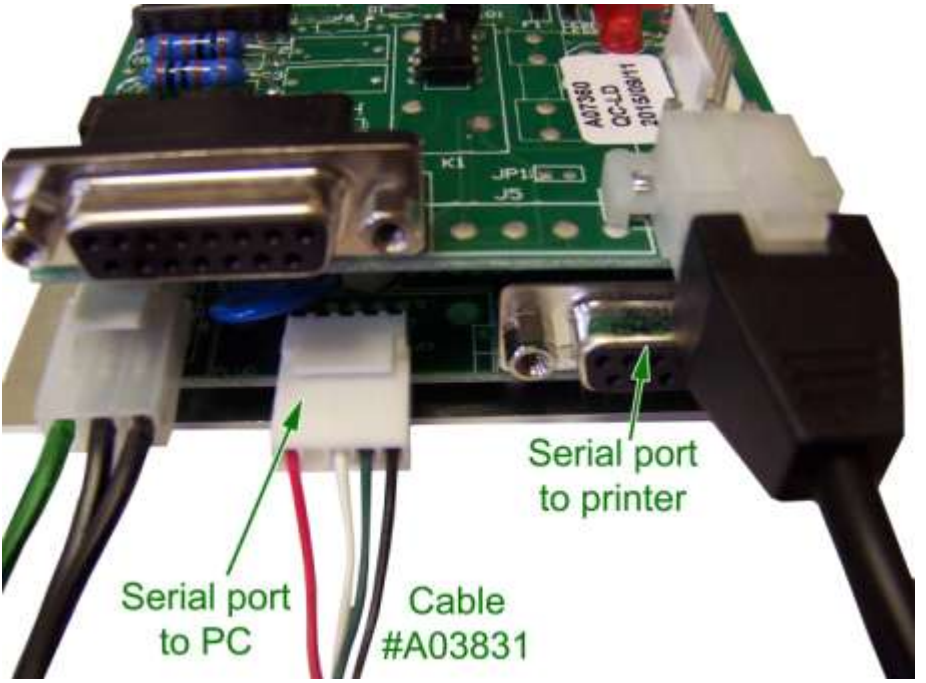
Connecting your Vend Station to a computer

The 9900X payment station can be connected to a computer (PC) to establish a communication with a software. As of writing this manual, the 9900X works with the following print management software:

EnvisionWare
ITC's Print Manager
iTeam Resources
OCS
PaperCut
PCounter
Smartguard
And others

Those software are either a print release station or a value-adding station or a copier. See page 28, Section None for more information.

The communication between the 9900X and those applications is done thru a serial port located directly on the main platform. This serial port **IS NOT** the printing port located in the forepart of the circuit (see image below).



If the PC does not have a serial port, a USB/Serial converter (p/n # E05560) will allow communication. When connected to a PC, the vend prices programmed into the 9900X have no use.

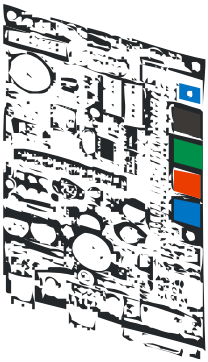
Programming your Vend Station

Your 9900X Vend Station is much easier to program than any other similar product on the market. The programming is divided in different sections called menu. Each menu regroups all parameters having a common function.

The menus are:

1. **Audit**	Gives you the accounting information of your system.
2. **System Parameters**	Enables you to program the basic functions of your Vend Station such as language.
3. **Copier Parameters**	Enables you to adapt your Vend Station to your copier.
4. **Value Parameters**	Enables you to set the different values such as copy price.
5. **Print Parameters**	Enables you to print all the parameters.
6. **Firmware Version**	Gives you the current firmware version of the coin-op for reference.

Follow the instruction on the last line of the display to know which button to press. Usually the buttons are:



Black -Browse through the menus.
Green -Enter the menu on the display.
Red -Modify the value or setting shown.
Blue -Step back to previous step

Image shows the X6 circuit board without the interface. Yours will have either the Smart or Standard interface. Both interfaces leave enough access to the push buttons.

The next pages explain in details all the menus and submenus. The 4-line, 20-character blue display makes the programming much easier and faster.

Once a parameter is changed, the display will show you the new setting for one second before moving automatically to the next parameter.

The audit -- # 1 of 6

The information available in the audit section will differ a lot depending on many things:

- The number of tubes in your coin changer (3, 4, 5, or 6).
- The presence of a bill acceptor.
- The presence of a serial card reader with multiple site codes.
- The presence of a credit card reader.
- The quantity of vend prices you have, depending on which copier your Vend Station is connected to (B&W, Color, etc.)
- The fact that the 9900X is connected to a computer.

Some information can be erased manually by pressing on the red button. If you do not wish to erase anything but simply wish to browse through the audit, keep on pressing on the black button as indicated on the last line the display.

The flow chart description on the next page shows a Vend Station equipped with a Canadian 5-tube coin changer (5¢, 10¢, 25¢, 1$, 2$), a bill acceptor and no card reader. It also shows that this Vend Station is attached to a one-price copier (Simplex, black & white, one format).

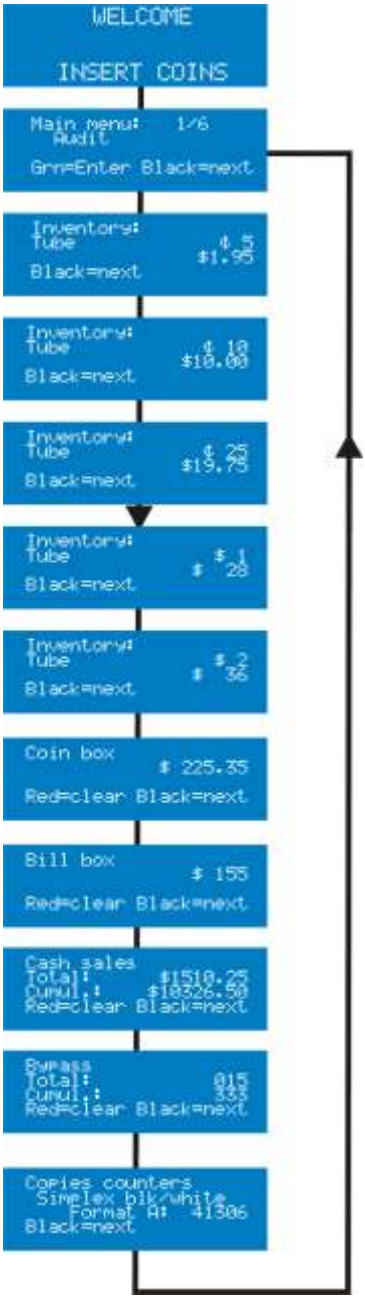
You can attach a small serial type portable printer. This small printer will give you a hard copy of the audit. A printer kit (p/n: K01440) is available from SEM. It includes the printer, its power supply and the communication harness.

You can also download the audit using Hyperterminal from Windows. Hyperterminal can be found in the Accessories/Communication section of any Windows from 3.1 to XP. Harness A03330 is required from SEM. The communication protocol is ***Serial 9600, N, 8, 1, none***. You also need to go in the ***ASCII set up*** and click on ***Append Line feed***. Other similar software can be found on the Internet.

When you print or download the audit, all counters that have the capability of resetting back to zero will do so automatically after one transaction providing the Auto-Reset has been enabled. (see page 22)

This flow chart description shows a Vend Station equipped with a Canadian 5-tube coin changer (5¢, 10¢, 25¢, 1$, 2$), a bill acceptor, and no card reader. It also shows that this Vend Station is attached to a one-price copier (Simplex, black & white, one format).

Many other counters will be visible when the 9900X is connected to a PC or a copier offering multiple vend prices according paper size and others. Among those counters are "Coins not remitted", and others.



If a serial, multiple site codes, card reader is present, the audit will give you the details in sales, unit sales, bonus, and money added for each of the three site codes.

A bit more details about the audit...

Tube inventory

The tube inventory visible on the display comes from the information sent by the coin changer. This will vary depending the coin changer you have.

If you have an MDB Level 2 coin changer (3-tube or 4-tube), the inventory information sent by the coin changer to the 9900X is very limited. There are only two coin level sensors in each tube: Low & High. Between those, the coin changer does not know how much coins there is in the tube. It is then important to fill up the coin tube the proper manner (Consult Annex 3 at the end of this manual on how to fill up the tube properly). If you need, you can adjust this inventory manually. When you see a tube value on the display, press on the green button. First digit will start flashing. Adjust the number using either the red or blue button. Press green to switch digit. Once done, press green to confirm the new value.

If you have an MDB Level 3 coin changer (MEI 5-tube or Coinco 6-tube), the tube inventory is managed in real-time. The coin changer knows exactly how much money there is in the tubes, no matter their respective level. When you have such a coin changer, you cannot adjust the inventory manually like described in the previous paragraph.

Coin box

The amount visible in the Coin box meter is the money present in the box since the last time this counter was cleared. If the last time you picked-up the money you cleared this meter, and if it tells you today there is $145.35 in the box, there is $145.35 in the box. **This amount is NOT the sales.** You cannot and must not use this meter as being the value of the copies sold. If a customer inserts a $1 coin and if that coin did not go to the tube meaning it went into the box, the coin box will show $1. Then, the customer makes a 20¢ copy. The sale is 20¢, not $1.

Bill box

The amount visible in the Bill box meter is the money present in the bill cassette since the last time this counter was cleared. If the last time you picked-up the bills you cleared this meter, and if it tells you today there is $95 in the bill box, there is $95 in the cassette. **This amount is NOT the sales.** You cannot and must not use this meter as being the value of the copies sold. If a customer inserts a $5 bill, the bill box will show $5. Then, the customer makes a 20¢ copy. The sale is 20¢, not $5. And worst, if the customer presses on coin/card return to get change back without making copies, the sale is $0 but bill box shows $5.

Coins not remitted

This meter will show activity only if you have an MDB Level 3 coin changer, for instance a 5-tube/6-tube coin changer, supporting Alternative Payout. In MDB Level 3, the X6 tells the coin changer to give out an amount (i.e. $3.25) and the coin changer decides by itself from which tubes it will dispense that amount based on the current coin level. You will see this meter increase if:

1. The X6 circuit has sent a payout order to the coin changer. The coin changer gave only what it could give (i.e. $1.50) because the tubes are running empty.
2. The meters will increase by $1.75 ($3.25 payout order - $1.50 actually paid out = $1.75 not remitted).

The Total and Cumul. meters work as in Cash sales (see below).

An MDB Level 2 coin changer (3-tube/4-tube) cannot generate an increase in this meter for the reason that even if the tubes are empty, the coin changer will execute the payout order even if no coins are coming out. A Level 2 coin changer does not manage the pay out.

Cash Sales

This meter has two lines. One line says **Total**, the other says **Cumul.**, which means Cumulative. The line Total is the value of all the copies paid cash since it was last cleared. If it shows $125.60, it means you have sold a total of $125.60 since that meter was cleared. Therefore, it is important to clear this meter every time you collect the money. If you are operating this coin-op on behalf of a third-party to which, you give a commission on sales, this is the number you must use to calculate the commission + the card sales if there is a card reader.

As for the **Cumul.** line, it keeps on adding up as you can't clear it. This is the value of copies paid cash since Day One. It is also a double-check tool. If upon the last collection visit, this meter was showing $9875.60, and today it shows $10001.20, the above meter called Total must show $125.60. Consequently, *Current cumulative meter - Previous cumulative meter = Current total sales* ($10001.20 - $9875.60 = $125.60).

Card Sales

This meter also has two lines: **Total** and **Cumul**. It works just like Cash sales but this time it refers to copies sold using a card (prepaid or credit). If you are operating this coin-op on behalf of a third-party to which, you give a commission on sales, this is the number you must use to calculate the commission + the cash sales above. Note that depending the prices set for the copies, you may find here amounts ending with any digits as cashless devices allow transactions ending with anything between 0 and 9 whereas in cash it is either 0 or 5.

Auxiliary reader

Will not be visible if you do not have an auxiliary reader/controller attached to the coin-op. This meter also has two lines: **Total** and **Cumul**. It works just like the two previous meters but this time it refers only to copies done using an auxiliary reader/controller. This meter does NOT make the difference between colour and B&W copies.

Bypass copies

This meter also has two lines: **Total** and **Cumul**. It works just like the two previous meters but this time it refers only to copies done using the by-pass key. This meter does NOT make the difference between colour and B&W copies.

Copies counters

The last information available in the audit is the copy counters. This section will have either very few or a lot of information depending the type of copier you have programmed in the X6 parameter called Copier Type. You can have either one or up to 15 meters.

This meter counts copies in unit, not in monetary value. Furthermore, there is only one meter per type of copy meaning this number can't be erased and will go up forever. This counter does NOT make difference between a free copy or a paid copy. It counts copies period.

The display shows you the information this way:

Copies counters:
Simplex Blk/White
Format A: 740
Black = next

This tells you that since Day One, this coin-op has received 740 debit signals from the copier, either paid or free copies. Those signals were received on the Black & White Simplex, Format A price line. It does not automatically means letter size B&W as many copiers will send letter and legal size signals on the same line. Furthermore, many copiers will send two debit pulses for duplex copies thus increasing this meter twice when in fact only one copy was done.

It is possible to print the audit using the printer kit #K01440 available from SEM Inc.

System parameters -- # 2 of 6

This menu leads you to the different parameters you need to program in your Vend Station. Those apply to the entire operation no matter the type of copier connected to your system. Some menus may not be visible depending if it refers to a peripheral not detected on power up.

Set clock

Set time and date on your Vend Station. This information will appear at the top of any printed audit. The Vend Station uses the international (or military) time format. 8PM = 20:00. The date is also in the international YYYY/MO/DA format. Please note that your Vend Station WILL NOT adapt to daylight saving time automatically.

Serial reader

When a serial magnetic card reader is present, you will have additional parameters to program. They are:

- Decimals after the dot
- Site code 1
- Site code 2
- Site code 3
- STX code
- ROM code
- Card type

Decimals after the dot

You can select to show two or three digits after the decimal point. Select three digits if you charge a price including tenth of cents (i.e. 6,4¢ per copy) for the prepaid card. **Does not apply to CC reader.**

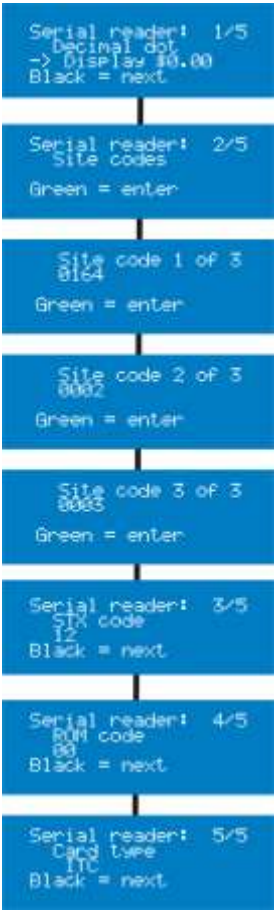
Site codes 1, 2, and 3

Enter here the three site codes you wish to accept. A site code is the signature of the card for a specific location. If you are not using all site codes, enter the site number for those not in use. (i.e. site code 1 = 0164; site code 2 = 0002; site code 3 = 0003).

If you enter an identical site code more than once, the system will have problems dispatching the sales to the proper site code in the audit.

STX and ROM codes

The STX and ROM codes are important. They are a part of the identity of your card system. On the SET PARAMETERS cards you received with the



card reader for your copier, the ROM and SITE codes are written. An example of this can be **C0 164**. **C** is the STX code in hexadecimal, **0** is the ROM code in decimal, and **164** is the site code.

STX Code

The STX value requires that we talk about the hexadecimal system. C being an hexadecimal value, it must be converted to a decimal value. The decimal system is the one we use every day in our life. It is based on 10 (0, 1, 2, 3, 4, 5, 6, 7, 8, and 9). The hexadecimal system is based on 16 (0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, **C**, D, E, F). Therefore, in the example **C0 164**, **C** in hexadecimal is equal to **12** in decimal. You must enter **12** as the STX value.

ROM Code

Using the same **C0** example, the ROM code must be programmed to **00**.

Card type

The card type is also important. It has to be set according to the system you are using. You have the choice between ITC and Other. If the SITE, the STX, the ROM and Card Type are not programmed correctly, your Vend Station will not accept your prepaid magnetic stripe cards.

ROM and STX are common to all site codes. It is not possible to have three different STX or ROM codes for each Site codes. Such a combination is not possible: C0 164, C1 165, C2 166. This combination however is possible: C0 164, C0 165, and C0 166.

Force a vend

When your Vend Station is equipped with a bill acceptor, you may want to force the purchase of at least one copy before allowing change payout. This feature is to be used if too many people are using your Vend Station as a change machine only. When in effect, anyone inserting money in the system will have to make at least one copy before being able to get change back. **The other side of the coin** is that if someone inserts a bill into the system and the copier is out of order, it will be impossible to get change back until a copy is made but no copy can be done as the copier is not functioning. You need to take that into consideration before changing this parameter.

Counter reset mode *(auto-reset after audit print-out)*

As described in the audit section, all TOTAL meters can be cleared. Setting this feature at *enabled* will reset those meters every time a printout is performed followed by one transaction. This means the audit will stay unchanged for an immediate reprint if the previous was not printed properly or if you want to give a copy to someone. One print-out + One transaction = Meters erased; Multiple print-outs + 0 transaction = Meters intact.

Station ID

The Station ID is there to identify your Vend Station should you have a fleet of Vend Stations. The ID would be on top of the printed audit report. The ID is made of up to 10 digits. The characters available are: **A** to **Z** (*upper case*), **(space) _ # * - . 0 1 2 3 4 5 6 7 8 9 : ; =.** This will enable you to enter a more descriptive ID for your vend station such as "**HLT 4-321**" meaning Health Building, fourth level, room 321.

Languages

The language setting divides in two. You have the menus interface and the customer interface messages. Both can be in different languages. Languages available are: English, French, and Spanish. The station cannot post messages in more than one language at a time.

That feature can be interesting if you are operating your 9900X in a predominantly Spanish-speaking area but still want to offer the English programming to your technicians.

Printer type

Your 9900X can print to a serial printer. Set the printer type here. You have the choice between Axhiom, CT-S300, or DPU-414. The printer connects to the DB-9 serial port behind the MDB connector on the main platform. If you have the printer kit K01440 to print the audit, set it to CT-S300.

Welcome message

You can create your own welcome message that will toggle on the first line of the display. You can have: "WELCOME TO YOUR" and then "PUBLIC LIBRARY". You must create the first welcome message and then the second. Most characters of the ASCII table are available to create a message including lower and upper case letters and special characters. The text will not self-centre. You must then calculate the space required.

Service message

In case of problem with your unit, it can display a personalized message prompting the customer to call for service. You have two messages that will toggle on the first line of the display. You can have: "DEFECTIVE, CALL US" and then "At: 1-888-334-7569". Most characters of the ASCII table are available to create a clear message including lower and upper case letters and special characters. The text will not self-centre. You must then calculate the space required.

Dispenser type

The X6 circuit that is in your 9900X vend station is the same there is in the 9910X payment station. This 9910X does the same thing the 9900X does but in addition, at the base, there is enough room to add a dispenser. This dispenser can either be a coin/token dispenser or a card dispenser. If your 9900X does not have a dispenser, leave that setting to None. If your station is a 9910X with a dispenser, you have the choice between Coin and Card. If you set it to Coin or Card, you will have to program the vend price in the Value Parameters section. The name of that parameter will then be HOPPER 1 Value or Sale Price Card 1 depending the setting here.

Cashless mode

The payment station 9900X is now capable of functioning with two types of card reader: Prepaid or Credit. It cannot have both. It's one of the other

Prepaid means any type of card that was previously loaded with credits. It can be a magnetic stripe, a chip card, etc. Such a system will debit an amount in real-time from the card upon each copy done.

Credit means a regular credit card like MasterCard/Visa or Bank Debit card. Such a system will debit one amount at the end of the session. That amount will be the sum of all the copies done during the card session. That session ends when the customer presses on the coin/card return button of the coin-op, or after a programmable time-out programmable below.

CC Inactivity length

This parameter applies ONLY if your coin-op is attached to a copier and the copier type set to anything except NONE (see copier Type in Copier Parameters 3 of 6).

This parameter is there to protect a customer that forgot to end his CC session and left. You have the choice between 0 and up to 10 minutes. Zero means no inactivity time out. If you set any time (1 to 10), the display will prompt a 2-minute warning countdown before that time is reached. If a debit signal arrives at the coin-op before the countdown ends, the inactivity time out will reset and the warning will go away. If nothing happens after the two-minute countdown, the session closes and whatever amount of copies done so far is then charged to the credit card.

CC Session length

This is a critical setting. In the numerous settings of the credit card reader (consult the CC reader manual or log-in to your credit card Merchant Account cloud server), there is one that rules the maximum time a session can stay open. The maximum session time varies depending the reader. This session time should be programmed to the maximum value allowed by the CC reader. In the X6, program this session length at least one minute shorter than the maximum set into the reader itself. The time ranges between 10 and 30 minutes. If the time programmed into the reader is 30 minutes, program the session length of the coin-op to 29 minutes or less.

Attention!!!

If you program this session length shorter that the session length set in the reader itself, the session could end without charging the credit card for the copies done during the session.

Behaviour of the 9900X when a CC is used.

When a customer presents his card to the CC reader, a communication is established with the CC Gateway/Processor. An amount is then transferred to the coin-op. That amount is programmable in your CC Merchant Account cloud server. Let's presume it is $20. The display of the 9900X will say Credit $20.00. Upon each copy, the credit decreases by the price of the copy. The last line of the display also indicate the cost of the page at the very moment the coin-op receives the debit signal. A 2-minute countdown starts before the end of the time programmed in the CC Session. At the end of the countdown, or if the customer presses on presses on the coin/card button, the session closes and the credit card will be charged of the amount of copies done in the session ($20.00 starting balance - $1.55 finishing balance = $18.45 charged to the CC).

Read this about CC operations...

Depending your agreement with your CC Gateway/Processor, the transactions may appear on the customer's CC monthly statement under the name of the Processor rather than the owner, the store, or the institution name where the CC transaction took place. **Appropriate signage is strongly advised such as**:

CREDIT CARD TRANSACTION RULES

- There is a **Minimum Charge of $1.00** for any card transaction.
- The system opens a card session with **a $20 pre-authorization**.
- The session ends after a **Maximum of 18 minutes** or **with 2 minutes inactivity**.
- Your card monthly statement will show this transaction under the name **ABC Processor Inc.**

Special function

This parameter is for a very specific task, not required in your type of operation. It must stay all 0. Even if you try to change it, it will go back to all zeros.

This concludes the System parameters section.

Copier parameters -- # 3 of 6

The copier parameters menu enables you to adapt your Vend Station to your copier. The copier type may be followed by other settings you may need to adjust. Also, copier type will vary if you have the standard parallel or the smart interface on your coin-op. The type of copier you need to program into the settings is indicated on a label that is attached to the cable coming from the station and going to the copier.

Copier Type with Standard Interface *(see page 11)*

The 9900X Series Vend Station offers you an easier way to connect and program your Vend Station. You just have to program the copier type according to the specifications on the communication harness. (see page 12) Programming a copier type other than the one prescribed on the harness may result an erratic behaviour, including giving out free copies. At the time of printing of this manual, the following types of copiers are available:

Important notice:

Make sure copier is set B&W by default not Auto-detect. If set on Auto-detect and if there is a trace of colour on the original document, the copier will send the colour debit signal thus charging a premium price instead of B&W price and also resulting in wrong change given out if any.

Type 1

Standard black & white copier using the usual Key Counter connector. Harness is made of 2 pairs of wires; two for the enable (loop) and two for the debit pulse coming from the copier.

Type 2

Standard black & white copier offering two prices (pulse B), simplex.

Type 3

Black & White copier, 2-price with debit pulse inverted (pulse B).

Type 4

Standard color copier, parallel signals, two paper sizes, simplex. (Xerox WC + Samsung)

Type 5

Standard color copier, parallel signals, 3 formats, simplex.

Type 6

Standard color copier, parallel signals, two formats, duplex.

Type 7

Standard color copier, parallel signals, three formats, duplex. Duplex price is usually a differential (10¢ + 5¢ differential = 15¢ for duplex). (Ricoh)

Type 8

Color copier, parallel signals, three formats, duplex.

Type 9

Color copier, parallel signals, three formats, duplex (2 pulses). This type will initiate an additional menu for a time delay for the second pulse on duplex. 2nd pulse delay: 01.00; Pulse length: 0.01; Blind: 0.00; Disable delay: 02.00; Exit delay: 10.00

Type 10

Black & White copier, parallel signals, 3 formats, duplex.

Type 11

Black & white microfiche reader and printer. Harness is made of 2 pairs of wires; two for the enable (loop) and two for the debit pulse coming from the copier (pulse A). Enable is inverted (NC instead of NO)

Type 12

N/A

Type 13

Hewlett-Packard FIH 6 prices.

Type 14

Toshiba eStudio's with GQ interface cable.

Type 15

Sharp MX Series, colour and B&W, Duplex

Delay 2nd pulse:	12.5 seconds *(8,5 seconds if no 11x17 in copier)*
Pulse length:	0.01 seconds
Blind:	0.00 second
Exit Delay:	3.00 seconds
Disable delay:	1.00 second

None

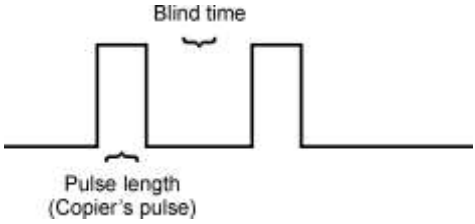
Type "None" refers to the 9900X connected to a PC rather than a copier thus disabling the price setting in the 9900X. In such a case, the 9900X normally communicates with a Print Release Station, an Account-based Value-adding station, or any other software applications requiring a pay-station.

When set to None, the 9900X will not accept money until a session is launched in the application. This applies to print management software PaperCut, PCounter, and Smartguard. Some other software like Cartadis cPad, EnvisionWare, ITC, iTeam, and OCS require the 9900X to accept money before opening a session, thus being programmed to Type 1. This results in the 9900X accepting money at all time.

With PaperCut and PCounter, you can also set Type 1 and accept money at all time if you prefer. When a patron logs-in, whatever amount previously inserted in the 9900X automatically transfers to the patron's account in whole.

Pulse length

Pulse length is the minimum time a debit pulse must last in order to be taken into account by the Vend Station. If it is shorter, the Vend Station sees the pulse but disregards it as a non-valid pulse. It is not necessary to match the pulse length setting with the actual length of the debit pulse coming from the copier. (i.e. Do not set the pulse length to 0.10 if you see that your debit pulse last 100ms. The Vend Station may miss some pulses. We suggest to keep it the lowest possible. A value between 0.01 and 0.04 will fit most copiers). This parameter is not visible when the Smart interface is used.



Pulse blind time

The pulse blind time is the interval between pulses. Usually, this parameter is set at 0. However, some older copiers may suffer from pulse bouncing. Is so, the Vend Station sees the bouncing and debits a copy for each of the bounce. If you wish to eliminate this, set a blind time. The Vend Station will see the bouncing but will not debit for the duration of the blind time. Be careful not to set a time too long. If the blind time is too long, the Vend Station may miss genuine pulses coming in fast on multiple copies. For example, an 80-copy minute copier would send a debit pulse every 750 milliseconds. If you set a blind time too high, you will miss genuine debit pulse thus giving out free copies. This parameter is not visible when the Smart interface is used.

Exit delay

The exit delay is the time laps between the moment the customer pushes on the coin return and the moment the Vend Station actually starts giving change back. The 02.00 default value will fit most copiers. However, some copiers send their debit pulse a little bit late in the process thus forcing you to set an exit delay a little longer. From the moment the customer activates the coin/card return and the moment change starts coming out, any debit pulse coming from the copier will be deducted from the change to give back. This parameter is not visible when the Smart interface is used.

Disable delay

The disable delay is a small time period that will keep the loop closed after the coin return button has been activated by the customer. This delay is there to let the copier finish its copy. Some copiers on the market will simply stop the entire process of making a copy just at the moment the loop opens, thus creating a paper jam. You then have to set a delay long enough to allow the copier to finish the job. However, do not set a delay too long as you will then have the problem of starting a second copy –that will eventually jam - for the price of one. Careful with the different paper format. An 8,5 x 14 and an 11 x 17 sheet will take longer to come out of the copier. This parameter is not visible when the Smart interface is used.

Copier Type with Smart Interface *(see page 11)*

If your vend station is equipped with the optional Smart Interface, it can communicate with a copier offering serial communication. At the time of printing, only the following copiers will communication with the 9900X equipped with the Smart Interface:

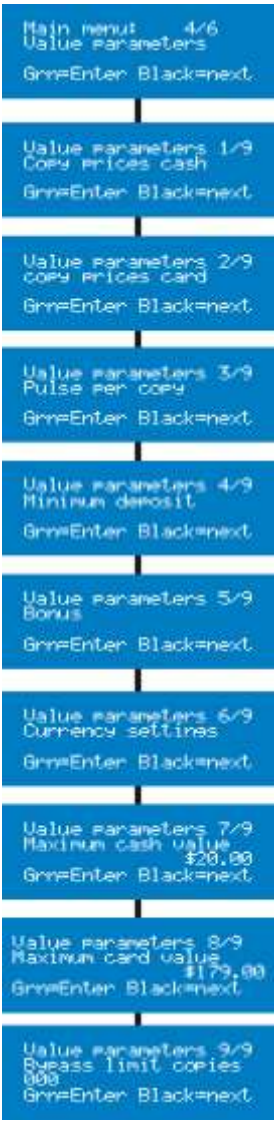
- Konica-Minolta Biz-Hub Vender 1
- Konica-Minolta Biz-Hub Vender 2
- Kyocera-Mita Task-Alfa.

Please refer to the copier manual for the proper setting in the copier. If there is no communication between the copier and the Vend Station, an error message will be visible on the display of the 9900X, on the copier's display or on both displays..

You cannot connect your vend station to a serial copier without the smart interface. You cannot connect your vend station to a standard copier with the smart interface.

Value parameters -- # 4 of 6

This is where you will set the different parameters having a monetary value or monetary impact. The quantity of parameters will vary depending the peripherals connected and the type of copier programmed. The quantity of vend prices will depend on the type of copier connected. The diagram below shows a 9900X equipped with a coin changer, a prepaid card reader, and an external access key-pad device. Those menus will not be visible if those are not present.



Copy prices cash

This will vary a lot depending the quantity of vend prices the copier allows. The minimum is one vend price (Type 1), the maximum is 15 (Ko-Mi 2). With Ko-Mi 2, you have 12 vend prices for copies, two vend prices for outgoing faxes and one vend price for the scans. For the fax, you have one connexion fee and one page fee. No matter how many pages you send, the connexion fee stays the same. Long distance calls are NOT taken into account. The type and copy format are clearly indicated on the display (i.e. simplex, B&W, format A; duplex, colour, format B, etc.).

Follow the last line of the display to know which button to press.

- Black = Next price (↗)
- Green = Enter in this price + moves (➔) to the next digit + save.
- Red = Increases (↑) the value blinking.
- Blue = Decreases (↓) the value blinking.

Usually, formats A, B, C = 8,5x11, 8,5x14, 11x17. Simplex = single-sided, Duplex = double-sided.

IMPORTANT: DO NOT SET COLOUR PRICES TO $0 IF YOUR COPIER IS ONLY B&W.

Copy prices card

If you have a card reader in your station (prepaid or CC), you will get the same quantity of vend prices as if paid in cash. This doubles the quantity of prices available. Anyone using a card instead of cash can pay a different price (higher or lower). Also note that a card reader allows you to set prices to anything, including pennies (i.e. A 12¢ price is possible).

Follow the last line of the display to know which button to press.

- Black = Next price (↗)
- Green = Enter in this price + moves (➔) to the next digit + save.
- Red = Increases (↑) the value that flashes.
- Blue = Decreases (↓) the value that flashes.

Note that if you are connecting the 9900X to a PC or an embedded solution in a copier, the vend prices here have NO EFFECT. Consult the software manual for more information on price setting.

Pulse per copy

This parameter enables you to set a certain quantity of pulses to send out to an auxiliary device connected in your Vend Station. The perfect example of such a device would be a keypad pulse type control device. That device connects into the Vend Station, which in turn connects to the copier. This way, when the auxiliary device gets activated, the Vend Station knows about it, preventing the insertion of money and counting the copies in the appropriate counter. With the a color multifunction copiers, you can set the Vend Station to send more than one pulse for each type of copy. The best example would be: Letter/legal B&W 1 pulse; Ledger B&W 2 pulses; Letter/legal color 3 pulses; Ledger color 4 pulses.

On the display, you will see this information:

P1 and P2 refer to an auxiliary device having two input lines. Most equipment on the market only have one input line. Therefore, using P1 only sets the number of pulses you wish the Vend Station to be sending to the device. The pulse signal from the Vend Station to the device is 100 ms ON, 100ms OFF or 5 pulses per second maximum. Please refer to Annex 1 at the end.

Minimum deposit

Minimum deposit is a feature that sometimes is necessary on some copiers, black & white or colour, or offering duplex.

Some copiers send the colour and/or duplex signal while it is printing instead of sending it before the process starts. It is then impossible to stop the printing in case of insufficient funds. In such a case, the only way to counteract the problem is requesting the customer to insert enough credits to cover all prices possibilities. If the copy costs less than the minimum deposit, change is given back.

You have the choice between NONE, FIXED AMOUNT or NUMBER of COPIES. Fixed amount will enable the copier only when that amount has been inserted. Number of copies will enable the copier only when the amount inserted is equal to the highest price of a copy times the number you entered (i.e. 15¢ x 2 = enables copier at 30¢). Most of the time, a fixed amount is used and that amount must be equal to the highest vend price programmed in the coin-op (i.e. B&W 10¢, colour 50¢ = minimum deposit 50¢).

Currency settings

Currency setting enables instructing your 9900X on the currency to accept for different purposes. You can set the currency for Vend Station sales (copy), for PC sales (when attached to a print or value-adding software), for card value adding, and when you are short of change in the tubes. All the settings can be different. For example, you can choose not to accept bills for copy but accept them for value adding on cards.

The bills available on the display are prompted by the internal configuration of the bill acceptor itself and will reflect the country's currency.

Maximum cash value

This is the maximum amount someone can insert before it starts rejecting what is above. If you set it at $20, the Vend Station will start rejecting everything that will end up above the amount. (i.e. Max cash at $20, $18 already inserted, will reject a $5 bill insertion as the final result would be $23.) Do not set this amount too low.

Maximum card value

Maximum card value is the maximum amount a prepaid card can hold. A card above will be rejected. That limit also applies to card revalue as well. It will not allow a revalue that would result in a new balance being higher than the value set. This setting must NOT be set lower than the CC pre-authorization amount or the amount programmed into the reader itself (Consult the CC reader manual or log-in to your Merchant Account cloud server). .

CC pre-authorisation.

With a CC reader connected, you can set a pre-authorisation amount here. Default value is $20. At the end of the transaction, only the real transaction amount is charged to the patron card. Depending on the make of the CC reader, a pre-authorisation amount can be set in the reader itself (Consult the CC reader manual or log-in to your Merchant Account cloud server). If so, that amount will override the value programmed here.

CC Minimum charge

You can set here a minimum charge for credit/debit card usage. Card processors will charge a flat fee per transaction and/or a percentage on each transaction. Setting a CC minimum charge here helps recovering a major part of those fees. It is important to understand that with a $1.00 CC "Minimum Charge", a customer will be charged $1.00 whatever he makes one or ten copies at 10 cents each. **Of course, adequate signage is a must (see page 25).**

Bypass limit copies

The 9900X Vend Station limits the free copies made with the bypass key. Enter that limit of free copies here. The maximum limit you can set is 999. An 000 limit = unlimited. Each time the bypass key is turned, the display shows how many copies are left in the count. Once the maximum reached, a supervisor must erase the count in the audit menu.

Sales price card 1 *or* **HOPPER 1 value**

The X6 circuit equips both the 9900X and 9910X coin-op. The 9910X can have either a built-in card dispenser or a coin dispenser hopper at the base. The name of the parameter will vary depending the dispenser you have. Set here the price of either the card or the token you are dispensing.

This concludes the Value Parameters setting.

Print parameters -- # 5 of 6

The Print parameters function is a very useful feature SEM offers you in this payment device. It allows you to print and review the current settings of your Vend Station. Printing is achieved via the DB9 serial port on the main board (see page 13 for port location). If you have your own serial printer, set it at 9600, N, 8 1. If the printer is not correctly attached or configured, the display will prompt a warning. Parameters can also be downloaded on Hyper-terminal in Windows XP and lower or any other similar software available on the Internet (requires SEM cable # A03330).

X6 Payment station v3.7 ← Payment station model and firmware version
2017/04/01 - 12:34:56 ← Date & time of printing
Station ID HLT 4-321 ← Station ID

System parameters
Force a vend disabled
Counters reset mode enabled
Station ID HLT 4-321
Language
Menus Interface English
Customer Interface Español
Printer type - CT-S300
Welcome message - original
Service message - original
Dispenser type - none
Cashless mode - none
Special function - 00000000

Current parameters

System Parameters 2/6

Copier parameters
Type of copier KO-MI 2 ← Connected to

Copier Parameters 3/6

Value parameters
Copy price cash
Simplex Black/white
Format A: $00.10
Format B: $00.15
Format C: $00.20
Simplex colour
Format A: $00.50
Format B: $00.75
Format C: $01.00
Duplex Black/white
Format A: $00.15
Format B: $00.25
Format C: $00.30
Duplex colour
Format A: $00.75
Format B: $01.00
Format C: $01.50

Scanner $00.05
Fax cnx fee $02.00
Fax/page $00.25
Minimum deposit none
Currency setting
For copy
Coins yes
bill $5 yes
bill $10 no
bill $20 no
For PC sale
Coins yes
bill $5 yes
bill $10 yes
bill $20 yes
For exact change
bill $5 no
bill $10 no
bill $20 no
Max. Cash value $34.00
Max. Card value $34.00
Bypass limit copies 500

Vend prices programmed

Currency settings for different situations

500 free copies allowed

Value parameters 4/6

Firmware version -- # 6 of 6

Firmware version is the current version of firmware in your 9900X. It is used as a reference for technical support. Should you need to contact us for technical support, be sure to have the firmware version available.

Printing, faxing, scanning vs. copies in an MFP device

The 9900X vend station does not have any control whatsoever on charging for a print job done in an MFP device, be it from a USB key or sent over the network. The coin-op does not invent, does not guess debit signals. It captures it. If the MFP device sends a debit signal on a print job, just like it does on a copy, then the 9900X will deduct an amount equivalent to this specific signal (format, B&W, colour, duplex). Your MFP may required to be programmed accordingly.

If the MFP does not send a debit signal on a print job, the 9900X cannot debit any amount. If the MFP allows a print job to come out direct, non-stop, even if there is a payment device attached to it, there is nothing the vend station can do.

A minority of MFP on the market will also process the information for an outgoing fax and a scan (to email or USB). In such a case, a specific debit signal is sent to the 9900X allowing setting a unique vend price for this very product. The vast majority of MFPs on the market, even though they will allow sending a fax and scanning a document, will NOT treat that as a copy, therefore not sending any debit signal to a payment device. Without a debit signal, the 9900X cannot debit any amount.

Consult the internal parameters of the MFP or contact our support team for more details.

Troubleshooting your Vend Station

You will find in the next pages a quick guide on troubleshooting. Most common problems are explained. For other types of problem you can call our service department during regular business hours at 1-888-334-7569 (Eastern Standard Time) or send an email at support@sem.ca.

Trouble	Causes	Solutions
Rejects all coins, bills will not go into bill reader, card is not accepted.	Vend Station not plugged into wall receptacle.	Plug into a 120 volts AC regular outlet **properly grounded**.
	No power in wall outlet.	Check outlet with voltmeter. If no power, refer to building manager.
	Internal fuse in main power transformer is blown.	Check with voltmeter if 24 volts AC is coming out on the secondary side. If not, replace power transformer.
	Main fuse (2 A.) on MCU board is blown.	Check fuse with ohm-meter and replace with **same type and value** fuse.
	Defective MCU board	If MCU LED is flashing, replace board. If not flashing, repeat all the above.
Rejects all coins, accept bills and cards.	Coin changer not properly plugged on "Y" harness of bill acceptor or card reader.	Shut down main power by unplugging from wall. Check for coin changer harness correctly plugged onto MCU board.
	Defective coin changer.	Unplug Station from wall and replace the coin changer (3 to 6 tubes). Apply power and test.
Bills will not go inside bill acceptor.	Bill acceptor not properly plugged on MCU board.	Unplug Station from wall. Check for bill acceptor harness correctly plugged onto MCU board. Apply power back. Test with bills.

	Defective bill acceptor.	Unplug Station from wall and replace with MDB bill acceptor. Apply power back and test.
Bills will go inside bill acceptor but will come out right away	That bill is set to NO in the Currency settings.	Set to YES (refer to currency settings in Value Parameters section).
	All settings to YES but still rejects bills.	Internal settings on bill acceptor inadequate or defective bill acceptor. Unplug Station from wall. Replace with MDB bill acceptor. Apply power back and test.
Card will not go inside reader.	Object or card stuck into reader.	Unplug Station from wall. Check the path for jam.
	Card reader not properly plugged on MCU board.	Unplug Station from wall. Check for card reader harness correctly plugged onto MCU board. Apply power back. Test with card.
	Defective card reader.	Unplug Station from wall and replace with same type card reader. Apply power back and test.
Card goes in and out of reader and comes out right away. Display shows DATA not VALID.	Wrong Site, STX, ROM and/or card type settings.	Go into programming in Set Reader and program properly (refer to page 20).
Money inserted but copier will not go in active mode.	Copy price set higher than amount inserted.	Make sure you have programmed the proper type of copier (Type #) plus check you vend price(s).
	If type of copier and price are correct, there is a defective connection between the MCU on Station and the enable side (loop) of the key counter plug on copier.	Check continuity on green and black wires of Station harness. Replace harness if necessary.

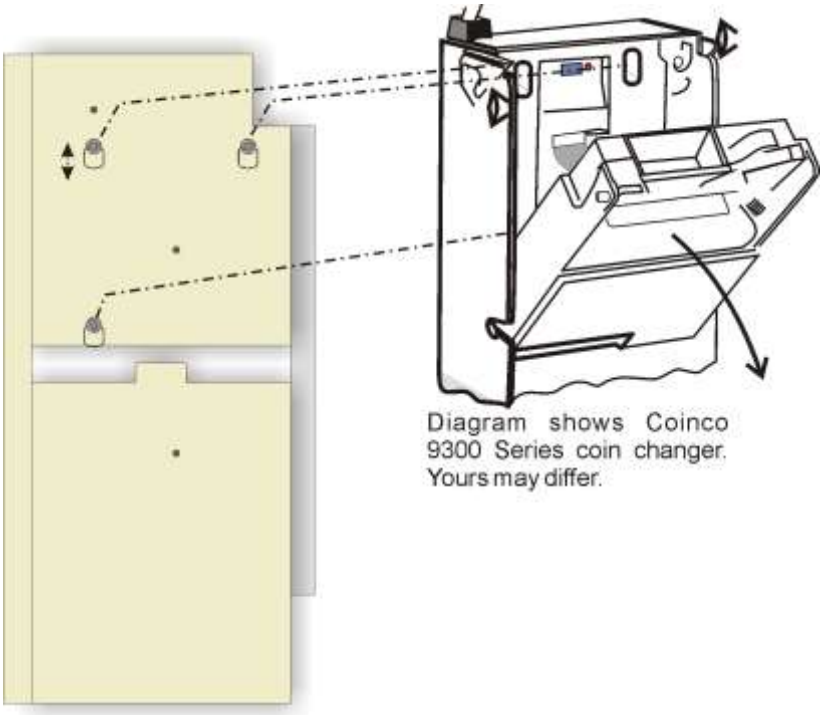
	No problem with harness, connection OK, continuity OK between green and black wires when credit is established in the Station.	Defective key counter plug on copier. Problem is in copier.
Copy was made but did not debit the Vend Station.	Did one of the LED on the expansion board of MCU?	If NO, there is a bad connection between the copier and the 9900X. Check where you are taking your pulse from. Check harness between copier and 9900X. Red and white wires carry the pulse on most copier harness. If harness and connections are OK, the copier is not sending the pulse on key counter plug. If YES, is the proper type of copier programmed? Check the pulse length. Make sure it is not set too long. A long pulse length will ignore all pulses that are shorter that the setting. Vend price(s) set to $0.00. MCU defective.
Copy was made but did not debit the Vend Station for the proper amount.	Wrong price setting or wrong copier type. If the amount debited was a multiple of one of the prices (2 x A, 3 x A, the same for B), the Vend Station is probably detecting more than one pulse for one copy.	Adjust copier type first and then adjust prices. Make sure your connection is secured. Check for the pulse blind. If the blind is too short and if the pulse from the copier is bouncing, Vend Station may see this as a genuine pulse.
Wrong change given back to the customer.	Wrong price setting or wrong copier type.	Adjust copier type first and then adjust prices.

	If the change returned indicates the amount debited was a multiple of one of the prices (2 x A, 3 x A, the same for B), the Station is probably detecting more than one pulse for one copy.	Make sure your connection is secured. Check for the pulse blind. If the blind is too short and if the pulse from the copier is bouncing, Vend Station may see this as a genuine pulse.
	Coins are stuck in the base of the coin mechanism.	Remove coins. Be careful not to damage the coin changer.
	Coin tubes are empty.	Fill up the tubes to a safe level.
	Amount debited = price of colour copy.	Auto-Detect chosen on the copier + the original document has a trace of colour on it. Therefore, the copier has sent a colour signal but the customer was expecting to pay the B&W price thus saying he did not get proper change back.
	Defective coin changer.	Replace coin changer.
Vend Station is debiting one copy upon insertion of coins, bills or card.	Is your copier an old analogical Minolta?	If YES, you must put Disable Delay at 0,5 second.
	Other copiers	Copier type wrongly set (see page 27, Type 3).
		Pulse is always ON in copier, never goes OFF.

Parts description

In the next pages, you will find the parts catalogue for your Vend Station. Please use the appropriate number when ordering parts from us in order to facilitate the identification of parts. Most parts are generally in stock and can be shipped on the next business day.

Installing/Removing Coin Changer

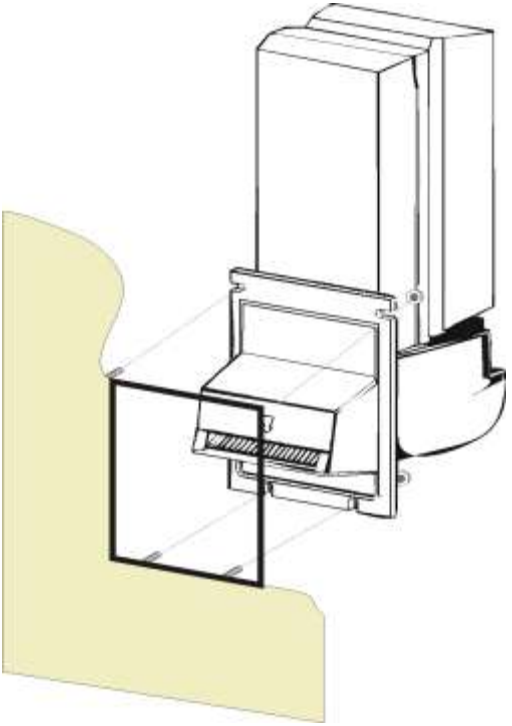


Description	Part #
Square/Slot machine screw 8-32 x 3/8" (3 pieces)	B00520

The coin changer, no matter the make or model and the quantity of tube, is always installed the same way. It is held in place by three Robertson/Slot machine screws. To remove, simply loosen the screws a bit and lift the coin changer out of its position.

Shipping bracket may still be in place preventing the coin changer to move while in shipping. You can remove the shipping bracket by unscrewing the wing nut. We suggest keeping it in place when changer is in place.

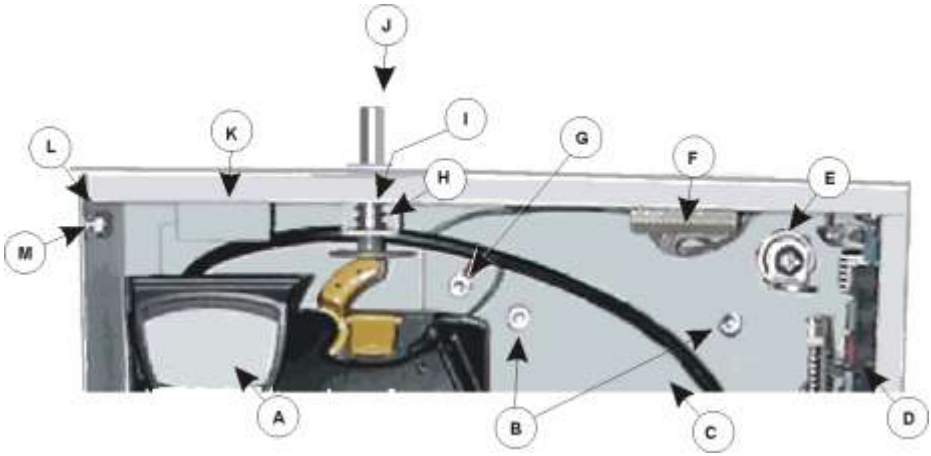
Installing/Removing Bill Acceptor



Description	Part #
Kept nut 8-32 (4 pieces)	B00520
NAMA Plate (not visible; normally covering hole)	S02461

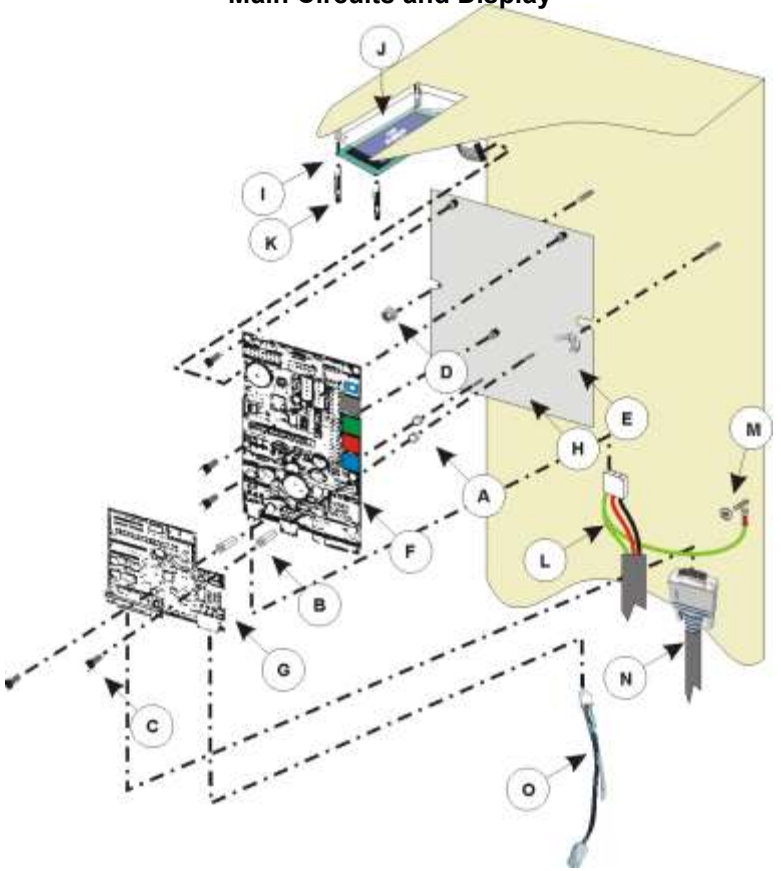
All standard MDB Protocol bill acceptors will normally fit in hole. If you are installing the bill acceptor as an add-on, do not discard the NAMA plate you will be removing. Bill acceptor connects to MDB port where coin changer is already connected. Connect coin changer in Y harness supplied with bill acceptor. ALWAYS REMOVE POWER BEFORE PLUGGING OR UN-PLUGGING PERIPHERALS.

Description cabinet top



Position	Description	Part #
A)	Coin changer	n/a
B)	Kept nut 8-32 (4 pieces)	B00520
C)	NAMA cover Plate	S02461
D)	X6 Board assembly	A07100
E)	By-pass lock assembly	A00590
F)	Display flat harness	A06970
G)	Ground washer star (+ one kept nut B00520)	B00980
H)	9900 Coin return spring	S00380
I)	“E” Clip 0.375 (not visible)	B00630
J)	9900 coin return button	S00405
K)	Coin insert slot	n/a
L)	Kept nut for back door (4 pieces)	B00520
M)	Washer #8 (5 pieces)	B00240
N)	Wing nut 8-32 (not visible)	B01290
O)	9900 Changer shipping stopper (not visible)	S03070

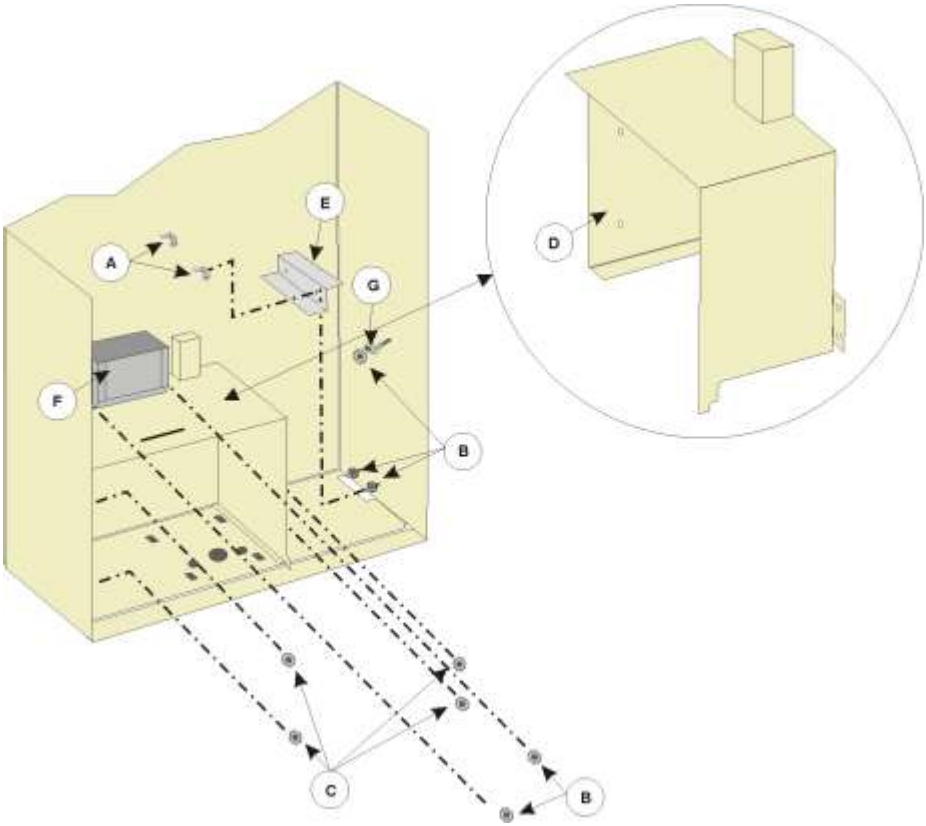
Main Circuits and Display



Position	Description	Part #
A)	Nylon bushing # 8 - ¼" (2 pieces)	B01080
B)	6-32 5/8" Hexagonal nylon stand-off (2 pieces)	B00150
C)	6-32 ¼" machine screw (5 pieces)	B00090
D)	Lock nut 8-32	B00530
E)	Wing nut 8-32	B01290
F)	X6 Main Circuit	A06280
G)	X6 Expansion board (standard)	A06500 or
G)	X6 Expansion board (smart)	A07640 *
H)	Aluminum plate	S03080
I)	LCD Display 4x20 with flat ribbon	A07110
J)	Protective transparent Lexan	S03046
K)	4-40 ¼ " machine screw (4 pieces)	B00080
L)	Power supply harness with ground wire	A06620
M)	Kept nut for ground	B00520
N)	Copier harness with DB15 connector	n/a
O)	MDB harness from coin changer/bill acceptor	n/a

* Smart Expansion board is for copiers using serial communication such as Konica-Minolta Biz-Hub or Kyocera-Mita Task-Alfa.

Description cabinet bottom

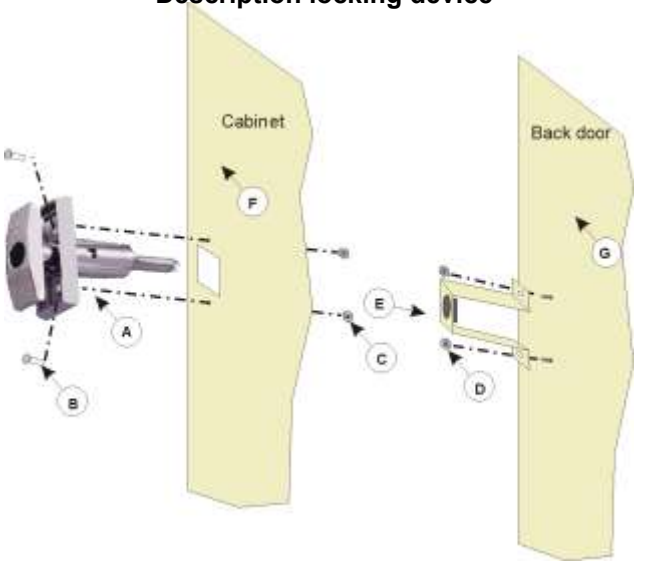


Position	Description	Part #
A)	Wing nut 8-32 (2 pieces)	B01290
B)	Kept nut 8-32 (8 pieces)	B00520
C)	Kept nut 10-32 (4 pieces)	B00550
D)	Coin box bracket	S02597
E)	Aluminum cable-tie	S02955
F)	Coin return bucket w/door	A00140
G)	Cable tie clip (3 pieces)	B00815
H)	Cable tie (not visible; under cabinet)	B00810
I)	Coin box (not visible)	S02441
J)	Coin box lock (not visible)	S00592

Available as an option and not visible on image...

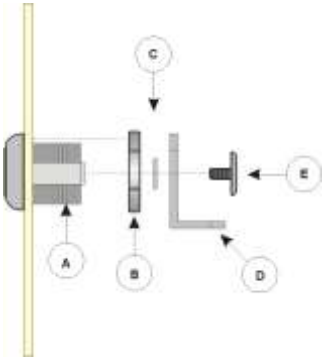
D')	Special X-large coin box bracket	S02598
I')	X-large coin box (± 25% bigger coin capacity)	S02444

Description locking device



Position	Description	Part #
A)	T-handle assembly w/o plug lock	A00150
B)	Carriage bolts 10-24 x 1 (2 pieces)	B00990
C)	Kept nut 10-24 (2 pieces)	B00580
D)	Kept nut 10-32	B00550
E)	9900 Cage nut assembly (thread ½-13 nc)	S02451
F)	Main cabinet 9900	S02425
G)	Back door 9900	S02435

By-pass Cam Lock



Position	Description	Part #
A)	Lock cylinder *	S00590
B)	Locking nut *	S00590
C)	90-degree turn guide *	S00590
D)	Actuator 90 degrees angle	S01805
E)	Locking screw *	S00590

* All parts with asterisk are included in the lock #S00590

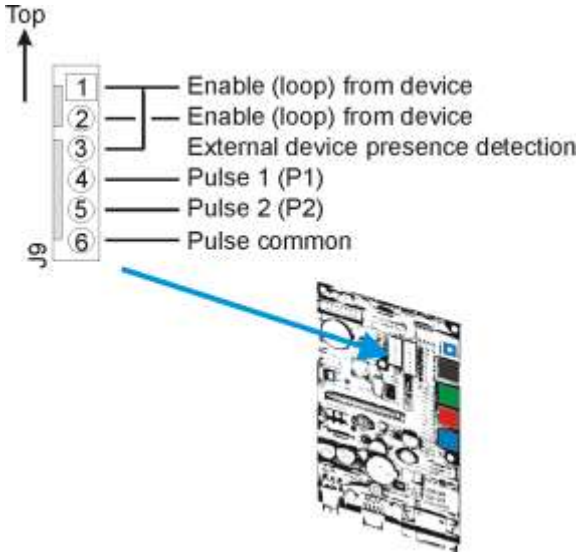
Annex 1

Connecting an existing external control device in your 9900X.

The 9900X offers you the capability of connecting an existing external device such as a pin-pad controller directly into the 9900X. This will have the following advantage: No interference with the connection of your 9900X with the copier; The 9900X will prevent the insertion of money while the external device is activated; The 9900X will keep track of the copies made this way under the title Auxiliary reader in the audit.

SEM can provide you with the proper harness to connect your external device. Please contact our sales department. You must supply us with the EXACT pin-out of the device's harness. If you cannot send us the details, or wish to make your own harness, please take note of the following: External device harness connects to the 6-pin header J9 on the 9900X main board, just behind the programming push buttons. Be careful not to misidentifying with the 7-pin header J14 located between the buttons and J9. J9 header is a Molex type. Pin #1 is located towards the top of the board. If you are making your own harness, please refer to the pin-out below. Notice that pin #1 also connects to pin #3. That is the external device detector. If you do not jump pin #1 & 3 together, the Vend Station will ignore the presence of the external device thus hiding any settings in the Value parameters menu. If your external device is capable of detecting two price pulses, you will have to use pins 4, 5, and 6 on header J9. If your device only has a single price capability, then use pins 4 and 6 on J9.

The 9900X enables you to send multiple pulses per copy to the external device. Please refer to page 33 for more details on how to program the number of pulses to send.



Annex 2

Pin-out description on DB15 header on the standard X6 standard Interface A06500).

Pin-out Description DB15 on Circuit

Pins 1-2:	Non-polarized, copy pulse 5-24 volts format A
Pins 3-4:	Polarized (3-; 4+), copy pulse 5-24 volts format B
Pins 5-6-7:	PULL-UP inputs for colour copies format
Pin 8:	Output 5 volts for contact closure / optocoupler style copier
Pin 9:	Ground
Pins 10-11:	Pin 10 (+); pin 11 (-) MUX / Low voltage input
Pins 12-13:	Clear contact
Pins 14-15:	Copy enable

Annex 3

Filling up the coin tubes.

The easiest way to fill up the coin tubes of your changer is to do as follow:

1. Insert coins into the coin slot just like a customer would do to buy copies.
2. Once done, **press on the BLACK button on the circuit**. This will cancel the credit while adjusting the inventory. The display will show *Inventory updated. Saving, one moment please.*

If you can't press on the black button because you do not have access. Unplug the coin-op from the wall and plug it back. **When you leave the place, the display MUST show Welcome ! Insert Coins.**

Filling the coin tubes this way serves two purposes: First, it adjusts the coin inventory in the audit (see page 17). Second, you are testing the coin acceptance. If the unit starts rejecting all the coins you insert it is because you have reached the maximum cash value set in the Value parameters (see page 34). Press on the black button and continue.

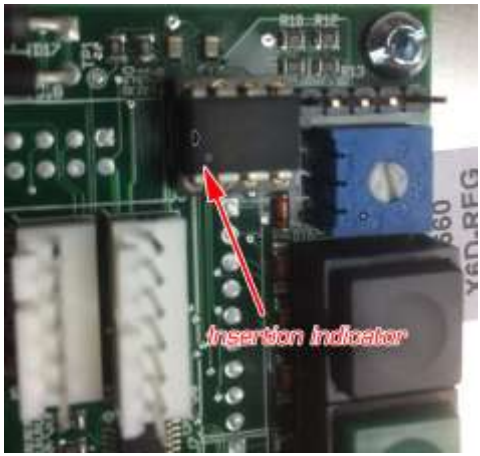
Another method consists of going into the audit and start inserting your coins like a customer would. Then step out of the audit. The display will show *Wait while initialization*...

All coin changers on the market give full priority to filling up the coin tubes. Only what is in excess will be diverted to the coin box. Please note that some types of coin changers allow you to preset a value or a coin level in the tubes. Please consult the instruction manual of the coin changer to set such a value or coin level. The 9900X has no control on the coin level in the tubes.

Servicing

The SEM X6 circuit is designed and manufactured with the utmost care and attention. However, a problem can eventually require a circuit replacement. If this should happen, you will greatly appreciate this unique feature. The entire memory of the X6 circuit, including the entire audit and all the different settings are stored in a small 8-pin removable chip you can move to the new X6 circuit. No need to reprogram all the settings in the new circuit board and no loss of information on sales. That chip is located at the top right corner of the circuit, next to the square blue LCD adjustment potentiometer above the black button.

It is important to insert the chip carefully in the proper position. There is a half-moon shape guide on the chip itself as seen below. This guide must be opposite to the square blue LCD adjustment potentiometer. **This must be achieved WITHOUT POWER on the circuit otherwise you will damage the chip and loose the information it holds.**



SEM INC. – WARRANTY AND LIABILITY CONTRACT

By issuing a Purchase Order or contracting with SEM Inc. to carry out the supply of products, clients are accepting the terms of this Warranty and Liability Contract.

SEM Inc. warrants all parts of new equipment for one (1) year, from date of invoice against DEFECTIVE MATERIAL OR WORKMANSHIP, but not against damage caused by accident, abuse, faulty installation, or improper operation and installation.

SEM Inc. shall not be liable for any direct, indirect and/or consequential damages or losses, including loss of use, revenue, profit incurred by the client, its customers and/or any third party as a result of the use of the work carried out by SEM Inc. for the client, including any loss resulting from equipment failure or malfunctions, design or programming errors or any other use of the work carried out in this contract. The client specifically waives any claim or recourse it may have against SEM Inc. in any of the above instances.

SEM Inc.'s obligation under this warranty is limited to correcting, or at its option replacing, without charge at its factory any equipment, components or parts thereof which are returned to its factory (transportation charges prepaid) within one year after date of invoice, examination of which disclose to SEM Inc.'s satisfaction that the equipment, components, or parts thereof were originally defective.

Any changes in design or improvements added to the line of equipment shall not create any obligation to upgrade or modify equipment previously sold and delivered to the client.

Any unauthorized alteration of, or addition to, articles of the contractors manufacture voids this warranty.

Equipment or components returned for Warranty repair must be accompanied by a copy of the original invoice as verification of purchase date. Equipment or components returned without a copy of original invoice will be charged to the customer at the regular repair rates.

This manual was written by our technical department. Even though the utmost attention was given to writing this manual, errors may have slipped by unnoticed. Any comments, suggestions, or errors should be sent directly to: gilbert.guinard@sem.ca

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