Hamilton Manufacturing Corporation

ACW-5-P
Five-Rate Parking Autocashier
Operational Manual

IMPORTANT

PLEASE READ THIS MANUAL CAREFULLY PRIOR TO INSTALLING THIS UNIT. A complete understanding of the operation of this unit is essential for a successful installation.

ABOUT THIS MANUAL

This manual was designed to introduce the ACW-5-P Auto Cashier and to provide general information about operation, installation and maintenance. This manual will enable the operator to program the ACW-5-P, perform audits, detect error codes and perform basic troubleshooting procedures. Also included are pre-programmed factory settings, Welcome Messages, Proceed Messages and Closed Messages, as well as a Tokenotefi Training Guide for use with the optional Tokenotesfi. Basic information is provided for the Hopper, Stacker and Validator. However, if additional information is needed for these components, refer to the appropriate manual. To obtain assistance from the manufacturer, please call (800) 837-5561 or (419) 867-4858. Or, you can contact Hamilton Mfg. online @ http:\\www.hamiltonmfg.com.

When calling for assistance, it is important to have serial numbers readily available. Please take the time to record these numbers in the spaces provided.

ACW-5-P SERIAL #_____

CONTROLLER SERIAL #_____

HOPPER SERIAL #_____

STACKER SERIAL #_____

VALIDATOR SERIAL #_____

LOCK / KEY #_____

Please complete the warranty card, which was included with your changer, and return it to the manufacturer.

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I. INTRODUCTION

Hamilton s ACW-5-P makes collecting revenue "around the clock" a simple process. The ACW-5-P combines the ease of fixed rate parking with the ability to set up five individual time zones, each with their own rate. This gives the operator the flexibility to charge different rates for day and night parking, special weekend rates, or even specify a special event, months in advance. Other features of the ACW-5-P are listed below.

Features of the ACW-5-P:

- A large, bright character display welcomes customers and guides them through their transactions.

- The ACW-5-P returns change, if necessary.

- The ACW-5-P is capable of accepting Hamilton Tokenotesfi. Tokenotesfi are paper tokens that are inserted into the bill acceptor like dollar bills and used as credit towards the desired selection.

- When used with an HV-X Validator (v3.19 or higher), the ACW-5-P Controller has the ability to cycle the Stacker in an attempt to clear a possible bill jam.

- The ACW-5-P has an audible beeper that is used to provide feedback to customers in order to guide them through their transactions.

- The ACW-5-P has the ability to deactivate itself if an attendant is on hand to greet customers, or if the lot is closed due to regularly scheduled maintenance.

- The ACW-5-P has the ability to automatically deactivate itself if the lot becomes full.

The following optional equipment is available for use with the ACW-5-P:

- An External Display featuring a 3 x 18 display area. The External Display is used to display customized messages and to guide customers through transactions by displaying instructions in a large, bold fashion.

- Pre-formed bases that place the ACW-5-P at the factory recommended height for various mounting situations.

- An ACW Lighted Cap, which is recommended if the ACW-5-P is mounted on a base.

- A hand-held printer used to receive a hard copy of all the audit information collected by the ACW-5-P.

- An Out of Service Relay Kit used to signal an auto-dialing modem to contact the owner if the unit goes into an error mode. (This kit only provides the signaling relay and does not include the actual auto-dialing modem.)

II. OPERATION

NORMAL OPERATION

Normal operation of the ACW-5-P consists of the following:

- **When a customer drives up to the Auto Cashier, he is greeted by a bright display that welcomes and/or instructs him on how to proceed.**
- **The last of the sequencing Welcome Messages always instructs the customer to DEPOSIT $3.00 . (The dollar amount represents the current parking rate.)**
- **The driver then begins to build up credit by inserting $1, $2, $5, $10, or $20 bills, quarters, token coins, or Hamilton s Tokenotesfi until the current parking fee has been reached.**
- **If a payment has been deposited, but it is less than the full fee, the display suspends sequencing through the Welcome Messages and displays a constant message that simply shows how much credit has been accumulated. This constant CREDIT $X.XX message reassures the customer that the money is being processed properly.**
- **If a customer deposits more than the current parking fee, the display will notify the customer of the amount of change that will be returned, and that amount will then be dispensed in quarters.**
- **Once enough credit has been accumulated for the current parking fee, and any change has been dispensed, the display will change to the alternating Proceed Messages.**
- **At this time, the ACW-5-P will activate a relay that signals the gate to raise for a car to pass through.**
- **After a programmable amount of time, the display returns to the sequencing Welcome Messages and the system prepares for the next customer.**

III. PROGRAMMABLE OPTIONS

The ACW-5-P has a number of programmable options that can be used by the owner to customize the operation of the machine. These programmable options give the owner the ability to:

- Set desired prices
- Program custom messages
- Control the number of cars that can enter the lot in a given time

When programming the different time zones, it is important to understand the following operational features:

- It is important to keep in mind that the starting and ending times are not included in a particular time zone. The time in between the starting and ending times is considered the active time. For example, if the starting and ending times for the Night-Time zone are
6:00 PM and 6:00 AM, then the Night-Time zone will be active from 6:01 PM to 5:59 PM. (In order for a time zone to start at 6:00 PM, you must set the starting time for 5:59 PM.)

  It is possible to overlap time zones, so that one zone will start as soon as the other zone ends. For example, you can set the Weekly Event #1 ending time for 6:01 PM, and set the starting Night-Time for 6:00 PM. In this instance, the Weekly Event #1 time zone will actually end at 6:00 PM and the Night-Time zone will start at 6:01 PM.

- The Day-Time zone is the default setting. The only way to adjust the Day-time zone is to change the starting and ending times of another time zone. For example, by setting the starting Night-Time to 6:00 PM and the ending Night-Time to 6:00 AM, the Day-Time zone, by default, will be from 6:00 AM to 6:00 PM. (Remember, the Night-Time zone will be active from 6:01 PM to 5:59 AM because the Controller only counts the time in between the settings.)

- Once a time zone has been programmed, it can not be erased or cleared. To deactivate or turn off a time zone, it is necessary to set the starting day, date and time to the exact same setting as the ending day, date and time. Refer to the example below:

TO DISABLE A TIME ZONE	
STARTING DAY/DATE/TIME	ENDING DAY/DATE/TIME
08-06-94 AT 6:00 PM	08-06-94 AT 6:00 PM

When deactivating a particular time zone, it is important to remember <u>not</u> to disable the MODE. (For example, the SPECIAL EVENT MODE.) Doing so will only disable the Validator for this time zone, not the time zone itself.

- **It is important to understand what happens when two or more time zones overlap. If more than one time zone is scheduled to be active during a particular period of time, there is a set order to determine which time zone will be active. This order, listed from highest to lowest in priority, is shown below.**

TIME ZONES
SPECIAL EVENT
WEEKLY EVENT #2
WEEKLY EVENT #1
NIGHT-TIME
DAY-TIME

As an example, assume Weekly Event #2 is set to be active on Fridays from 4:00 PM to 8:01 PM, and the Night-Time zone is set to be active from 6:00 PM to 6:00 AM. In this example, on Fridays from 6:00 AM to 4:00 PM, the Day-Time zone will be active. From 4:01 PM to 8:00 PM, the Weekly Event #2 will be active, and from 8:01 PM Friday through 5:59 AM Saturday, the Night-Time zone will be active. This example is shown below:
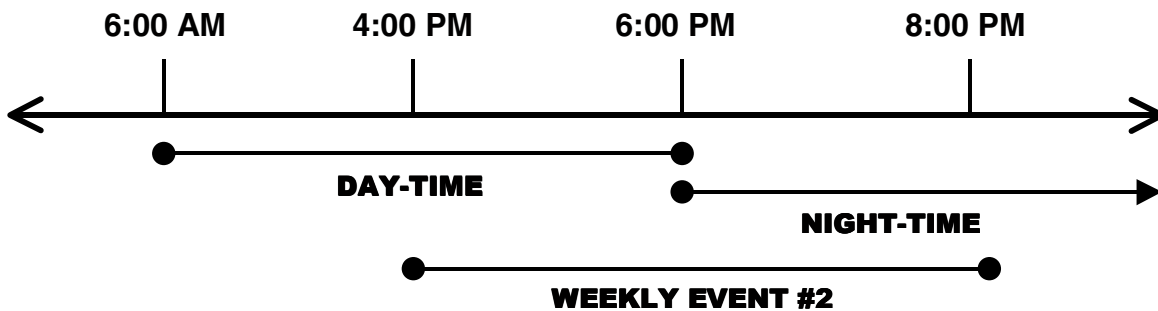
At 6:01 PM the Night-Time zone is scheduled to start, but on Fridays at this time, the Weekly Event #2 time zone coincides. Since the Weekly Event #2 has higher priority than the Night-Time zone, the Weekly Event #2 rate will be charged.

A description of all of the programmable options, in the order that they will be encountered in the PROGRAMMING mode, is listed below. For information on the actual programming sequences necessary, refer to the PROGRAMMING section.

❑ **TOKEN COIN MODE?** The term credit is used to mean any non-cash form of payment. For the ACW-5-P this includes token coins, Hamilton Tokenotesfi, and debit or credit cards if the machine is so equipped. There are two choices for the TOKEN COIN MODE, MULTIPLE CREDITS and SINGLE CREDIT MODE. MULTIPLE CREDITS allows the customer to insert as many token coins as necessary to pay for the selected wash. The SINGLE CREDIT MODE, on the other hand, limits the customer to receiving credit for only one token coin per transaction. SINGLE CREDIT MODE is often used when token coins are distributed as a promotion to get customers to choose your car wash for reduced car wash rates. By only accepting one credit per customer, the customer will not be able to accumulate the promotional token coins and receive a free wash. In this mode, you will still be collecting some revenue on every car washed.

❑ **TOKEN COIN VALUE?** The TOKEN COIN VALUE? category is used to program the amount of credit given when a token coin is accepted by the ACW-5-P. The value can be anything from $0.00 to $63.75 in $0.25 increments. (Refer to APPENDIX C and the PROGRAMMING section for information on programming the TOKEN COIN VALUE.)

❑ **TOKENOTE® MODE?** The term credit is used to mean any non-cash form of payment. For the ACW-5-P this includes token coins, Hamilton Tokenotesfi, and debit or credit cards if the machine is so equipped. There are two choices for the TOKENOTEfi MODE, MULTIPLE CREDITS and SINGLE CREDIT MODE. MULTIPLE CREDITS allows the customer to insert as many Tokenotesfi as necessary to pay for the selected wash. The SINGLE CREDIT MODE, on the other hand, limits the customer to receiving credit for only one Tokenotefi per transaction. SINGLE CREDIT MODE is often used when Tokenotesfi are distributed as a promotion to get customers to choose your car wash for reduced car wash rates. By only accepting one credit per customer, the customer will not be able to accumulate the promotional Tokenotesfi and receive a free wash. In this mode, you will still be collecting some revenue on every car washed.

❑ **TOKENOTE® VALUE?** The TOKENOTEfi VALUE? category is used to program the amount of credit given when the Validator accepts a Tokenotefi trained without a Training Coupon. The value can be anything from $0.00 to $63.75 in $0.25 increments. (Refer to APPENDIX C and the PROGRAMMING section for information on programming the TOKENOTEfi VALUE.)

❑ **COUPON DISCOUNTS?** The COUPON DISCOUNTS? category is used to program the amount of credit given when a Tokenotefi, trained with one of the four Training Coupons (Coupon #1 4), is accepted by the Validator. Each coupon code can have its own value that ranges from $0.00 to $63.75 in $0.25 increments. (Refer to Appendix C and the PROGRAMMING section for information on programming the COUPON DISCOUNTS.)

❑ **WELCOME PROMPTS?** The WELCOME PROMPTS ? category is used to select the sequencing messages that are seen when a customer first pulls up to the ACW-5-P. There are up to five sequencing messages possible, however only the first four are programmable. The fifth message will always be displayed in sequence, and will always read   DEPOSIT $3.00   where the dollar amount represents the current parking rate. The first four messages may be chosen from a list of pre-programmed messages or a custom message may be created. Up to eight different custom messages can be programmed. If a ninth custom message is attempted, it overwrites the first custom message programmed. Once a custom message is programmed, it will be listed along with the pre-programmed messages when scrolling through the available message choices. These custom messages can be deselected or overwritten, but never erased. If it is undesirable to sequence through all five messages, program the desired messages with pre-programmed or custom messages and program the remaining messages with the   --- NOT USED ---   message located in the pre-programmed message list. This message will not appear on the screen. When this message is encountered in the message sequence, it will automatically skip to the next message in the sequence without any time delay.

   Welcome Prompts Example: To guide a customer through a transaction, the following messages may be selected:

WELCOME MESSAGE #1	**"SPACE AVAILABLE"**
WELCOME MESSAGE #2	**"TO PARK HERE"**
WELCOME MESSAGE #3	**"—NOT USED—"**
WELCOME MESSAGE #4	**"—NOT USED—"**

   Remember, Welcome Message #5 will always be displayed and will always read DEPOSIT $X.XX, where $X.XX represents the current parking rate.

❑ **PROCEED PROMPTS?** The PROCEED PROMPTS? category is used to select the sequencing messages that are seen after a customer completes a transaction and is waiting to proceed into the parking lot. There are up to four sequencing Proceed Prompts possible. These four messages may be chosen from a list of pre-programmed messages or a custom message may be created. Up to eight different custom messages can be programmed. If a ninth custom message is attempted, it overwrites the first custom message programmed. Once a custom message is programmed, it will be listed along with the pre-programmed messages when scrolling through the available message choices. These custom messages can be deselected or overwritten, but never erased. If you do not wish to use all four messages, simply program the desired messages with the pre-programmed or custom messages and program the remaining messages with the   --- NOT USED ---   message located in the pre-programmed message list. This message will not appear on the screen. When this message is encountered in the message sequence, it automatically skips to the next message in the sequence without any time delay.

   Proceed Prompts Example: To guide a customer through a transaction, the following messages may be selected:

PROCEED MESSAGE #1	**"THANK YOU"**
PROCEED MESSAGE #2	**"PLEASE DRIVE AHEAD"**
PROCEED MESSAGE #3	**"—NOT USED—"**
PROCEED MESSAGE #4	**"—NOT USED—"**

❑ **CLOSED PROMPTS?** The CLOSED PROMPTS? category is used to select the sequencing messages that are displayed when the ACW-5-P is signaled that the lot is full or it is programmed to be disabled. There are up to four sequencing messages possible. The four messages may be chosen from a list of pre-programmed messages or a custom message may be created. Up to eight different custom messages can be programmed. If a ninth custom message is attempted, it overwrites the first custom message programmed. Once a custom message is programmed, it will be listed along with the pre-programmed messages when scrolling through the available message choices. These custom messages can be de-selected or overwritten, but never erased. If it is undesirable to sequence through all four messages, program the desired messages with pre-programmed or custom messages and program the remaining messages with the   --- NOT USED ---   message located in the pre-programmed message list. This message will not appear on the screen. When this message is encountered in the message sequence, it will automatically skip to the next message in the sequence without any time delay. As a programming example, to tell a customer that the lot is full and to try again some other time, the Closed Messages may be programmed as follows:

> **Closed Prompts Example:** To guide a customer through a transaction, the following messages may be selected:

CLOSED MESSAGE #1	"PARKING LOT FULL"
CLOSED MESSAGE #2	"PLEASE COME AGAIN"
CLOSED MESSAGE #3	"---NOT USED---"
CLOSED MESSAGE #4	"---NOT USED---"

❑ **SET DAY/NIGHT RATES?** The SET DAY/NIGHT RATES? category is used to program two of the five possible parking rates in the ACW-5-P, the Day rate and the Night rate. To program, it is necessary to determine what times will be considered Night , whether the system is to be enabled or disabled during each time zone, and the fee to charge for each of these zones.

The Night and Day-Time zones are determined by specifying a starting and ending time for the Night time zone. The times are specified in non-military time and are programmed using the format HH:MM A/P, where HH represents the hour, MM represents the minute, and A/P represents the AM or PM setting.

Once the day and night hours have been determined, the Day-Time mode and Night-Time mode must be decided upon. For each of these modes, there are two choices, SYSTEM ENABLED and SYSTEM DISABLED. When SYSTEM ENABLED is selected for a particular time zone and that time zone is active, the display will cycle through the sequencing Welcome Messages and the Validator and coin acceptors will be activated and ready to accept deposits. When SYSTEM DISABLED is selected for a particular time zone and that time zone is active, the display will cycle through the sequencing Closed Messages and the Validator and coin acceptors will be deactivated so they will not accept deposits. One example of how to utilize this feature would be to set the Day-Time mode to SYSTEM DISABLED while there is an attendant present taking the payments. Then, after the attendant has left for the day, set the Night-Time mode to SYSTEM ENABLED to continue taking payments automatically.

The last feature to program in this category is the actual parking fees for the two time zones. These fees are programmed independently and can range from $0.25 to $63.75 in $0.25 increments.

❑ **SET WEEKLY EVENTS?** The SET WEEKLY EVENTS? category is used to program two of the five possible parking rates in the ACW-5-P, the Weekly Event #1 rate and the Weekly Event #2 rate. These two events are used when a special rate is used for an event that occurs during the same time period every week. For instance, these events could be programmed to offer a special weekend parking rate, or possibly charge a special fee during a weekly event such as a football game, or a weekly concert that brings in more people to the lot than on any other day of the week. The two events are programmed independently of each other. To program, it is necessary to determine the time zones in which the event rates are to be active, whether the system is to be enabled or disabled during these time zones, and the fee to charge for each of these zones.

The Weekly Event #1 and Weekly Event #2 time zones are determined by specifying a starting and ending day and time. The times are specified in non-military time and are programmed using the format DDD HH:MM A/P, where DDD represents the day of the week, HH represents the hour, MM represents the minute, and A/P represents the AM or PM setting.

Once the Weekly Event #1 and/or Weekly Event #2 hours have been determined, the Weekly Event #1 mode and Weekly Event #2 mode must be decided upon. For each of these modes, there are two choices, SYSTEM ENABLED and SYSTEM DISABLED. When SYSTEM ENABLED is selected for a particular time zone, and that time zone is active, the display will cycle through the sequencing Welcome Messages and the Validator and coin acceptors will be activated and ready to accept payment. When SYSTEM DISABLED is selected for a particular time zone, and that time zone is active, the display will cycle through the sequencing Closed Messages and the Validator and coin acceptors will be deactivated so that they will not accept any payment. One example of how to utilize this feature would be to set one of the Weekly Event modes to SYSTEM DISABLED during the time that weekly lot maintenance is being performed so that cars will not be permitted until this work is completed.

The last feature to program in this category is the actual parking fees for the two time zones. These fees are programmed independently of each other, and can range from $0.25 to $63.75, in $0.25 increments.

❑ **SET SPECIAL EVENT?** The SET SPECIAL EVENT? category is used to program one of the five possible parking rates in the ACW-5-P, the Special Event rate. The Special Event is used to program a special rate for a one-time-only event. This event can be programmed days, months or even years in advance. To program, it is necessary to determine a starting date and time and ending date and time, whether the system is to be enabled or disabled during this time zone, and the fee to charge while this time zone is active.

The Special Event time zone is determined by specifying a starting date and time and an ending date and time. The times are specified in non-military time and are programmed using the format NN-DD-YY AT HH:MM A/P, where NN represents the month, DD represents the date, YY represents the year, HH represents the hour, MM represents the minute, and A/P represents the AM or PM setting.

Once the Special Event date and times have been determined, the Special Event Mode must be decided. For this mode, there are two choices, SYSTEM ENABLED and SYSTEM DISABLED. When SYSTEM ENABLED is selected for a particular time zone, and that time zone is active, the display will cycle through the sequencing Welcome Messages and the Validator and coin acceptors will be activated and ready to accept payment. When SYSTEM DISABLED is selected for a particular time zone, and that time zone is active, the display will cycle through the sequencing Closed Messages and the Validator and coin acceptors will be deactivated so that they will not accept any payment. One example of how to utilize this feature would be to program the Special Event time zone to coincide with a yearly parking lot resurfacing and set the Special Event Mode to SYSTEM DISABLED. Since the machine will be disabled and the closed messages will be displayed, customers will know that the lot is closed and they can not park there at this time.

The last feature to program in this category is the actual parking fee for this time zone. This fee is programmed with values ranging from $0.25 to $63.75, in $0.25 increments.

❑ **SET DATE & TIME?** The SET DATE & TIME? category is used to program the current day, date and time. Since the selection of fee time zones and thus collected revenue is dependent on this system clock, it is important to set it properly. The time is programmed similar to the following example:

SAT_08-06-94_05:30_P

The day is selected followed by the month, date, and year, then the hour and minute, and finally the AM/PM specification.

❑ **VEND DURATION?** The VEND DURATION? category is used to program the length of time that the ACW-5-P turns on its vend relays. The vend relays get turned on to signal the parking gate that the customer has finished the transaction and is ready to drive ahead. The length of time these relays should be held depends on the requirements of the particular parking gate being used. **Refer to the parking gate manual before setting this category.** The possible values range from 0.1 - 4.0 seconds.

❑ **SET PROCEED TIME?** The SET PROCEED TIME? category is used to program the length of time that the ACW-5-P prompts a customer to proceed into the parking lot after the customer has completed a transaction. After this time delay the ACW-5-P returns to sequencing through the Welcome Prompts and gets ready for the next customer. The possible values range from 0.1 - 9.9 seconds. **The Proceed Time must be longer or equal to the Vend Duration. If the Proceed Time is set for a shorter time, the value of the Vend Duration will also be used as the Proceed Time.**

❑ **SET PAY DEFAULT?** The SET PAY DEFAULT? category is used when a fault is detected in one of the payment devices, such as the Validator or one of the coin acceptors. There are two options to choose from in this mode, USE ALT PAYMENT or OUT OF SERVICE. If a fault has been detected and the default payment mode is set to OUT OF SERVICE, the ACW-5-P will shut itself down until the error has been corrected. However, if the default payment mode is set to USE ALT PAYMENT, the ACW-5-P can

continue operating, even if there is a fault in one or more of its payment devices. For example, a coin acceptor malfunctions, giving a constant payout pulse. In this situation, instead of shutting down the ACW-5-P, it will continue to operate but change the messages the customer sees. It will stop displaying the normal Welcome Messages and instead display the messages "PAYMENT OPTIONS" and "USE BILLS ONLY". This gives the customer the message not to use coins and tells the operator something has gone wrong with one of the coin acceptors and service is required. The ACW will continue to operate as long as there are payment options available. If all payment options are determined to be faulty, the machine will shutdown, displaying an error message for the last device to have a problem.

❑ **SET BUTTON ENABLE?** The SET BUTTON ENABLE? category is used to program which buttons are enabled or disabled. The refund button is selectable between enabled or disabled. If this button is enabled it will register as a valid selection and refund the customer his money. If this button is disabled, pressing it will have no affect.

❑ **SET EMPTY MODE?** The SET EMPTY MODE? category is used to program how the ACW-5-P will respond when its coin dispenser runs out of coins. There are two choices, OUT OF SERVICE and USE EXACT AMOUNT. If OUT OF SERVICE is selected and the Hopper goes empty, the display will change from the Welcome Prompts to show the sequencing messages "OUT OF SERVICE" and "HOPPER EMPTY". When this occurs, the Validator and coin acceptors will be deactivated so no further transactions can occur until the Hopper is again filled with coins. If USE EXACT AMOUNT is selected and the Hopper goes empty, the Validator and coin acceptors will remain activated and the display will stop showing the Welcome Messages and instead show the sequencing messages "USE EXACT AMOUNT", "NO CHANGE RETURNED" and "DEPOSIT $X.XX", where the dollar amount is the current parking rate. In this mode, it is possible to continue performing transactions even though the Hopper is empty since the customer is being notified that no change will be returned and the exact amount must be deposited.

❑ **SET BUILD MODE?** The SET BUILD MODE? category is not used in the ACW-5-P, so the setting is irrelevant.

IV. AUDITS

For added security, the ACW-5-P contains two complete sets of audits.

The RESETTABLE audit categories include:

- INVENTORY DEPOSITS?
- INVENTORY VENDING?
- INVENTORY OVERPAID?
- AUDIT VAULT COUNT?

The NON-RESETTABLE audit categories include:

- TOTAL DEPOSITS?
- TOTAL VENDING?
- TOTAL OVERPAID?
- TOTAL VAULT COUNT?

The information stored is the same for both sets. However, the RESETTABLE AUDITS are values accumulated since the last time the audits were cleared. The NON-RESETTABLE AUDITS contain values accumulated throughout the entire life of the Controller while it has been inside the ACW-5-P.

For details on how to view the audit information on your ACW-5-P, refer to the PROGRAMMING Section. (It may be necessary to read the entire section to get a complete understanding of how the Controller functions.)

The information stored in each audit is described below.

❑ **INVENTORY and TOTAL DEPOSITS?** The DEPOSITS category shows a complete dollar amount of everything deposited into the machine, minus the change returned to the customer. It is broken down into three sub-categories, CASH, TOKENS and CARDS. The CASH deposit sub-category gives a total dollar amount of all $1, $5, $10, $20 bills and quarters deposited. It takes into consideration change that has been returned to the customer, displaying the amount of profit made. The TOKEN deposit sub-category gives a total dollar amount of all Tokenotesfi and token coins deposited. The CARDS sub-category gives the total dollar amount of all WashCardfi, debit card and credit card transactions, if applicable.

❑ **INVENTORY and TOTAL VENDING?** The VENDING category gives a complete breakdown of how many customers entered the lot during each of the five programmable time zones. This category also shows the breakdown of payment methods by giving a dollar amount of all cash, Tokenotesfi, and token coins deposited for each time zone.   It also gives the total dollar amount of all WashCardfi, debit card and credit card transactions, if applicable.

❑ **INVENTORY and TOTAL OVERPAID?** The OVERPAID category totals the amount of change that could not be dispensed to customers. Most frequently, this category is adjusted when the Coin Hopper is empty and the ACW-5-P is operating in the USE EXACT AMOUNT Mode. If a customer deposits more than the selected wash price, the difference between the amount deposited and the selected wash price will be added to the overpaid categories.

❑ **AUDIT and TOTAL VAULT COUNT?** The VAULT COUNT category gives a complete breakdown of all deposits and cash payouts. It does this by offering specific counts on the number of each denomination bill that has been deposited, the number of each type of Tokenotefi deposited, and the number of token coins, debit card swipes and quarters deposited. There is also a count of the number of quarters dispensed as change.

❑ **CLEAR RESETTABLE INVENTORIES?** Clearing the RESETTABLE INVENTORIES has the effect of zeroing out all values and counts that have been accumulated since the last time these inventories were cleared. The categories effected are INVENTORY DEPOSITS, INVENTORY VENDING, INVENTORY OVERPAID, and AUDIT VAULT COUNT. The NON-RESETTABLE categories remain unchanged. Refer to the PROGRAMMING section for details on how to clear the inventories.

V. PROGRAMMING

The ACW-5-P comes pre-programmed from the factory. (Refer to Appendix D for the factory settings.) However, you may decide to program the ACW-5-P to meet your individual needs.

❑ **IN ORDER TO PROGRAM THE ACW-5-P, YOU MUST FIRST GAIN ACCESS TO THE CONTROLLER BY FOLLOWING THE STEPS BELOW:**

1. Open the cabinet to view the Controller. It is positioned inside the large metal enclosure mounted on the lower right portion of the door.
2. To gain access to the Controller, remove the cover from the enclosure. (Refer to the directions printed on the enclosure.)
3. Once inside, the Controller is the piece of equipment that the wiring harness plugs into. (There is also a label to identify the Controller.)

❑ **THERE ARE FOUR BUTTONS ON THE SIDE OF THE CONTROLLER THAT LOOK LIKE THIS:**
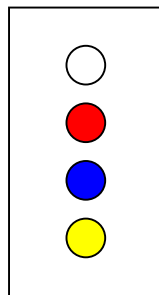
WHITE BUTTON   RETURN

RED BUTTON

BLUE BUTTON (OR BLACK)

YELLOW BUTTON   ACTION

❑ **THE CONTROLLER HAS THREE LEVELS (OR "MODES") OF OPERATION:**

- **RUN MODE:** Where transactions are carried out with the customer. (Welcome Prompts are displayed.)
- **MENU MODE:** Scrolls through all of the programming categories.
- **PROGRAMMING MODE:** Scrolls through all of the messages or dollar amounts available for a particular category.

❑ **THE FOLLOWING TABLE SHOWS THE FUNCTION OF EACH BUTTON AND HOW TO MOVE FROM MODE TO MODE.**

BUTTON	FUNCTION
WHITE - RETURN	Used to move up one MODE level at a time.
RED	Used to move down through the programming categories while in the MENU MODE, or to move through lists of messages or dollar amounts and to increase dollar amounts in the PROGRAMMING MODE.
BLUE or BLACK	Used to move up through the programming categories while in the MENU MODE, or to move through lists of messages or dollar amounts and to decrease dollar amounts in the PROGRAMMING MODE.
YELLOW ACTION	Used to move down one MODE level at a time.

❑ **IN ORDER TO PROGRAM THE ACW-5-P IT IS NECESSARY TO:**

1. Have the machine turned on and running.
2. Have access to the four programming buttons on the side of the Controller.
3. Be able to view the display on the front of the machine.

❑ **TO PROGRAM A PARTICULAR CATEGORY YOU MUST FOLLOW THE STEPS BELOW:**

1. Starting from the RUN MODE (Welcome Prompts), press the ACTION (YELLOW) button once. This will move you down one mode to the MENU MODE.
2. Using the RED and BLUE buttons, scroll through the different categories until you find the category you wish to change.
3. Once the desired category is displayed, use the ACTION (YELLOW) button to move down one mode to the PROGRAMMING MODE.
4. Using the RED and BLUE buttons, scroll through the messages or dollar amounts for that particular category until you find the desired selection.
5. Press the RETURN (WHITE) button twice to move up two modes and to return you to the RUN MODE (Welcome Prompt).
6. Or, if you wish to make a change to another category, press the RETURN (WHITE) button once to move up one mode to the MENU MODE. Repeat Step 4 for each category you wish to change.

★ **Once a selection is displayed, it is automatically saved into the Controller's memory.**

MENU MODE

PROGRAMMING CATEGORIES	DESCRIPTIONS
INVENTORY DEPOSITS?	The amount taken in by the ACW-5-P in cash, Tokenotes®, token coins, debit cards and credit cards.
INVENTORY VENDING?	Individual counts of the five parking time zones.
INVENTORY OVERPAID?	The total change unable to be refunded while in the USE EXACT AMOUNT mode.
AUDIT VAULT COUNT?	Totals of each bill and coin denomination.
TOKEN COIN MODE?	Allows either single or multiple token use.
TOKEN COIN VALUE?	Amount of credit given for a valid token coin.
TOKENOTE® MODE?	Allows either single or multiple Tokenotefi use.
TOKENOTE® VALUE?	Amount of credit given for a valid Tokenotefi.
COUPON DISCOUNTS?	Amount of credit given for a valid coupon.
WELCOME PROMPTS?	Up to four sequencing messages displayed while system is enabled and in stand-by. Choose from pre-programmed Welcome Messages or program custom messages.
PROCEED PROMPTS?	Used to prompt the customer to proceed into the parking lot. Up to four Proceed Messages can be displayed. Choose from pre-programmed Proceed Prompts or program custom messages.
CLOSED PROMPTS?	Up to four sequencing messages displayed while system is disabled. Choose from pre-programmed closed messages or program custom messages.
SET DAY/NIGHT RATES?	Program night hours, system mode and rates for day and night time zones.
SET WEEKLY EVENTS?	Program day, time, and duration, system mode and rates for two weekly events.
SET SPECIAL EVENT?	Program date and time duration, system mode and rate for one special event.
PRINT REPORT?	Prints report to optional portable printer.
SET DATE & TIME?	Sets current date and time in non-military format.
VEND DURATION?	Sets duration of vend relay closure.
SET PROCEED TIME?	Used to set the length of time that the acw-5-p prompts a customer to proceed into the parking lot.
SET EMPTY MODE?	Choice of shutting down (OUT OF SERVICE) or requesting exact change (USE EXACT AMOUNT) when Hopper is empty.

MENU MODE

PROGRAMMING CATEGORIES	DESCRIPTIONS
SET BUILD MODE?	Not used, setting is irrelevant.
SET PAY DEFAULT?	Choice of shutting down (OUT OF SERVICE) or giving payment options (USE ALT PAYMENT) when a fault has been detected in one of the payment devices.
SET BUTTON ENABLE?	Used to enable or disable the REFUND button.
TOTAL DEPOSITS?	A cumulative non-resettable total of cash taken in and token credit (Tokenotesfi, token coins, debit and credit cards).
TOTAL VENDING?	A cumulative non-resettable total of services performed.
TOTAL OVERPAID?	A cumulative non-resettable total of change unable to be refunded when in the USE EXACT AMOUNT mode.
TOTAL VAULT COUNT?	A cumulative non-resettable total of each bill denomination and coin.

The following section explains the physical programming steps required for each of these categories. For more information regarding the function of each category, refer to the PROGRAMMABLE OPTIONS section. The categories will be listed in the order in which they appear in the MENU MODE.

INVENTORY DEPOSITS?

❑ **TO VIEW THE INVENTORY DEPOSITS VALUES:**

● Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.   INVENTORY DEPOSITS is the first category so it should already be displayed.

● With Inventory Deposits appearing on the display, press the ACTION (YELLOW) button again. The display should read:

CASH = $0.00

or

TOKENS = $0.00

or

CARDS = $0.00

* The dollar amounts shown are the current dollar, token and debit/credit totals.

● Use the ACTION (YELLOW) button to toggle between these values.

● When these values have been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.

INVENTORY VENDING?

❑ **TO VIEW THE INVENTORY VENDING VALUES:**

● **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

● **Using the RED and BLUE buttons, scroll through the categories until   INVENTORY VENDING?   is displayed.**

● **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

| VEND 1 CNT = 0 | **Number of Item 1 fees received** |

or | VEND 1 CSH = $0.00 | **Number of Item 1 fees received in cash** |

or | VEND 1 TOK = $0.00 | **Number of Item 1 fees received in Token Credit** |

or | VEND 1 DEB = $0.00 | **Number of Item 1 fees received in debit or credit cards** |

● **Use the ACTION (YELLOW) button to toggle between these values.**

● **When these values have been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

INVENTORY OVERPAID?

❑ **TO VIEW THE INVENTORY OVERPAID VALUE:**

● **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

● **Using the RED and BLUE buttons, scroll through the categories until   INVENTORY OVERPAID?   is displayed.**

● **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

| OVERPAID $0.00 |

*The dollar amount shown is the current overpaid totals.

● **When this information has been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

AUDIT VAULT COUNT?

❑ **TO VIEW THE AUDIT VAULT COUNT VALUES:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   AUDIT VAULT COUNT?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. One of the following will be displayed:**

$20 BILL CNT	0
$10 BILL CNT	0
$5 BILL CNT	0
$2 BILL CNT	0
$1 BILL CNT	0
QUARTER CNT	0
TOKEN CNT	0
TOKENOTE CNT	0
COUPON 1 CNT	0
COUPON 2 CNT	0
COUPON 3 CNT	0
COUPON 4 CNT	0
HOPPER CNT	0

*The values shown are the current counts for each of these denominations.

- **Press the ACTION (YELLOW) button to scroll through these displayed values.**
- **When this information has been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOKEN COIN MODE?

❑ **TO VIEW THE CURRENT TOKEN COIN MODE:**

- **Starting in the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until TOKEN COIN MODE? is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **MULTIPLE CREDITS**
>
> or
>
> **SINGLE CREDIT MODE**

*Depending on the current setting.

- **Use the RED and BLUE buttons to toggle between the two settings.**
- **Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOKEN COIN VALUE?

❑ **TO VIEW THE CURRENT TOKEN COIN VALUE:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until TOKEN COIN VALUE? is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **TOKEN COIN = $0.00**

*The dollar amount is the current value.

- **Using the RED and BLUE buttons, raise or lower the value in $0.25 increments. The value can range from $0.00 to $63.75.**
- **When the desired value is displayed, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOKENOTE® MODE?

❑ **TO VIEW THE CURRENT TOKENOTE® MODE:**

- **Starting in the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

- **Using the RED and BLUE buttons, scroll through the categories until TOKENOTEfi MODE? is displayed.**

- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

MULTIPLE CREDITS

or

SINGLE CREDIT MODE

*Depending on the current setting.

- **Use the RED and BLUE buttons to toggle between the two settings.**

- **Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOKENOTE® VALUE?

❑ **TO VIEW THE CURRENT TOKENOTE® VALUE:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

- **Using the RED and BLUE buttons, scroll through the categories until TOKENOTEfi VALUE? is displayed.**

- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

TOKENOTE = $0.00

*The dollar amount is the current value.

- **Using the RED and BLUE buttons, raise or lower the value in $0.25 increments. The value can range from $0.00 to $63.75.**

- **When the desired value is displayed, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

COUPON DISCOUNTS?

❑ **TO VIEW THE CURRENT COUPON DISCOUNT VALUES:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

- **Using the RED and BLUE buttons, scroll through the categories until   COUPON DISCOUNTS?   is displayed.**

- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **COUPON 1 = $0.00**

  ***The dollar amount is the current value for coupon #1.**

- **Using the RED and BLUE buttons, raise or lower the value in $0.25 increments. The value can range from $0.00 to $63.75.**

- **When the desired value is displayed, you may program the next coupon or exit the PROGRAMMING MODE. To program the next coupon use the ACTION (YELLOW) button to scroll through each of the four Coupon Discounts and the RED and BLUE buttons to raise or lower the value. Repeat this step for each coupon you wish to program.**

- **Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

WELCOME PROMPTS?

❑ **TO VIEW THE CURRENT WELCOME PROMPT MESSAGES:**

- From the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.
- Using the RED and BLUE buttons, scroll through the categories until   WELCOME PROMPTS?   is displayed.
- Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:

| WELCOME MESSAGE #1 |

briefly, then

| TO ENTER LOT |

*The second message displayed is the current Welcome Message #1.

- To change this message, use the RED and BLUE buttons to scroll through the factory pre-programmed messages. (Refer to Appendix F for a complete list of pre-programmed Welcome Messages.)
- When the desired message is displayed, you may program the next welcome message or exit the PROGRAMMING MODE. To program the next message, use the ACTION (YELLOW) button to scroll through each of the four Welcome Messages and the RED and BLUE buttons to scroll through the list of factory pre-programmed messages. Repeat this step for each Welcome Message you wish to program.
- Press the RETURN (WHITE) button to return to the MENU or RUN MODE.

❑ **IF THERE IS NOT A PRE-PROGRAMMED MESSAGE SUITABLE FOR YOUR APPLICATION, IT IS POSSIBLE TO PROGRAM A CUSTOM MESSAGE:**

- Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.
- Use the RED and BLUE buttons to scroll through the categories until   WELCOME PROMPTS?   is displayed.
- To enter the PROGRAMMING MODE, press the ACTION (YELLOW) button. This will bring up the Welcome Message #1.
- If the new custom message is not intended for Message #1, press the ACTION (YELLOW) button until the proper message number is displayed.
- Using the RED and BLUE buttons, scroll through the pre-programmed messages until a blank message is displayed.
- Press and hold the ACTION (YELLOW) button until a flashing cursor is displayed, then release the ACTION button.
- Use the RED and BLUE buttons to move through the displayable letters and characters.
- Once the desired character or letter is displayed, move to the next space by pressing the ACTION (YELLOW) button.
- When the message is complete, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.

PROCEED PROMPTS?

- Starting in the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.
- Using the RED and BLUE buttons, scroll through the categories until   PROCEED PROMPTS?   is displayed.
- Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:

| PROCEED MESSAGE #1 |

briefly, then

| DRIVE FORWARD |

*The second message displayed is the current Proceed Message #1.

- To change this message, use the RED and BLUE buttons to scroll through the factory pre-programmed messages (refer to Appendix E for a complete list of pre-programmed Proceed Messages).
- When the desired message is displayed, you may program the next message or exit the PROGRAMMING MODE. To program the next message, use the ACTION (YELLOW) button to scroll through each of the four Proceed Messages and the RED and BLUE buttons to scroll through the list of factory pre-programmed messages. Repeat this step for each Proceed Message you wish to program.
- Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.

❑ IF THERE IS NOT A PRE-PROGRAMMED MESSAGE SUITABLE FOR YOUR APPLICATION, IT IS POSSIBLE TO PROGRAM A CUSTOM MESSAGE:

- Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.
- Use the RED and BLUE buttons to scroll through the categories until   PROCEED PROMPTS?   is displayed.
- To enter the PROGRAMMING MODE, press the ACTION (YELLOW) button. This will bring up Proceed Message #1.
- If the new custom message is not intended for Message #1, press the ACTION (YELLOW) button until the proper message number is displayed.
- Using the RED and BLUE buttons, scroll through the pre-programmed messages until a blank message is displayed.
- Press and hold the ACTION (YELLOW) button until a flashing cursor is displayed, then release the ACTION (YELLOW) button.
- Use the RED and BLUE buttons to move through the displayable letters and characters.
- Once the desired character or letter is displayed, move to the next space by pressing the ACTION (YELLOW) button.
- When the message is complete, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.

CLOSED PROMPTS?

❑ **TO VIEW THE CURRENT CLOSED PROMPT MESSAGES:**

● From the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.

● Using the RED and BLUE buttons, scroll through the categories until CLOSED PROMPTS? is displayed.

● Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:

| CLOSED MESSAGE #1 |

briefly, then

| PARKING LOT CLOSED |

*The second message displayed is the current Welcome Message #1.

● To change this message, use the RED and BLUE buttons to scroll through the factory pre-programmed messages. (Refer to Appendix F for a complete list of pre-programmed Closed Messages.)

● When the desired message is displayed, you may program the next Closed Message or exit the PROGRAMMING MODE. To program the next message, use the ACTION (YELLOW) button to scroll through each of the four Closed Messages and the RED and BLUE buttons to scroll through the list of factory pre-programmed messages. Repeat this step for each Closed Message you wish to program.

● Press the RETURN (WHITE) button to return to the MENU or RUN MODE.

❑ **IF THERE IS NOT A PRE-PROGRAMMED MESSAGE SUITABLE FOR YOUR APPLICATION, IT IS POSSIBLE TO PROGRAM A CUSTOM MESSAGE:**

● Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.

● Use the RED and BLUE buttons to scroll through the categories until CLOSED PROMPTS? is displayed.

● To enter the PROGRAMMING MODE, press the ACTION (YELLOW) button. This will bring up the Closed Message #1.

● If the new custom message is not intended for Message #1, press the ACTION (YELLOW) button until the proper message number is displayed.

● Using the RED and BLUE buttons, scroll through the pre-programmed messages until a blank message is displayed.

● Press and hold the ACTION (YELLOW) button until a flashing cursor is displayed, then release the ACTION button.

● Use the RED and BLUE buttons to move through the displayable letters and characters.

● Once the desired character or letter is displayed, move to the next space by pressing the ACTION (YELLOW) button.

● When the message is complete, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.

SET DAY/NIGHT RATES?

❑ **TO VIEW THE CURRENT DAY AND NIGHT MODES, TIMES, AND RATES:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   SET DAY/NIGHT RATES?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

<div align="center">

DAY-TIME MODE

briefly, then either

SYSTEM ENABLED

or

SYSTEM DISABLED

</div>

*The second message is the current setting of the Day-Time mode.

- **To change this setting, use the RED or BLUE button to toggle between the two choices.**
- **When the proper Day-Time mode is displayed, press the ACTION (YELLOW) button to set the Day-Time parking fee. The display will read:**

<div align="center">

DAY-TIME FEE= $1.00

</div>

*The dollar amount is the current Day-Time parking rate.

- **Using the RED or BLUE buttons, raise or lower the fee in $0.25 increments. The value can range from $0.00 to $63.75.**
- **When the correct amount is displayed, press the ACTION (YELLOW) button to program the starting time for the Night-Time zone. The display will read:**

<div align="center">

NIGHT BEGINS 06:00 P

</div>

*With a flashing cursor on the first pair of numbers.
This is the current Night-Time zone starting time.

- **To change this, use the RED and BLUE buttons to adjust the starting hour.**
- **When the desired hour is displayed, press the ACTION (YELLOW) button to program the starting minute.**
- **The cursor will move to the second pair of numbers, and with the RED and BLUE buttons, adjust the starting minute.**
- **When the correct starting minute is displayed, press the ACTION (YELLOW) button to program the Night-Time AM or PM setting. The cursor will move to the last character and with the RED and BLUE buttons, toggle between   A   or   P .**

- **Press the ACTION (YELLOW) button again to program the ending time for the Night-Time zone. The display will read:**

> **NIGHT ENDS 06:00 A**

*With a flashing cursor on the first pair of numbers.
This is the current ending time for the Night-Time zone.

- **To change this, use the RED and BLUE buttons to adjust the ending hour.**
- **When the desired hour is displayed, press the ACTION (YELLOW) button to program the ending minute.**
- **The cursor will move to the second pair of numbers, and with the RED and BLUE buttons, adjust the ending minute.**
- **When the correct ending minute is displayed, press the ACTION (YELLOW) button to program the Night-Time AM or PM setting. The cursor will move to the last character and with the RED and BLUE buttons, toggle between A or P .**
- **Once the correct ending time for the Night-Time zone is displayed, press the ACTION (YELLOW) button to program the Night-Time Mode. The display will read:**

> **NIGHT-TIME MODE**

briefly, then either

> **SYSTEM ENABLED**

or

> **SYSTEM DISABLED**

*The second message is the current setting of the Night-Time mode.

- **To change this setting, use the RED or BLUE button to toggle between the two choices.**
- **When the proper Night-Time mode is displayed, press the ACTION (YELLOW) button to set the Night-Time parking fee. The display will read:**

> **NIGHT-TIME FEE=$2.00**

*The dollar amount is the current Night-Time parking rate.

- **Using the RED or BLUE buttons, raise or lower this fee in $0.25 increments. The value can range from $0.00 to $63.75.**
- **When the correct amount is displayed, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

SET WEEKLY EVENTS?

❑ **TO VIEW THE CURRENT WEEKLY EVENT #1 AND WEEKLY EVENT #2 MODES/DAYS/TIMES/RATES:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   SET WEEKLY EVENTS?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **WEEKLY EVENT #1 MODE**

briefly, then either

> **SYSTEM ENABLED**

or

> **SYSTEM DISABLED**

*The second message is the current setting of the Weekly Event #1 time zone mode.

- **To change this setting, use the RED and BLUE buttons to toggle between the two choices.**
- **When the proper Weekly Event #1 mode is displayed, press the ACTION (YELLOW) button to set the Weekly Event #1 time zone starting day and time. The display will read:**

> **BEGINS SAT 01:00 P**

*With a flashing cursor on the day setting.
This is the current Weekly Event #1 starting day and time.

- **To change this, use the RED and BLUE buttons to adjust the starting day.**
- **When the desired starting day is displayed press the ACTION (YELLOW) button to program the starting hour. The cursor will move to the first pair of numbers, and with the RED and BLUE buttons adjust the starting hour.**
- **When the correct starting hour is displayed, press the ACTION (YELLOW) button to program the starting minute. The cursor will move to the second pair of numbers and with the RED and BLUE buttons adjust the starting minute.**
- **When the correct minute is displayed, press the ACTION (YELLOW) button to program the Weekly Event #1 starting time AM or PM setting. The cursor will move to the last character, and with the RED or BLUE buttons toggle between   A   and   P .**
- **Press the ACTION button again to program the Weekly Event #1 ending day and time. The display will read:**

> **ENDS SAT 03:00 P**

*With a flashing cursor on the Day setting.
This is the current Weekly Event #1 time zone ending day and time.

- **To change this, use the RED and BLUE buttons to adjust the ending day.**
- **When the desired ending day is displayed press the ACTION (YELLOW) button to program the ending hour. The cursor will move to the first pair of numbers, and with the RED and BLUE buttons adjust the ending hour.**
- **When the correct ending hour is displayed, press the ACTION (YELLOW) button to program the ending minute. The cursor will move to the second pair of numbers and with the RED and BLUE buttons adjust the ending minute.**
- **When the correct minute is displayed, press the ACTION (YELLOW) button to program the Weekly Event #1 ending time AM or PM setting. The cursor will move to the last character, and with the RED or BLUE buttons toggle between A and P .**
- **Once the correct Weekly Event #1 time zone ending day and time are displayed, press the ACTION (YELLOW) button to program the Weekly Event #1 time zone parking rate. The display will read:**

> **EVENT RATE = $3.00**

*The dollar amount is the current Weekly Event #1 time zone parking rate.

- **Using the RED or BLUE buttons, raise or lower the value in $.25 increments. The value can range from $0.00 to $63.75.**
- **When the correct value is displayed, press the ACTION (YELLOW) button to display the Weekly Event #2 time zone.**
- **Program the Weekly Event #2 time zone using the same procedures that were followed for programming Weekly Event #1.**
- **Once the Weekly Event #2 has been programmed press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

SET SPECIAL EVENT?

❑ **TO VIEW THE CURRENT SPECIAL EVENT MODE/DATE/TIME/RATE:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   SET SPECIAL EVENT?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **SPECIAL EVENT MODE**

briefly, then either

> **SYSTEM ENABLED**

or

> **SYSTEM DISABLED**

*The second message is the current setting of the Special Event mode.

- **To change this setting, use the RED and BLUE buttons to toggle between the two choices.**
- **When the proper Special Event mode is displayed, press the ACTION (YELLOW) button to set the Special Event starting date and time. The display will read:**

> **SPECIAL EVENT BEGINS**

briefly, then

> **08-06-94 AT 05:30 P**

*With a flashing cursor on the first pair of numbers.
This is the current Special Event starting date and time.

- **To change this, use the RED and BLUE buttons to adjust the starting month.**
- **When the desired starting month is displayed, press the ACTION (YELLOW) button to program the starting date. The cursor will move to the second pair of numbers, and with the RED and BLUE buttons, adjust the starting date.**
- **When the correct starting date is displayed, press the ACTION (YELLOW) button to program the starting year. The cursor will move to the next pair of numbers and with the RED and BLUE buttons adjust the starting year.**
- **When the correct year is displayed, press the ACTION (YELLOW) button to program the Special Event starting time. The cursor will move to the next pair of numbers, and with the RED and BLUE buttons adjust the starting hour.**
- **When the correct starting hour is displayed, press the ACTION (YELLOW) button to program the starting minute. The cursor will move to the next pair of numbers and with the RED and BLUE buttons adjust the starting minute.**
- **When the correct starting minute is displayed, press the ACTION (YELLOW) button to program the starting AM or PM setting. The cursor will move to the last character, and with the RED or BLUE buttons toggle between   A   and   P .**

- **Press the ACTION button again to program the Special Event ending date and time. The display will read:**

<div style="text-align:center">

SPECIAL EVENT ENDS

</div>

<div style="text-align:center">

briefly, then

08-06-94 AT 05:50 P

</div>

<div style="text-align:center">

*With a flashing cursor on the month setting.
This is the current Special Event ending date and time.

</div>

- **To change this, use the RED and BLUE buttons to adjust the ending month.**
- **When the desired ending month is displayed, press the ACTION (YELLOW) button to program the ending date. The cursor will move to the second pair of numbers, and with the RED and BLUE buttons adjust the ending date.**
- **When the correct ending date is displayed, press the ACTION (YELLOW) button to program the ending year. The cursor will move to the next pair of numbers and with the RED and BLUE buttons adjust the ending year.**
- **When the correct year is displayed, press the ACTION (YELLOW) button to program the Special Event ending time. The cursor will move to the next pair of numbers, and with the RED and BLUE buttons adjust the ending hour.**
- **When the correct ending hour is displayed, press the ACTION (YELLOW) button to program the ending minute. The cursor will move to the next pair of numbers and with the RED and BLUE buttons adjust the ending minute.**
- **When the correct ending minute is displayed, press the ACTION (YELLOW) button to program the ending AM or PM setting. The cursor will move to the last character, and with the RED or BLUE buttons toggle between A and P .**
- **Once the correct Special Event time zone ending day and time are displayed, press the ACTION button to program the Special Event time zone parking rate. The display will read:**

<div style="text-align:center">

EVENT RATE = $2.50

</div>

<div style="text-align:center">

*The dollar amount is the current Special Event parking rate.

</div>

- **Using the RED or BLUE buttons, raise or lower the value in $.25 increments. The value can range from $0.00 to $63.75.**
- **When the correct value is displayed, press the RETURN button once to return to the MENU MODE or twice to return to the RUN MODE.**

PRINT REPORT?

❑ **TO GET A PRINTOUT OF THE ACW-5-P AUDITS, IT IS NECESSARY TO:**

- **First connect a printer to the system.**
- **Then, starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until PRINT REPORT? is displayed.**
- **To start printing, press the ACTION (YELLOW) button. The display will read:**

> **PRINTING REPORT!**

- **When all information has been sent to the printer, the Controller returns to the MENU MODE. Press the RETURN button once to return to the RUN MODE.**

❑ **THERE IS AN ALTERNATE METHOD OF OBTAINING A PRINTOUT OF THE ACW-5-P AUDITS THAT DOES NOT REQUIRE ENTERING THE PROGRAMMING MODE. TO DO THIS:**

- **First connect a printer to the system.**
- **Then, with the printer turned ON, press the ON-LINE button on the printer four times in quick succession. The printer will begin printing and the display will read:**

> **TRANSMITTING DATA!**

- **When all information has been sent to the printer, the Controller returns to displaying the Welcome Messages.**

SET DATE & TIME?

❑ **TO VIEW THE DATE AND TIME:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until SET DATE & TIME is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **SAT 08-06-94 05:30 P**

- **There will be a flashing cursor on the day setting. This is the current day of the week. To change this, use the RED and BLUE buttons to adjust the day.**

- **When the correct day is displayed, press the ACTION (YELLOW) button to program the current month. The cursor will move to the first pair of numbers. Use the RED and BLUE buttons to adjust the month.**

- **Follow this same sequence to program the current date, year, hour, minute, and the AM/PM setting.**

- **When the correct day, date, and time are displayed, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

VEND DURATION?

❑ **TO VIEW THE CURRENT VEND DURATION TIME:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

- **Using the RED and BLUE buttons, scroll through the categories until   VEND DURATION?   is displayed.**

- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **VEND PULSE = 1.0s**

*The value shown is the current time in seconds.

- **To change this value, use the RED and BLUE buttons to raise or lower the value in 0.1 second increments. The factory recommendation is 2.0 seconds, however, REFER TO YOUR PARKING MANUAL FOR THEIR RECOMMENDATION BEFORE PROGRAMMING THIS SETTING.**

- **When the desired value is displayed, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

SET PROCEED TIME?

❑ **TO VIEW THE CURRENT PROCEED TIME:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

- **Using the RED and BLUE buttons, scroll through the categories until   SET PROCEED TIME?   is displayed.**

- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **PROCEED TIME = 7.0s**

*The value shown is the current time in seconds.

- **To change this value, use the RED and BLUE buttons to raise or lower the value in 0.1 second increments.**

- **When the desired value is displayed, use the RETURN button once to return to the MENU MODE or twice to return to the RUN MODE.**

SET EMPTY MODE?

❑ TO VIEW THE CURRENT EMPTY MODE:

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   SET EMPTY MODE?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

USE EXACT AMOUNT

or

OUT OF SERVICE

*Depending on the current setting.

- **Use the RED and BLUE buttons to toggle between the two settings.**
- **Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

SET BUILD MODE?

❑ TO VIEW THE CURRENT BUILD MODE:

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   SET BUILD MODE?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

LIMIT ENABLED

or

LIMIT DISABLED

*Depending on the current setting.

- **Use the RED and BLUE buttons to toggle between the two settings.**
- **Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

SET PAY DEFAULT?

❑ **TO VIEW THE CURRENT PAYMENT MODE:**

- **Starting in the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   SET PAY DEFAULT?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

> **OUT OF SERVICE**
>
> **or**
>
> **USE ALT PAYMENT**

*Depending on the current setting.

- **Use the RED or BLUE buttons to toggle between the two settings.**
- **Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

SET BUTTON ENABLE?

❑ **TO VIEW THE CURRENT ENABLE SETTING:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until   SET BUTTON ENABLE?   is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display should read:**

> **REFUND = ENABLE**
>
> **or**
>
> **REFUND = DISABLE**

*Depending on the current setting.

- **Use the RED or BLUE buttons to toggle between the two settings.**
- **Press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOTAL DEPOSITS?

❑ **TO VIEW THE TOTAL DEPOSITS VALUES:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until TOTAL DEPOSITS is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display should read:**

<div align="center">

CASH = $0.00

or

TOKENS = $0.00

or

CREDITS = $0.00

*The dollar amounts shown are the current dollar, token and debit/credit totals.

</div>

- **To toggle between these values press, the ACTION (YELLOW) button.**
- **When these values have been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOTAL VENDING?

❑ **TO VIEW THE TOTAL VENDING VALUES:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until TOTAL VENDING? is displayed.**
- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

	VEND 1 CNT = 0	Number of Item 1 fees received
or	**VEND 1 CSH = $0.00**	Number of Item 1 fees received in cash
or	**VEND 1 TOK = $0.00**	Number of Item 1 fees received in token credit
or	**VEND 1 DEB = $0.00**	Number of Item 1 fees received in debit or credit cards

- **Use the ACTION (YELLOW) button to scroll through these values.**

- **When these values have been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOTAL OVERPAID?

❑ **TO VIEW THE TOTAL OVERPAID VALUE:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

- **Using the RED and BLUE buttons, scroll through the categories until   TOTAL OVERPAID?   is displayed.**

- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. The display will read:**

OVERPAID $0.00

*The dollar amount shown is the current overpaid totals.

- **When this information has been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

TOTAL VAULT COUNT?

❑ **TO VIEW THE TOTAL VAULT COUNT VALUES:**

- **Starting from the RUN MODE, press the ACTION (YELLOW) button to enter the MENU MODE.**

- **Using the RED and BLUE buttons, scroll through the categories until   TOTAL VAULT COUNT?   is displayed.**

- **Enter the PROGRAMMING MODE by pressing the ACTION (YELLOW) button. One of the following will be displayed:**

$20 BILL CNT	0
$10 BILL CNT	0
$5 BILL CNT	0
$2 BILL CNT	0
$1 BILL CNT	0
QUARTER CNT	0
TOKEN CNT	0
TOKENOTE CNT	0
COUPON 1 CNT	0
COUPON 2 CNT	0
COUPON 3 CNT	0
COUPON 4 CNT	0
HOPPER CNT	0

*The values shown are the current counts for each of these denominations.

- **Press the ACTION (YELLOW) button to scroll through these displayed values.**
- **When this information has been recorded, press the RETURN (WHITE) button once to return to the MENU MODE or twice to return to the RUN MODE.**

CLEAR RESETTABLE INVENTORIES

❑ TO CLEAR THE INVENTORIES:

- **Starting from the RUN MODE, first press the ACTION (YELLOW) button to enter the MENU MODE.**
- **Using the RED and BLUE buttons, scroll through the categories until any of the INVENTORY categories are displayed.**
- **Next, press the ACTION (YELLOW) button to enter the PROGRAMMING MODE and to display the contents of the category entered.**
- **At this point, press and hold both the RED and BLUE buttons until the display reads:**

> **CLEAR INVENTORIES?**

- **Release both buttons. When both buttons have been released, the display will begin sequencing through the following messages:**

> **CLEAR INVENTORIES?**

> **ACTION TO CLEAR**

> **OR RETURN TO ABORT**

- **This message sequence will continue until either the ACTION (YELLOW) button or the RETURN (WHITE) button is pressed.**
- **If the ACTION (YELLOW) button is pressed, the display will read:**

> **MEMORY CLEARED!**

briefly, then return to the beginning of the MENU MODE.

- **If the RETURN (WHITE) button is pressed, the display will read:**

> **MEMORY NOT CLEARED**

briefly, then return to the beginning of the MENU MODE.

- **Press the RETURN (WHITE) button once to return to the RUN MODE.**

VI. INSTALLATION / MAINTENANCE

★ **It is very important to read and understand all of these instructions before attempting installation.**

The installation process contains two distinct operations, **MECHANICAL INSTALLATION**, and **ELECTRICAL INSTALLATION**.

THE MECHANICAL INSTALLATION INVOLVES:

- Unpacking the machine
- Positioning the ACW-5-P Unit
- Mounting the ACW-5-P Unit
- Running wiring conduits to the car wash

THE ELECTRICAL INSTALLATION INVOLVES:

- Running the necessary wiring
- Making the proper wiring terminations
- Correctly setting the Car Wash Cycle Synchronization Switch
- Setting the PROGRAMMABLE OPTIONS
- Performing a General Systems Test

The following sections provide detailed explanations for each of these installation procedures.

A. MECHANICAL INSTALLATION

1. UNPACKING
There are a number of things to keep in mind while unpacking your ACW-5-P that will make the installation and continued operation of your machine run smoother. These tips are listed below.

❑ **BE SURE TO SAVE YOUR KEYS**
The keys and lock inserts are placed inside a small cloth bag attached to the outside of the machine in a visible, secured spot. This bag should be located between the layers of shrink-wrap that encircle the outside of the cabinet. When removing this shrink-wrap, be sure to locate the bag containing the keys and set it aside so it does not get thrown away. **MAKE A PERMANENT RECORD OF THE NUMBERS ON YOUR KEYS IN CASE A KEY IS LOST AND MUST BE REORDERED.**

❏ **REMOVE THE PACKING STRAP FROM THE VALIDATOR**
The Validator comes shipped with a packing strap secured around it to minimize the vibrations of shipping. If this strap is not removed, a high bill rejection rate could result. The strap may be cut off with a pair of wire cutters or sturdy scissors.

❏ **LOOSEN THE VALIDATOR THUMBSCREW**
The Validator comes shipped with a tightly secured thumbscrew that holds the Validator to the Validator Bracket. This is to minimize the vibrations caused by shipping. This thumbscrew should be loosened three full turns. If the thumbscrew is not loosened, bill stealing or Stacker jamming could result. The screw may be loosened by hand or with a small pair of pliers.

❏ **REMOVE THE PACKING STRAP FROM THE HOPPER**
The Hopper comes shipped with a packing strap secured around it to minimize the vibrations caused by shipping. If this strap is not removed, the Hopper will not tip out for easy filling. The strap may be cut off with a pair of wire cutters or sturdy scissors. Cardboard is placed around the edges of the Hopper to protect it during shipping. After removing the strap, be sure to remove the cardboard as well.

❏ **REMOVE ALL PACKING DEBRIS FROM THE HOPPER**
During packing and unpacking, it is possible for debris to fall into the Hopper Bowl (the area where the coins go). If this material is not removed, Hopper jamming could occur. With the power completely disconnected, remove all loose material inside the Hopper Bowl.

❏ **FILL HOPPER WITH COINS**
Before powering up the machine for the first time, it is recommended that the Hopper be filled with coins. In order for the Hopper to dispense coins, there must be enough coins in the Hopper Bowl to touch the two sensing plates located at the bottom of the bowl. Otherwise, the Hopper will register as empty.

❏ **INSERT SAMPLE COIN**
In order for the Auto Cashier to start accepting coins, a sample coin must first be inserted into the Slugbuster. The Slugbuster is located on the inside of the cabinet door. There is a sliding mechanism on the Slugbuster identified by a round sticker that reads Slide To Replace Coin . Simply slide this mechanism to the right and insert the sample coin. The mechanism will slide back into place on it s own. The Auto Cashier is now ready to accept coins.

2. POSITIONING
There are no set guidelines for the placement of the ACW-5-P. There is a typical height, from the pavement to the bottom of the cabinet, of approximately 26 (see Figure 2).

3. MOUNTING
It is recommended that the ACW-5-P be mounted in a permanent enclosure. Safety is a primary concern, so the equipment must be securely mounted. Hamilton recommends using one of the following methods:

- The first method is to construct a small brick or concrete kiosk that will house the ACW-5-P. Figure 1 and Figure 2 give the ACW-5-P mounting hole locations as well as suggested kiosk dimensions. **Have your engineer or contractor recommend construction suitable for strength and stability**. For an illustration of this mounting procedure, refer to APPENDIX G.

- The other method involves mounting the ACW-5-P on the optional ACW Base described in the INTRODUCTION section. In this situation, the base is secured to the pavement and the ACW-5 is secured to the base. **Fasteners to be used should be recommended by your engineer as to strength and suitability.** If this method is chosen, it is strongly recommended that the optional ACW Lighted Cap be installed. This addition serves to better insulate the ACW-5-P from harsh environmental conditions as well as offering an attractive lighted top. Contact Hamilton Mfg. for installation instructions for the ACW Lighted Cap.

★ **Hamilton will not be responsible for injury due to improper installation.**

4. RUNNING CONDUIT

Typical electrical code requires low and high voltage wiring to be run in separate conduits. Because of this the ACW-5-P has two   conduit mounting holes in the back of the cabinet, as well as two   and one ‰ conduit holes in the bottom of the cabinet. These bottom holes are matched with identical holes in any of the optional ACW Bases offered by Hamilton Mfg.

★ **At least one bottom hole must remain unused at all times.**

- Conduit carrying high voltage 120VAC power lines, as well as any signal lines containing 120VAC, should be connected to the center mounting hole on the back wall of the ACW-5-P or any one of the bottom mounting holes.

- Conduit carrying lines with 24VAC, 24VDC, 12VAC or 12VDC signals should be connected to the mounting hole on the right side of the back wall (when viewed from the front of the machine), or any unused bottom mounting hole.
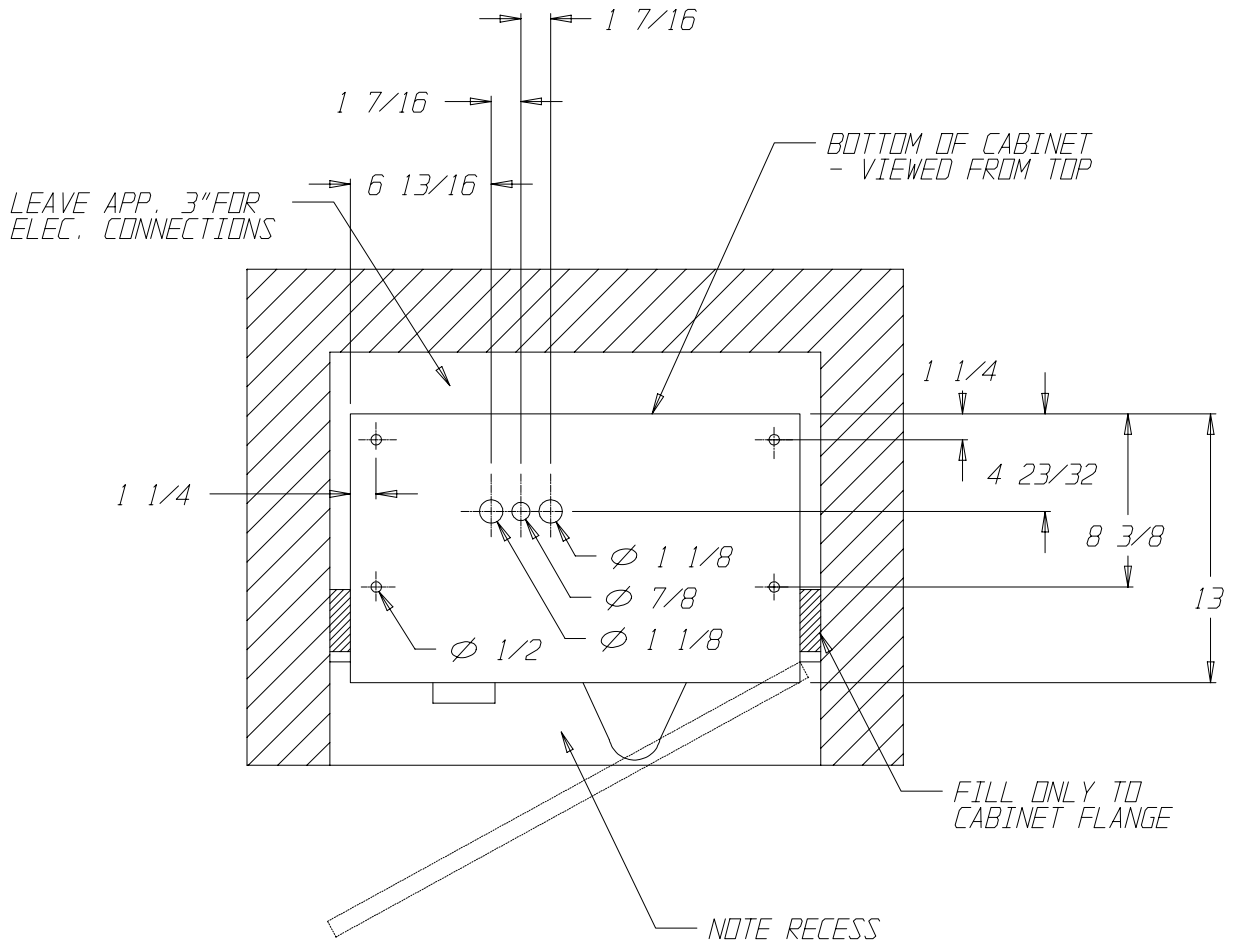
Figure 1
MOUNTING DETAILS A
(all dimensions in inches)

BOTH CONDUIT CONNECTORS
THREADED FOR 3/4" CONDUIT
CONTROL

120 VAC

AT LEAST 1/2 FILL
ABOVE CABINET.
1 INCH SHOWN.

7 3/8

3 1/8

1

8 1/2

27 1/2

28 1/2

16

8 3/8

1 1/4

Ø 1/2

CONCRETE
ANCHORS

21 3/4

20

26

CURB

CONCRETE
AND
FILL

PAVEMENT
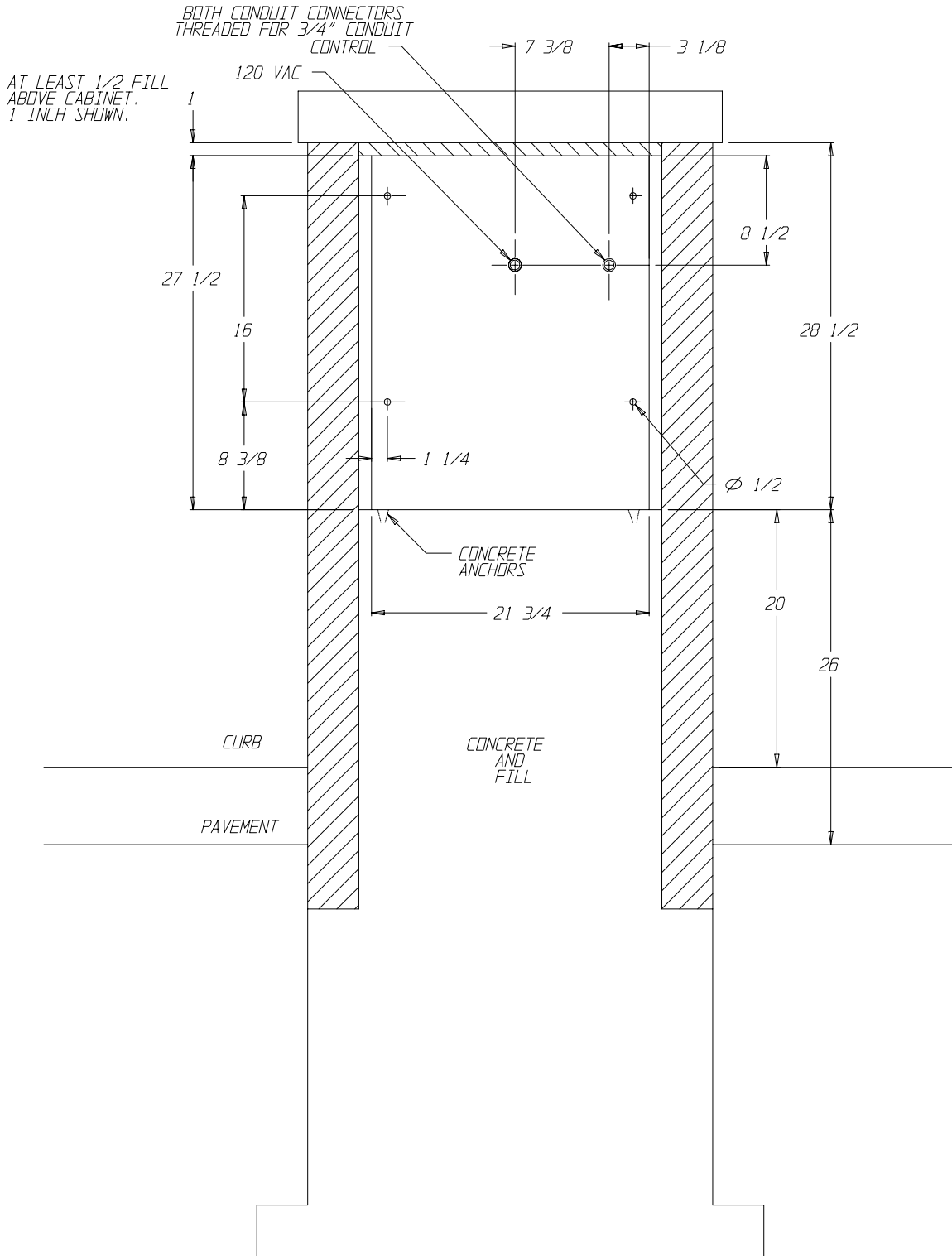
Figure 2
MOUNTING DETAILS B
(all dimensions in inches)

B. ELECTRICAL INSTALLATION

This auto cashier operates on 120 VAC, 60 Hz. This unit uses a 5 AMP circuit breaker. Unit may be hard-wired with conduit if desired.

A GROUND FAULT INTERRUPTER IS REQUIRED. The recommended Ground Fault Interrupter is sometimes referred to as an ELCI (Equipment Leakage Circuit Interrupter) and should have the following specifications:

- 120 VAC
- 15 AMP
- 6-10mA trip level
- Should **not** trip when power is removed from circuit.

1. PULLING WIRES

❑ **THE MAXIMUM NUMBER AND TYPE OF WIRE NEEDED TO BE PULLED FOR THE ACW-5-P IS SHOWN BELOW.**

WIRES	WIRE GAUGE	WIRE DESCRIPTION	WIRE COLOR
3	14 AWG OR LOCAL CODE SPECIFICATION	120VAC HOT, NEUTRAL, EARTH GROUND	BLK, WHT, GRN
*2	20 AWG	GATE A SIGNAL GATE A RETURN	ANY COLOR
*2	20 AWG	GATE B SIGNAL GATE B RETURN	ANY COLOR
2	20 AWG	CYCLE/INHIBIT COIL CYCLE/INHIBIT COIL	ANY COLOR

For proper operation of the ACW-5-P, all wires listed above must be pulled and terminated as explained in the following section, WIRE TERMINATIONS.

The Gate B Signal pair is optional and should be pulled if there is, or will ever be, a device other than the parking gate that will need to receive a signal when a car is admitted to the lot. The System Inhibit Signal pair is also optional, and should be pulled if some device external to the ACW-5-P will be used to deactivate the ACW-5-P for situations such as the lot becoming full.

2. WIRE TERMINATIONS

❑ **THE WIRE TERMINATIONS SHOULD PROCEED AS FOLLOWS:**

1) One side of the three power supply wires (120VAC HOT, 120VAC NEU, and 120VAC GND) should be attached directly to the electrical service panel supplying power to the installation. They should be connected to a 15 AMP circuit breaker and the ACW-5-P should be the only device on this circuit. The other end of these three wires should be routed into the ACW-5-P through the installed conduit. The wires should be terminated using wire-nuts so that each of the colors (WHT, BLK, and GRN) mates with the same color wire coming from within the service box connected to the Relay Panel of the ACW-5-P.

2) **The GATE A wire pair is used to signal the parking gate that a customer has completed a transaction and is now ready to pull into the lot. The signal presented to the parking gate is a normally open, dry contact relay closure. In the ACW-5-P, connect one end of this pair to terminals 1 and 2 on the Relay Panel terminal block. Refer to your parking gate literature for proper connections on the other end of this pair.**

3) **The GATE B wire pair is used to signal some other piece of equipment that a customer has completed a transaction and is now ready to pull into the lot. The signal presented to this piece of equipment is a normally open, dry contact relay closure. In the ACW-5-P, connect one end of this pair to terminals 3 and 4 on the Rely Panel terminal block. Refer to external equipment s literature for proper connections on the other end of this pair.**

4) **The CYCLE/INHIBIT pair is used to disable the ACW-5-P remotely from the unit. The signal coming from the external device must be able to energize the coil of a relay on the Relay Panel. This means that the external equipment is supplying both voltage and current when it energizes the coil. Inside the ACW-5-P, the wiring connections depend on the signal provided by the external device.**

   - **If the externally supplied signal is a 120VAC signal, the CYCLE/INHIBIT pair should be connected to the two RED wires coming from the service box connected to the Relay Panel. This connection is made by using wire-nuts to connect the CYCLE/INHIBIT SIGNAL to one of the RED wires (it doesn t matter which one), and connecting the CYCLE/INHIBIT RETURN wire to the other RED wire. If there are no RED wires coming from the service box, contact your equipment supplier or Hamilton Mfg. before proceeding.**

   - **If the externally supplied signal is 24VAC, 24VDC, 12VAC or 12VDC, the CYCLE/INHIBIT pair should be connected directly to the terminal block of the Relay Panel. The proper connection will have one wire of this pair connected to terminal 9 of the Relay Panel (it doesn t matter which one) and the other wire of the pair connected to terminal 10. If there are RED wires coming from the service box connected to the Relay Panel, contact your equipment supplier or Hamilton Mfg. before proceeding.**

❑ **ADDITIONAL WIRE TERMINATIONS FOR USE WITH THE CRC CREDIT CARD SYSTEM.**

The installation of the changer should proceed as outlined in the above section. However, If a CRC Credit Card System is being used, the following must be performed, as well.

   - **The telephone line used for the changer must be a dedicated line. No other telephone or equipment can be connected with the same line (the use of line splitters is not permitted). If more than one CRC changer is to be installed at the same location, a dedicated phone line must be run to each machine.**
   - **The telephone line should be run in a separate conduit. If any other wiring is run in the same conduit, communications problems could occur.**
   - **For more detailed information on installing the CRC, refer to the CRC manual.**

3. SETTING THE CAR WASH CYCLE SYNCHRONIZATION SWITCH

The Car Wash Cycle Synchronization Switch is the silver toggle switch located on the Relay Panel (Refer to Figure 3). The proper setting of this switch depends on the equipment used in your parking lot system. If the System Inhibit feature is not being used, and no external equipment energizes the CYCLE/INHIBIT RELAY, this switch should be set to PASSIVE. If the System Inhibit feature is being used, the correct setting will depend on how the external equipment controls the CYCLE/INHIBIT RELAY. If the external equipment normally leaves the CYCLE/INHIBIT RELAY de-energized while in stand-by where the parking lot is open and the ACW-5-P is to continue processing transactions, then energizes the relay when the lot becomes full or another error occurs, this switch should be set to PASSIVE. If the reverse occurs, where the external equipment normally energizes the Cycle/Inhibit Relay in stand-by when the lot is open and the ACW-4-P is to continue processing transactions, then de-energizes the relay when the lot becomes full or some other error occurs, the switch should be set to ACTIVE.

4. PROGRAMMING CONTROLLER OPTIONS

To set the PROGRAMMABLE OPTIONS, first refer to the PROGRAMMABLE OPTIONS section of this manual for a description of what features are programmable and an explanation of the different selections. Then, refer to the PROGRAMMING section for in-depth coverage of the actual programming process.

5. GENERAL TEST

After completing all of the steps under MECHANICAL and ELECTRICAL INSTALLATION, the following test can be conducted:

- Be sure to test all facets of the operation, including the bill acceptor and coin acceptors.

- Test for proper gate actuation and System Inhibit control, if used.

- Ensure that coins are being dispensed for both change and as a refund. If there are any problems refer to the TROUBLESHOOTING section or contact Hamilton Mfg.

Figure 3
Relay Panel

Legend:
1 – CAR WASH CYCLE SYNCHRONIZATION SWITCH
2 – POWER SWITCH
3 – 15 PIN MOLEX CONNECTOR
4 – CYCLE/INHIBIT RELAY 120 VAC
        24 VAC, 24 VDC
        12 VAC, 12 VDC
5 – TERMINAL STRIP
6 – SERVICE BOX
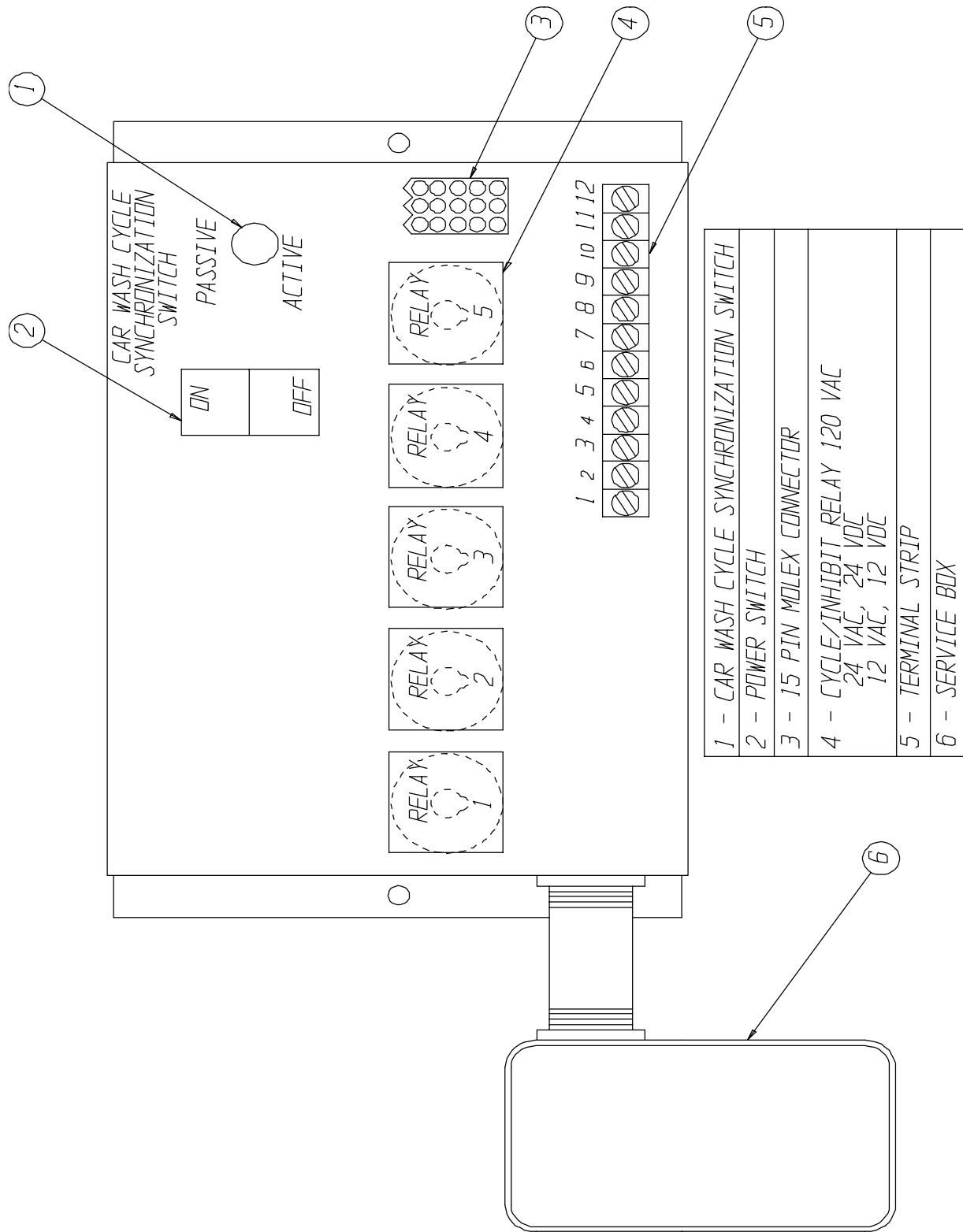
C. MAINTENANCE

A few simple maintenance routines can extend the usefulness and productivity of the ACW-5-P.

CAUTION!

DO NOT USE OIL, GREASE OR SOLVENTS ON ANY PART OF THIS UNIT EXCEPT AS CLEARLY SPECIFIED IN THIS MANUAL, THE HOPPER MANUAL, OR IN THE VALIDATOR/STACKER MANUAL.

❑ Monthly Maintenance

1. HOPPER

To remove the Hopper from the machine and clean it, follow the steps below:

- Disconnect the CIRCUIT BREAKER on the relay panel to turn off all power to the machine.
- Empty all of the coins from the Hopper.
- Unplug the main harness from the bottom of the Hopper.
- Tilt the top of the Hopper backwards slightly, then lift up and forward to remove the Hopper Assembly from the cabinet.
- Use a Phillips screwdriver to remove the eight #8 x 1/4 self-tapping screws that hold the cover on the outer housing.
- Remove the coin baffle from the outer housing.
- Sweep all debris out of the Hopper with a clean soft brush.
- Dampen a cloth and apply a HOUSELHOLD CLEANER to all surfaces inside the coin bowl. Scrub if needed.
- Dampen a clean cloth and soak up any remaining residue.
- Vacuum the inside of the Hopper thoroughly, and return the coins.
- Reassemble the Hopper and re-install it into the machine.

2. VALIDATOR

- Clean the Validator by unplugging and removing it from the cabinet.
- Unscrew the two thumb wheels and open the bottom plate.
- Use a clean soft brush or cloth to remove any lint, dust or dirt that may have become deposited on the sensor lenses, belts and/or wheels.
- Reassemble the Validator and re-install it into the machine.

3. STACKER

The ACW-5-P can be operated without the Stacker. If you do not wish to use the Stacker, the BY-PASS PLUG attached to the Stacker Harness must be used. Unplug the Stacker and connect the Harness to the BY-PASS PLUG.

If the Stacker is being used, it is important to perform the following maintenance on a monthly basis:

- Keep the Stacker clean by using a clean soft brush or cloth to remove any lint, dust or dirt.
- Make sure the relay is tight in the socket with the relay bail in place.
- Check operation; the Stacker should cycle smoothly.
- With the Stacker empty, check the pressure plate. Push the plate down and let it go. It should snap freely to the top.

❑ Annual Maintenance

1. VALIDATOR

The Validator should be serviced annually to maintain maximum performance. This work should only be done by a trained technician.

2. STACKER

- All pivot points must be cleaned and re-greased.
- Check the switch tightness and the cam to see if it is still in round.
- Check for bent, loose, worn, rusted or corroded parts.
- Check the motor for coasting.
- Use a small amount of Dry Slick   on the slides. Do not use grease or WD-40   .

VII. ERROR CODES / TROUBLESHOOTING

The ACW-5-P is equipped with a self-diagnostic capability that makes it possible for common problems to be quickly detected and serviced. When most errors occur, the Controller will automatically shut down the entire unit as a precaution in order to prevent further malfunctions. When the ACW-5-P shuts itself down after an error has been detected, it de-activates the bill acceptor and coin acceptors so that further deposits cannot be accepted. When this occurs, the display will read:

> OUT OF SERVICE

It is necessary to troubleshoot and correct the problem before normal operation can resume. **Shutting off power to the unit will not erase this error condition.**

TO RESUME NORMAL OPERATION, IT IS NECESSARY TO:

1. Acknowledge that you have seen the error. To do this, press the YELLOW button on the Controller labeled ACTION. When this button is pressed, the display will show the detected error. (Possible errors and their descriptions are covered later in this section.)
2. After making note of the error and correcting the problem, it is necessary to once again press the ACTION button to return to normal operation. When this button is pressed the display will read:

> ERROR ACKNOWLEDGED

briefly, then return to the Welcome Prompt.

It is possible for the ACW-5-P to detect an error and still remain operational. This occurs when the default payment mode has been set to USE ALT PAYMENT instead of OUT OF SERVICE . In the USE ALT PAYMENT mode, the Controller will only shut down the component that is malfunctioning. The controller will stop displaying the normal Welcome Messages and instead display the messages PAYMENT OPTIONS and USE BILLS ONLY (depending on which payment options are available). When all the payment options have been exhausted, the ACW-5-P will shut down and display an error message for the last component malfunction. When this occurs, follow the above steps to return to normal operation.

ERROR CODES

❑ **$5 INPUT STUCK**
The normal signal on the $5 line, in standby, is a TTL level logic high. When signaling that a $5, $10 or a $20 bill has been accepted this line is pulled low briefly. If this line should be pulled low for an extended period, this error will result and the machine will be shut down.

❑ **$1 INPUT STUCK**
The normal signal on the $1 line, in standby, is a TTL level logic high. When signaling that a $1 bill has been accepted this line is pulled low briefly. If this line should be pulled low for an extended period, this error will result and the machine will be shut down.

❑ 25¢ INPUT STUCK

The normal signal on the Quarter line, in standby, is a TTL level logic high. When signaling that a Quarter has been accepted this line is pulled low briefly. If this line should be pulled low for an extended period, this error will result and the machine will be shut down.

❑ VALIDATOR SHUT DOWN

If the Validator (only an HV-X v3.15 or higher) detects an error it will send a pulse of specific length to the Controller and a special Validator Shut Down error will be displayed. This error indicates a Validator problem, not a Controller problem.

❑ TOKEN INPUT STUCK

The normal signal on the Token line, in standby, is a TTL level logic high. When signaling that a token coin has been accepted this line is pulled low briefly. If this line should be pulled low for an extended period, this error will result and the machine will be shut down.

❑ DROP SWITCH STUCK

The normal signal on the Drop line, in standby, is a TTL level logic low. When signaling that a coin is being dispensed this line is pulled high briefly. If this line should be pulled high for an extended period, this error will result and the machine will be shut down. This situation is only tested during the time a payout is occurring.

❑ UNEXPECTED COIN DROP

The normal signal on the Drop line, in standby, is a TTL level logic low. When a coin is dispensed, this line goes high briefly, then returns to its logic low state. If the Controller records two unexpected coin drop signals while in standby, the machine will shut down with this error.

❑ HOPPER COASTING ERROR

If two coin drop signals are recorded immediately after the Hopper has paid out, the machine will shut down with this error.

❑ HOPPER TIME-OUT

The normal signal on the Drop line, in standby, is a TTL level logic low. When a coin is dispensed, this line goes high briefly then returns to its logic low state. If during the time a payout is occurring a high pulse is not detected for 10 consecutive seconds this error will result and the machine will be shut down.

❑ STACKER TIME-OUT

The normal signal on the Busy line, in standby, is a TTL level logic low. This line goes high during the bill stacking process then returns to its logic low state when the Stacker reaches its home position. If the Stacker never returns to its home position, this error will result and the machine will be shut down.

❑ MULTIPLE POWER INT

There is special circuitry inside the Controller to determine if a power outage has occurred. If there are several power outages while processing money (dispensing coins, stacking bills, etc.) this error will occur and the machine will be shut down.

❏ MEMORY DATA ALTERED!

There are special detection routines built into the Controller s program that can determine if its memory has been corrupted. If the memory is corrupted, values such as wash prices and the audits can no longer be trusted. If this should occur, the entire memory is cleared and the machine will be shut down. Re-programming the Controller will be necessary since all settings will default to the lowest possible denomination ($0.00) for credits and the highest possible denomination ($63.75) for any payment option. This default mechanism is used as a safeguard to ensure that the machine does not give out free parking time. Below is a list of the PROGRAMMABLE OPTIONS and their default settings.

PROGRAMMABLE OPTIONS	DEFAULT SETTINGS
TOKEN COIN MODE?	MULTIPLE CREDITS
TOKEN COIN VALUE?	$0.00
TOKENOTEfi MODE?	MULTIPLE CREDITS
TOKENOTEfi VALUE?	$0.00
COUPON DISCOUNTS?	$0.00
WELCOME PROMPTS?	BLANK
PROCEED PROMPTS?	BLANK
CLOSED PROMPTS?	BLANK
SET DAY/NIGHT RATES?	$63.75
SET WEEKLY EVENTS?	$63.75
SET SPECIAL EVENT?	$63.75
SET DATE & TIME?	SUN 01-01-00 12:00 A
VEND DURATION?	1.0 SECOND
SET PROCEED TIME?	7.0 SECONDS
SET EMPTY MODE?	OUT OF SERVICE
SET BUILD MODE?	LIMIT DISABLED
SET PAY DEFAULT?	OUT OF SERVICE
SET HOPPER STYLE?	NEW STYLE HOPPER
SET BUTTON ENABLE?	ENABLED

★ The following errors will be displayed as long as the faulty condition exists, but will be cleared as soon as the condition is corrected. **THIS MEANS THESE ERRORS DO NOT NEED TO BE ACKNOWLEDGED BY PRESSING THE ACTION BUTTON.**

❏ HOPPER EMPTY

The normal signal on the Empty line, in standby, is a TTL level logic low. When there are not enough coins to make a connection from the bottom of the Hopper up to the two coin sensing plates in the Hopper bowl, this line goes high. When this happens, the Hopper Empty error will result. Refilling the Hopper with coins will automatically clear this error.

❏ RELEASE BUTTON

When one of the item selection buttons is held in for an extended period this message will appear on the display. Releasing the button should automatically clear this error. If the error does not clear, however, it could indicate a broken or stuck REFUND button or contact block. Dislodge or replace the button or contact block to remedy this error. If the error still does not clear, there may be damage to the CPU, in which case you should contact the factory for assistance.

TROUBLESHOOTING

In addition to the self-diagnostic error codes, there are other possibilities that could arise in either the installation or at some point during extended operation of your ACW-5-P. This section provides a general troubleshooting guide, broken down into categories of symptoms.

TROUBLESHOOTING GUIDE		
DISPLAY QUESTIONS		
SITUATION	PROBABLE CAUSE	CORRECTIONS
• Display is blank • No manual Hopper run • No functions • No LED on Validator	A. No power source B. Circuit Breaker is set to off	A. Switch on main power B. Switch on Circuit Breaker
• Display is always blank • Hopper runs using manual switch located on bottom rear of Hopper	Controller display problems	Contact the factory for assistance
Display is blank until button is pushed or credit is deposited	Welcome Messages are not programmed	Program Welcome messages
Display reads OUT OF SERVICE alternating to HOPPER EMPTY , or display reads USE EXACT AMOUNT alternating to NO CHANGE RETURNED	A. Coin Hopper is empty B. Sensors are dirty C. Loose connection on Empty Circuit	A. Refill Hopper B. Clean Sensors (See INSTALLATION / MAINTENANCE section) C. Locate and repair the connection
Display reads OUT OF SERVICE	Error detected by Controller (See Error Codes)	Correct malfunction, acknowledge error
Display reads RELEASE BUTTON	A. Refund Button or contact block is stuck B. Damage to CPU	A. Dislodge stuck button or contact block B. Contact the factory for assistance

TROUBLESHOOTING GUIDE

MONEY ACCEPTANCE QUESTIONS

SITUATION	PROBABLE CAUSE	CORRECTIONS
• **Cannot activate refund** • **Credit is showing on display**	A. In USE EXACT AMOUNT mode B. Contact buttons are not working C. CPU input is missing	A. Fill coin Hopper or change mode to OUT OF SERVICE B. Replace contact block C. Contact the factory for assistance
• **Accepts fee, but gate does not open** • **DRIVE AHEAD or similar message shown on ACW Display**	Observe the VEND RELAYS and see below	Observe the VEND RELAYS and see below
IF THE RELAY ACTIVATES	A. Duration of relay closure is too long or too short for wash equipment to recognize B. Wash equipment is not accepting signal from ACW C. Broken connection in wiring between ACW and gate equipment	A. Reprogram VEND DURATION setting in ACW Controller B. Refer to the gate equipment manual C. Locate and repair connection
IF RELAY DOES NOT ACTIVATE	A. Vend relay is loose or defective B. Broken connection in wiring between ACW Controller and relay panel C. Output missing from Controller	A. Reinstall or replace relay B. Locate and repair connection C. Contact the factory for assistance
One Coin Acceptor does not accept coins	A. Broken connection on power wires to Coin Acceptor B. Coin Acceptor sensitivity is too high C. Coin Acceptor is defective	A. Locate and repair connection B. Adjust sensitivity C. Replace Coin Acceptor

TROUBLESHOOTING GUIDE

MONEY ACCEPTANCE QUESTIONS (CONT...)

SITUATION	PROBABLE CAUSE	CORRECTIONS
• **Both Coin Acceptors do not accept coins** • **Validator does accept bills**	A. **Broken connection on either the power wires supplying the Transformer, or the wires from the Transformer to the Coin Acceptor** B. **Transformer not working** C. **Both Coin Acceptors are defective**	A. **Locate and repair connection** B. **Replace Transformer** C. **Replace Coin Acceptors**
• **Both Coin Acceptors do not accept coins** • **Validator is disabled**	A. **Controller is either OUT OF SERVICE, in PROGRAMMING MODE or TRANSMITTING DATA** B. **Broken connection on ENABLE wire which runs from the Controller to the Validator and Transformer** C. **ENABLE output missing from Controller**	A. **Place Controller in RUN MODE** B. **Locate and repair connection** C. **Contact the factory for assistance**
Coin Acceptor accepts only some coins	A. **Coins being used are of poor quality** B. **Coin Acceptor sensitivity too high** C. **Loose connection to Coin Acceptor**	A. **Use a different coin sample** B. **Adjust sensitivity** C. **Locate and repair connection**
• **Validator disabled (Validator LED flashing only half of 1)** • **Coin Acceptor is working**	A. **Broken connection on ENABLE wire from Controller to Validator** B. **Validator ENABLE circuit changed**	A. **Locate and repair connection** B. **Contact the factory for assistance**
• **Validator dead (No LED lit on Validator)** • **Coin Acceptor is working**	A. **Broken connection on power wires to Validator** B. **Validator is defective**	A. **Locate and repair connection** B. **Contact the factory for assistance**

TROUBLESHOOTING GUIDE

MONEY ACCEPTANCE QUESTIONS (CONT...)

SITUATION	PROBABLE CAUSE	CORRECTIONS
• **Validator dead (LED lit, but not displaying error code)** • **Coin Acceptor is working**	A. **Dirty or blocked sensor inside Validator** B. **Blocked bill path (will not allow insertion)** C. **Validator drive train problems** D. **Validator PCB damaged**	A. **Remove obstruction or clean sensors** B. **Remove obstruction** C. **Contact the factory for assistance** D. **Contact the factory for assistance**
Validator dead (LED flashing error code)	**Error detected by Validator PCB**	**Refer to the Validator Manual for Validator error codes**
Validator runs without inserting a bill	**Dirty blocked sensor inside Validator**	**Remove obstruction or clean sensors**
Validator rejects too many bills or all bills (bill goes in and comes back out)	A. **Dirty sensor, magnetic heads or rollers** B. **Validator requires service**	A. **Clean as needed or contact the factory for assistance** B. **Contact the factory for assistance**
• **Validator accepts bills** • **Does not give credit**	A. **Bill stuck completely or partially in Validator** B. **Error detected** C. **Broken connection on vend wires between Validator and Controller** D. **Controller CPU missing input**	A. **Determine cause of sticking and remove bill from Validator (Refer to the Validator Manual), or Contact the factory for assistance** B. **Refer to the Validator Manual or contact the factory for assistance** C. **Locate and repair connection** D. **Contact the factory for assistance**

TROUBLESHOOTING GUIDE

HOPPER QUESTIONS

SITUATION	PROBABLE CAUSE	CORRECTION
Overpayment of change	A. Parking rates set incorrectly B. Hopper not counting coins	A. Check parking rates B. Perform HOPPER PAYOUT TEST (Refer to the Hopper Manual), or contact the factory for assistance
• Hopper does not run • Hopper does not pay back change	A. Coin or foreign material lodged in Hopper B. Broken connection in wire between Controller and Hopper motor C. Output missing from Controller	A. Clear obstruction in Hopper B. Locate and repair connection C. Contact the factory for assistance
Hopper runs slowly	A. Foreign material in Hopper B. Output weak from Controller	A. Remove foreign material B. Contact the factory for assistance
• Underpayment of change • Controller does not go into OUT OF SERVICE	A. Parking rates set incorrectly B. Coins fall back into Hopper after counting C. CPU misreads coin count	A. Check parking rates B. Perform HOPPER PAYOUT TEST (Refer to the Hopper Manual), or contact the factory for assistance C. Contact the factory for assistance
• Underpayment of change • Controller does go into OUT OF SERVICE	Error detected by Controller (See ERROR CODES)	Correct malfunction, acknowledge error

VIII. RETURNING ITEMS FOR SERVICE

If any part or component must be shipped to the distributor or the manufacturer for replacement or repair, the following procedure is used:

- **CALL BEFORE SHIPPING. BE READY WITH THE MACHINE SERIAL NUMBER AND THE COMPONENT SERIAL NUMBER. YOU WILL RECEIVE A RETURN AUTHORIZATION NUMBER (RA NUMBER). WRITE THE RA NUMBER ON THE OUTSIDE OF THE BOX YOU ARE USING TO RETURN THE COMPONENT, AS WELL AS ON AN ENCLOSED NOTE.**

- If shipping components, first place in a plastic bag before putting in a box and surrounding with good packing material.

- Ship via **UNITED PARCEL SERVICE (UPS)** if possible.

- If shipped by **U.S. POSTAL SERVICE (Parcel Post),** send by **SPECIAL HANDLING**.

- Adequately insure shipments; if uncertain about the value, call the distributor or the manufacturer for information.

- **Include a note in shipment describing the nature of the problem, along with a full return address. WE CANNOT RETURN SHIPMENTS TO POST OFFICE BOXES. Be sure to include the RA Number.**

- Please include your **NAME** and a **TELEPHONE NUMBER** where you can be reached.

IX. PARTS

The following is a list of parts for the ACW-5-P, which may be ordered from your Hamilton Distributor or direct from the factory. When calling to place a part order, make sure you have the changer model and serial number available.

PART NO.	PART DESCRIPTION	QTY
11-0033	HOPPER PIVOT BRACKET	1
11-0101	HOPPER ASSEMBLY, ACW-4	1
36-0036	SINGLE STACKER	1
46-0157	VALIDATOR, HV-7	1
	or	
46-0170R	HV-X VALIDATOR WITH CHUTE (Specify Model and Serial Number)	1
46-7000A	COIN MECH TRANSFORMER ASSEMBLY	1
47-0024	PAYOUT RELAY	*3
	or	
47-0202	PAYOUT RELAY, 24VAC	*1
	or	
47-0203	PAYOUT RELAY, 24VDC	*1
	or	
47-0205	PAYOUT RELAY, 12VAC	*1
	or	
47-0206	PAYOUT RELAY, 12VDC	*1
47-0049	CONTACT BLOCK	1
47-0050	SWITCH BUTTON , ACW RED	1
47-0077	CHANGER GROUND TERMINAL	3
47-0155A	OUT OF SERVICE RELAY KIT (Optional)	1
47-0232	CLAMP, CABLE PANDUIT	14
47-0275	CABLE TIE 6	**17
47-2021A	SEIKO PRINTER (Optional)	1
48-0006A	HEATER ASSEMBLY	1
48-0033A	STACKER BYPASS PLUG	1
48-1000	COIN MECH HARNESS, ACW Y	1
48-1011	HARNESS, AC/DC SPLIT	1
48-2000A	ACW PRINTER HARNESS (For use with the optional printer)	1

PART NO.	PART DESCRIPTION	QTY
49-0560A	CRC COMMUNICATION CONTROLLER (For use with the ACW-5-P-CRC) (Specify Model and Serial Number)	1
49-0562A	ACW BEEPER ASSEMBLY	1
49-1029B	ACW-4-KP RELAY PANEL COMPLETE	1
49-1200B	ACW CONTROLLER, COMPLETE (Specify Model and Serial Number)	1
49-2010A	AUDIT PRO REMOTE ASSEMBLY	1
49-2010a	CRC REMOTE ASSEMBLY (For use with the ACW-4-P-CRC) (Specify Model and Serial Number)	1
49-2016A	CARD READER ASSEMBLY (For use with the ACW-5-P-CRC)	1
60-0006B	ASSEMBLY, FACEPLATE VALDE (For use with HV-7 Validator only)	1
	or	
60-0282	HV-X SLIDER FACEPLATE	1
60-0284	HV-X CLAMPING FACEPLATE	1
60-0011	TOKEN BOX, ACW-4	1
60-0014	COIN SLOT, .25	1
60-0115	VALIDATOR BRACKET, NS	1
60-0116	VALIDATOR SUPPORT BRACKET	1
60-0040	COIN SLOT, 1-1/8 TOKEN	1
60-0064	COIN ENTRANCE CHUTE, .25	2
60-0205	CHUTE, ACW COIN	1
60-0206	CHUTE, ACW COIN RETURN	1
60-0207	BRACKET, ACW-4 STACKER	1
60-0240A	ASSEMBLY, ACW-4 FAN ENCLOSURE	1
60-0241	ENCLOSURE, ACW-4 CONTROLLER	1
60-0242	BRACKET, VALIDATOR SEAL CLAMPING	1
60-0243	SEAL, VALIDATOR WATER	1
60-0245A	ACW-4 ENVIRO ENCLOSURE	1
60-0249	COIN MECH BRACKET & CHANNEL ASSEMBLY	2
61-0581A	26 STAINLESS STEEL BASE (Optional)	1
61-0582A	20 PEDESTAL BASE (Optional)	1
61-0589A	26 PEDESTAL BASE (Optional)	1
61-0592A	20 STAINLESS STEEL BASE (Optional)	1
61-0590A	ACW ENCLOSURE (Optional)	1
61-0590C	ACW ENCLOSURE w/EXTERNAL DISPLAY (Optional)	1
61-0594A	EXTERNAL DISPLAY (Optional)	1
61-0615E	ACW-5-P CABINET COMPLETE	1
	or	

PART NO.	PART DESCRIPTION	QTY
61-0615F	ACW-5-P-CRC CABINET COMPLETE	1
63-0420A	FACE PANEL ASSEMBLY, ACW-5 (Specify Model and Serial Number)	1
63-5005	LOCK INSERT, 1 PAIR	1
63-5006	LOCK BARRELS	2
80-0008	COIN ACCEPTOR	2
80-0051A	ACW-4 COIN MECH ASSEMBLY	1
90-0026	SCREW, 4-40 x 1/2 PH	3
90-0129	SCREW, 6-32 x 3/8 PH	2
90-0131	SCREW, 6-32 x 3/16 PH	8
90-0142	SCREW, 8-32 x 1/4	4
90-0250	MOUNTING STUD CONTROLLER, LONG	4
90-0275	LOCK BOLT	2
90-0301	NUT, 10-24 x 3/8	2
90-0310	NUT, 6-32 x 5/16 HEX	2
90-0326	NUT, 10-24 LOCK	4
90-0331	NUT, 1/4-20 x 1/2	4
90-0336	LOCK NUT, SPRING LOADED	2
90-0403	INTERNAL LOCKWASHER, 1/4"	4
90-0428	WASHER, SPACER	6
90-0429	WASHER, 1/4 x 3/4	4
90-0514	SCREW, 10-32 x 5/16 PH	2
90-0611	INTERNAL LOCKWASHER, #8	3
90-0612	INTERNAL LOCKWASHER, #10	5
90-0661	SET SCREW, 10-24 X 3/8	1
96-0052	DECAL, ACW FUNCTIN & PRICE	1

* The following combinations of PAYOUT RELAYS can be used:
- **3 of part number 47-0024, or**
- **2 of part number 47-0024 and 1 of part number 47-0202 (24VAC), or**
- **2 of part number 47-0024 and 1 of part number 47-0203 (24VDC), or**
- **2 of part number 47-0024 and 1 of part number 47-0205 (12VAC), or**
- **2 of part number 47-0024 and 1 of part number 47-0206 (12VDC)**

** Add an additional 11 Cable Ties for the ACW-5-P-CRC.

APPENDIX A

POWER BOX / RELAY PANEL
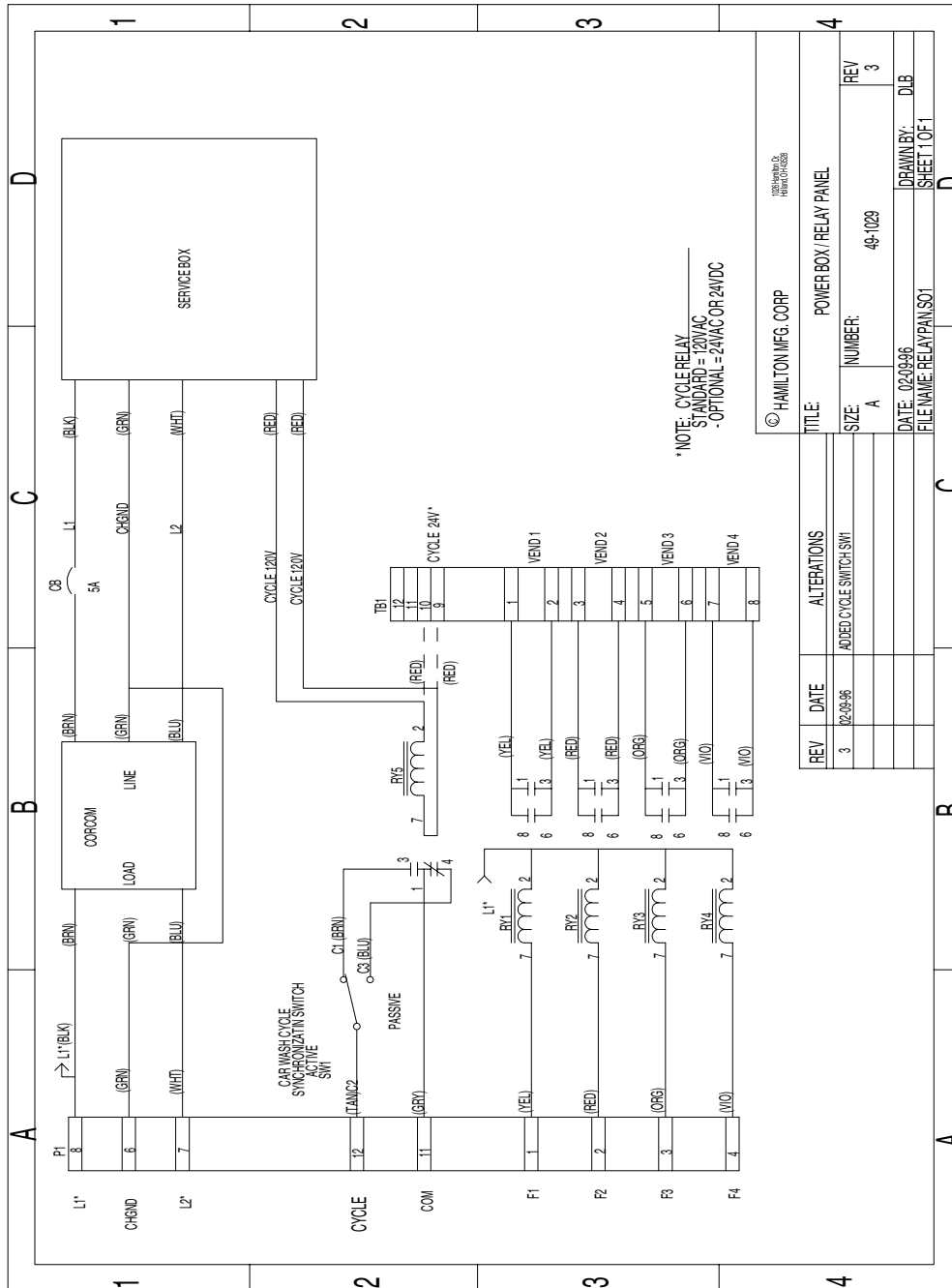
APPENDIX B
ACW-4 SPLIT HARNESS
(Left Side)
PART # 48-1011

STACKER 6 PIN M

L2(WHT)	1
L1(BLK)	2
STK(GRY)	4
GND(GRN)	6
BUSY(W/BLK)	3
COM(BRN)	5

VALIDATOR 9 PIN M

ENAB(BLU)	1
L2(WHT)	2
GND(GRN)	6
L1(BLK)	9
$5(W/BRN)	8
$1(W/BLU)	7
COM(BRN)	3

HEATER 2 PIN M

L2(WHT)	1
L1(BLK)	2

HOPPER 12 PIN M

L1(BLK)	1
CHNG(RED)	2
L2(WHT)	5
GND(GRN)	6
EMPT(W/GRN)	12
DROP(W/RED)	3
COM(BRN)	11
COM(BRN)	7

4 PIN F

COM(BRN)	1
BUSY(W/BLK)	2

4 PIN F

COM(BRN)	1
$1(W/BLU)	2
$5(W/BRN)	3

4 PIN F

COM(BRN)	1
DROP(W/RED)	2
EMPT(W/GRN)	3

BLACK DYE CONNECTOR

RED DYE CONNECTOR

COM(BRN)	1
BUSY(W/BLK)	2

4 PIN M

COM(BRN)	1
$1(W/BLU)	2
$5(W/BRN)	3

4 PIN M

COM(BRN)	1
DROP(W/RED)	2
EMPT(W/GRN)	3

4 PIN M

ACW-4 SPLIT HARNESS
(Right Side)
PART # 48-1011

OUT OF SERVICE RELAY
2 PIN M

L1(BLK)	1
SERV(VIO/WH)	2

RELAY PANEL
15 PIN M

F1(W/YEL)	1
F2(W/ORG)	2
F3(LT.BLU)	3
F4(VIO)	4
GND(GRN)	6
L2(WHT)	7
L1(BLK)	8
CYC	10
CYC(ORG)	12
COM(BRN)	11

TRANSFORMER
4 PIN M

L1(BLK)	1
ENAB(BLU)	2
24VAC(YEL)	4
COM(BRN)	3

FAN
2 PIN M

L2(WHT)	1
L1(BLK)	2

AC CARD EDGE
22 PIN

STK(GRY)	1
CHNG(RED)	3
	4 KEY
F3(LT BLU)	5
F4(VIO)	7
F1(W/YEL)	9
F2(W/ORG)	11
ENAB(BLU)	13
GND(GRN)	19
L1(BLK)	20
SERV(VIO/W)	21
L2(WHT)	22

4 PIN F

COM(BRN)	1
CYC(ORG)	2

4 PIN M

COM(BRN)	1
24VAC(YEL)	2

BLUE DYE CONNECTOR

GREEN DYE CONNECTOR

4 PIN M

COM(BRN)	1
CYC(ORG)	2

4 PIN F

COM(BRN)	1
24VAC(YEL)	2

DATA LINE
4 PIN F

TXD(RED)	1
CTS(WHT)	2
COM(BRN)	3
RCV(YEL)	4

REFUND(TAN)	○
COM(BRN)	○
SEL1(W/BLK/RED)	○
COM(BRN)	○
SEL2(W/BLK/YEL)	○
COM(BRN)	○
SEL3(W/BLK/ORG)	○
COM(BRN)	○
SEL4(W/BLK/BLU)	○
COM(BRN)	○

COIN MECH
4 PIN M

.25(W/VIO)	1
TOKEN(PINK)	2
24VAC(YEL)	3
COM(BRN)	4

DC CARD EDGE
18 PIN

TXD(RED)	18
CTS(YEL)	17
COM(BRN)	16
	15 KEY
CYC(ORG)	14
RCV(YEL)	13
SEL2(W/BLK /YEL)	12
SEL1(W/BLK /RED)	11
SEL3(W/BLK /ORG)	10
SEL4(W/BLK /BLU)	9
REFUND(TAN)	8
DROP(W/RED)	7
EMPT(W/GRN)	6
BUSY(W/BLK)	5
$5(W/BRN)	4
$1(W/BLU)	3
.25(W/VIO)	2
TOK(PINK)	1

SPLIT HARNESS LEGEND	
SYMBOL	**FUNCTION**
$.25	The Coin Mech sends a signal to the Controller indicating a coin or token is accepted (normally open connection to logic ground)
$1	The Validator sends a signal to the Controller for $1 (normally open connection to the logic ground)
$5	The Validator sends a signal to the Controller, using different pulses for 5, 10 or 20 dollar bills (normally open connection to the logic ground)
24VAC	24 Volt Alternating Current to power the Coin Acceptors
BUSY	Signal from the Stacker to the Controller that indicates the Stacker is not in standby position (normally closed connection to the logic ground)
CHNG	Powers the Hopper during coin payout, 120VAC Neutral
COM	Common (logic ground connection used in all components)
CTS	Clear To Send, from printer to Controller
CYC	A signal that indicates a car has exited. The Signal comes from the car wash or parking gate to toggle the Cycle Relay (normally closed connection to logic ground within the Cycle Relay)
DROP	Sends a signal to the Controller that indicates a coin payout (normally closed connection to the logic ground)
EMPT	A circuit opens when the Hopper is near empty, sending a signal to the Controller (normally closed connection to the logic ground)
ENAB	Allows Validator to take bills, 120VAC Neutral signal comes from the Controller
F1	Relay 1 activation ,120VAC Neutral signal comes from the Controller to the Relay Pan
F2	Relay 2 activation, 120VAC Neutral signal comes from the Controller to the Relay Pan
F3	Relay 3 activation , 120VAC Neutral signal comes from the Controller to the Relay Pan
F4	Relay 4 activation , 120VAC Neutral signal comes from the Controller to the Relay Pan
GND	Earth Ground
L1	120VAC Hot
L2	120VAC Neutral
RCV	Signal from the computer to the Controller in a credit card system, indicates if card is approved or denied
REFUND	An open circuit that sends a signal to the Controller when the selection is pushed (normally open connection to logic ground)
SEL1	An open circuit that sends a signal to the Controller when the

SPLIT HARNESS LEGEND (cont...)	
SYMBOL	**FUNCTION**
SEL2	An open circuit that sends a signal to the Controller when the selection is pushed (normally open connection to logic ground)
SEL3	An open circuit that sends a signal to the Controller when the selection is pushed (normally open connection to logic ground)
SEL4	An open circuit that sends a signal to the Controller when the selection is pushed (normally open connection to logic ground)
SERV	OUT OF SERVICE light activation. This line is a switched 110VAC Neutral line
STK	Triggers the Stacker to run. A momentary 120VAC Neutral signal comes from the Controller
TOK	Coin Mech sends a signal to the Controller indicating a coin or token is accepted (normally open connection to logic ground)
TXD	Serial Data Out , from Controller to printer

APPENDIX C

TOKENOTE® TRAINING GUIDE
FOR AUTO CASHIERS

A Tokenotefi is a paper coupon that can be accepted by the Validator. It is intended to give credit towards the wash price and not as a substitute for cash. Because of this, change will not be dispensed if the value of a Tokenotefi exceeds the wash price. Likewise, the value of a Tokenotefi cannot be refunded in cash.

When programming your machine to accept Tokenotesfi, refer to the options listed below to help you decide which programming method to use.

❑ **To program just one or more Tokenotes® with the same value, refer to SECTION A.**

❑ **To program two or more Tokenotes® with different values, refer to SECTION B.**

❑ **To Program Token Coins, refer to SECTION C.**

❑ **To Void Tokenotes, refer to SECTION D.**

Sections A-D can be found on the following pages.

Refer to the PROGRAMMABLE OPTIONS section and the PROGRAMMING section for additional information.

NOTE: It is important that all Tokenotesfi and Coupons are intended for the type of Validator being used. For example, Tokenotesfi and Coupons intended for an HV7-T will not work in an HVX. When ordering new Tokenotesfi and Coupons, please specify the Validator type.

NOTE: It is also important to realize that accepted Tokenotesfi will issue a programmable amount of credit good towards all wash selections. Tokenotefi use cannot be limited to a specific wash or subset of washes.

A. PROGRAMMING ONE OR MORE TOKENOTES® WITH THE SAME VALUE

❏ **MATERIALS NEEDED:**

• **VALIDATOR** - A Hamilton HVX, or HV7-T or HV5-T Validator

• **TOKENOTE®** - A uniquely coded paper coupon that can be accepted by the Validator and used as credit towards a wash. These must be specially ordered from Hamilton Mfg. or your Hamilton Distributor.

• **CLEAR ALL COUPON** The CLEAR ALL Coupon is used to erase all previously trained Tokenotesfi so that the Validator will no longer accept any of those Tokenotesfi.

❏ **TO PROGRAM, FOLLOW THE STEPS BELOW:**

VALIDATOR
1. With the power on, check the operation of the changer. A dot flashing on the LED indicates the machine is operating normally.
2. Note the position of each switch on the DIP switch. (The DIP switch is located on the side of the Validator.)
3. Set all 10 DIP switches to the OFF position. Then, starting with Switch #10, slowly move the switches to the ON position, one switch at a time and in decreasing order (10, 9, 8, 7). The LED should now be flashing the letter P . This signifies that the Validator is in the Tokenotefi Programming Mode. (If using an HV7-T or HV5-T Validator, it is not necessary to set the switches in order.)
4. At this point, it is recommended to insert the CLEAR ALL Training Coupon, especially if this the first time the Validator is being programmed or if it has just been returned after being service. The CLEAR ALL Coupon will erase all previously trained Tokenotesfi from the Validator s memory but will not affect the Controller s memory.
5. Insert one Tokenotefi into the Validator, making sure that it is accepted.
6. Repeat Step 5 for each uniquely coded Tokenotefi you wish to program. (Make sure that each Tokenotefi is equal in value.) Up to 16 different codes can be programmed.
7. Starting with Switch #1, slowly move the switches back to their original positions one at a time. This must be done in increasing order (1, 2, 3, 4). A dot should now be flashing on the LED. (If using an HVX Validator, Switch #2 must be in the OFF position in order to accept Tokenotesfi.)

CONTROLLER
1. Press the ACTION (YELLOW) button on the side of the Controller to enter the MENU MODE.
2. Use the RED and BLUE (or BLACK) buttons to scroll through the categories until TOKENOTEfi VALUE? is displayed.
3. Press the ACTION button to enter the PROGRAMMING MODE.
4. Use the RED and BLUE (or BLACK) buttons to increase or decrease the value in $0.25 increments.
5. When the desired value is displayed, press the RETURN (WHITE) button twice to return to the RUN MODE.

B. PROGRAMMING TWO OR MORE TOKENOTES® WITH DIFFERENT VALUES

❑ **MATERIALS NEEDED:**

- **VALIDATOR** - A Hamilton HVX, or HV7-T or HV5-T Validator

- **TOKENOTE®** - A uniquely coded paper coupon that can be accepted by the Validator and used as credit towards a wash. These must be specially ordered from the manufacturer or your Hamilton Distributor.

- **TRAINING COUPONS**   Training Coupons are used to program Tokenotesfi into the Validator s memory. There are four different Training Coupons: Coupon #1, Coupon #2, Coupon #3, and Coupon #4.

- **CLEAR ALL COUPON**   The CLEAR ALL Coupon is used to erase all previously trained Tokenotesfi so that the Validator will no longer accept any of those Tokenotesfi.

❑ **TO PROGRAM, FOLLOW THE STEPS BELOW:**

VALIDATOR
1. With the power on, check the operation of the changer. A dot flashing on the LED indicates the machine is operating normally.
2. Note the position of each switch on the DIP switch. (The DIP switch is located on the side of the Validator.)
3. Set all 10 DIP switches to the OFF position. Then, starting with Switch #10, slowly move the switches to the ON position, one switch at a time and in decreasing order (10, 9, 8, 7   ). The LED should now be flashing the letter   P . This signifies that the Validator is in the Tokenotefi Programming Mode. (If using an HV7-T Validator, it is not necessary to set the switches in order.)
4. At this point, it is recommended to insert the CLEAR ALL Training Coupon, especially if this is the first time the Validator is being programmed or if it has just been returned after being service. The CLEAR ALL Coupon will erase all previously trained Tokenotesfi from the Validator s memory but will not affect the Controller s memory.
5. Insert one Tokenotefi into the Validator, making sure that it is accepted.
6. Insert Training Coupon #1 into the Validator, making sure that it is accepted.
7. Repeat Steps 5 and 6 to program each uniquely coded Tokenotefi of the same value.
8. To program a differently coded Tokenotefi with a different payout, simply insert that Tokenotefi into the Validator, followed by Coupon #2. Repeat as needed, using Coupons #3 and #4 for each new value. Altogether, up to 16 different codes can be programmed.
9. Starting with Switch #1, slowly move the switches back to their original positions one at a time. This must be done in increasing order (1, 2, 3, 4   ). A dot should now be flashing on the LED. (If using an HVX Validator, Switch #2 must be in the OFF position in order to accept Tokenotesfi.)
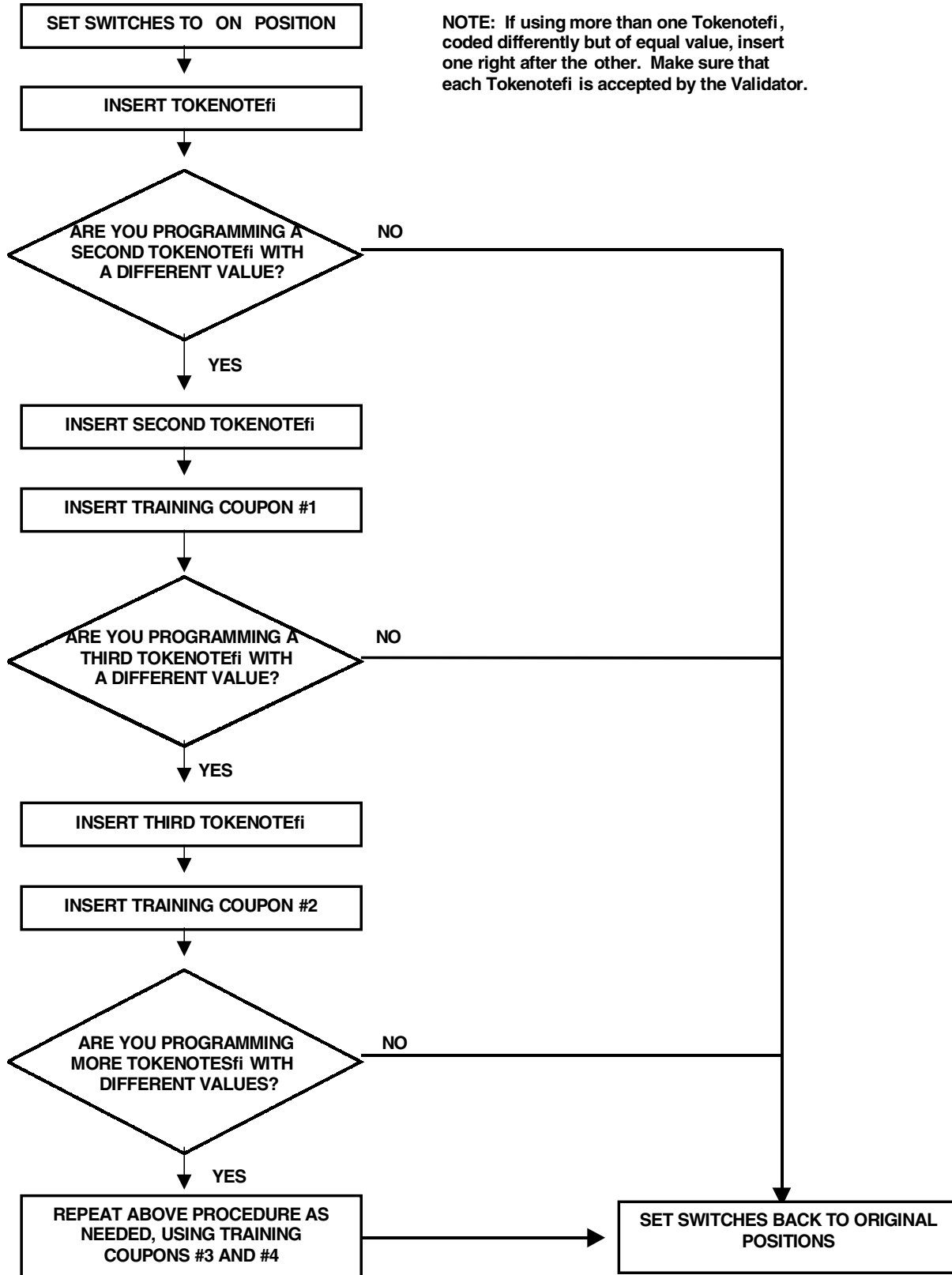
CONTROLLER

1. Press the ACTION (YELLOW) button on the side of the Controller to enter the MENU MODE.
2. Use the RED and BLUE (or BLACK) button to scroll through the categories until "COUPON DISCOUNTS" is displayed.
3. Press the ACTION button to enter the PROGRAMMING MODE. "COUPON #1" will be displayed.
4. Use the RED and BLUE (or BLACK) buttons to scroll through the values until the desired amount is displayed.
5. To program the next coupon, use the ACTION button to scroll through the four coupons, and the RED and BLUE (or BLACK) buttons to raise or lower the values.
6. Press the RETURN (WHITE) button twice to return to the RUN MODE.

❑ **WHEN PROGRAMMING MORE THAN ONE TOKENOTE®, IT IS IMPORTANT TO KEEP THE FOLLOWING IN MIND:**

- Tokenotesfi may be programmed into the four COUPON DISCOUNTS categories (using Training Coupons #1 – 4) and the TOKENOTEfi VALUE? category all at the same time. Tokenotesfi may be distributed evenly throughout these categories, or spread out using any combination, as long as the Tokenotefi values are the same for each category. When programming, always start the first Tokenotefi in the TOKENOTEfi VALUE? category. Use the COUPON DISCOUNTS categories when using multiple values.
- Up to 16 differently coded Tokenotesfi can be programmed at one time. (The Validator can learn up to 16 different codes.)
- It is possible to use one coupon to program several differently coded Tokenotesfi, as long as they are of equal value. (For example, Coupon #1 can be used to program 3 differently coded Tokenotesfi with a value of $5 each.)

TRAINING TOKENOTES® ON THE VALIDATOR

SET SWITCHES TO ON POSITION

↓

INSERT TOKENOTEfi

↓

ARE YOU PROGRAMMING A SECOND TOKENOTEfi WITH A DIFFERENT VALUE? — **NO** →

YES ↓

INSERT SECOND TOKENOTEfi

↓

INSERT TRAINING COUPON #1

↓

ARE YOU PROGRAMMING A THIRD TOKENOTEfi WITH A DIFFERENT VALUE? — **NO** →

YES ↓

INSERT THIRD TOKENOTEfi

↓

INSERT TRAINING COUPON #2

↓

ARE YOU PROGRAMMING MORE TOKENOTESfi WITH DIFFERENT VALUES? — **NO** →

YES ↓

REPEAT ABOVE PROCEDURE AS NEEDED, USING TRAINING COUPONS #3 AND #4 →

SET SWITCHES BACK TO ORIGINAL POSITIONS

NOTE: If using more than one Tokenotefi, coded differently but of equal value, insert one right after the other. Make sure that each Tokenotefi is accepted by the Validator.

C. PROGRAMMING TOKEN COINS

❏ MATERIALS NEEDED

- **COIN ACCEPTOR**

- **TOKEN COINS**   For information on where to purchase Token Coins, check with your distributor, or contact Hamilton for a distributor in your area.

❏ TO PROGRAM, FOLLOW THE STEPS BELOW:

COIN ACCEPTOR
1. With the power on, check the operation of the changer. A dot flashing on the Validator LED indicates the machine is operating normally.
2. Insert a sample token into the coin acceptor.
3. Insert a second token to verify acceptance.

CONTROLLER
1. Press the ACTION (YELLOW) button on the side of the Controller to enter the MENU MODE.
2. Use the RED and BLUE (or BLACK) button to scroll through the categories until TOKEN COIN VALUE?   is displayed.
3. Press the ACTION button to enter the PROGRAMMING MODE.
4. Use the RED and BLUE (or BLACK) buttons to increase or decrease the value in $0.25 increments.
5. When the desired value is displayed, press the RETURN (WHITE) button twice to return to the RUN MODE.

D. VOIDING TOKENOTES®

To void unwanted Tokenotesfi it is necessary to have three additional Training Coupons; NULL, VENDING CLEAR ONE, and CLEAR ALL. The use of any Tokenotefi can be eliminated by one of the three methods described below.

❑ **Use the NULL Training Coupon to continue accepting a particular Tokenote® but stop giving credit for it** (This will erase any value that the Tokenotefi had)

VALIDATOR
1. With the power on, check the operation of the changer. A dot flashing on the LED indicates the machine is operating normally.
2. Note the position of each switch on the DIP switch. (The DIP switch is located on the side of the Validator.)
3. Set all 10 DIP switches to the OFF position. Then, starting with Switch #10, slowly move the switches to the ON position, one switch at a time and in decreasing order (10, 9, 8, 7). The LED should now be flashing the letter P . This signifies that the Validator is in the Tokenotefi Programming Mode. (If using an HV7-T or HV5-T Validator, it is not necessary to set the switches in order.)
4. Insert the Tokenotefi you no longer wish to credit into the Validator, making sure that it is accepted.
5. Insert the NULL Training Coupon into the Validator, making sure that it is accepted.
6. Repeat Steps 4-5 for each Tokenotefi that you no longer wish to give credit for.
7. Starting with Switch #1, slowly move the switches back to their original positions one at a time. This should be done in increasing order (1, 2, 3, 4). A dot should now be flashing on the LED.

❑ **Use the VENDING CLEAR ONE Training Coupon to stop accepting a particular Tokenote** (This will erase any record that the Tokenotefi was ever programmed)

VALIDATOR
1. With the power on, check the operation of the changer. A dot flashing on the LED indicates the machine is operating normally.
2. Note the position of each switch on the DIP switch. (The DIP switch is located on the side of the Validator.)
3. Set all 10 DIP switches to the OFF position. Then, starting with Switch #10, slowly move the switches to the ON position, one switch at a time and in decreasing order (10, 9, 8, 7). The LED should now be flashing the letter P . This signifies that the Validator is in the Tokenotefi Programming Mode. (If using an HV7-T or HV5-T Validator, it is not necessary to set the switches in order.)
4. Insert the Tokenotefi you wish to clear into the Validator, making sure that it is accepted.
5. Insert the VENDING CLEAR ONE Training Coupon into the Validator, making sure that it is accepted.
6. Repeat Steps 4-5 for each Tokenotefi you wish to void.
7. Starting with Switch #1, slowly move the switches back to their original positions one at a time. This must be done in increasing order (1, 2, 3, 4). A dot should now be flashing on the LED.

❑ **Use the CLEAR ALL Training Coupon to stop accepting all Tokenotes® already programmed into the Validator** (This erases any record that the Tokenotesfi were ever programmed)

VALIDATOR
1. With the power on, check the operation of the changer. A dot flashing on the LED indicates the machine is operating normally.
2. Note the position of each switch on the DIP switch. (The DIP switch is located on the side of the Validator.)
3. Set all 10 DIP switches to the OFF position. Then, starting with Switch #10, slowly move the switches to the ON position, one switch at a time and in decreasing order (10, 9, 8, 7). The LED should now be flashing the letter P . This signifies that the Validator is in the Tokenotefi Programming Mode. (If using an HV7-T or HV5-T Validator, it is not necessary to set the switches in order.)
4. Insert the CLEAR ALL Training Coupon into the Validator, making sure that it is accepted.
5. Starting with Switch #1, slowly move the switches back to their original positions one at a time. This must be done in increasing order (1, 2, 3, 4). A dot should now be flashing on the LED.

❑ **The following table shows the different types of Training Coupons needed to successfully program Tokenotes® on an Auto Cashier.**

TRAINING COUPONS	
Training Coupon Type	**Usage**
COUPON #1	Used to program credit for Coupon #1 discount
COUPON #2	Used to program credit for Coupon #2 discount
COUPON #3	Used to program credit for Coupon #3 discount
COUPON #4	Used to program credit for Coupon #4 discount
CLEAR ALL	Used to erase all trained Tokenotesfi so that the Validator will no longer accept any Tokenotesfi
NULL	Used to accept a particular Tokenotefi without giving credit for it (such as an expired note)
CLEAR ONE	Used to erase one or more trained Tokenotesfi so that the Validator will no longer accept cleared Tokenotesfi

APPENDIX D

FACTORY PROGRAMMED SETTINGS

PROGRAMMABLE OPTIONS	FACTORY SETTINGS
TOKEN COIN MODE	MULTIPLE CREDITS
TOKEN COIN VALUE	$1.00
TOKENOTEfi MODE	MULTIPLE CREDITS
TOKENOTEfi VALUE	$1.25
COUPON #1 VALUE	$0.25
COUPON #2 VALUE	$0.50
COUPON #3 VALUE	$0.75
COUPON #4 VALUE	$1.00
WELCOME MESSAGE #1	TO PARK HERE
WELCOME MESSAGE #2	--- NOT USED ---
WELCOME MESSAGE #3	--- NOT USED ---
WELCOME MESSAGE #4	--- NOT USED ---
CLOSED MESSAGE #1	PARKING LOT CLOSED
CLOSED MESSAGE #2	--- NOT USED ---
CLOSED MESSAGE #3	--- NOT USED ---
CLOSED MESSAGE #4	--- NOT USED ---
DAY MODE	SYSTEM ENABLED
DAY FEE	$1.00
NIGHT START TIME	6:00 P
NIGHT END TIME	6:00 A
NIGHT MODE	SYSTEM ENABLED
NIGHT FEE	$2.00
WEEKLY EVENT #1 MODE	SYSTEM ENABLED
WEEKLY EVENT #1 START TIME	SAT 01:00 A
WEEKLY EVENT #1 END TIME	SAT 01:00 A
WEEKLY EVENT #1 FEE	$63.75
WEEKLY EVENT #2 MODE	SYSTEM ENABLED
WEEKLY EVENT #2 START TIME	---00:00 A
WEEKLY EVENT #2 END TIME	--00:00 A
WEEKLY EVENT #2 FEE	$63.75
SPECIAL EVENT MODE	SYSTEM ENABLED
SPECIAL EVENT START TIME	00-00-00 AT 00:00 A
SPECIAL EVENT END TIME	00-00-00 AT 00:00 A
SPECIAL EVENT FEE	$63.75
VEND DURATION	2.0 seconds
PROCEED TIME	7.0 SECONDS
EMPTY MODE	OUT OF SERVICE
BUILD MODE	NOT USED, SO SETTING IS IRRELEVANT
PAY DEFAULT	OUT OF SERVICE

APPENDIX E

	PRE-PROGRAMMED WELCOME MESSAGES	
	--NOT USED--	
	CURRENT DAY, DATE & TIME	
	TO ENTER LOT	
	DEPOSIT MONEY	
	WAIT FOR GATE	
	AND DRIVE THROUGH	
	TO PARK HERE	
	SPACE AVAILABLE	
	PAY IN CASH OR TOKEN	
	USE CASH OR TOKEN	
	BLANK	

	PRE-PROGRAMMED PROCEED MESSAGES	
	DRIVE FORWARD	
	PLEASE PROCEED	
	DO NOT BRAKE/STEER	
	PUT CAR IN NEUTRAL	
	PLEASE DRIVE AHEAD	
	THANK YOU!	
	---NOT USED---	

	PRE-PROGRAMMED CLOSED MESSAGES	
	--NOT USED--	
	CURRENT DAY, DATE & TIME	
	PARKING LOT CLOSED	
	COME AGAIN	
	PLEASE WAIT	
	PARKING LOT FULL	
	PULL FORWARD	
	TAKE TICKET	
	(BLANK)	

LIMITED WARRANTY AGREEMENT
OF HAMILTON MANUFACTURING CORP.

Hamilton Manufacturing Corp., an Ohio Corporation, ("Seller") warrants to Purchaser that all new equipment shall be free from defects in material and factory workmanship for a period of one (1) year from the original shipping date. Hamilton Manufacturing Corp. further warrants if any part of said new equipment in Seller's sole opinion, requires replacement or repair due to a defect in material or factory workmanship during said period, Seller will repair or replace said new equipment. Purchaser's remedies and the liabilities and obligations of Seller herein shall be limited to repair or replacement of the equipment as Seller may choose, and Seller's obligation to remedy such defects shall not exceed the Purchaser's original cost for the equipment. Purchaser EXPRESSLY AGREES this is the EXCLUSIVE REMEDY under this warranty. There are no other express or implied warranties which extend beyond the face hereof. All warranty repair service must be performed by either a Factory Trained Service Representative or **HAMILTON MANUFACTURING CORP., 1026 Hamilton Drive, Holland, Ohio 43528 PHONE (419) 867-4858 or (800) 837-5561, FAX (419) 867-4867.**

The limited warranty for new equipment is conditioned upon the following:

1.   The subject equipment has not, in the Seller's sole opinion, been subjected to: accident, abuse, misuse, vandalism, civil disobedience, riots, acts of God, natural disaster, acts of war or terrorism.

2.   The Seller shall not be liable for any expense incurred by Purchaser incidental to the repair or replacement of equipment and Purchaser shall assume full responsibility for any freight or shipping charges.

3.   The coverage of this warranty shall not extend to expendable parts.

4.   Purchaser shall have a warranty registration card on file with Seller prior to any claim in order for warranty protection to apply.

5.   No warranty coverage is applicable to any equipment used for currency other than that specified at the time of the purchase.

6.   Seller expressly disclaims any warranty that counterfeit currency will not activate said equipment.

7.   Seller expressly disclaims any warranty for any losses due to bill manipulation or theft or loss of cash under any circumstances.

Seller further warrants all repair or service work performed by a factory trained representative or Hamilton Manufacturing Corp. for a period of ninety (90) days from the date the repair or service work was performed. Purchaser's remedies and the liabilities and obligations of Seller herein shall be limited to repair or replacement of equipment as Seller may choose, and Seller's obligation to remedy such defects shall not exceed the Purchaser's depreciated value of the equipment. Purchaser EXPRESSLY AGREES this is an EXCLUSIVE REMEDY under this warranty. There are no other express or implied warranties on repair or service work performed by a factory trained representative or Hamilton Manufacturing Corp. which extend beyond the face hereof.

(See next page for additional provisions)

The limited warranty for repair and service work is conditioned upon the following:

1.   The subject equipment has not, in the Seller's sole opinion, been subjected to: accident, abuse, misuse, vandalism, civil disobedience, riots, acts of God, natural disaster, acts of war or terrorism.

2.   The Seller shall not be liable for any expense incurred by Purchaser incidental to the repair or replacement of equipment and Purchaser shall assume full responsibility for any freight or shipping charges.

3.   The coverage of this warranty shall not extend to expendable parts.

4.   Purchaser shall have a warranty registration card on file with Seller prior to any claim in order for warranty protection to apply.

5.   No warranty coverage is applicable to any equipment used for currency other than that specified at the time of the purchase.

6.   Seller expressly disclaims any warranty that counterfeit currency will not activate said equipment.

7.   Seller expressly disclaims any warranty for any losses due to bill manipulation or theft or loss of cash under any circumstances.

8.   No person or entity other than a factory trained representative or Hamilton Manufacturing Corp. has performed or attempted to perform the subject repair or service.

THIS AGREEMENT IS MADE WITH THE EXPRESS UNDERSTANDING THAT THERE ARE NO IMPLIED WARRANTIES THAT THE EQUIPMENT SHALL BE <u>MERCHANTABLE,</u> OR THAT THE GOODS SHALL BE <u>FIT FOR ANY PARTICULAR PURPOSE</u>. PURCHASER HEREBY ACKNOWLEDGES THAT IT IS NOT RELYING ON THE SELLER'S SKILL OR JUDGMENT TO SELECT OR FURNISH EQUIPMENT SUITABLE FOR ANY PARTICULAR PURPOSE AND THAT THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THAT WHICH IS DESCRIBED HEREIN.

The Purchaser agrees that in no event will the Seller be liable for direct, indirect, or consequential damages or for injury resulting from any defective or non-conforming new, repaired or serviced equipment, or for any loss, damage or expense of any kind, including loss of profits, business interruption, loss of business information or other pecuniary loss arising in connection with this Limited Warranty Agreement, or with the use of, or inability to use the subject equipment regardless of Sellers knowledge of the possibility of the same.

Hamilton Manufacturing Corporation

1026 Hamilton Drive
Holland, OH 43528

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Customer Service Phone: (800) 837-5561 **Customer Service Fax:** (419) 867-4857
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