CRANE®

NRI

A Crane Co. Company

Optipay™ CC

A-66 Coin Changer

Operation and Maintenance Manual
(Revision 1)

Includes configuration setup using a Palm Pilot® Setting Module

May 05

1-800-628-8363

JCM Part Number 960-000102.Rev. 1

JCM® AMERICAN CORPORATION

Download from Www.Somanuals.com. All Manuals Search And Download.

JCM is a registered trademark of JCM American Corporation. All other product names mentioned herein may be registered trademarks or trademarks of their respective companies. Furthermore, ™, ® and © are not always mentioned in each case throughout this publication.

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC

Table of Contents

1 TOC

1 GENERAL INFORMATION 1-1

General Information 1-1

General Information Concerning Coin Changer 1-2

Advantages 1-2

Service Tools 1-2

PC Test Station 1-2

Configuration Tools 1-3

Update Tools 1-3

2 SAFETY INSTRUCTIONS 2-1

Proper use 2-1

Protecting Yourself and the Equipment 2-1

3 DESIGN 3-1

The Coin Validator 3-1

Device Overview 3-1

Return Lever 3-2

Keyboard 3-2

Pilot Lights 3-2

Interfaces 3-2

DIP Switch Block 3-2

Product Labels 3-3

The Payout Unit 3-3

Tube Cassette 3-3

Payout Module 3-4

Filling Level Sensors 3-4

MDB Vending Machine Cable 3-4

4 FUNCTIONS 4-1

Filling and Emptying Change Tubes 4-1

Configuring Change Tube Coin Maximum 4-1

Security Stock Considerations 4-2

Inhibiting Certain Coin Types 4-2

Disabling the Inventory Keys 4-2

Configuring Tokens 4-2

Sending the Telephone/Currency Code to the Vending Machine Controller 4-2

Tube Counter Automatic Correction 4-2

Resetting the Tube Counter 4-2

Individual Wake-up Time Considerations 4-3

Accepting and Converting a Second Currency Type (optional) 4-3

Minimizing String Manipulation (optional) 4-3

5 INSTALLATION 5-1

6 ENERGIZING 6-1

7 OPERATION 7-1

Vending Change by Using the Keyboard or Emptying the Tube Cassette 7-1

Emptying the Change Tubes to a Certain Fill Level 7-1

Download from Www.Somanuals.com. All Manuals Search And Download.

Validator Change Filling **7-1**
Inhibiting Coin Types Using DIP Switch Block Settings **7-2**
8 CLEANING **8-1**
9 TRANSPORT **9-1**
10 TECHNICAL DATA **10-1**
A-66 Specifications **10-1**
CE Certification **10-1**
11 CONFIGURATION **11-1**
Workshop Testing the Coin Changer **11-1**
Workshop Testing and/or Configuring the Coin Changer **11-1**
On-Site Testing and/or Configuring the Coin Changer in a Vending Machine **11-1**
PC Programming Station and Palm Pilot® Handheld Use **11-1**
Which Functions Can be Configured? **11-2**
WinEMP© Software **11-2**
PalmA66© Software **11-2**
PalmEMP© Software **11-2**
PC Programming Station Device Environment **11-2**
Connecting a Palm Pilot® Handheld **11-3**
12 PALM PILOT® USAGE **12-1**
A66US Changer Program Usage **12-1**
Requirements 12-1
Managing Coin and Configuration Settings 12-1
Changer Service, Token Programming, and Currency Conversion 12-4
Changer Diagnostics **12-6**
13 INDEX **13-1**
A TROUBLE SHOOTING **A-1**
Quick Pilot Light Diagnosis **A-1**
Diagnosis Using a Palm Pilot® Setting Module **A-2**
B GLOSSARY **B-1**

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
List of Figures

1 LOF

Figure 1-1 Optipay™ CC A-66 Coin Changer 1-1
Figure 3-1 A-66 Design Features 3-1
Figure 3-2 Coin Validator's Rear Side 3-2
Figure 3-3 Coin Validator Removal 3-2
Figure 3-4 Coin Validator Side Label 3-3
Figure 3-5 Coin Validator Front Label 3-3
Figure 3-6 Tube Cassette Removal/Replacement 3-4
Figure 4-1 Tube Cassette Removal 4-1
Figure 5-1 Coin Validator Removal 5-1
Figure 5-2 Coin Changer mounting hole locations 5-1
Figure 6-1 Coin Validator Keyboard 6-1
Figure 7-1 Coin Validator Removal 7-2
Figure 7-2 Coin Validator Switch Block 7-2
Figure 8-1 Opening and Closing the Coin Validator's Access Panel 8-1
Figure 11-1 PC Programming Station Connection 11-3
Figure 11-2 Palm to Validator or Changer Connection 11-3
Figure 12-1 Typical M100/500 Series Palm Pilot® Handheld & Software ..... -1
Figure 12-2 Palm A66US Selection 12-1
Figure 12-3 Selecting Settings 12-1
Figure 12-4 Selecting Mode 12-1
Figure 12-5 Operating Modes 12-2
Figure 12-6 Inhibit Coin Channels Mode 12-2
Figure 12-7 Float Level Mode 12-2
Figure 12-8 Float up Selection Warning 12-3
Figure 12-9 Security Stock Mode 12-3
Figure 12-10 Coin Sorting Mode 12-3
Figure 12-11 Recycler Mode 12-4
Figure 12-12 Other Settings Mode 12-4
Figure 12-13 Clone Mode 12-4
Figure 12-14 Service Mode 12-4
Figure 12-15 Filling Levels Mode 12-5
Figure 12-16 Teach Tokens Mode 12-5
Figure 12-17 Token Programming Mode 12-5
Figure 12-18 Conversion Setting Mode 12-6
Figure 12-19 Diagnostics Mode 12-6
Figure 12-20 Error List Mode 12-6
Figure A-1 Quick Diagnosis with the Help of the Pilot Lights A-1

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
List of Tables

1 LOT

Table 3-1 Side Label Features 3-3
Table 3-2 Front Label Features 3-3
Table 3-3 U.S. Coin Cassette Capacity 3-3
Table A-1 LED Indicator Meanings A-1
Table A-2 Display Indicators A-2

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
A-66 Coin Changer
Section 1

1 GENERAL INFORMATION

This section provides a general overview of the advantages and options of the Optipay™ CC A-66 Coin Changer. This first section is designed to help you navigate through this manual with ease.

General Information

This manual describes the design, operation and functional range of the A-66 Coin Changer (See Figure 1-1). Sections 5, 6 and 7 explain the steps necessary towards installation, energizing and operation of the coin changer.

Chapters 8 to 11 describe how the Coin Changer is cleaned, transported and electronically configured. The section entitled “Configuration” deals primarily with the use of a Palm Pilot® to configure Coin Changer. The JCM WinEMP©, PalmA66© and PalmEMP© configuration programs are described separately in the software instructions of section 11.

The appended "Index", "Setting Module Functional Overview", and "Trouble Shooting" sections reduce the search for specific explanations and additional help when required.

To make operation of this device and navigation within this manual easier, the following illustrations were used within the text:

- **Safety instructions**, which need to be observed in order to protect the operators and equipment, have been written in bold text and have been given the pictographs: ⚠
- **Special *Notes***, which effect the use of the Coin Changer have been written in *italic* text and have been given the pictograph: ☞
- **Steps,** requiring the operator to perform specific actions are given sequential numbers (1., 2., 3., etc.).

Figure 1-1 Optipay™ CC A-66 Coin Changer

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

At the beginning of each section you will find a "Chapter Guide", that summarizes the content of the specific section.

Separate software instructions to configure the Coin Changer are located in "Configuration" section 11.

- WinEMP© – Contains the configuration and diagnostics programs for the JCM Coin Validators, and the operating instructions for the Optipay™ CC A-66 Coin Changer.
- PalmA66© – Contains the operating instructions for configuring the Optipay™ CC A-66 Coin Changer
- PalmEMP© – Contains the operating instructions for configuring the A-66 Coin Validator.

If these instructions are not available to you, they can be downloaded at any time from the JCM home page (www.jcm-american.com) in a compressed Portable Document File (PDF) format.

General Information Concerning Coin Changer

The four tube Optipay™ CC A-66 Coin Changer series is designed for vending and service machines containing the serial Multi Drop Bus (MDB) interface.

The integrated Coin Validator contains the reliable sensor system and false money rejection capabilities of the tried and tested G-40.4000 Coin Validator within the G-46.4 Coin Changer series.

In order to react as quickly as possible to newly inserted false coins and to enable your individual adjustments, the Coin Validator can be connected to a Personal Computer (PC) programming station containing the WinEMP© configuration and diagnostics software, including a card reader, chip card and the G-19.0641 test assembly. With the aid of a Palm Pilot® handheld containing PalmEMP©, and PalmA66© program applications, the Coin Changer can be configured directly at the vending machine independently from the PC method. This manual deals exclusively with the Coin Changer configuration using the Palm Pilot®. For configurations using the other programs, separate software instructions are available. (see the "Service tools" section in this section and Chapter 11 "Configuration" for further information).

Token types not programmed by the manufacturer, can be programmed directly at the Coin Changer by inserting the new tokens.

Advantages

- An easily configured Coin Validator enables fast reaction to changing market situations and new false coin introductions
- Easy configuration with help from:
  - the WinEMP© PC software for the workshop
  - the PalmA66© or PalmEMP© with Palm Pilot® handheld software
- Reliable sensing system and optimum rejection of false coins due to the integrated, electronic A-66 Coin Validator
- Universal payout mechanism for different coin diameters and thicknesses
- Flexible payout combinations by easy tube cassettes change out
- Faster service due to error diagnosis
- Splash-proof electronics
- A monitored coin run and controlled sorting guarantee an improved operating reliability and protection against manipulation
- An acceptance speed of 2 coins per second
- A teach mode, able to learn up to three different tokens types or sizes
- Flash Memory technology for implementing uncomplicated and time-saving Coin Validator operating software updates

Service Tools

In order to test the Coin Changer and adapt it to the individual needs of your facility, the following accessories can be acquired from JCM:

PC Test Station

If you only wish to check the functionality of the Coin Changer without making any adjustments, the JCM Test Station is sufficient for this purpose. The Test Station is composed of the following two components:

- Test software WinMDB© and
- Tester G-19.0654 for use as Vending Machine simulation and MDB functional testing.

Download from Www.Somanuals.com. All Manuals Search And Download.

If it is desirable to test all functions and not just the MDB functions, an additional G-55.0348 RJ-45 PC plug adaptor is available from JCM, allowing you to connect the Coin Changer directly to the PC using the easily accessible 8-pin modular RJ-45 jack receptacle located on the top right side of the device.

Configuration Tools

In order to react as quickly as possible to new false coins in the workshop or on site, and enable individual adjustments, the coin changer can be connected to a:

- JCM Programming Station consisting of:
  - WinEMP© configuration and diagnostics software which includes the card reader and chip card
  - Tester G-19.0641
- JCM Palm Pilot®, and applications PalmEMP© and PalmA66© for a Palm Pilot® handheld

Chapter 11 "Configuration" explains which of the preceding configuration tools can be used to set the different Coin Changer parameters.

Update Tools

The Coin Changer's integrated Coin Validator is equipped with microprocessor circuitry that contains Flash Memory. This allows quick updates of the Coin Validator's operating software without complications. In order to load new operating software into the Coin Validator, one of the following three alternatives is required:

- a JCM PC Update Station consisting of:
  - WinFlash© software
  - Tester G-19.0641
  - Programming adapter G-19.0646
- a JCM Flash Prommer G-55.0350 or
- JCM Palm "PalmFlash©" application for a Palm Pilot® handheld and a Flash Adapter

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

Download from Www.Somanuals.com. All Manuals Search And Download.

2 SAFETY INSTRUCTIONS

This section providessafety instructions for using the Optipay™ CC A-66 Coin Changer.
Before operating the device for the first time, please carefully read through this manual at least once, and most importantly, read the safety instructions. This ensures that the contents of this manual and the operation of the A-66 Coin Changer is completely understood.

Proper use

The four tube A-66 Coin Changer is intended for use in vending and service machines containing the serial MDB interface. Only use the A-66 Coin Changer for this purpose. Under no circumstances can the manufacturer be held liable for any damage or loss resulting from improper use of the device.

The Coin Changer series is state of the art and has been constructed in compliance with recognized safety regulations. Nevertheless, this equipment can be a source of danger. Therefore, please observe the following safety regulations:

Protecting Yourself and the Equipment

The A-66 Coin Changer may only be connected by a qualified electrician/ electronics technician.

Only use the Coin Changer according to for it's intended use. Under no circumstances can the manufacturer be held liable for any damage or loss resulting from improper use of this device.

**The Coin Validator's printed circuit board (pcb) is fitted with electronic components which may be damaged beyond repair by electrostatic discharge.
Please observe the handling instructions regarding static sensitive components.**

Select the correct operating voltage for the Coin Changer (see device label directly, or Figure 3-4 in section 3). Never pull on the Coin Validator's Coin Changer connecting cable when a voltage is applied!

Remove the Vending Machine's Power Line Plug before you install, clean or remove the Coin Changer.

Always transport the Coin Changer empty of coins and in its original packaging. It is sufficiently protected in this way. Never carry the Coin Changer by its external cables.

Contact JCM if you wish to alter the Coin Changer's design greater than that which is described in these instructions.

Keep water and other liquids away from the Coin Changer.

Dispose of a damaged Coin Changer correctly, if you have no further use for it.

JCM reserves the right to make technical modifications to the device which are not covered by these instructions.

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
A-66 Coin Changer
Section 3

3 DESIGN

This section describes the general design of the Optipay™ CC A-66 Coin Changer and the various Coin Validator components within it important to the operation of the device. The following items will be discussed:

- Return lever, keyboard, pilot lights, interfaces, DIP Switch block, product labels
- Tube cassette, pay out set, and filling level sensors

The Coin Validator

Coins inserted into the Coin Validator **(3)** (See Figure 3-1) pass through the Coin Insertion Funnel (**11**) into the validation area of the device. Here the coin's properties are compared with the values contained in the stored acceptance bands data. Rejected coins from the Coin Validator pass into the return area tray of the Vending Machine. In the event of a sale, accepted coins are either directed to one the four Tube Cassettes (**6**) or into the Cash Box below them.

Device Overview

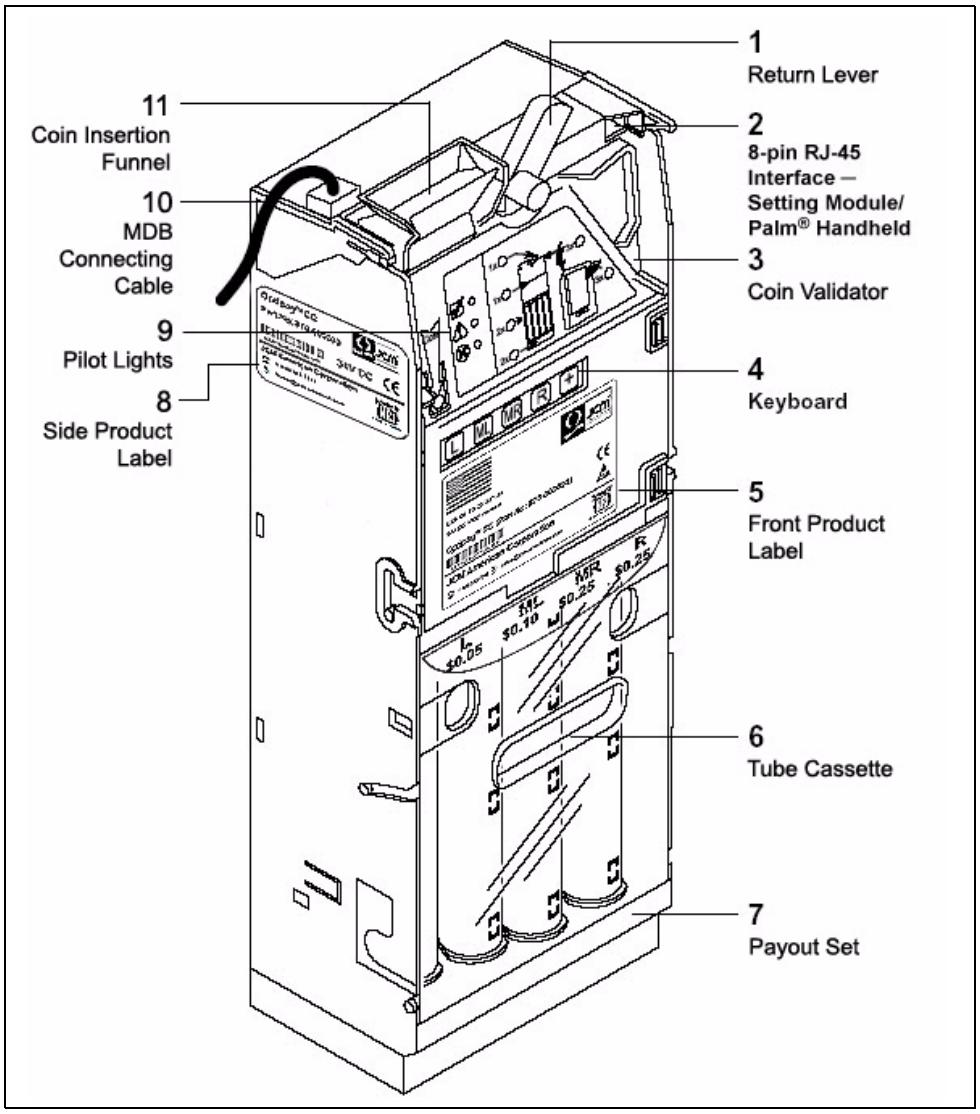


Figure 3-1 A-66 Design Features

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

Return Lever

The Return Lever (See Figure 3-1 [**1**]) on the top of the Coin Validator is operated by using the Vending Machine's Return Button. Operating this lever is necessary if inserted coins are awaiting return, or a coin jam caused by stuck coins require removal. When the return lever is operated, the measurement and validation area of the Coin Validator opens so that all objects within the Coin Validator are directed to the return area tray (See Figure 3-1).

Keyboard

The front of the Coin Validator is equipped with a five key touch-sensitive membrane Keyboard (See Figure 3-1 [**4**]) which allows filling of the Payout Unit's change tubes before the device is put into operation or emptying them for inventory (See section 4 "Functions" and section 7 "Operation" for further information).

Pilot Lights

There is a Pilot Light set of three Light-Emitting Diode (LED) at the front of the Coin Validator positioned beneath one another colored; Green, Yellow, and Red respectively (See Figure 3-1 [**9**]).

These LED Pilot Lights are mainly used for quick fault diagnosis, but can also indicate the units current status in normal operation conditions (See Figure 3-1).

If the top Green LED lights or flashes, no faults are indicated and the device is working properly. If the middle Yellow LED flashes there is a definite general fault indicated that usually can be easily remedied.
If the bottom Red LED flashes, a fault that must be remedied by a service technician is indicated. (also see the section 14 "Trouble Shooting" appendix).

Interfaces

There is a 40-Pin Dual Inline Header interface jack on the middle rear of the Coin Validator's circuit board (See Figure 3-2 [**12**]). This interface allows the device to be connected to the Coin Changer using a pre-assembled flat ribbon cable assembly. On the top right front of the Coin Validator there is an 8-pin RJ-45 receptacle jack (See Figure 3-1 [**2**]). This connector allows the Coin Changer to be connected to a Palm Pilot® handheld device for configuration purposes. On the left side of the Coin Validator there is a direct 5-Pin Printed Circuit Board (PCB) edge connector (See Figure 3-2 [**11**]) which allows connection of the Coin Validator to a programming PC and a JCM Test Station.

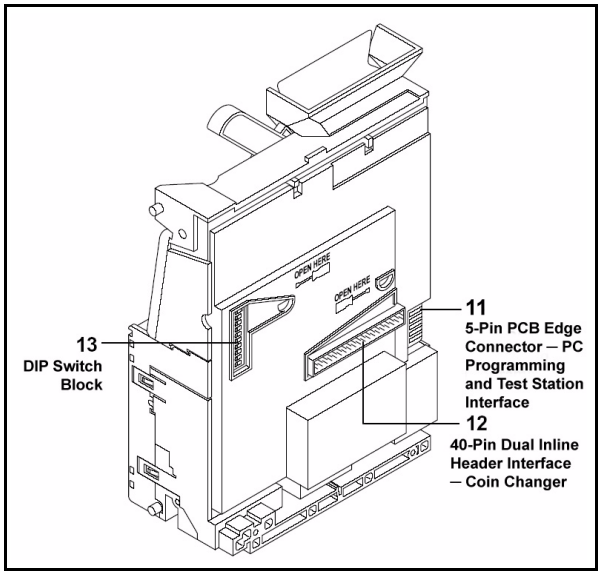


Figure 3-2 Coin Validator's Rear Side

DIP Switch Block

Individual settings for inhibiting various coin types can be easily made by selecting the proper switches on the 10-position DIP Switch Block located on the rear PCB of the device (See Figure 3-2 (**13**) as well as section 7 "Operation" for detailed user information).

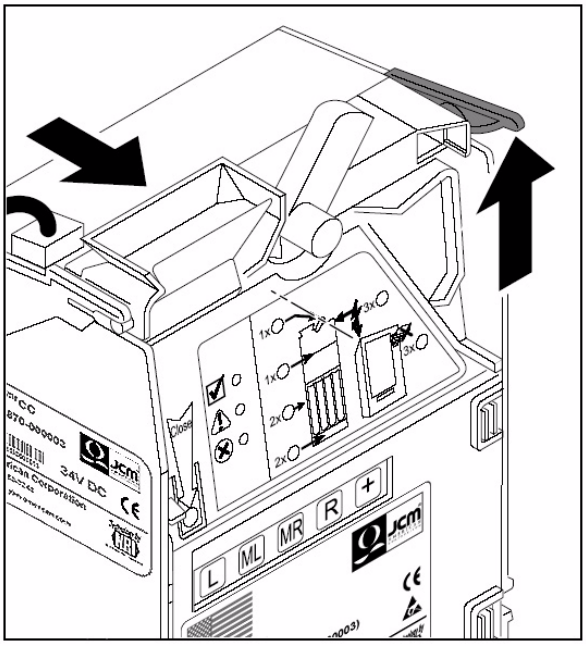


Figure 3-3 Coin Validator Removal

Download from Www.Somanuals.com. All Manuals Search And Download.

Product Labels

The Coin Validator's Side Product Label ((See Figure 3-1 [**11**] and Figure 3-4) contains all the device defining data, such as the device type and series, and the data programmed according to customer specifications such as their currency and relative country's coin type requirements listed in Table 3-1.

Figure 3-4 Coin Validator Side Label

Table 3-1 Side Label Features

1.	Data block number	**2.**	Order number (6 digit)
3.	Device part number	**4.**	Serial device number per order number (3 digit)
5.	Barcode	**6.**	Certified European mark
7.	Date of manufacture (4 digit)	**8.**	Nominal Voltage
9.	Ordering code (8 digit)	**10.**	Product Trade Marked name

The Front Product Label (See Figure 3-1 [**5**] and Figure 3-5) contains similar information as the side label with additional content regarding safety and relative country's coin age denomination requirements listed in Table 3-2.

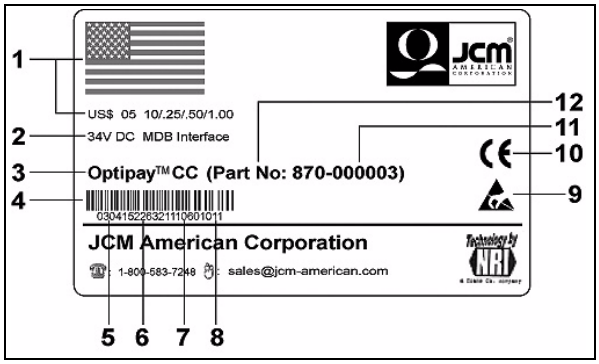


Figure 3-5 Coin Validator Front Label

Table 3-2 Front Label Features

1.	Country flag, country code and currency/coin type requirements	**2.**	Order number (6 digit)
3.	Nominal voltage & Interface	**4.**	Serial device number per order number (3 digit)
5.	Product name	**6.**	Safety tested certification logo
7.	Barcode	**8.**	Certified European mark
9.	Date of manufacture (4 digit)	**10.**	Data block number
11.	Ordering code (8 digit)	**12.**	Device part number

The Payout Unit

The Payout Unit consists of the four tube cassette and the payout set. The device is equipped with filling level sensors and tube counters to monitor each tube cassette's inventory.

Tube Cassette

The Tube Cassette (See Figure 3-1 [**6**] and Figure 3-6 [**1**]) incorporates four change tubes with different diameters for collecting four user coin types, available for vending to a customer. A sticker located at the top of the Tube Cassette identifies which tube accepts a particular denomination coin value.

The tube coin storage capacity depends on the thickness of each coin type (example: approximately 87 U.S. 25¢ coins can fill a tube), See Table 3-3 for a listing of the U.S. coin values and quantities allowed per tube.

Table 3-3 U.S. Coin Cassette Capacity

Coin Value	Thick-ness (cm)	Nº. of Coins @ 100% Sensor Level	Empty	@ 50%	@ 75%
0.5	1.87	78	10	39	59
0.10	1.3	112	14	56	85
0.25	1.67	87	11	44	66
1.00	2.0	73	9	36	55

The Coin Validator tests whether an accepted coin should be sorted into one of the four tubes, or be directed to the Cash Box according to customer programming.

Download from Www.Somanuals.com. All Manuals Search And Download.

If at any time another combination of tube coins is required, the appropriate cassette can be ordered from the JCM and simply exchanged in the assembly (See Figure 3-6 [**1**]).

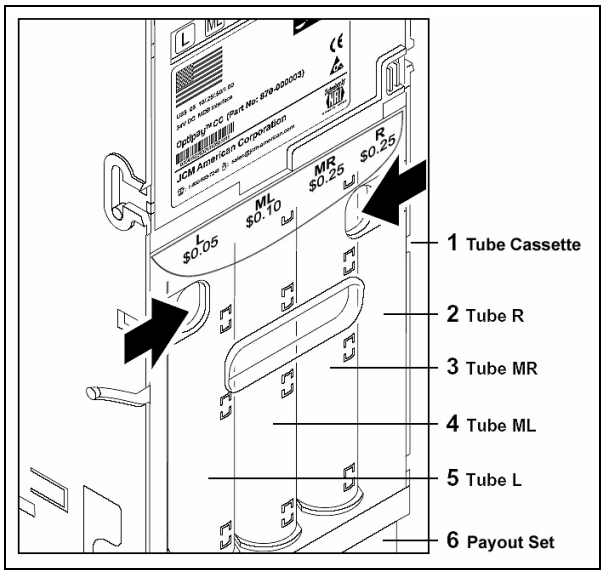


Figure 3-6 Tube Cassette Removal/Replacement

Payout Module

Vending change is done by two motors installed at the bottom of the Payout Set (See Figure 3-1 [**6**]), which rotate in order to vend the desired coins.

The left side motor is responsible for vending the left "Tube L (**5**)" and middle left "Tube ML (**4**)" tube coins, and the right side motor is responsible for vending the right "Tube R (**2**)" and middle right "Tube MR (**3**)" tube coins.

Filling Level Sensors

The capacity of each tube is monitored by four independent sensors viewing the number of it's related coins:

- An empty sensor is positioned at the height of 8 to 10 collected coins
- A 50% sensor approximately half way up
- A 75% sensor near the top, and
- A full sensor is positioned at the top rim of each tube.

In order for the tube counters to function without fault when the change tubes are filled by inserting coins through the Coin Changer, or when the tubes are filled by removing the four Tube Cassette, the filling level sensors must check the tube counter's status after every coin acceptance and coin vend. If the number of coins does not correspond with the measured tube capacity level, the tube count will be corrected depending on the respective tubes coin thickness.

If a tubes "full" sensor displays the message "tube full", all further coins for this tube will be automatically directed to the Cash Box. Only when coins have been vended again from this tube, will more coins be allowed into the tube.

MDB Vending Machine Cable

The MDB Interface Connecting Cable (See Figure 3-1 [**10**]) to the Vending Machine is installed at the top left corner of Coin Changer. For details of how to install the Coin Changer into a Vending Machine, see section 5 "Installation".

Download from Www.Somanuals.com. All Manuals Search And Download.

4 FUNCTIONS

This section describes the main functions of the Optipay™ CC A-66 Coin Changer with particular emphasis on:

- Filling and emptying the change tubes
- Considering the maximum number of coins configured for the change tube
- Considering the configured security stock of tube coins
- Inhibiting certain coin types
- Disabling the inventory keys
- Configuring tokens
- Sending the telephone/currency code to the Vending Machine control
- Correcting the tube counter automatically
- Resetting the tube counter
- Considering the individual wake-up time
- Accepting and converting a second currency coinage (optional)
- Minimizing string manipulation (optional)

Only these functions will be described in this section. If adjustable functions require changing, see section 7 "Operation" for direct Coin Changer adjustments, and section 11 "Configuration" for using the configuration tools to reset them.

Filling and Emptying Change Tubes

The simplest and quickest way to fill and empty the tube cassette is to remove the cassette (See Figure 4-1). This allows for coin sorting or the removal of several coins at once.

If the correct number of tube coins is required to simplify coin management, the change tubes can be filled by inserting individual coins into the Coin Changer one at a time. The tube counters register every coin inserted or paid out when activated by the keyboard (see section 6 "Energizing" and section 7 "Operation").

The tube cassette can also be both filled and emptied in this manor with the help of the PC software or the Palm Pilot® handheld software (see section 11 "Configuration").

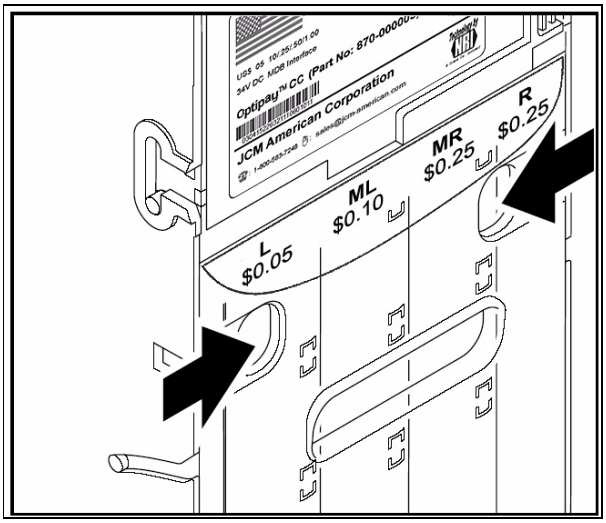


Figure 4-1 Tube Cassette Removal

Coins can vend individually, (e.g. for test purposes), consecutively for inventory purposes, or before device transportation.

If the tubes must always be filled or emptied to a certain capacity by service personal, a “float level” can be configured (see section 11 "Configuration"). This filling capacity is irrelevant for normal use and only guarantees that a known number of coins is present for accounting purposes. If the “float level” function is activated, Cash Box coins will not be accepted. Consequently, the Cash Box must not be emptied prior to refilling the tubes because the unaccepted coins will not be counted during a refill.

Configuring Change Tube Coin Maximum

The Coin Changer can be configured so each change tube will accept a fixed number of coins. When this fixed number is reached in a tube, all subsequent coins destined for this tube will be automatically directed to the Cash Box. Only when coins have been vended from this tube, will more coins be allowed to enter it. (See section 11 "Configuration").

If this function is unused, the full sensor located at the top of the tube determines when the coins will be directed into the Cash Box and no longer into the coin tube, irrespective of the number of coins inserted.

Download from Www.Somanuals.com. All Manuals Search And Download.

Security Stock Considerations

If a security stock is configured for the individual tubes, the Coin Changer will not vend a minimum number of tube coins. The security stock can be set between 1 and 9 coins. It should be set higher for coins which have stacking and edge standing problems rather than those that lay flat, as these coin types do not fall easily when they land on a stack higher than the coin (see section 11 "Configuration").

The Coin Changer can also be configured in such a way that the security stock can be paid out of the Vending Machine, or the security stock can be delivered to the Vending Machine, when the machine polls the capacity level (see section 11 "Configuration").

Inhibiting Certain Coin Types

If certain coin types are no longer being accepted as Vending Machine payment (e.g. because too many false coins of a particular type are in circulation), these coins types can either be inhibited directly on the device by setting specific DIP switches on the rear DIP Switch block (see Chapter 7 "Operation"), or by applying the PC software or the Palm Pilot® handheld software instructions (see section 11 "Configuration").

Disabling the Inventory Keys

The inventory keys constitute a part of the Coin Changer's front Keyboard: (e.g., keys [L], [ML], [MR] and [R]).

These keys allow the vending of one, several or all coins from the corresponding Left, Middle Left, Middle Right and Right change tube. Should operation of these keys no longer be desired, they can be inhibited, or configured in such a way that they can be enabled by Vending Machine control (see section 11 "Configuration").

Configuring Tokens

The Coin Changer contains three coin channel memory locations for configuring a maximum of three different type tokens. Therefore, a new token's measured value can be directly assigned to a coin channel on the Vending Machine by inserting the corresponding tokens into it. The acceptance band generated will then accept these tokens for payment within the Vending Machine.

In addition, you can choose between a normal and wide acceptance band for the configured tokens. However, a wide acceptance band should only be set if a limited number of the tokens are available for generating the token's value measurement, or if the tokens show very large tolerance values. Otherwise, there is the danger that a large number of false coins will be accepted.

Tokens can either be configured so the customer gets his selected product free of charge (free vend tokens), or configured to assign a certain set denomination (value tokens). The Coin Changer can either direct the accepted tokens to the cashbox or send them back to the customer in the return tray.

Chapter 11 "Configuration" reveals which configuration tool can be used to configure tokens.

Sending the Telephone/Currency Code to the Vending Machine Controller

Depending on which state or country the machine is installed, a telephoned currency code can be remotely sent to the Vending Machine control and set into the Coin Changer (e.g. for setting menu and display text).

For more details on how to change the pre-programmed telephone/currency code, please see section 11 "Configuration".

Tube Counter Automatic Correction

Usually after every coin acceptance and pay out, the Coin Changer compares the tube counter status and the sensor's measured fill level, and, if necessary, corrects the tube counter data.

If the Vending Machine control is unable to process the automatic tube counter correction, the Coin Changer can be set so that the tube count will not be automatically corrected (see section 11 "Configuration").

In this case, the change tubes should be filled by inserting the coins through the Coin Changer and not by directly placing the coins into the tube cassettes (see section 6 "Energizing" or section 7 "Operation").

Resetting the Tube Counter

After the change tubes have being emptied following repairs with tube counter correction switched OFF, the Coin Changer's tube counters should be reset for start up. This is so the tube counter will begin to count from zero again when the tubes are

Download from Www.Somanuals.com. All Manuals Search And Download.

being refilled, rather than from the stored number of coins set in the register (see section 11 "Configuration").

Individual Wake-up Time Considerations

For battery operated Coin Changers with an external wake-up line, a specific time period can be set that specifies how long the Coin Changer remains ON after the last Vending Machine poll (wake-up time) (see section 11 "Configuration").

When the wake-up time has elapsed, the Coin Changer automatically switches itself OFF and must be re-initialized again by the Vending Machine control system activating the external wake-up line.

Accepting and Converting a Second Currency Type (optional)

If the Coin Changer needs to accept two currency types, the second currency value can be converted to the main currency value using a set rate.
The second currency value is rounded up or down respectively in such a way that it can be managed by the main currency counter. Chapter 11 "Configuration" describes which configuration tool is used to program a second currency.

Minimizing String Manipulation (optional)

The Coin Changer can be optionally equipped with a String Sensor. This device recognizes coins inserted into the device connected to a string and inhibits this type of coin from being accepted. By recognizing this security condition these coin types will not generate a credit value.
The sensitivity of the String Sensor can be individually set for each unit (see section 11 "Configuration").

Following a string manipulation attempt it is possible to reject the next 100 tube coins inserted by directing them to the Cash Box instead of into the coin tubes. Coins directed to the Cash Box are less prone to manipulation, so further attempts at string manipulation will obviously fail (see section 11 "Configuration").

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
A-66 Coin Changer
Section 5

5 INSTALLATION

This section provides a installation instructions for the Optipay™ CC A-66 Coin Changer.The A-66 Coin Changer is either:

- Energized within a Vending Machine, or
- Connected to a JCM Test Station using WinMDB© software for test purposes or
- Connected to one of the following JCM configuration tools for set up purposes:
  - A PC programming station containing WinEMP© software
  - A Palm Pilot® handheld (containing installed PalmA66® and/or PalmEMP® software).

This section describes how to connect the Coin Changer to a Vending Machine. For details on connecting the service tools, see section 11 "Configuration".

> ⚠ **To avoid damage to the equipment, please make sure that you check the following before installation:**
>
> **– check that the Coin Changer's MDB connecting cable is suitable for the Vending Machine interface.**
>
> **– check that the Coin Changer's power supply is the same as the nominal voltage stated on its product label.**

The following steps describe how to install the Coin Changer into a Vending Machine:

1. Disconnect the Vending Machine's main AC power plug.
2. Unlock (See Figure 5-2 [**1**]), pull out [**2**] and remove the Coin Validator from the Coin Changer assembly by carefully lifting the left and right side catches and gently pulling forward as indicated by the arrows illustrated in Figure 5-1.
3. Hang the A-66 in the Vending Machine using the three mounting holes located on the back wall of the Coin Validator. Two holes are

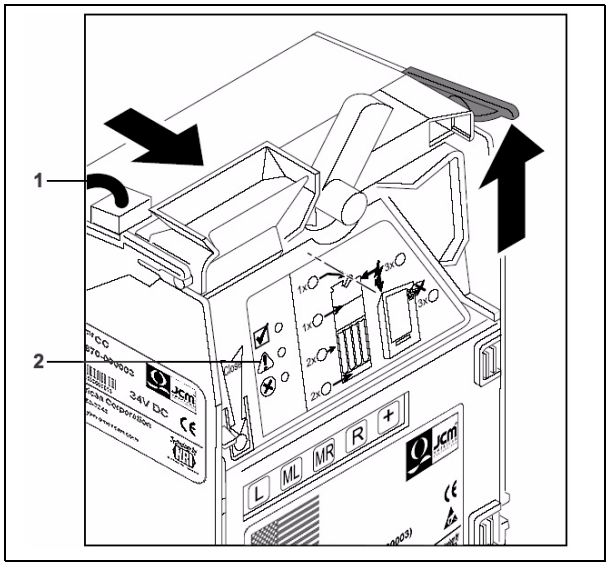


Figure 5-1 Coin Validator Removal

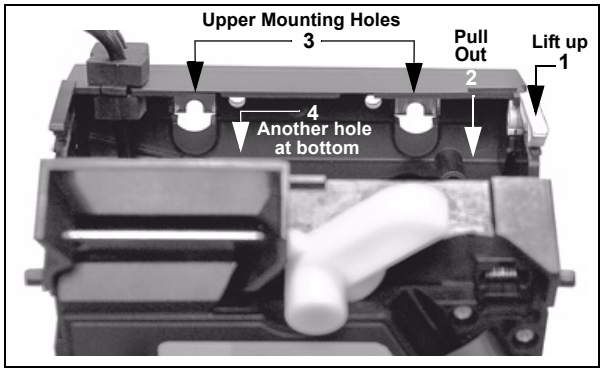


Figure 5-2 Coin Changer mounting hole locations located at the top (See Figure 5-2 [**3**]) and one is located at the bottom [**4**] (not shown).

> ⚠ **Ensure that the Coin Validator assembly remains safely connected to the Coin Changer by the flat 40-wire ribbon cable.**

4. Tightly secure the Coin Changer's housing to the Vending Machine.
5. Replace the Coin Validator back into the Coin Changer and engage.

> ⚠ **Ensure that an air space exists between the Vending Machine's return lever and that of the Coin Changer when closing.**

Download from Www.Somanuals.com. All Manuals Search And Download.

6. Connect the Coin Changer to the Vending Machine using the MDB connecting cable (See Figure 5-1 [**1**]).

NOTE: A second Harness containing a four pin connector is used with the optional DBV-301 Validator's RC-10 Recycling Unit. This should be tied off if not being used.

7. Reconnect the Vending Machine's main AC power supply. The three LEDs (See Figure 5-1 [**2**]) located on the Coin Validator's front panel will briefly illuminate to test their functions. Afterwards, the Green LED should remain lit. The Coin Changer is now operational and ready for use.

Download from Www.Somanuals.com. All Manuals Search And Download.

6 ENERGIZING

This section provides energizing (power-up) instructions for the Optipay™ CC A-66 Coin Changer.

Although the individual functions of the A-66 Coin Changer are pre-programmed by the manufacturer to customer specifications, the first time the device is activated, the four Tube Cassette change tubes must be filled with relevant coin types.

In many cases the Vending Machine's controls will offer a filling function. In this case they should be used, because the control unit might not accept the filling level capacity of the Coin Changer.

If the Cash Box contains coins, it must be emptied, otherwise new coins directed to the Cash Box will not be counted.

To begin the energizing process:

1. Press the Plus [+] key (See Figure 6-1 [**4**]). An audible signal will sound and the Green LED (See Figure 6-1 [**1**]) will begin flashing indicating that the Coin Changer is no longer in a standard operating mode and has now entered the filling level mode.

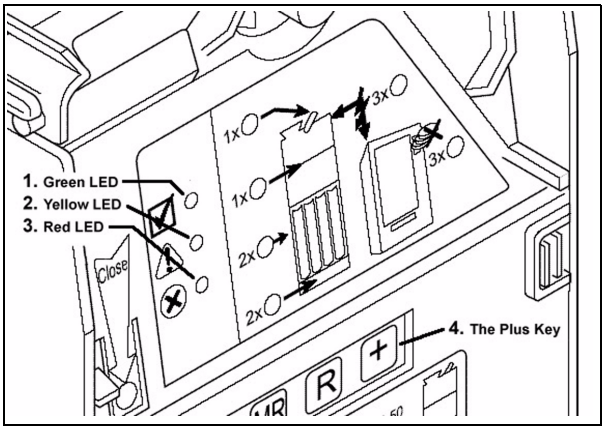


Figure 6-1 Coin Validator Keyboard

2. Insert the coin tubes.
   The Coin Validator's tube counter meters in the accepted coins, and the Coin Changer sorts the corresponding coin type into its pre-configured tube until either:
   - The full sensor is covered, or
   - The maximum coin number is configured, or
   - The float level is reached.

   If the "float" function is active, tube coins inserted thereafter will not be accepted and will be directed to the return area tray. Otherwise, they will be accepted and directed to the Cash Box.

If all the coin tubes are full:

3. Press the Plus [+] key again.
   Two audible signals will sound and the Green LED will light constantly indicating that the Coin Changer is no longer in the filling level mode and has returned to the operating mode.

If no coins are inserted in a 30 second time period, the Coin Changer will automatically return to the operating mode, without having to press the Plus [+] key a second time.

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

Download from Www.Somanuals.com. All Manuals Search And Download.

7 OPERATION

This section explains how to enter functions and settings directly on the Optipay™ CC A-66 Coin Changer using its various operating controls (e.g., the front panel Keyboard and the DIP Switch Block), rather than using the additional programming tool accessories.

Vending Change by Using the Keyboard or Emptying the Tube Cassette

Coins can be either vended from the change tubes individually if a coin acceptance test is desired, or consecutively when the tubes need to be completely emptied (e.g., before transit, for repairs, or in case of an inventory).

Membrane inventory keys [L], [ML], [MR] and [R] apply to the "left", "middle left", "middle right", and "right" coin tubes respectively.

If the Coin Changer is configured so the inventory keys are disabled, these membrane keys will not be active. The device is either configured so the keyboard can be enabled by the Vending Machine's control system, or so the keyboard must be initially activated by one of the various configuration tools (see section 11 "Configuration").

To vend tube coins individually, simply press the corresponding [L], [ML], [MR] and [R] key. One coin will pay out each time the specific key is pressed.

To vend several tube coins:

1. Hold down the desired [L], [ML], [MR] or [R] membrane key for approximately five seconds.
   The corresponding tube will automatically empty without having to press the respective key again.
2. Now, press any other key.
   The coins will stop dispensing if not already completely emptied.

If the Coin Changer is configured so the inventory keys are disabled, these membrane keys will not be active. The device is either configured so the keyboard can be enabled by the Vending Machine's control system, or so the keyboard must be initially activated by one of the various configuration tools (see section 11 "Configuration").

Emptying the Change Tubes to a Certain Fill Level

If a "float" level is configured, the change tubes can be emptied to the tube counter's set float level value.

Emptying the change tubes to the set float level:

1. Press the Plus [+] key.
   An audible signal will sound and the Green LED will begin flashing indicating that the Coin Changer is no longer in a standard operating mode and has now entered the filling level mode.
2. Hold down any key, for approximately five seconds (the Green LED illuminates).
   All tubes will automatically empty to the preconfigured float level. Afterwards, two audible signals will sound and the Green LED will light constantly indicating that the Coin Changer is no longer in the filling level mode, and has returned to the operating mode.

Validator Change Filling

After an inventory or repair the tube cassette's four change tubes can be refilled with relevant coin types through the Coin Validator using the keyboard.

In many cases the Vending Machine's controls will offer a filling function. In this case they should be used, because the control unit might not accept the filling level capacity of the Coin Changer.

If the Cash Box contains coins, it must be emptied, otherwise new coins directed to the Cash Box will not be counted.

Download from Www.Somanuals.com. All Manuals Search And Download.

1. Press the Plus [+] key.
   An audible signal will sound and the Green LED will begin flashing indicating that the Coin Changer is no longer in a standard operating mode and has now entered the filling level mode.
2. Insert the coin tubes.
   The Coin Validator's tube counter meters in the accepted coins, and the Coin Changer sorts the corresponding coin types into its relative pre-configured tube until either:
   - The full sensor is covered, or
   - The maximum coin number is configured, or
   - The float level is reached.

   If the "float" function is active, tube coins inserted thereafter will not be accepted and will be directed to the return area tray. Otherwise, they will be accepted and directed to the Cash Box.

If all the coin tubes are full:

3. Press the Plus [+] key again.
   Two audible signals will sound and the Green LED will light constantly indicating that the Coin Changer is no longer in the filling level mode, and has returned to the operating mode.

If no coins are inserted in a 30 second time period, the Coin Changer will automatically return to the operating mode, without having to press the Plus [+] key a second time.

Inhibiting Coin Types Using DIP Switch Block Settings

By setting various switches on the DIP Switch Block located on the rear Coin Validator's circuit board, it is possible to inhibit configured coin types related to the first eight memory slots (coin channels) of the Coin Changer without using the additional configuration tools available. For details on which coin type has been programmed for each coin channel, please contact your JCM representative, or connect the Coin Validator to the Palm Pilot® using PalmA66® and/or PalmEMP® software (see section 11 "Configuration").

To inhibit a specific coin type:

1. Remove the Coin Validator from the Coin Changer assembly by carefully lifting the left and right side catches and gently pulling forward as indicated by the arrows illustrated in Figure 7-1 .

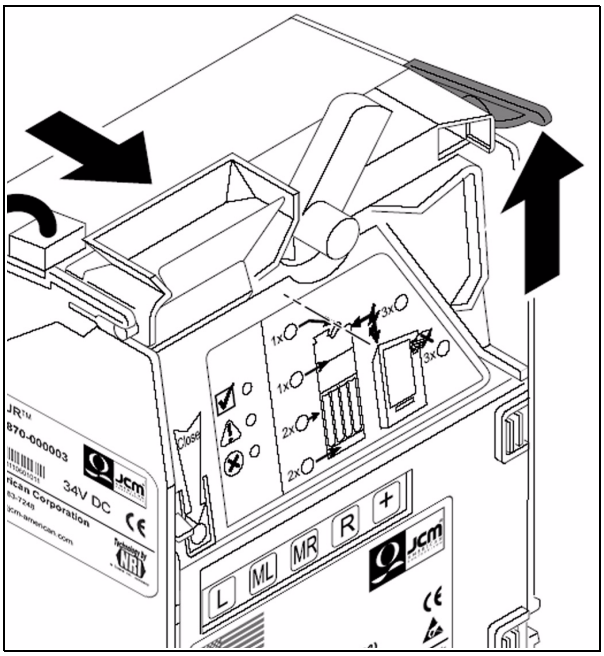


Figure 7-1 Coin Validator Removal

Ensure that the Coin Validator remains safely connected to the Coin Changer by the flat 40-wire ribbon cable.

2. Set the related DIP Switches (1 through 8) to their correct position (ON) using a scribe, small screw driver or an opened paper clip (See Figure 7-2).

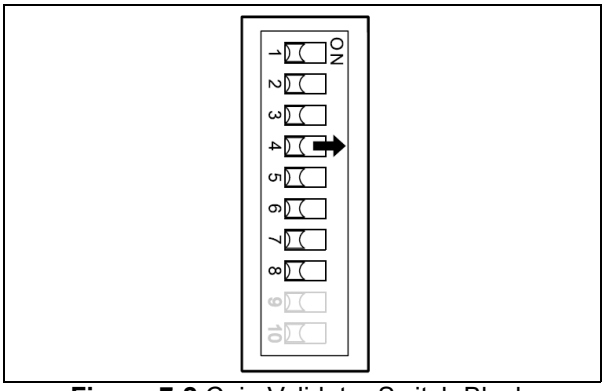


Figure 7-2 Coin Validator Switch Block

The assigned coin types will no longer be accepted, and will now be directed to the return area tray.

3. Reinstall the Coin Validator and activate it.

With the aid of the configuration tools, the possibility to inhibit any or all of the pre-programmed coin types also exists (see section 11 "Configuration").

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
A-66 Coin Changer
Section 8

8 CLEANING

This section explains how to clean the Optipay™ CC A-66 Coin Changer.

Only wipe the Coin Validator from time to time with a damp cloth (use luke warm water containing a mild dish cleaning liquid):

> ⚠ **Under no circumstances allow the cloth to be wet enough to allow excess fluid to run into the device. Otherwise the printed circuit board (pcb) may be damaged.**
>
> **Do not use any solvents or scouring agents which can attack the plastic surfaces of the device.**

1. Remove the Vending Machine's main AC power plug.
2. Press up on the locking catch lever and open the Coin Validator panel to the left (See Figure 8-1 [**1**]).
3. Wipe the coin runway clean once inside the coin validation area.
4. Close the Coin Validator panel and gently press in on the "Close" arrow white dot until the metal spring engages behind the lever and a click is heard (See Figure 8-1 [**2**]).
5. Reconnect the Vending Machine to the main AC power supply.

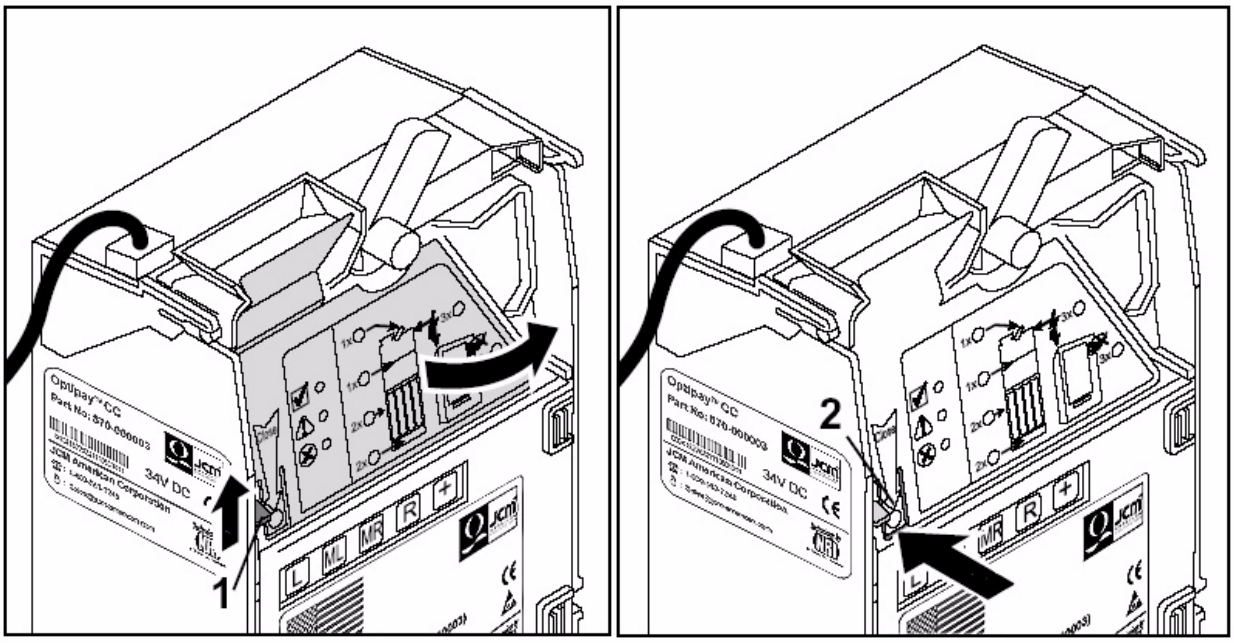


Figure 8-1 Opening and Closing the Coin Validator's Access Panel

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

9 TRANSPORT

This chapter explains how to transport the Optipay™ CC A-66 Coin Changer.

Empty the tube cassette before transporting the device so that loose coins do not fall out.

Pull the Vending Machine's main AC power plug before removing the Coin Changer from the Vending Machine.

To avoid unnecessary damage, only transport the device in its original packaging; and, under no circumstance carry it by it's connecting cable.

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
A-66 Coin Changer
Section 10

10 TECHNICAL DATA

This section lists and defines the Optipay™ CC A-66 Coin Changer specifications.

A-66 Specifications

Coin acceptance	20 coin types maximum 16 different coin channels (up to 3 tokens) Coin diameter: 0.59–1.23 in. (15–33 mm) Coin thickness: 0.047–0.138 in. (1.2–3.5 mm)
Coin vending:	4 coin types from a tube cassette (coin diameter and thickness depends on the specific tube cassette)
Device dimensions:	Height: 14.96 in. (380.0 mm) Width: 5.25 in. (133.5 mm) Depth: 3.01 in (76.5 mm [80 mm with return]) lever depressed])
Machine interface:	Serial **M**ulti-**D**rop **B**us (MDB) interface
Mounting position:	Vertical (maximum deviation = 2°)
Temperature range:	-4 °F to 167 °F (-20 °C to +75 °C)
Humidity:	90% maximum
Nominal voltage:	24 Volts DC
Power consumption:	Standby = 1.2 Watts; maximum 6 Watts with 24 V DC
Noise immunity:	The device fulfills the current requirements on generic immunity and generic emissions according to current EC directives (a EMC law)
Safety prescriptions:	Low voltage directive

CE Certification

The CE certificate (CE = Communautés Européennes) confirms that our products comply with the specified basic requirements of the applicable directive. The CE certif-icate is not a quality assurance certificate in terms of the quality expected by the manufacturer, but only in terms of the quality demanded legally. It is a pure administrative certificate and is intended only as proof of compliance with the directives for the monitoring authorities and not directed at clients or final customers.

The following directives and their subsequent changes can be applied partially to JCM devices:

1. The EMC Directive (89/336/EEC) regarding devices that cause electromagnetic interference or are interfered with by same.
2. The Low Voltage Directive (73/23/EEC) regarding electrical equipment used with a nominal voltage between 50 and 1000 Volts AC and 75-1500 Volts DC.

The CE Certificate Labelling Directive (93/68/EEC) modification regarding the application and use of CE labels.

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

11 CONFIGURATION

This section explains how to configure the Optipay™ CC A-66 Coin Changer for use.

In order to test the A-66 Coin Changer, react quickly to new false coin occurrences, and make individual adjustments in the workshop or on site, three different service tools are available to facilitate these Coin Changer requirements.

This section includes:

- A presentation of the individual service tools required depending on where the Coin Validator is to be tested or configured
- Lists of the functions which can be set with each service tool
- Lists of the equipment required for testing or configuration using the respective tool
- Brief descriptions detailing how to connect the various service tools to the Coin Changer

Workshop Testing the Coin Changer

If Coin Changer functionality needs to be checked without making any adjustments, the JCM Test Station is sufficient for this purpose. The Test Station is composed of the following two components:

- Test Software WinMDB© and
- Tester G-19.0654 for Vending Machine simulation and MDB functions testing

Workshop Testing and/or Configuring the Coin Changer

If the Coin Changer requires testing and configuration in the workshop, the following three JCM configuration solutions are available:

- A PC programming station consisting of:
  - WinEMP© configuration and diagnostics software, including a card reader and a chip card
  - Tester G-19.0641 for checking the power supply
- A Palm Pilot® handheld containing:
  - PalmEMP© and/or PalmA66© software installed
  - Tester G-19.0641or G55.0338 for checking the power supply.

If the vending unit does not require testing, it is unnecessary to dismantle the entire Coin Changer. In this case it is just sufficient to remove the Coin Validator from the Coin Changer in order to configure or test it.

If it is difficult to connect the G-19.0641 tester to the 5-pin PCB Edge Connector Plug located behind the Coin Changer housing, and it is more desirable to connect the G-55.0338 tester by means of the MDB connecting cable, an additional 8-pin RJ-45 PC-Adaptor (plug and cable G 55.0348) can be obtained from JCM for this purpose. This will allow the Coin Changer to connect directly to a PC using the easily accessible 8-pin RJ-45 jack on the top right corner of the device. This will also allow testing of all Coin Changer functions and not just the MDB functions available through the 5-pin pcb edge connector plug.

On-Site Testing and/or Configuring the Coin Changer in a Vending Machine

If the Coin Changer must be tested or configured in a Vending Machine on site, the following mobile JCM configuration tools are available:

- A Palm Pilot® Handheld with PalmEMP© and PalmA66© software installed

PC Programming Station and Palm Pilot® Handheld Use

There are separate operating instructions available for the PC base station using WinEMP© software and the Palm Pilot® using PalmA66© and PalmEMP© handheld software. This software contains all necessary detailed steps for configuring the Coin Changer from installation, to its initial connection and operation. This user manual only provides a general overview relative to these instructions.

Download from Www.Somanuals.com. All Manuals Search And Download.

The WinEMP© software or PalmA66© and PalmEMP© software is used to diagnose and configure JCM Coin Validators as well as update the data block in the device memory (data block download). All three programs identify the connected Coin Validator and the device's own data, and present them on the video screen of your PC or on the Palm Pilot® handheld's display.

Which Functions Can be Configured?

All available functions of the Coin Changer can be set with the PC programming station using the WinEMP© PC based software, whereas, by using either of the Palm Pilot® handheld programs, only some of the functions can be set. However, both of the Palm Pilot® programs together allow the same configuration possibilities as using the WinEMP© PC based software alone.
In addition to Coin Changer diagnostics, (e.g. in Service cases) the following functions can be set:

WinEMP© Software

WinEMP© software provides:

- Replacement of the tube cassette
- Resetting of the tube counters
- Genuine coin acceptance optimization and false coin rejection
- New coin type and token configuration
- Other tube coin type configuration
- Configuring the maximum number of tube coins
- Configuring a security stock
- Inhibiting individual coin types
- Disabling the inventory keys
- Configuring the telephone and currency code
- Suppressing or activating the tube counter correction
- Configuring an individual wake-up time
- Configuring a second currency including the conversion factor
- Minimizing string manipulation
- Configuring the smallest coin values decimal point reference and the calculations basis for all coin types
- Data block download of current coin information
- Restoration of an old Coin Changer configuration
- Storing Coin Changer settings for a standardized configuration (cloning)

PalmA66© Software

PalmA66© software provides:

- Replacement of the tube cassette
- Resetting of the tube counters
- Configuring up to three token types
- Other tube coin type configuration
- Configuring the maximum number of tube coins
- Configuring a security stock
- Inhibiting individual coin types
- Disabling the inventory keys
- Configuring telephone and currency codes
- Suppressing or activating the tube counter correction
- Configuring an individual wake-up time
- Configuring a second currency including its conversion factor
- Minimizing string manipulation
- Configuring the smallest coin values decimal point reference and the calculations basis for all coin types
- Storing Coin Changer settings for a standardized configuration (cloning)

PalmEMP© Software

PalmEMP© software provides:

- Genuine coins acceptance optimization and false coin rejection
- New coin type and token configuration (acceptance band only, not the token type)
- Data block download of current coin information
- Storing Coin Changer settings for a standardized configuration (cloning)

PC Programming Station Device Environment

The PC programming station consists of:

- WinEMP© configuration and diagnostics software including Card Reader G-19.0647 and chip card

Download from Www.Somanuals.com. All Manuals Search And Download.

- Tester G-19.0641 for the checking the power supply (See Figure 11-1).

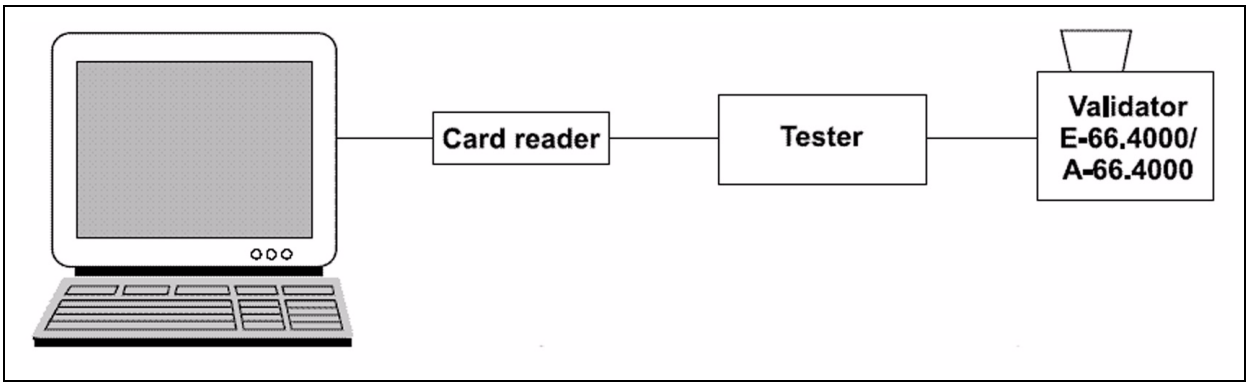


Figure 11-1 PC Programming Station Connection

Connecting a Palm Pilot® Handheld

PalmEMP© and PalmA66© are JCM software solutions that can be installed on a Palm Pilot® handheld as additional applications. The Palm Pilot® handheld can be simply connected to the Coin Validator or Coin Changer by means of an additional connecting cable (See Figure 11-2 illustrating a simple software delivery method).

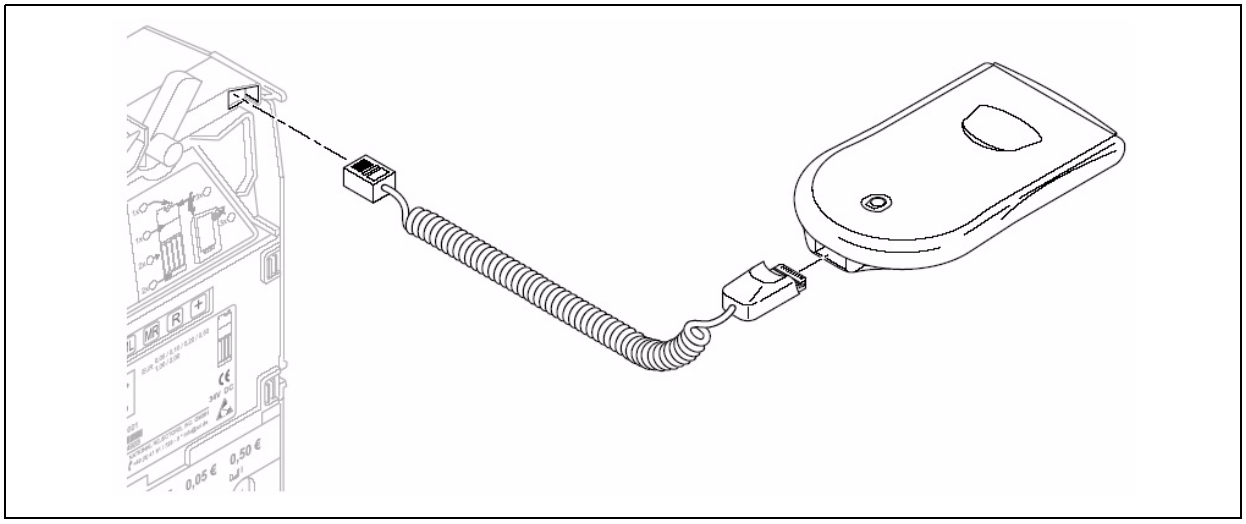


Figure 11-2 Palm to Validator or Changer Connection

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

12 PALM PILOT® USAGE

A66US Changer Program Usage

This section describes the use of a Palm Pilot® to configure the Optipay™ CC A-66 Coin Changer using PalmA66© and/or PalmEMP© software.

Requirements

- A Palm Pilot® Handheld – All M100, 500 and Tungsten Series handhelds (See Figure 12-1)
- Centaur Changer Communication Cable
- JCM A66US Changer Program for the Palm Pilot®*
- PC with Windows 2000 or XP O/S
- Palm Pilot® Application Suite
- Hot Sync Cradle or Cable*.

**Refer to the Palm Pilot® user's manual for program installation and Hot Sync instructions.*

Figure 12-1 Typical M100/500 Series Palm Pilot® Handheld & Software

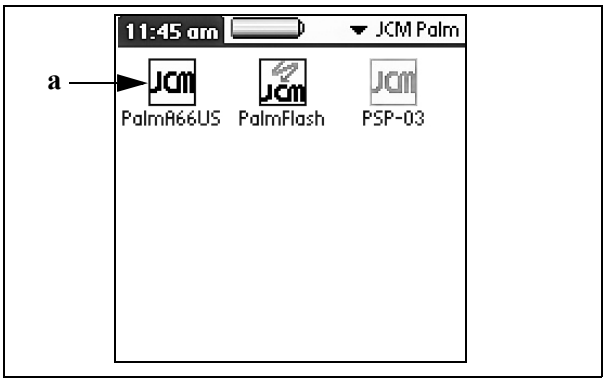


Figure 12-2 Palm A66US Selection

Managing Coin and Configuration Settings

1. Turn on the Palm Pilot® and select the JCM Palm A66US application (See Figure 12-2).
2. Select the **Settings** tab on the main menu screen (See Figure 12-3 a).
3. Select the **Operating modes...** tab on the **Settings** menu screen (See Figure 12-4 a).

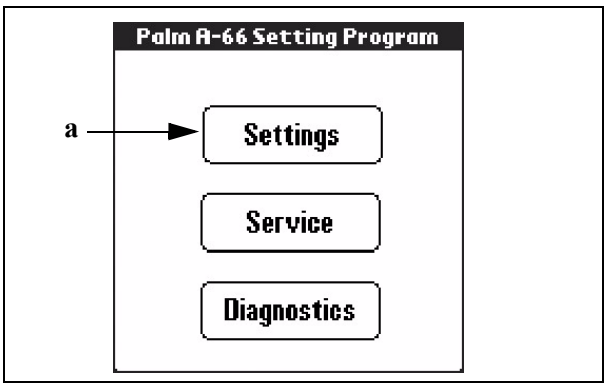


Figure 12-3 Selecting Settings

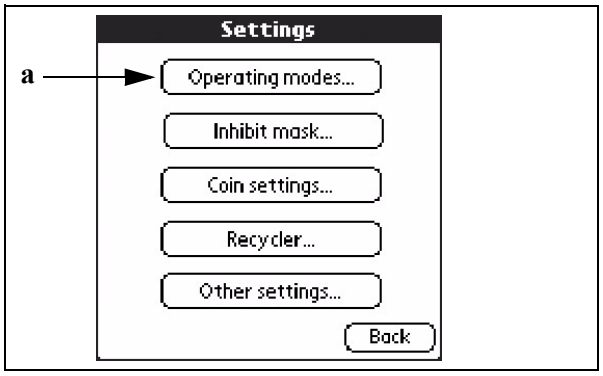


Figure 12-4 Selecting Mode

Download from Www.Somanuals.com. All Manuals Search And Download.

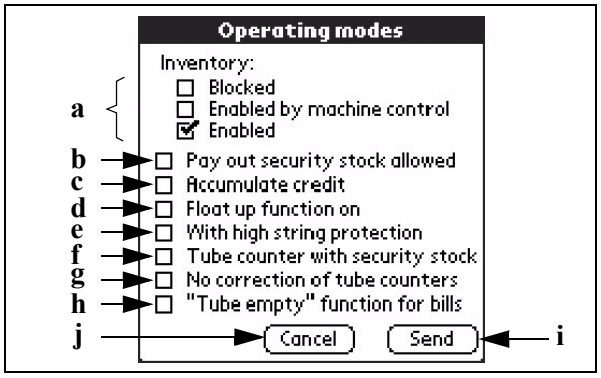


Figure 12-5 Operating Modes

4. Set **Operating modes** functions listed in Figure 12-5 "a" through "h".

Select the desired settings and click Send (See Figure 12-5 i) *to program the Coin Changer or* Cancel (See Figure 12-5 j) *to return to the* Settings *screen.*

a). **Inventory** check box functions are:

- **Blocked** – Inventory keypad is disabled
- **Enabled by machine control** – Inventory keypad can be enabled by the Vending Machine. This requires a service pass code
- **Enabled** – Inventory keypad enabled

b). **Payout security stock allowed** – Check to enable the machine to pay the entire contents of the change tubes.

c). **Accumulate credit** – Low value coins are inserted until a credit value is reached. The Coin Changer then sends the value to the VMC.

d). **Float up function on** – Enable to allow float up levels. Coin "float" values are set on the "Coin Settings" page.

e). **With high string protection** – Enabling high string protection will cause the Coin Changer to send the next 100 coins to the cashbox if the string sensor is triggered.

f). **Tube Counter with security stock** – Check Tube Counter's security stock, including the security stock values, to transmit tube contents to the VMC.

g). **No correction of tube counters** – to disable the automatic Coin Changer Coin Tube Sensors.

m). **"Tube empty" function for bills** – Check this function to disable acceptance of high value bills when the Coin Changer is empty.

5. Select Inhibit Mask... on the **Settings** screen to enable or disable coin/bill acceptance (See Figure 12-6 a).

a). Select the tick box next to each denomination that is to be disabled (See Figure 12-6 b).

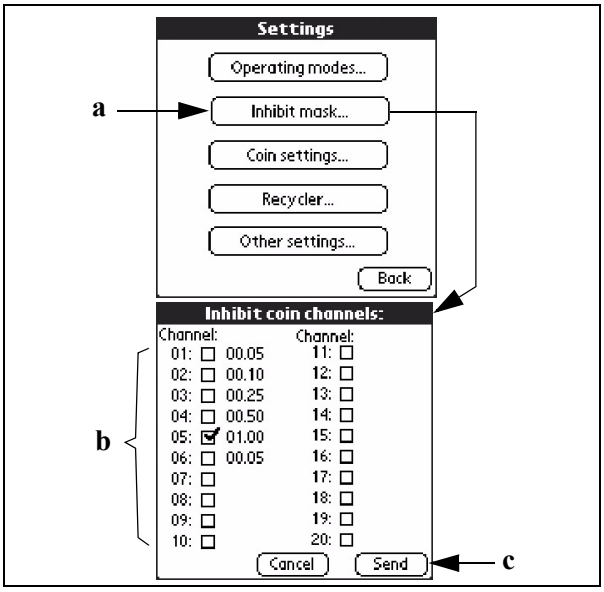


Figure 12-6 Inhibit Coin Channels Mode

b). Select Send to program the Coin Changer or Cancel to return to the **Settings** screen (See Figure 12-6 c).

6. Setting the Changer's "Float Level".

a). Configure the "Float Level" for each coin denomination by using the triangular "up" and "down" pointing arrows on the **Float Level** screen (See Figure 12-7 a).

b). Click Send to program the Coin Changer (See Figure 12-7 b).

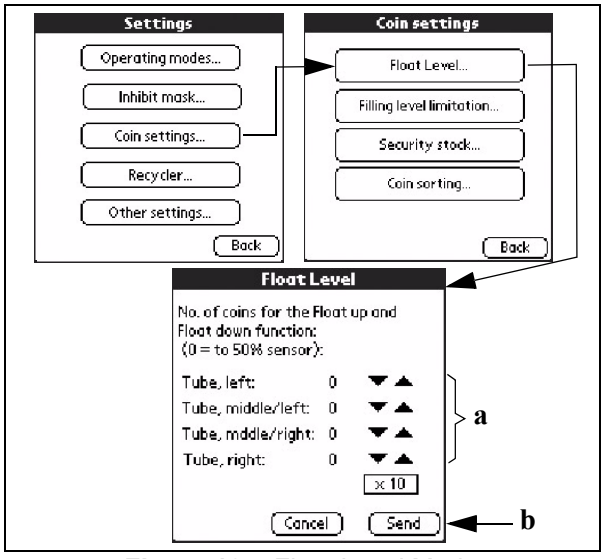
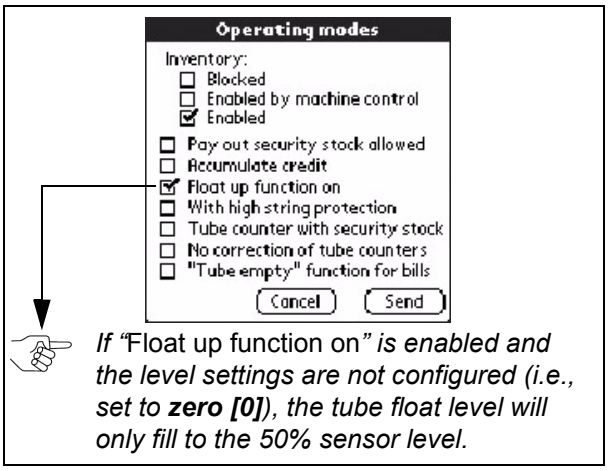


Figure 12-7 Float Level Mode

Download from Www.Somanuals.com. All Manuals Search And Download.

c). Float-up function warning (See Figure 12-8).



*If "*Float up function on*" is enabled and the level settings are not configured (i.e., set to **zero [0]**), the tube float level will only fill to the 50% sensor level.*

Figure 12-8 Float up Selection Warning

7. Setting Coin Changer "Security Stock" quantities.

a). Configure the "Security Stock" for each tube by using the **Security stock** drop down menu's triangular "up" and "down"arrows to set the desired value (See Figure 12-9 a).

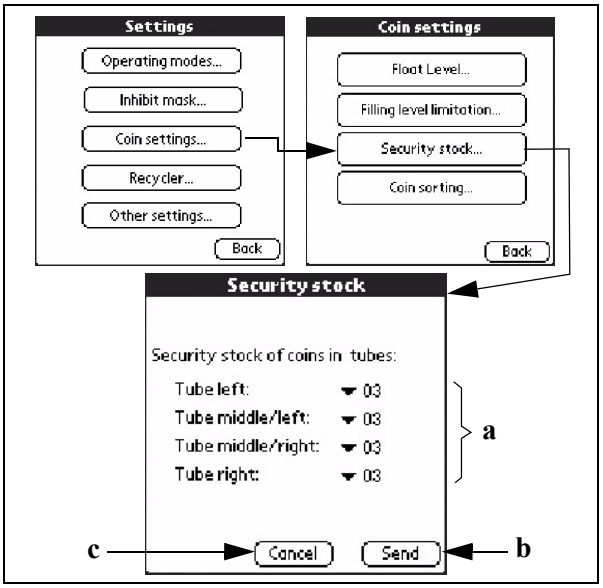


Figure 12-9 Security Stock Mode

b). Click Send (See Figure 12-9 b) to program the Coin Changer or Cancel (See Figure 12-9 c) to return to the **Coin settings** mode menu.

*NOTE: A "Security Stock" level of **three (3)** coins is recommended to prevent "coin bounce" and possible stacking issues in the Coin Changer tubes.*

8. Configuring Changer tube "Coin Sorting".

a). Select Coin sorting... from the **Coin settings** mode menu.

b). The **Coin sorting, channel 1-8** screen shows the current tube configuration (See Figure 12-10).

c). To change the tube configuration, select Change (b) and then select from the available payout combinations listed.

d). Click OK (c) to select or

e). Back to reset to Step "b" and then

f). Send to program the Coin Changer.

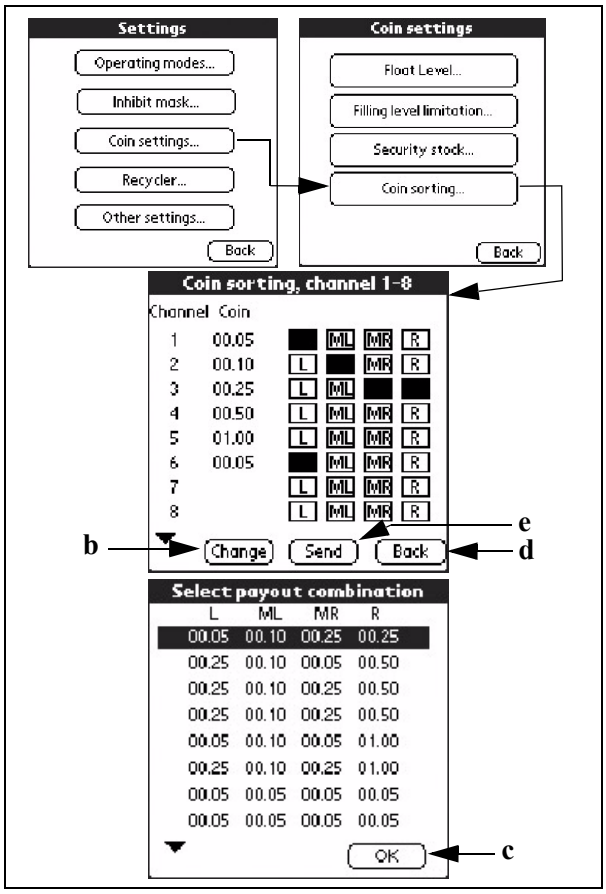


Figure 12-10 Coin Sorting Mode

9. Enabling the Bill Recycler.

a). Select the Recycler... tab on the **Settings** menu screen and then check the ☑ Recycler active tick box to enable the RC-10 recycling unit (See Figure 12-11). The recycle value will be set by the Coin Changer's software.

Download from Www.Somanuals.com. All Manuals Search And Download.

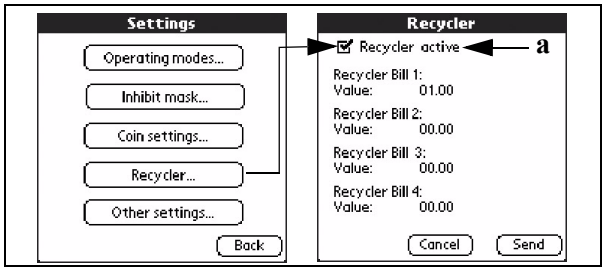


Figure 12-11 Recycler Mode

12. The "Other settings" configurations.

a). Select the Other settings… mode on the **Settings** menu screen and the following selections will appear:

- **Smallest coin value:** – Reference value for all coin values programmed. All coin values to be accepted must be a multiple of the smallest coin value (See Figure 12-12).

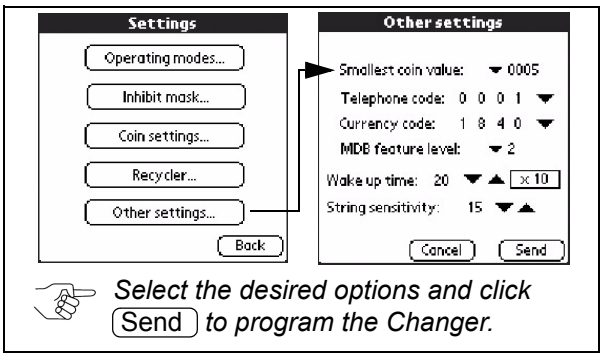


Figure 12-12 Other Settings Mode

- **Telephone code:** – **and Currency code:** – These codes are used in combination to set the Vending Machine's language and currency type.

NOTE: The Telephone Code is initially set to "01" and the Currency Code is initially set to "9001".

- **MDB feature level:** –
  - **Level 3** – The changer controls all payout functions
  - **Level 2** – The vending VMC controls all payout functions
- **Wake up time:** – External input enable signal for use with battery powered units.
- **String sensitivity:** – "**0**" is the minimum sensitivity level setting. "**49**" is the maximum sensitivity level setting.

b). Make value changes by using the related Up/Down menu triangular arrows to set the desired value and select Send.

11. Cloning configuration settings.

a). Click on the **Clone** menu bar and select Clone setting data (See Figure 12-13 a).

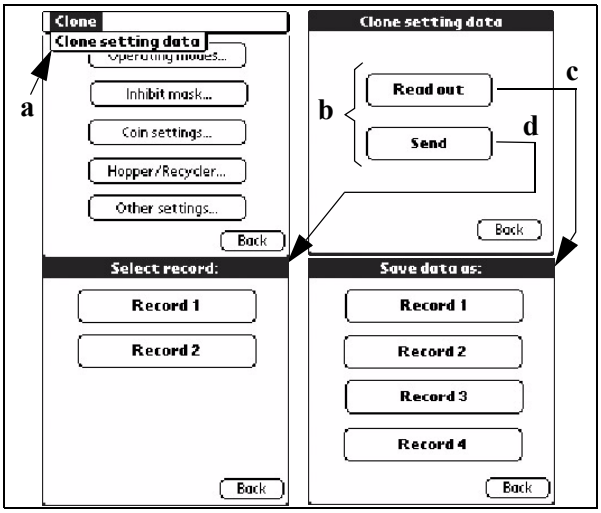


Figure 12-13 Clone Mode

b). To record the Coin Changer's settings, select Read out from the **Clone setting data** menu that appears, then select the desired record number (See Figure 12-13 b-to-c) in the **Save data as:** menu that appears.

c). To program the settings into a new Coin Changer, select Send (See Figure 12-13 c) or Back to reset to Step "b" and

d). Select the appropriate Record 1 or Record 2 button (See Figure 12-13 d).

Changer Service, Token Programming, and Currency Conversion

1. Changer payout set & tube counter editing.

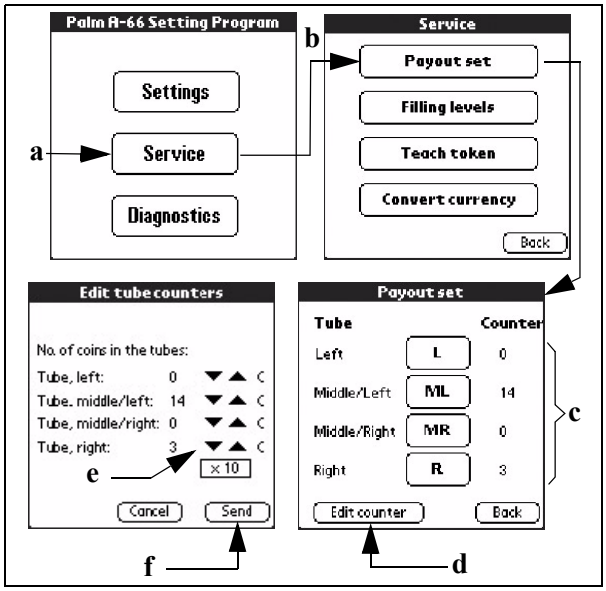


Figure 12-14 Service Mode

Download from Www.Somanuals.com. All Manuals Search And Download.

a). Select the Service tab on the main menu screen (See Figure 12-14 a), and then

b). Select Payout set on the Service menu that appears to view the coin levels in each tube (See Figure 12-14 b). Click on the related L ML MR R tube position tab to perform a payout test on the respective tube (See Figure 12-14 c).

c). To edit the counter, click Edit counter (See Figure 12-14 d) and

d). Adjust levels using the respective "up" and "down" pointing triangular arrow (See Figure 12-14 e).

l). Click Send to program the Coin Changer (See Figure 12-14 f).

2. Viewing the "Filling Levels".

a). Select the Service tab on the main menu screen (See Figure 12-15 a); then

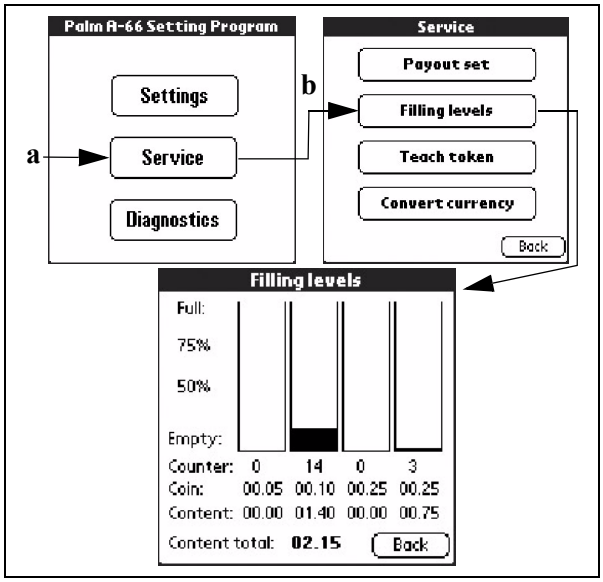


Figure 12-15 Filling Levels Mode

b). Select Filling levels to view the coin level bargraphs, count, each tube's total coin value and the entire Tube Cassette's total monitory value.

2. Teaching new coins & tokens.

a). Select Teach token on the Service menu screen (See Figure 12-16 a -b), then

b). Select the desired channel to program the chosen token (See Figure 12-16 c).

c). From the Token Teach: screen select a new token to program (i.e., Teach) or one to change that has already been programmed into the Coin Changer memory (i.e., Change code).

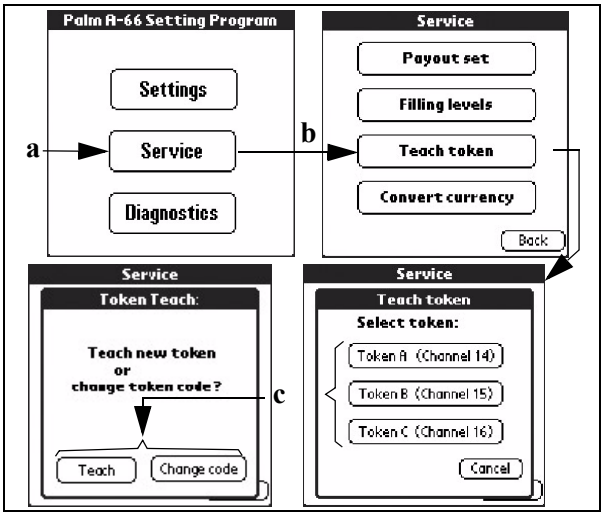


Figure 12-16 Teach Tokens Mode

d). While in the "Teach Token" mode insert a minimum of 10 coins to program tokens into the Coin Changer's memory (See Figure 12-17 d).

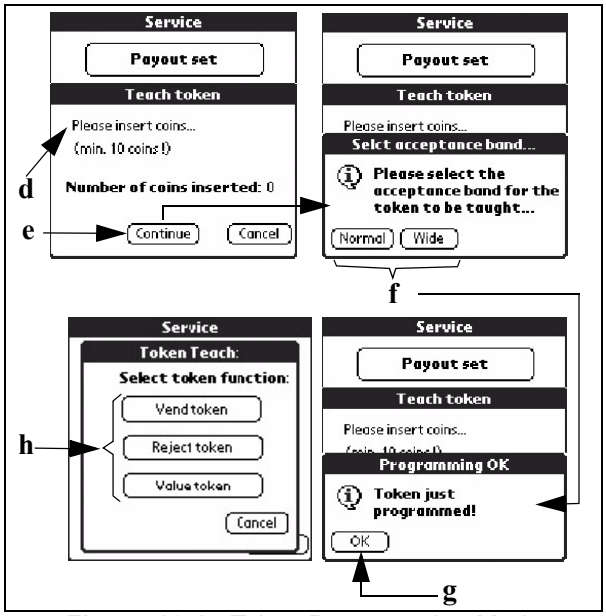


Figure 12-17 Token Programming Mode

e). Select Continue on the Teach token menu screen within the Service menu revealing a third Selct acceptance band... menu (See Figure 12-17 e).

f). Select either Normal or Wide acceptance parameters (See Figure 12-17 f); then

g). Select OK in the Programming OK menu that appears (See Figure 12-17 g).

c). Select the appropriate Token Teach: function tab (e.g., Vend token , Reject token or Value token) to complete token programming within the Service menu.

Download from Www.Somanuals.com. All Manuals Search And Download.

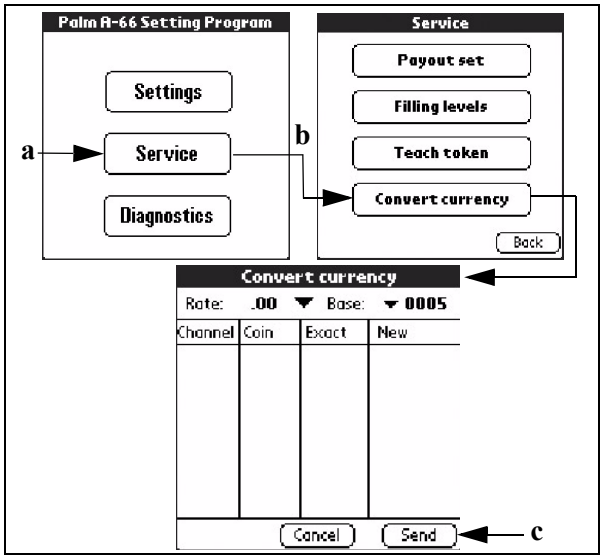


Figure 12-18 Conversion Setting Mode

4. Currency conversion settings

   a). Select the **Service** tab on the main menu screen (See Figure 12-18 a); then

   b). Select Convert currency (See Figure 12-18 b) to view the **Convert currency** screen.

   c). Set the required coin base and conversion rate values. In addition, the appropriate coin channel parameters must also be set.

NOTE: Currency conversion can only be set if multiple currencies are programmed into the Coin Changer.

   e). Select Send when finished programming (See Figure 12-18 c).

Changer Diagnostics

1. Select **Diagnostics** from the main menu screen (See Figure 12-19 a-b).

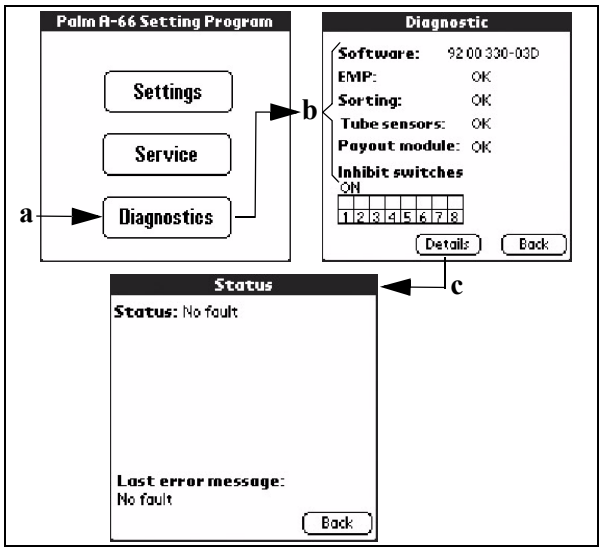


Figure 12-19 Diagnostics Mode

   a). The **Diagnostic** menu functions available (See Figure 12-19 b) are as follows:

   - **Software:** – Current software version number
   - **EMP:** – Changer self test
   - **Sorting:** – Sorting gate test
   - **Tube sensors:** – Self test
   - **Payout module:** – Self test
   - **Inhibit switches** – Current switch positions graphic.

   b). Select Details (See Figure 12-19 c) to access the fault description **Status** page and review the fault status if any.

2. To view the changer statistical meters:

   a). Click on the menu bar and then

   b). Select from one of the three available Meter lists (i.e., Error list, Statistic counter 1 or Statistic counter 2 [See Figure 12-20 a]).

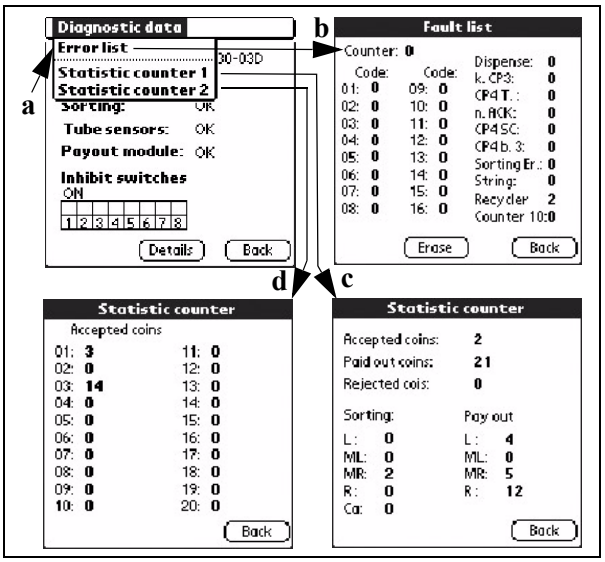


Figure 12-20 Error List Mode

   c). The "Error List" reveals the **Fault list** menu screen (See Figure 12-20 b) that displays an error "Counter", error "Code" list and 10 sensor type failure totals.

   d). "Statistic counter 1" (See Figure 12-20 c) displays the page 1 listing of the coins accepted relative to the coin channel.

   e). "Statistic counter 2" (See Figure 12-20 d) displays the page 2 listing of the total coins accepted, paid out, and rejected. It also shows the total transactions for each coin tube.

Download from Www.Somanuals.com. All Manuals Search And Download.

13 INDEX

A

Acceptance band
token validation programming... 4-2
width of... 4-2
Acceptance speed
advantages... 1-2
Adjustable functions
changing of... 4-1
AN/AB messages... A-2
Audible signals
sounding of... 7-1
Automatic return to operation
30 second delay period... 6-1
A66US Changer Program
software requirement of a... 12-1

B

Battery operated Coin Changers
w/external wake-up... 4-3

C

Card Reader
PC Programming Station requirement for a... 11-2
Cash Box
emptying of... 6-1
location... 3-1
CE mark certification
description of... 10-1
Change tube
filling of... 6-1
Chip card
PC Programming Station requirement for a... 11-2
Coin acceptance
conditions for... 6-1
Coin and configuration settings
Managment of... 12-1
Coin Changer
design of... 3-1
general information concerning the... 1-1; 2-1; 5-1; 6-1
installation of a... 5-1
Coin insertion funnel
location & use... 3-1
Coin number allowance
requirements
correct amounts of... 4-1
Coin storage capacity
thickness dependency for... 3-3
Coin type inhibiting
certain types of... 4-2
Coin types
differences of... 3-3
Coin Validator
cleaning the... 8-1
integral part of Coin Changer
A-66.4000 version... 1-2
integration of... 3-1
removal of... 5-1
Communication cable
requirement of a... 12-1
Controlled sorting guarantee
advantages of... 1-2
Customer specifications
special label listing of... 3-3

D

Data block
updating the... 11-2
Diagnostic functions
steps to set... 12-6
DIP Switch Block
location of... 3-2
DIP Switch Bock
location & settings... 7-1
DIP Switches 1 through 8
setting of... 7-2
Disabling inventory keys
configuration
defination for... 7-1
Disclaimer
JCM rights reserved... 2-1
Display indicator meanings
table listing of... A-2

E

Easy configuration
advantages of... 1-2
EMC Directive
definition of the... 10-1
Emptying the Change Tubes
completely, or to a certain level... 7-1
Energizing
beginning the process of... 6-1
Energizing Coin Changer
in a Vending Machine, by using a Test Station... 5-1
Entering functions and settings
methods for... 7-1
equipment damage... 5-1
Error diagnosis
service advantages for... 1-2

Download from Www.Somanuals.com. All Manuals Search And Download.

F

False coin introductions
new & fast reactions to... 1-2
Fault diagnosis
quick LED indicating for... 3-2
Fault LED illumination conditions
Green, Yellow, Red... A-1
Fault List screen display
error counter, error code and sensor failure totals of... 12-6
Fault occurance indicators... A-1
FE messages... A-2
Filling change through the Validator
using keyboard to... 7-1
Filling level sensors
empty, 50%, 75% & full
description of... 3-4
Flash Adapter
a Palm Pilot handheld adapter... 1-3
Flash Memory
programming advantages of... 1-2
Flash Prommer
part of JCM PC Update Station components... 1-3
Flexible payout combinations
advantages of a... 1-2
Float Level
configuration conditioning of the... 7-1
configuring a... 4-1
Front Product Label
location & device defining data listings on... 3-3

G

General Information
product related... 1-1
Green LED
normal operation
indication of... 3-2

I

Individual coin vending
for unit testing, inventory & transportation... 4-1
INFO messages... A-2
Inhibiting coin types
using the DIP Switch Block settings to... 7-2
Inventory keys
disabling of... 4-2
uses of the... 7-1

J

JCM PC Update Station
component parts of... 1-3
JCM service tool availability... A-1
JCM Test Station
components... 1-2
requirements & usage... 3-2
usage of a... 5-1

K

Keyboard
description of
uses for... 7-1
front part of Coin Validator
membraine type... 3-2

L

LED
Light-Emitting Diode
part of Coin Validator diagnostics... 3-2
LED Indicator Meanings
table listing... A-1
Liability
JCM dislaimer... 2-1
statement of... 2-1
Low Voltage Directive
definition of the... 10-1

M

Maximum coin content
configuring of... 4-1
MDB Connecting Cable
Vending Machine interfacing... 3-4
MDB connecting cable
use of an... 5-1
Membrane keys
touch-sensitive part of the Coin Validator's keyboard... 3-2
Monitored coin run
advantages of a... 1-2
Multi Drop Bus
a Vending Machine interface requirement... 1-2

N

Navigation
within manual
procedures for... 1-1

O

Operating instructions
separate
location of... 1-2
Operating software
update advantages of... 1-2
Optimum false coin rejection
advantages of... 1-2

P

Palm Pilot... A-2
software requirements & usage... 4-1
Palm Pilot Handheld
types & software requirements... 12-1
Palm Pilot handheld personal assistant... 1-2
PalmEMP
JCM/Palm software type
uses for... 1-1

Download from Www.Somanuals.com. All Manuals Search And Download.

software application
description of... 1-2
PalmE66
JCM/Palm software type
uses for... 1-1
software application
description of... 1-2
PalmFlash
a Palm Pilot handheld application... 1-3
Payout module
location & usage... 3-4
Payout Unit
location & use of... 3-3
tube cassettes & payout set usage... 3-3
PC base station
programming uses of a... 11-1
PC Programming Station
uses of a... 5-1
PC programming station
configuration & component parts of... 1-2
PC Test Station
usage... 1-2
PC & Palm Pilot Programming
usage of... 11-1
PDF
Portable Document File
homepage location for this documents... 1-2
Personal Computer (PC)
programming station usage... 1-2
Pilot lights
fault indicating LEDs on Coin Validator... 3-2
Pre-program coin type ihibiting
using configuration tools to... 7-2
Pre-programmed telephone/currency code
see Chapter 11... 4-2
Product Labels
location and feature listings on the... 3-3
Programming Adapter
part of JCM PC Update Station equipment... 1-3
Programming PC
requirements & usage... 3-2
Proper use
of Coin Changer... 2-1
Protection
yourself and equipment... 2-1

Q

quick updates
Flash Memory usage... 1-3

R

Red LED
major fault
indication of... 3-2
Reliable sensing system
advantages of a... 1-2
Return Lever
part of Coin Validator... 3-2
Ribbon cable
flat, multi-wire
usage... 3-2
RJ-45 PC plug adaptor... 1-3

S

Safety
instructions for... 2-1
pictographs indicating... 1-1
Second Currency Type
accepting & converting of... 4-3
Security stock
maintenance considerations for... 4-2
Vending Machine payout methods... 4-2
Security stock allowance
1-9 coin maximum... 4-2
Service tools
JCM recommendations for... 1-2
Side Product Label
location & device defining data listings on... 3-3
Software
descriptions of & user instructions for... 1-1
Software instructions
user reference to... 1-2
Software updates
advantages for... 1-2
Special Notes
italic text highlighted... 1-1
Specifications
table listing of... 10-1
Splash-proof electronics
advantages of... 1-2
Stacking and edge standing
problems regarding... 4-2
Statistic counters
one & two
display description of... 12-6
Status or fault messages
e.g., INFO, AN/AB or FE... A-2
Steps
sequential numbering of... 1-1
String Manipulation
minimizing... 4-3
String Sensor
option
description & usage... 4-3
sensitivity of... 4-3

T

Teach mode
advantages of... 1-2
Test Software
WinMDB use in Workshop... 11-1
Test software
uses with WinMDB... 1-2
Tester
#G-19.0654
usage... 1-2

Download from Www.Somanuals.com. All Manuals Search And Download.

Tester G-19.0654
uses in Workshop... 11-1
Testing and/or configuring
in Workshop... 11-1
On-Site... 11-1
Testing requirements
conditions for... 11-1
Tokens
configuring of... 4-2
Tools
configuration... 1-3
JCM configurations of... 5-1
service
availablity of... 11-1
udating... 1-3
Trouble Shooting
see Section 14... 1-1
Tube cassette
sticker location & information content of... 3-3
w/change tubes & content ID... 3-3
Tube Cassettes
filling and emptying
simplest & quickest methods for... 4-1
Tube cassettes
location & use... 3-1
Tube Counter
automatic correction of... 4-2
resetting of... 4-2
status of... 4-2
status & description... 3-4
Tube "Full" Sensor
requirement & location of... 3-4
Two currency types
acceptance of... 4-3

U

Units current status
normal or fault indicators for... 3-2
Universal payout mechanism
advantages of a... 1-2

V

Vend tokens
free or value of... 4-2
Vending coins
by emptying the Tube Cassette... 7-1
using the Keyboard to... 7-1
Vending Machine simulation tester
Tester G-19.0654... 1-2
Vending several tube coins
instructions for... 7-1

W

Wake-up time
setting of... 4-3
Warning... 5-1
air space allowance... 5-1
altering design
contact JCM before proceeding with... 2-1
correct unit operating voltage... 2-1
disposal of unit... 2-1
electrical shock... 2-1
electronic components... 2-1
electrostatic discharge damage... 2-1
emptying Cash Box prior to refilling... 4-1
flat 40-wire ribbon cable connection... 5-1
Float up function zero setting... 12-3
handling static sensitive components... 2-1
keeping unit dry and clean... 2-1
liquid damage... 8-1
pulling connecting cable... 2-1
removing power... 2-1
security stock level 3 coin minimum... 12-3
setting the currency conversion value... 12-6
Teach Token mode coin minimums... 12-5
transportation of unit... 9-1
transporting unit
always repackage when... 2-1
unit installation... 5-1
Windows PC
operating system requirements... 12-1
WinEMP
JCM software type
uses for... 1-1
software application
description of... 1-2
WinFlash
software for JCM PC Update Station use... 1-3
Workshop testing
requirements for... 11-1

Y

Yellow LED
minor fault
indication of... 3-2

Numerics

40-Pin Dual Inline Header
service interface jack
location of... 3-2
5-pin pcb edge connector plug
location of... 11-1
5-Pin printed circuit board edge connector
location & usage... 3-2
8-pin modular RJ-45 Jack receptacle... 1-3
8-pin RJ-45 jack
location of the... 11-1
8-pin RJ-45 PC-adaptor plug
additional part requirement to use... 11-1
8-pin RJ-45 receptacle jack
location & usage... 3-2

 © 2005 JCM-American Corporation

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
A-66 Coin Changer
Appendix A

A TROUBLE SHOOTING

If a Coin Changer fault occurs, the pilot lights at the top of the Coin Validator will indicate the fault's location.

The following JCM diagnostic service tools are available to detail diagnose the fault's cause (see the "Diagnosis Using the Setting Module" area in this appendix, as well as the in related information located in sections 1 and 11 of this manual).

Front Panel LED Indicators

If the Green LED at the top of the Coin Validator is lit or is flashing, no faults are indicated and the device is working properly (See Figure A-1).

If the Yellow LED in the middle of the Coin Validator flashes there is a definite fault which generally can be easily remedied.

If the Red LED at the bottom of the Coin Validator flashes, a fault that must be remedied by a service technician is probable.

The label at the top of the Coin Validator may help in locating the fault and Table A-1 lists their meanings.

Quick Pilot Light Diagnosis

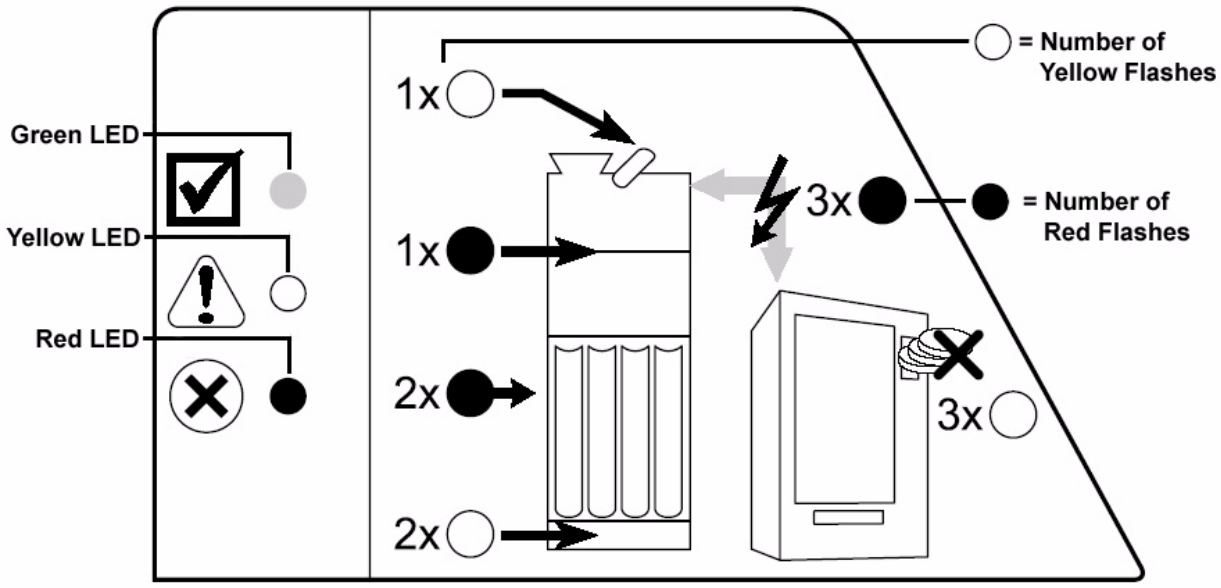


Figure A-1 Quick Diagnosis with the Help of the Pilot Lights

Table A-1 LED Indicator Meanings

LED	Meaning	Trouble
Green Lit	Coin changer operational	No error
Green Flashing	Filling level mode active	No error
Green & Yellow Lit	Inserted coin inhibited from the Vending Machine	Check vending machine settings (a possibility that high value coins were inhibited as tube is empty)

Table A-1 LED Indicator Meanings (Continued)

LED	Meaning	Trouble
Green & Red Lit	Inserted coin inhibited from the Vending Machine	Activate coin channel using switching block or Palm Setting Module with WinEMP© or Palm Pilot® with PalmA66©
Yellow Flashes once	Return lever pressed or switch in Coin Validator defective	Check return mechanism in Vending Machine or Service case

Download from Www.Somanuals.com. All Manuals Search And Download.

Table A-1 LED Indicator Meanings (Continued)

LED	Meaning	Trouble
Yellow Flashes Twice	Coins stuck in vend area or motor failure	Remove tube cassette and any jammed coins, then vend one coin from each tube using the inventory keys or Service case
Yellow Flashes 3 times	Coin changer inhibited by Vending Machine	Check Vending Machine (possibly empty or defective)
Red Flashes once	Fault in Coin Validator	Remove jammed coins by pressing the return lever on the Coin Validator or Service case, Coin Validator may have to be exchanged
Red Flashes twice	Fault in Coin Validator	Service case, Coin Validator may have to be exchanged
Red Flashes 3 times	Vending Machine no longer communicates with Coin Changer (has sent no command in 2 secs.)	Check Vending Machine control or connecting cable

Diagnosis Using a Palm Pilot® Setting Module

If a Coin Changer fault occurs, the Palm Pilot® Setting Module displays the appropriate status or error message as soon as you connect it to the RJ-45 interface jack on the Coin Changer's front panel (see chapter 11 "Configuration"). Depending on the operating mode or fault, three status or fault messages are displayed as follows:

- **INFO messages**: used in general only for information about particular operating states
- **AN/AB messages**: indicate where a coin was accepted (AN) or why a coin was rejected (AB)
- **FE messages**: indicate why the Coin Changer no longer functions (Table A-2).

Table A-2 Display Indicators

Display	Meaning	Trouble
INFO INFO -01	Return Lever pressed or a switch in Coin Validator defective	No error or, check the return mechanism in Vending Machine, or Service case

Table A-2 Display Indicators (Continued)

Display	Meaning	Trouble
InFo-09	String sensor active	Coin on string recognized (no error), or check sensor (Service case)
InFo-09A	Tube coins are delivered to the cash-box after a recognized string manipulation	No error. This function can be deactivated however, using PRO 04 02
InFo-80	Coin Changer inhibited by Vending Machine	Check Vending Machine (possibly empty or defective)
AN An X YY An X YY	Accepted coin will be sorted into: X = 0 cash-box X = 1 left tube X = 2 middle left tube X = 3 middle right tube X = 4 right tube Inserted coins accepted in the coin channel YY = 01–16 (Channel No.)	No error
AB Ab-01	Measured inserted coin values are outside the acceptance band limit	If necessary, widen acceptance band limit using with WinEMP© or PalmEMP©
Ab-02	Inserted coin inhibited by the Coin Changer	Enable coin channel using DIP Switch Block or Palm Setting Module with WinEMP© or Palm Pilot® with PalmA66©
Ab-03	Inserted coin has not passed through measurement section in the appropriate amount of time	Remove coins or foreign objects by pressing the return lever on the Coin Validator, or check measurement by air-core coil or CP2 level (Service case)
Ab-04	Inserted coin was not recognized	Insert coin again more slowly
Ab-05	CP3 or CP4 sensor active	Insert coin more slowly, or inserted coin not on string or check sensors (Service case)

Download from Www.Somanuals.com. All Manuals Search And Download.

Table A-2 Display Indicators (Continued)

Display	Meaning	Trouble
Ab-06	Sensor behind the acceptance gate has not recognized the inserted coin	Check acceptance gate with WinEMP® or PalmEMP® and if necessary, exchange it (Service case) or check the CP3 sensor (Service case)
Ab-07	Sensor behind the acceptance gate has not recognized inserted coin	Check acceptance gate with WinEMP® or PalmEMP® and if necessary, exchange it (Service case) or Check the CP4 sensor (Service case)
Ab-08	Inserted coin has covered the sorting control for too long a time	Insert coin more slowly, or Inserted coin not on string or check the CP4 sensor (Service case)
Ab-09	String manipulation recognized	Inserted coin not on string or if necessary, reduce sensitivity of the String Sensor using PRO 21 01 or clean and/or exchange String Sensor (Service case), or check acceptance gate for ease of movement (Service case)
Ab-10	Inserted coin recognized in false money coin channel	No error
Ab-11	Inserted coin recognized as enabling token	No error
Ab-12	Inserted coin inhibited from the Vending Machine	Check Vending Machine's settings (is possible that high value coins were inhibited because tubes are empty)
Ab-00	Other fault with coin acceptance	Service case
FE FE-01	Coins jammed in the payout area (left tube)	Remove the cassette and jammed coins, then vend one coin from this tube using the "L" inventory key, or a Service case

Table A-2 Display Indicators (Continued)

Display	Meaning	Trouble
FE-02	Coin jammed in the payout area (middle left tube) or motor failure of middle left tube	Remove the cassette and jammed coin, then vend one coin from this tube using the "ML" inventory key, or a Service case
FE-03	Coin jammed in the payout area (middle right tube) or motor failure (middle right tube)	Remove the cassette and jammed coin, then pay out one coin from this tube using the "MR" inventory key, or a Service case
FE-04	Coin jammed in the payout area (right tube) or motor failure (right tube)	Remove the cassette and jammed coin, then pay out one coin from this tube using the "R" inventory key or a Service case
FE-13	Checksum fault by acceptance band	Check and, if necessary, adjust the acceptance band of the appropriate coin channel with WinEMP© or PalmEMP©
FE-14	Checksum fault by coin values	Check and, if necessary, correct coin values with WinEMP© or PalmEMP©
FE-15	Checksum fault by configuration	Check PRO functions with the Palm Setting Module and, if necessary, correct them
FE-38	Vending Machine no longer communicates with Coin Changer (has sent no command in 2 seconds.)	Check Vending Machine control or the interconnecting cable

Download from Www.Somanuals.com. All Manuals Search And Download.

THIS PAGE INTENTIONALLY LEFT BLANK

Download from Www.Somanuals.com. All Manuals Search And Download.

Optipay™ CC
A-66 Coin Changer
Appendix B

B GLOSSARY

Nº. Term

A

1 **A-66** – The Coin Changer Series product code number.

C

2 **Optipay™ CC** – The A-66 Bill Validator Series product name.
3 **Coin Validator** – An integral part of the A-66 Centaur product

D

4 **Data Block** – a specific data area in a programmable memory used to hold coin setup data.
5 **DIP Switch** – Dual Inline Package Switch - a printed circuit board mountable two-position slide switch package containing up to 16 individual switches.
6 **DIP Switch Block** – a single Dual Inline Package two-position circuit board switch set.
7 **Dual Inline Header** – a chassis connector consisting of two female or male pin rows counting greater than ten.

F

8 **Filling Level Sensor** –four sensors that detects the relative volume of coins within a given tube. More than one sensor is usually present mounted in the chassis behind the coin cassette.
9 **Flash Memory** – Electronically programmable memory integrated circuits that can be reused without requiring special erasure procedures.
10 **Float Level** – A specific amount of coinage remaining in a cassette tube when servicing a vending machine.

L

11 **LED** – acronym for Light Emitting Diode.

M

12 **MDB** – acronym for Multi Drop Bus - a communications protocol standard used by the Vending Machine Industry.
13 **Membrane Keys** – A type of keyboard in which the keys are covered by a transparent, plastic shell. The keys have very little movement, but are pressure sensitive to touch. The primary advantage of a membrane keyboard is that the covering protects its internal components from dirt, but quick and accurate typing is usually difficult.

Download from Www.Somanuals.com. All Manuals Search And Download.

Glossary of Terms
Continued

Nº. Term

P

14 **Palm Pilot** – A portable handheld programmable electronic device that functions as a personal organizer, but can also contain other applications that allow music playback, photographic display, view and edit documents, up and down loading of software and much more. Also commonly called a Personal Digital Assistant (PDA).

15 **Payout Module** – a motorized coin dispensing mechanism.

16 **Payout Set** –a motorized coin dispensing assembly located below the coin cassette.

17 **PCB Edge Connector** – a keyed set of printed circuit tabs at the edge of a printed circuit board designed to receive a mating pin count interface connector.

18 **Pilot Lights** – different colored incandescent or Light Emitting Diodes (LEDs) surface mounted on a device to visually indicate specific operation conditions or warnings.

R

19 **Receptacle Jack** – a diagnostics connector located on the Validator's front panel for cable connection to a Palm Pilot® handheld programming device.

S

20 **Security Stock** – a preset number of coins programmed to remain in a cassette to prevent jamming problems caused when coins bounce off the cassette's plastic surface.

T

21 **Token** – a non-negotiable coin designed for inhouse or promotional use.

22 **Tube Cassette** – a four tube coin holder that facilitates easy bulk coin removal and filling operations.

23 **Tube Counter** – a memory counter that tracks the number of coins accepted and reports same to the host machine housing the Coin Changer.

W

24 **Wake-up Time** – part of a power saving circuit feature used with a battery powered Coin ® Changer.

Download from Www.Somanuals.com. All Manuals Search And Download.

Download from Www.Somanuals.com. All Manuals Search And Download.

CRANE®

NRI

A Crane Co. Company

Optipay™ CC

A-66 Coin Changer

Operation and Maintenance Manual
(Revision 1)

Includes configuration setup using a Palm Pilot® Setting Module

May 05

Download from Www.Somanuals.com. All Manuals Search And Download.

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com