JetSort®
1000 SERIES COIN SORTERS

OPERATING INSTRUCTIONS

For Basic
and
Advanced Models

MADE IN
USA

NEW MACHINE WARRANTY

Cummins-Allison Corporation warrants the Series 1000 JetSort® Coin Sorter to be free of defects in material and workmanship, under normal use, for a period of one (1) year from the date of receipt. Labor to repair a failure due to defect is covered within ninety (90) days from the date of receipt. If any such defect occurs, your local Cummins-Allison Service Representative (local Cummins-Allison Branch office or Authorized Cummins-Allison Dealer) should be contacted immediately. This New Machine Warranty does not apply to consumable items such as Sort Disks, Coin Pads or supplies. Please refer to the Series1000 JetSort Sort Disk Warranty below for further details.

The Warranty for all replacement parts (with the exception of Sort Disks, Coin Pads, and supplies) is limited to the longer of ninety (90) days or the balance of the New Machine One-Year Parts Warranty.

This Warranty does not include service or replacement parts necessitated by accident, misuse, alterations, acts of God, war, fire, water, sabotage, adverse environmental conditions (temperatures below 50F or above 90F, humidity below 20% or above 80%), poor or fluctuating electrical power (power other than 115, 220, or 240 Volt A.C. +/- 10% based on country; not warranted for use with power inverter), machines being shipped by a customer to a location other than the original location, or repairs being performed by persons not authorized by Cummins-Allison Corp.

This Warranty is the sole warranty given regarding the Series1000 JetSort Coin Sorter, and is in lieu of all other warranties, express or implied, including the implied warranties of merchantability and fitness for a particular purpose. The customer's remedy is limited to repair or replacement as outlined above. In no event shall Cummins be liable under this Warranty for incidental, special or consequential damages, whether or not Cummins-Allison Corporation has been advised of the possibility of such damages. Because some states do not allow the exclusion or limitation of liability for consequential or incidental damages, the above limitation may not apply to you.

SERIES1000 JetSort SORT DISK WARRANTY

Cummins-Allison Corporation warrants the Sort Disk used on the Series 1000 JetSort to have a minimum life of 10 MILLION MIXED COINS. Replacement of a Sort Disk prior to processing 10 MILLION MIXED COINS is subject to the Proration Schedule and conditions listed in the following paragraphs and in the New Machine Warranty listed above.

Sort Disk replacement also is subject to verification by a local Cummins Branch Service Manager of the actual number of coins processed by the Sort Disk, by denomination, and a determination that a sorting accuracy of at least 99.995% cannot be achieved through adjustment.

This Warranty applies only to those machines that are continuously maintained at Cummins factory settings and are serviced from the time of installation exclusively by either Authorized Factory Trained Cummins Service Personnel or by machine users that were trained by Cummins Authorized Service Personnel.

This Warranty does not apply to Sort Disks subjected to abuse, service by unauthorized personnel, exposure to foreign materials mixed with the coin (e.g., sand, water, glass, plastics, non-coin metal objects), bent or damaged coins, or coins with material compositions or physical designs not approved by Cummins Engineering.

Replacement Sort Disks also are covered under this Warranty subject to the preceding conditions. Sort Disks must be replaced by Authorized Cummins Service Personnel for this Sort Disk Warranty to apply.

PRORATION SCHEDULE

Replacement Sort Disks installed prior to an original Sort Disk processing 10 MILLION MIXED COINS are subject to the following discount from the retail price prevailing at the time of the replacement. The prevailing retail price depends on whether the unit is presently covered under a Cummins Preventative Maintenance Contract (in which case labor is included and the lower Sort Disk price applies) or not (in which case labor is not included and the higher Sort Disk price applies.)

PRORATION SCHEDULE
(Standard Coin Mix)

Volume	Replacement Cost
Below 3,000,000 coins	FREE
3,000,000 to 5,000,000 coins	60% Discount
5,000,000 to 7,000,000 coins	30% Discount
7,000,000 to 9,999,999 coins	10% Discount
Above 10,000,000 coins	0% Discount

PRORATION SCHEDULE
(*Non - Standard Coin Mix)

Volume	Replacement Cost
Below 2,000,000 coins	FREE
2,000,000 to 2,999,999 coins	60% Discount
3,000,000 to 3,999,999 coins	30% Discount
4,000,000 to 4,999,999 coins	10% Discount
Above 5,000,000 coins	0% Discount

*Any single denomination exceeds 60% of total number of coins processed.

JETSORT 1000 Series -- TABLE OF CONTENTS

BASIC Model   631-9601-00
ADVANCED Model   631-9606-00

OPTIONS FOR *BASIC / ADVANCED* JETSORT 1000 Series:

		White	Gray
Coin Boxes (front)		610-0017-00	610-0017-20
Coin Boxes (side)*		610-0040-00	610-0040-20
Bag Adapter (front)		610-0131-01	610-0131-21
Bag Adapter (side)*		610-0132-01	610-0132-21
Table-Top Stand		610-0100-01	610-0100-21
Table Mount		610-7019-01	
Magnet for Cash Till Hopper	610-7007-01		
Magnet for Lift Tray	610-0077-01		
Single Box Coin Capture (front)	610-7009-21	610-7009-01	
Single Box Coin Capture (side)*	610-7010-21	610-7010-01	
Cash Till Refill Kit		610-7005-01	610-7005-21
Automatic Oiling (field installed)	610-7004-01		
Coin Packaging Kit		610-7013-01	610-7013-21
Foot Pedal	610-7015-01		
Floor Stand		610-7017-01	610-7017-21
Floor Stand Security Door		610-7018-01	610-7018-21
Floor Stand Printer Shelf		610-7023-01	610-7023-21
Floor Stand JetScan Shelf		610-7024-01	610-7024-21

*** Applies to 8 Coin Machines or Custom Configuration Only**

JETSORT 1000 Series -- SPECIFICATIONS

Peripheral Devices:

Citizen Printer Model 3535 (dot matrix)	122-0267-01
Citizen Printer Model 270 (thermal)	122-0381-00
Citizen Printer Model 3551 (dot matrix with auto cut)	600-1370-01
Citizen Printer Model 1000 (thermal with auto cut)	600-1371-01
· 6-Digit Remote Display Assembly	620-0915-01

Printer Supplies

Single Ply Paper for Models 3535 and 3551 (10 rolls per carton)	122-0266-00
Ribbon (6 red and black ribbons per carton)	122-0265-00
Thermal Paper Model 270 Printer (10 rolls per carton)	122-0383-00
Thermal Paper Model 1000 Printer (10 rolls per carton)	122-0393-00

Cables & Adapters:

6-Foot External Cable for printer, remote display, computer	750-0657-01
12-Foot External Cable for printer, remote display, computer	750-0925-01
Printer RS-232 Serial Adapter (25 Pin Male)	406-0173-01
Computer RS-232 Serial Adapter (25 Pin Female)	406-0178-01
Computer RS-232 Serial Adapter (9 Pin Female)	406-0176-01
Interconnect Cable for JetSort connected to JetScan/JetCount	600-1122-01

Software Option Kits:
Kit 1 Communications
Kit 2 JetScan / JetCount Interface
Kit 3 Communications and Coin Packaging (EBS)
Kit 4 Communications, JetScan / JetCount, Coin Packaging (EBS)
Kit 5 Coin Packaging (EBS)

Consult your Cummins Sales Representative for ordering information on the above option kits.

JETSORT 1000 Series -- SPECIFICATIONS

BASIC / ADVANCED MODEL

Accuracy:	99.995%
U.S. Denominations:	1¢, 5¢, 10¢, 25¢, 50¢, $1 SBA / GD
Pre-Set Limits:	Full, Half, None Adjustable box / bag limits using PJS* *Only applies to Advanced Model 631-9606-00
Power:	115/230 V 50/60Hz
Mixed Speed:	Up to 1,500 coins / minute

Denomination Speed:

Pennies:	Up to 1,900 coins/min.
Nickels:	Up to 1,300 coins/min.
Dimes:	Up to 2,200 coins/min.
Quarters:	Up to 1,000 coins/min.
Half Dollars:	Up to 500 coins/min.
SBA:	Up to 650 coins/min.

Tray Capacity: Up to 2,500 dimes

Coin Collection: Boxes or Bags

Coin Capacity:

	Full Boxes	Full Bags*
Pennies	400	5,000
Nickels	250	4,000
Dimes	500	10,000
Quarters	200	4,000
Halves	80	2,000
SBA	150	2,000

*Full and Half Bag Limits per Federal Standard

Dimensions:	10 1/2" W x 16 3/4" D x 10" H
Weight:	47.5 pounds

JETSORT 1000 Series -- INTRODUCTION

BASIC / ADVANCED MODEL

This manual is designed to provide the new user with a detailed description of the various features and modes of operation for the JetSort 1000 Series *Basic / Advanced* machines. Some functions may not apply to all machines.

For ease of use, the manual is divided into seven sections.

Section 1:   JetSort Set-Up

Section 2:   Diagnostics

Section 3:   Operation

Section 4:   JetSort Maintenance

Section 5:   Error Messages

Section 6:   Glossary

PROGRAMMING AND STORING JETSORT FEATURES

JetSort is designed to provide you with a high level of user-programmable features to make your coin counting and sorting tasks as easy and automated as possible. This section addresses these features and explains how to set up JetSort features to your specific coin sorting and counting requirements.

The JetSort is designed to provide a wide range of programmable features to meet your specific needs. The performance of your JetSort will depend upon which features are incorporated into the specific machine you are operating. Standard pre-programmed features built into the JetSort may also affect its operation and the appearance of certain screens.

Some operations and displays described here may not be consistent with those shown on your machine. Your JetSort operation may vary depending on how it is configured and which features are enabled or disabled.

IMPORTANT INFORMATION

Please read the following information before entering Set-Up.

To move within the Set-Up mode, use the following keys:

BATCH KEY:	Moves backward
SUB-BAT:	Moves forward
PRINT:	Moves cursor from top line to bottom line
TOTALS OR DENOM:	Allows operator to select an option. **TOTALS** key moves forward, **DENOM** key moves backward.
CLEAR:	This key is also used to exit the Set-Up Mode.

The following settings will produce the JetSort response described:

OFF: No prompt for data will be displayed. Data cannot be entered in this mode.

AUTO: Operator will be automatically prompted to enter Data.

DEMND: JetSort function will only be prompted upon operator demand.

To access and set up JetSort features, you must be at a Batch Ended condition. From a Batch Ended condition, press and hold the red **STOP** key until the following screen is displayed:

> **PRESS <BAT> SETUP**
> **PRESS <SBAT> DIAGS**

Note: Do not enter Diagnostics without first contacting your local Cummins office.

To enter Set-Up, press the **BATCH** key. The following fields should appear:

1.
> **→ User Defaults**
> **Get**   **Save**

User Defaults allows you to save current user settings as the default, or retrieve (get) previously saved default settings. This eliminates the need to reconfigure your JetSort in the event of an unexplainable machine memory loss (e.g., a power surge could cause memory / machine problems). The "Default" Setting can be revised at any time. Choosing "Save" overwrites all previously set-up JetSort functions. To move the selection cursor (_) to the bottom line, press the **PRINT** key. To select the "Get" option, press the **TOTALS** or **DENOM** key. You will see the word "OK" momentarily on the screen, which signifies that the machine is executing the command.

To move to the Save option, press the **SUB-BATCH** key. To exit, press the **PRINT** key to move the cursor (_) to the top line, then the **SUB-BATCH** key to move forward.

2.

> → LANGUAGE COINS
> English   U.S. 6

The Language Coins selection feature allows you to determine the type of language and the coin set to be processed. Of course, a new Sort Disk is required to process coins other than your specific country.

Note: The "LANGUAGE" selection allows the user to select the language from which the commands will be displayed on the machine. The available choices are German, English and Spanish.

The user can select the language and select the specific Euro country to set the machine with the proper country-specific bag, box, and sachet limits (if they are used).

The "COINS" selection is important to note since four new selections have been added to denote the country-specific information, which is unique to each Euro nation. The new selections available are:

GER € (Germany Euro), IRE € (Ireland Euro), HOL € (Holland Euro), ITA € (Italy Euro) and SPN € (Spanish Euro)

3.

> → Machine Type
>   Box Model

Box / Bag Configuration allows you to configure your JetSort for collecting coin with Bags or Boxes. When Box is chosen for Machine Type, the Box configuration initially shows under Box / Bag Denomination selection. When Bag is chosen, the Bag configuration initially shows under Box / Bag Denomination selection. In either case, any denomination can be converted from Box to Bag and vice versa.

Note: Factory Default is set to "Boxes."

4a.

→ 1c	5c	10c
Box	Box	Box

4b.

→ 25c	50c	$1
Box	Box	Box

The next two screens show the different denominations for that country's coin set. JetSort 1000 has the capability to configure Box or Bag by denomination. As indicated above, if Box is chosen for Machine Type, all denominations will default to Box. However, the user can select any denomination to bag or box coins as desired.

5.

→Stop Limits
Full

Stop Limits allows the operator to set Box Stop Limits for Full, Half or None. The Factory Default is set to "Full" Box Limits. The following specifies coin box / bag fill quantities:

Note: Limits vary by each country.   Check your machine software for pre-programmed box / bag limits.

Full Limit:

Coin	Full Box Limit	Full Bag Limit
$.01	400 coins	5,000 coins
$.05	250 coins	4,000 coins
$.10	500 coins	10,000 coins
$.25	200 coins	4,000 coins
$.50	80 coins	2,000 coins
$SBA	150 coins	2,000 coins

Half Limit:

Coin	Half Box Limit	Half Bag Limit
$.01	200 coins	2,500 coins
$.05	125 coins	2,000 coins
$.10	250 coins	5,000 coins
$.25	100 coins	2,000 coins
$.50	40 coins	1,000 coins
$SBA	75 coins	1,000 coins

6a.

→1c	5c	10c
Full	Full	Full

6b.

→25c	50c	$1
Full	Full	Full

JetSort has the capability to configure Full, Half or No Stop Limits by denomination. Factory Default is set to "Full."

7a.

→ 1c	5c	10c
On	On	On

7b.

→ 25c	50c	$1
On	On	On

Coin Count Sensors allow the user to disengage a sensor by denomination. Example: If the 10¢ sensor is set to Off and a dime is processed through the JetSort, the dime will sort but will not be counted or added to the total. Factory Default is set to "On."

8.

→DBal	BAT	S/B
	Off	Off

Allows an operator to key in expected totals in order to compare them to actual monies sorted and counted. Declared Balance Batch or Sub-Batch can be set to Off, Demand, or Auto. Factory Default is "Off."

9a.

> →Media 1
>   Off

Allows an operator to enter values for other media (ex. Rolled coin, credit cards, travelers checks, etc.) as part of money received. The Media feature can be set to Off, Auto w/ coins, Auto w/o coins, Demand w/ coins, or Demand w/o coins. Factory Default is "Off."

9b.

> →Media 2
>   Off

Allows an operator to enter values for other media (ex. Rolled coin, credit cards, travelers checks, etc.) as part of money received. The Media feature can be set to Off, Auto w/ coins, Auto w/o coins, Demand w/ coins, or Demand w/o coins. Factory Default is "Off."

9c.

> →Media 3
>   Off

Allows an operator to enter values for other media (ex. rolled coin, credit cards, travelers checks, etc.) as part of money received. The Media feature can be set to Off, Auto w/ coins, Auto w/o coins, Demand w/ coins, or Demand w/o coins. Factory Default is "Off."

10.

> →Custom Media:
>   1   2   3

Allows customized headers for each media type. Press the DENOM key to call up the alphabet characters. The order of characters is upper case, followed by lower case and then by symbols. Press **CLEAR** to remove a label previously entered. Use the **START SUB-BATCH** key to move cursor right for the next character. Press **ENTER** to accept the custom label.

11.

> →A: B: C:
> Off   Off   Off

Allows for each label to be set to Off, Automatic or Demand. Factory Default is "Off."

12.
→Custom Labels:
(A)   (B)   (C)

Allows for tracking and reporting of JetSort information by four (4) operator specified categories A, B, C, and D. Label headers (i.e. Route, Bag, Customer, Operator, Teller, etc.) may be customized with names up to twelve characters (alpha and numeric) each.

Label A: Batch label. Appears in Batch print reports only.
Label B: Batch label. Appears in Batch and Sub-Batch print reports.
Label C: Sub-Batch label. Appears in Sub-Batch print reports only.
Label D: Sub-Batch label. Appears in Sub-Batch print reports only.

13.
→D: Date
Off   Off

Allows the operator to track monies by date. Normally entered on the numeric keypad as (MM-DD-YY) followed by **ENTER**. If turned on, the Date field cannot be bypassed without entering data. Factory Default is "Off."

14.
→Custom Labels:
(D)   (ID)

Allows a custom ID label to be entered.

15.
→ID Codes:
(Off)

Entry field used to track information separated into individual segments (products, operators, etc.). Batches and Sub-Batches are run within this field. Batches and Sub-Batches can be cleared while their totals remain in memory under the ID code. Up to 100 fields can be accessed using numbers 1-100. If ID Codes are turned On, a prompt to enter an ID code will appear when processing Batches and Sub-Batches and cannot be bypassed. ID Codes can be set to Off or Automatic. Factory Default is "Off."

16.
```
→BCR Setup:
Scanr   (Off)
```

JetSort can be connected to a Bar Code Wand or Scanner Gun. To activate, select "Scanr" for Scanner Gun or "Wand" for Scanner Wand. The Bar Code Reader option can be set to Off or Automatic. If Auto is selected, when Label A is scanned, the JetSort will enter Label A and automatically move to Label B. If Off is selected, when Label A is scanned, the operator must depress the **ENTER** key to move to Label B before scanning.

17.
```
→Bilcnt      Prnt:
 Off         All
```

Allows a JetScan or JetCount to be connected to the JetSort 1000. Billcount can be set to Off, Automatic, or Demand. Under Print, the user can select Total or All. "Total" will print the total amount of currency processed on the JetScan. "All" prints all amounts by denomination of currency processed on the JetScan. Factory Default is "All."

18.
```
→End Key ?
   Not Needed
```

If set to "Not Needed", pressing the **SUB-BATCH** key will end the current Sub-Batch and start the next one. Press the **END** key to end the current Batch. If set to "Needed", press the **END** key to end a Sub-Batch. Press the **END** key a second time to end a batch. Factory Default is set to "Not Needed."

19.
```
→End Bat Display
     Total Amt.
```

Upon ending a Batch or Sub-Batch, JetSort will display the total when set for "Total Amt.". If set to "Zero", upon conclusion of a Batch or Sub-Batch, the display will show zero. Factory Default is set to "Total Amt."

20.
```
→Clear at EndBat
       No
```

When set to "Yes", and upon ending a Batch or Sub-Batch, all Boxes and/or Bags are automatically cleared. The Factory Default is set to "No."

21.
> **→Enable Verify?**
> **No**

In a Batch Ended condition, allows the user to count the coins in the boxes (or bags) without adding to or affecting Batch, Sub-Batch and Day totals. When set to "Yes", press the Start Sub-Batch key to activate the Verify function. Press the Start Sub-Batch key again to end the Verify function. The Factory Default is set to "No."

22.
> **→Packaging?**
> **Off**

The packaging option allows the JetSort to dispense rolled coin limits into pre-formed paper tubes. *(Note: This screen is only enabled with option kit 3, 4, or 5.)* Package Only sets all denominations to rolled coin limits. Package and Sort allows the user to select by denomination that which is to be placed in rolled coin tubes.

23.
> **→Cashtill   DayT?**
> **Off   No**

The cash till option allows operators to verify the amount of coins in their register tills. If using the cash till option, this feature when turned on defaults the limits to none. The coins sorted and counted can be added to the Day Total if DayT is set to Yes or not added to the Day Total if DayT is set to "No."

24.
> **→Fast Clear Lmt?**
> **No**

Allows the user to clear a box/bag limit by pressing the Clear key once. Factory Default is No.

25.

> → Print   Format (1)
>   Mode 1   Auto

JetSort reports generate data depending on how JetSort features are configured.
Actual appearance of your reports may differ from that described below.
JetSort is designed to generate reports in four different formats or modes. They are:

Print Mode 1:   Shows Date, Audit #, Batch, Sub-Batch Codes, Coins, Currency,
                 Checks, Miscellaneous, Media totals, and Declared Balance.

Print Mode 2:   Show everything in Print Mode 1 together with individual coin and
                 currency totals.
Print Mode 3:   Shows Audit #, Batch, Sub-Batch code and total money processed.
Print Mode 4:   Shows money processed totals.

The mode your machine uses was set up at the time the machine was initialized.
Automatic (AUTO) or DEMAND (DMND) printing after Batches and Sub-Batches can be
set within the Print Format Screen.

26.

> →Print   Format (2)
>   ID Brkdn   Red+

ID Breakdown print report can be enabled within this screen by selecting "ID Brkdn" or
"No Brkdn." Color printing can also be enabled within this screen by selecting "Red+ or
Red-". If set to Red+, the Day Total and IDs will print in red. Factory Default is "ID
Brkdn" and "Red-."

27.

> →Prt Feed Lines
>   6

This allows the operator to set the number of lines between print reports. A number
between 1-10 can be selected. Factory Default is 6.

28.

> →Printer Type
>   Other Printer

Allows the operator to choose between the Citizen high-speed printer dot matrix and the
Citizen 270 thermal printer. Factory Default is Other Printer.

29.
> → Comp Interface
> 36/2

The JetSort 1000 has emulation protocols (of previous model JetSorts) available for interface. As an example, the user currently has an old JetSort model 3100, purchases a JetSort 1000 and would like to interface the new machine, without having to rewrite the application software. They would simply select the 31/2 from the emulation menu, and the JetSort 1000 would communicate like the old model 3100.

Emulation Reference:

Key	Communication Protocol Form #
36/2	022-1752-00 (newest version)
36/1	022-7128-00
31/2	022-7111-00 (newest version)
31/1	022-7089-00
5000	022-7110-00

30.
> → Comm Mode
> Immd Ack-   Lrep-

Protocol Key:
There are two different versions available when transmitting data from the JetSort to a computer. They are "immediate" or "polled".

Immediate: JetSort will initiate all transmissions as soon as a report is generated either by keystroke or by a bag limit being reached. The report will be sent through the communication port and a response from the computer is expected. If JetSort does not get a response from the computer, a COMM LINK ERROR will appear.

Polled: The receiving computer will initiate all transmissions. The computer must poll the JetSort for data. If any report was generated since the last poll, the JetSort will immediately send out the next report stored in memory.

Bidirectional: Allows the JetSort to be controlled from a computer system / keyboard.

CRM: Allows interface to the CRM software.

Acknowledge Key (ACK):

JetSort has the option of receiving a "hand-shake" signal from the receiving device (computer). To receive an acknowledgment, turn the ACK key to "On" by selecting ACK+. Factory Default is "ACK-."

Limit Report (Lrep):

If a bag limit is reached on the JetSort, a message can be sent to the computer. To activate, turn the "Lrep" key to Lrep+. Factory Default is "Lrep-."

31.
```
→ Comm Mode:
   Norm.
```

The data from the JetSort is sent to the computer in the form of a report. There are four different modes in which the JetSort can be programmed. If "Norm." is selected, the standard computer protocol will be generated. If "Total" is selected, only the total amount of the batch will be transmitted. If "3" is selected, the machine will emulate a Brandt coin sorter protocol (Service America interface). If "Wedge" is selected, the machine will interface to the Software Wedge. Factory Default is "Norm."

32.
```
→ PORT 1 SETUP:
   Off  1200, 7, NP
```

The *Advanced* Model 1000 has 4 communication ports. Port Set-Up allows for data transmission set up from JetSort port to six peripherals: Remote Display, Printer, Computer, Bar Code Reader, JetScan and JetCount. In order to connect a peripheral device to the JetSort, you must select data transmission functions such as baud rate, stop bits and parity. Note: The peripheral device and the JetSort must have the same settings in order for the connection to work properly.

33.
```
→ Auto Oiler
   Off
```

If the machine is installed with an oiling kit and this option is turned "On," a small drop of oil is dispensed onto the sorting disk to lubricate coins.

33a.
```
→ Coins Per Oil
  (thousands)
```

Determine the frequency with which the oil is to be dispensed. The number selected represents "coins in oil per thousand." The range can be set from 1 to 99. For example, If the number 4 is entered, a drop of oil will be dispensed every 4,000 coins. A setting of 4 or 5 is recommended for everyday use.

33b.
```
→            10_
  Enter Coins/Oil
```

Use the numeric keypad to select the desired setting and press **ENTER**. Press the **CONT** key to space to the left. Ensure the cursor is to the right of the desired setting otherwise entry will not be accepted. Press **CLEAR** to erase entry.

33c.
```
→ Oil Pulse Width
   (seconds)
```

Determine the length of time that the oiling motor is activated. This determines the amount of oil to be dispensed. A factory setting of .10 is recommended. This number represents seconds.

33d.
```
→           .10_
  Enter Pulse Wid.
```

Use the numeric keypad to select the desired setting and press **ENTER**. Press the **CONT** key to space to the left. Ensure the cursor is to the right of the desired setting otherwise entry will not be accepted. Press **CLEAR** to erase entry.

If "Coins Per Oil" is set to 4, and "Oil Pulse Width" is set to .10, the oiling motor will activate for one tenth of a second every 4,000 coins and dispense one drop of oil onto the sorting disk.

33e.

→ 1 Shot	Prime
Off	Off

Select 1 Shot to ensure that oil is being dispensed properly. This will activate the oiling motor one time to dispense one drop of oil.   **(Wipe off any excess oil and discard cloth or paper towel.)**

Select Prime to ensure the oil is running through the hose correctly and that air pockets are removed from the oil tube. If the **DENOM** key is held down the system will be primed repeatedly whereas depressing the key once primes only one time.

34.

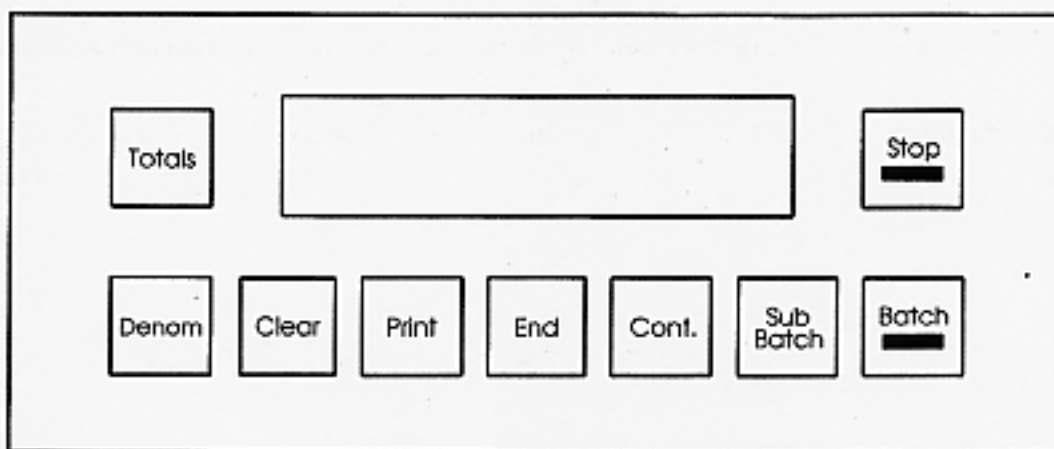| → **Setup Report** |
|----------|
| **Printout** |

A full report of the various settings programmed by the operator can be requested. Press the **PRINT** key to bring the cursor down. Press **TOTALS** or **DENOM** to request the report. A port must be turned on for the Print Report feature to be activated.

Note: Must exit Set-Up after enabling port then re-enter Set-Up to properly activate printout report feature.

SECTION 2   JETSORT 1000 Series OPERATION

THE JETSORT *BASIC* CONTROL PANEL:

The control panel of the JetSort consists of a 2 x 16-line LCD display and 9 function keys.

```
┌─────────────────────────────────────────────────────────┐
│                                                           │
│  ┌───────┐  ┌──────────────────────────┐    ┌───────┐    │
│  │       │  │                          │    │ Stop  │    │
│  │ Totals│  │                          │    │ ▬▬▬   │    │
│  └───────┘  └──────────────────────────┘    └───────┘    │
│                                                           │
│  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐ │
│  │      │ │      │ │      │ │      │ │      │ │ Sub  │ │Batch │ │
│  │Denom │ │Clear │ │Print │ │ End  │ │Cont. │ │Batch │ │ ▬▬▬  │ │
│  └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ └──────┘ │
│                                                           │
└─────────────────────────────────────────────────────────┘
```
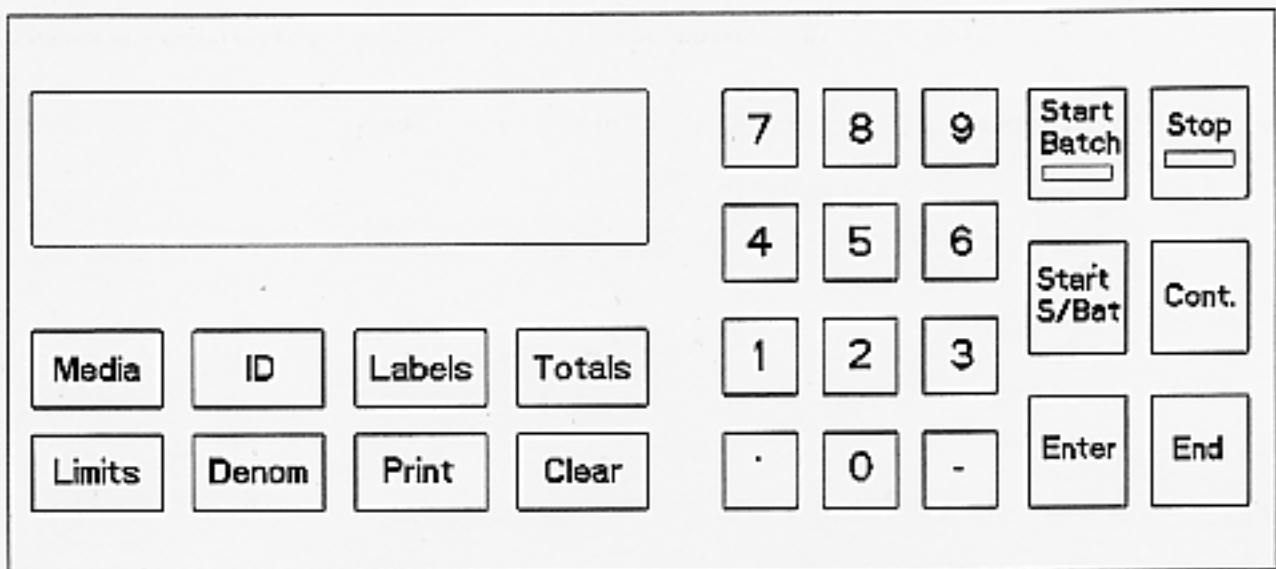
The Function Keys are used to start a Batch or Sub-Batch, continue sorting, end Batches and Sub-Batches and Stop the JetSort. There is also a PRINT key along with TOTALS and DENOM functionality, which allow the user to view Batch or Sub-Batch totals by denomination.

SECTION 2   JETSORT 1000 Series OPERATION

THE JETSORT *ADVANCED* CONTROL PANEL:

The control panel of the JetSort consists of a 2 x 16-line LCD display and 26 function keys.

The Function Keys are used to start a Batch or Sub-Batch, continue sorting, end Batches and Sub-Batches and Stop the JetSort. There is also a PRINT key along with TOTALS and DENOM functionality, which allow the user to view Batch or Sub-Batch totals by denomination.

SECTION 2   JETSORT 1000 Series OPERATION

OPERATING THE JETSORT 1000:

Before turning on the power, check to make certain that there is Box or Bag in place for each denomination to be counted. Turn on the main power switch located at the back of the machine.

1.   STARTING BATCHES & SUB-BATCHES:

To begin sorting coin, press the **BATCH** key. Feed coin from the inspection tray into the sorting chamber. A new Batch or Sub-Batch is begun by ending the current transaction (**END** key if selected as "needed" in set up), and pressing the **BATCH** or **SUB-BATCH** keys to begin a new transaction. Upon ending a Batch, data is transferred to the Day Total and the Batch Register is cleared.

2.   ENTERING AND CORRECTING LABELS INFORMATION

Labels A-D need to be turned On if labels are to be used. Enter label information through the numeric keypad and press the **ENTER** key to accept the entry. Repeat this process to enter information for additional label prompts. Label information is not stored in long term memory.

If in the middle of a Batch, the operator needs to correct a label, press the **LABELS** key when the screen says Batch Waiting. The screen will indicate the label previously entered. At this point, the operator can input the correct label via the keypad and Press **ENTER** to accept the entry. When the screen says Batch Waiting, the operator can resume sorting. Data can only be corrected while in a Batch Waiting condition.

3.   ENTERING AND CORRECTING ID INFORMATION

The ID function needs to be turned On in Set-Up. Enter ID information through the numeric keypad and press **ENTER** to accept the entry. If the ID function is turned On, you cannot bypass the ID prompt without entering an ID. ID information is stored in long term memory.

If in the middle of a Batch, the operator needs to correct an ID, press the **ID** key when the screen says Batch Waiting. The screen will indicate the ID previously entered. At this point, the operator can input the correct ID via the keypad and Press **ENTER** to accept the entry. When the screen says Batch Waiting, the operator can resume sorting. Data can only be corrected while in a Batch Waiting condition.

4.   ENTERING AND CORRECTING DECLARED BALANCE INFORMATION

The Declared Balances for both Batch and Sub-Batch must be turned On in Set-Up. Enter data using the numeric keypad and press **ENTER** <u>twice</u> to accept the information and return to a Batch Waiting condition.

When entering values for Batch Declared Balance, Sub-Batch Declared Balance and Miscellaneous Media, the **ENTER** key works like a calculator. Entering a positive value, followed by the **ENTER** key will add the value to previously recorded values. Entering a value, followed by the – (minus) key will deduct the value from the previously recorded values. Once your entered value is correct, press the **ENTER** key a second time to record the new value and leave the screen.

JetSort will display the difference between coin/currency total and Batch Declared Balance or Sub-Batch Declared Balance, along with Even, Over or Short Status, after ending a Batch.

To subtract from balance values, enter the difference through the numeric keypad and press the – (minus) key. The adjusted balance will now be displayed. Press the **ENTER** key to accept and return to a Batch Waiting condition. Data can only be corrected while in a Batch Waiting condition.

5.   ENTERING AND CORRECTING MISCELLANEOUS MEDIA INFORMATION

If miscellaneous media (currency, checks, miscellaneous) is turned On in Set-Up, enter data via the numeric keypad and press the **ENTER** key <u>twice</u> to accept and return to a Batch Waiting condition. Press the **CLEAR** key to correct and re-enter numeric values not yet recorded.

If in the middle of a Batch, the operator needs to correct media entered, press the **MEDIA** key when the screen says Batch Waiting. The screen will indicate the media previously entered. At this point, the operator can input the correct ID via the keypad and Press **ENTER** to accept the entry. When the screen says Batch Waiting, the operator can resume sorting. Data can only be corrected while in a Batch Waiting condition.

To subtract from balance values, enter the difference through the numeric keypad and press the – (minus) key. The adjusted balance will now be displayed. Press the **ENTER** key to accept and return to a Batch Waiting condition.

6.   CONTINUING AND ENDING BATCHES & SUB-BATCHES:

Continuing and ending Batches and Sub-Batches varies depending on whether the End Key function is set to "Needed" or "Not Needed" in Set-Up. Your JetSort is shipped with "Not Needed" as the default setting. With the End Key function set to "Not Needed", after processing coin, you may:

1. Begin a new Sub-Batch by pressing the **SUB-BATCH** key again.
2. Continue the first Sub-Batch by loading more coin and pressing the **CONT** key.
3. End the current Sub-Batch by pressing the **END** key. Pressing the **END** key a second time will end the current Batch.

With the End Key function set to "Needed", after processing coin, you may:

1. End the current Sub-Batch by pressing the **END** key.
2. Begin a new Sub-Batch by pressing the **END** key, followed by the **SUB-BATCH** key,
3. Continue a Sub-Batch by loading more coin and pressing the **CONT** key, or
4. End the current Sub-Batch and current Batch by pressing the **END** key twice.

When the End Key function is set to "Needed", a Sub-Batch is ended only when the **END** key is pressed. All coin sorted after beginning a Sub-Batch is counted toward the current Sub-Batch until the **END** key is pressed. Press the **END** key once to end the current Sub-Batch and press it twice to end the current Batch.

The below screen should appear when you are in a Batch Ended condition and are ready to begin a new batch:

```
COIN $              .00
Batch Ended
```

The below screen should appear when JetSort is in a Batch Waiting condition:

```
COIN $              1.53
Batch Waiting
```

To continue processing coin while in a Batch Waiting condition, press the **CONT** key.

7.   INFORMATION RETRIEVAL:

JetSort accumulates and reports information in several categories. To display totals, the JetSort must be in a Batch Ended condition.

To view a specific total, press the **TOTALS** key. JetSort will display a Sub-Batch total, Day total, Box total or Bag Total and Batch total. To view each total, press and/or hold the **TOTALS** key.

To view a specific total by denomination, press the **TOTALS** key, then the **DENOM** key.

Example: To view the dime total for the Day, press the **TOTALS** key, scroll until the display states the Day Total, press the **DENOM** key until the display shows the dime total. A sample screen is shown below. JetSort has processed $216.70 in dimes, with a unit count of 2,167.

```
10c $                          216.70
DAY                            2167
```

To exit out of TOTALS or DENOM, press the **END** key.

ID totals are displayed through the Day Total. To display totals for individual IDs, the JetSort must be in a Batch Ended condition. Press the TOTALS key for the **Day/ID** screen as indicated below.

```
10c $                          216.70
DAY ID : 13                    2167
```

Enter the ID number you wish to display and press the **ENTER** key. The ID number you entered will be displayed on the **Day/ID** screen and ID totals will be displayed in the upper right hand corner of the screen.

8.   CLEARING COUNTS AND TOTALS:

JetSort tracks individual coin bag counts and day counts, independent of any Batch or Sub-Batch data stored. These features allow you to obtain grand totals for individual coin denominations and total coin sorted and counted for any period desired. Bag and day counts accumulate until a bag limit is reached or counts are cleared manually by an operator.

JetSort allows you to clear bags and day totals either when they have reached their individual bag stop limits or at any time before they reach their limits. It also allows you to clear all bags at once.

Example: To clear the Day Total, press the **TOTALS** key until the Day Total appears. Press the **CLEAR** key and a similar screen should appear:

```
COIN $                         921.36
CLEAR DAY TOTAL?
```

To clear the Day Total, press the **CLEAR** key again and the following screen should appear:

```
COIN $                            .00
DAY                             TOTAL
```

Press the **END** key to return to the main screen.

9.   CLEARING BOX/BAG LIMITS:

When a bag or box has reached its stop limit, the JetSort 1000 stops and a limit message flashes on the display, showing the denomination for which the limit has been reached.

```
25c           4000
LIMIT         25c
```

To clear the bag count or box count, press the **CLEAR** key once. The JetSort 1000 will display the following screen:

```
25c              0
CLEAR THIS BAG ?
```

Press the **CLEAR** key again to clear the bag count and return to a Batch Waiting condition.

To clear all bag counts, press the **TOTALS** key until the following screen appears:

```
Coin $              $56.20
CONTAINER    TOTAL
```

Press the **CLEAR** key once. The screen then appears:

```
Coin $                 0
CLEAR ALL BAGS ?
```

Press the **CLEAR** key again to clear all bags.

10.   CLEARING BOX/BAG LIMITS:

To clear an ID count, you must be in a Batch Ended condition. Press the **TOTALS** key to display individual IDs. Enter an ID number through the numeric keypad, followed by the **ENTER** key.

```
Coin $              $56.20
DAY ID:          28 TOTAL
```

Press the **CLEAR** key once to display the following message:

```
Coin $              $56.20
CLEAR DAY TOTAL?
```

Press the **CLEAR** key again to clear an individual ID count.

To clear all 100 JetSort IDs, enter 0 and press the **ENTER** key. The JetSort will display day totals for all 100 IDs. Press the CLEAR key to clear all ID totals. The JetSort will display the following message:

```
Coin $              $56.20
CLEAR ALL ID DAY TOTALS?
```

Press the **CLEAR** key again to clear all JetSort IDs.

11.   PJS LIMITS:

JetSort 1000 is designed to allow the operator to set stop limits for the number of coins fed into any denomination bag or box. PJS limits can be set in either piece or value counts. These stop limits can be entered and stored in the JetSort's memory through the PROGRAMMABLE JET STOPS (PJS) menu.

JetSort is designed with three bag stop limits built-in - Full (full federal bag limits or box limits), Half (half federal bag or box limits) and rolled coin limits. PJS files 01, 02, and 03 are preset to Full, Half and Rolled coin limits and cannot be changed in permanent memory. (Note: File 3 is not preset if EBS is not enabled.)

File 0 exists for coin limits based on Set-Up bag/box and Full / Half / None configurations. The display would show File 0 – Alt File as opposed to File 0 Set-up File for above.

Individual stop limits may be changed while processing coin and will be used until new stop limits are set.

JetSort 1000 can store up to 22 (04-25) individual PJS settings.

12.   RETRIEVING PJS FILES:

Press the LIMITS key to call up the PJS files. To retrieve a file, enter in the file number through the keypad and press the ENTER key. The denomination limits can be viewed for that particular file by pressing the DENOM key.

13.   CREATING AND SAVING NEW PJS FILES:

In the PJS file, press the DENOM key to the call up the denomination. Enter the stop limit through the keypad and press the ENTER key to create an alternate file. Then press the – (minus) key to save the file. The screen will then prompt as follows:

```
PJS
FILE TO SAVE  ^^
```

Enter a number between 04 and 25 and press ENTER to save the file.

If a previously stored PJS file number was entered, the screen will display the following prompt:

```
PJS                    6
EXISTS!  REPLACE?
```

Press the **ENTER** key to overwrite the previous code. Press the **CLEAR** key to preserve previously recorded PJS files. *Note: PJS files 01, 02, and 03 cannot be replaced. (Note: File 3 can be replaced if EBS is not enabled.)*

14.   PRINTING REPORTS:

Cummins printer IDP3535 is recommended for use with JetSort. Both the printer and JetSort must be initialized to the same baud rate and parity for them to properly work together. Contact your local branch office for proper initialization instructions.

JetSort can generate a number of printed reports including a Batch, Sub-Batch, Bag and Day total reports.

Reports are generated automatically or by operator demand depending on how the Set-Up functions are configured.

If the Printer Set-Up is set to AUTO, Batch and Sub-Batch reports will be generated automatically whenever a Batch or Sub-Batch is ended.

If the Printer Set-Up is set to DEMND, you must press the **PRINT** key to generate reports.

SECTION 3 JETSORT 1000 Series MAINTENANCE

1.   HANDLING JAMS:

If a jam occurs while sorting coin, or if there is a sensor malfunction, the JetSort will stop immediately and display an error message. If there is a jam that has stopped the table from rotating, a Table Error message will appear. If a jam occurs at a sensor, a Sensor Error message will appear. The correction procedure for both types of jams are similar.

The first step in correcting a jam is to remove the inspection tray, remove the sort disk and remove all loose coin from the sorting disc area.

Once this is done, press the **CLEAR** key to clear the error. In the case of either type of jam, the JetSort will give you the option of verifying your count or continuing with coin processing. If the table jam message remains, contact your Local Cummins office.

In the case of a sensor jam, the display will tell you exactly where it detects an obstruction.

2.   RECONCILING COUNTS:

Option 1:

After clearing a jam, you may either reconcile your counts or continue Batch or Sub-Batch processing. If you wish to reconcile the count at the time of the jam, empty the contents of all bags, together with any coin from inside the sort head into the tray and press the **SUB-BATCH** key. Sort the coin (current transaction and the bag contents), then press the **STOP** key. Press the **SUB-BATCH** key again to end the reconciliation. The display screen now reflects the correct transaction total.

Option 2:

To continue Batch or Sub-Batch processing, press the **CONT** Key to resume processing without reconciling from where the jam occurred.

SECTION 3 JETSORT 1000 Series MAINTENANCE

3.   CLEANING YOUR JETSORT:

The entire sorting chamber of your JetSort should be cleaned at least once a week to remove coin dust and debris that accumulates in the sorting area.

To clean your JetSort, remove the sort disk. Take a stiff, non-metallic brush and clean the grooves on the underside of the top disk, making sure that you DO NOT brush the sort pad which rests on the lower disk.

Check the sort pad for any cuts that may affect the sorter's accuracy. Replacement sort pads are readily available from your Local Cummins branch office. Replace the sort head and be sure to latch it shut. Vacuum the entire chamber area around the sort head.

4.   PREVENTATIVE MAINTENANCE:

Preventative Maintenance Inspection Agreements are available from Cummins-Allison. A preventative maintenance contract not only helps extend the life of your JetSort, but it also prevents down time and expensive repairs. For additional information, contact your local Cummins branch office.

SECTION 4 JETSORT 1000 Series ERROR MESSAGES

1. Memory Default:

Indicates JetSort has cleared all memory registers (except PJS registers 01, 02 and 03) and has returned to factory defaults. This condition can be induced by holding down the red **STOP** key while turning on the JetSort.

2. EEPROM ERROR:

Indicates JetSort has experienced a memory loss on start up. This may affect memory conditions and may result in loss of user defaults. Contact your Local Cummins office for additional information.

3. PJS Error Messages:

Error: Entry below min!
The stop limit entered for a particular coin denomination is lower than the minimum of ten (10). Enter a stop limit of 10 or more. *Advanced* model only.

Error: Uneven multiple!
The stop limit entered for a particular coin denomination is an uneven multiple of the coin denomination. Example: $100.25 stop limit for quarters. Enter a stop limit that is an even multiple of coin denomination. *Advanced* model only.

Error: Entry below bag!
The stop limit entered for a particular coin denomination is at or below the current bag count. The JetSort will not accept such limits. Enter a stop limit above the current bag count or clear all day totals and re-enter stop limit. *Advanced* model only.

Error: No such file!
The PJS file number requested through the PJS GET feature, has not been previously recorded. GET a different PJS file or enter stop limits for new PJS file. *Advanced* model only.

Limit (1¢, 5¢, 10¢, 25¢, 50¢, $1)
JetSort has reached the denomination stop limit for a particular coin denomination. Clear bag or re-set stop limit to resume processing. *Advanced* model only.

Warning: Exists, Replace?
The file number entered for a new PJS file has been previously used. Enter a different PJS file number or overwrite previously recorded PJS file by pressing the **ENTER** key. *Advanced* model only.

Error: Invalid File!

The file number entered for a new PJS file is invalid. JetSort features 25 individual PJS settings. You may save up to 22 custom settings (file numbers 04-25). You may not overwrite file settings 01 and 02 (full and half federal bag limits) and file setting 03 (rolled coin limits) stored in memory. *Advanced* model only.

5.   Additional Error Messages:

ERROR: Neg Result

Value entered for correction of Declared Balance, Declared Sub-Balance or other miscellaneous media resulted in a negative number. Re-enter values. *Advanced* model only.

Waiting to Send

Communication error message. JetSort is waiting to send to the printer or other peripheral device. Wait for JetSort to finish processing data (indicated by removal of error message) and then proceed.

Hold Comm Poll

Communication error message. JetSort's data buffer is limited to one batch. JetSort is waiting for an external computer to poll the JetSort for Batch data and cannot process additional Batch data until polled for first Batch data. Wait for poll to take place (indicated by removal of error message) and then proceed.

Hold for Printer

Printer communication error message. JetSort is processing data and waiting to send data to the printer. Wait for JetSort to finish processing data and then proceed.

Comm Link Error

Communication error message. JetSort is attempting to process data to be sent to external computer, but the computer isn't responding. Check computer connections. *Advanced* model only or *Basic* model if communications is installed.

Trying To Comm

Communication error message. JetSort is attempting to process data from first Batch, after subsequent Batch has been ended. JetSort will alert operator of Comm Link Error regarding first Batch and display Trying to Comm error along with time (in seconds) remaining until first Batch data is processed and Comm Link Error is cleared. After error message is cleared, JetSort will display first Batch totals.

Sensor Error

Coin processing error message. JetSort senses coin defects, turns off motor and alerts user. Basic and Advanced models.

SECTION 4 JETSORT 1000 Series ERROR MESSAGES

Table Error

Coin processing error message. The JetSort senses that the table is not turning at proper operational speed. JetSort turns off motor and alerts user. Basic and Advanced models.

(1¢, 5¢, 10¢, 25¢, 50¢, $1, Coin #7, Coin #8) Sensor Block

JetSort senses a coin defect or jam at the sensor for a particular coin denomination. JetSort turns off motor and alerts user.

Pwr Fail Error

JetSort senses a power failure if the machine is unplugged or a real power outage occurs during operation. When powering up the machine again, a power fail error message is displayed on the screen. Press the **CLEAR** key to reconcile or continue the current batch or sub-batch.

Bag Limits

An industry standard established by the Federal Depository Bank that specifies coin bag fill quantities.

Batch

Money that is recorded as coming from one general source and processed as an over all group.

Batch Key

Key that starts a new Batch and starts coin sorter.

CLEAR Key

The key used to delete information from different areas of JetSort's memory or to clear a screen if an error is made in entering information.

CONT Key

Restarts the machine and continues counting from the point where it was stopped.

Day Total

Total monies received during a specific time frame, such as day, half day, etc.

END Key

The key used to end a Batch or Sub-Batch.

STOP Key

The key used to stop the machine at any point in the counting process.

Sub-Batch

Monies processed from one or several sources and treated as subgroups within a Batch. Allows for more detailed tracking of proceeds within a Batch.

SUB-BATCH Key

Key that starts a new Sub-Batch within a Batch.

SECTION 6   LIFT TRAY REMOVAL / INSTALLATION

LIFT TRAY ASSEMBLY REMOVAL AND INSTALLATION

Figure1 – Lift Tray Assembly and Installation

LIFT TRAY ASSEMBLY REMOVAL – FIGURE 1
1. To remove the lift tray assembly, simply pull back and up on the bottom of the latch (Figure 1) until it pops loose. Pull the base up and backward to clear the two tabs at the front of the tray where they slip under the Display Assembly.

LIFT TRAY ASSEMBLY INSTALLATION – FIGURE 1
1. To install the lift tray assembly, slip the two tabs at the front of the tray under the Display Assembly and lower the base into the cabinet.
2. Hook the top of the latch over the tab on the tray base (Figure 1) and press down and in on the bottom of the latch until it snaps in place.

SECTION 7 SORT DISK REMOVAL / INSTALLATION

SORT DISK PARTIAL REMOVAL AND INSTALLATION

NOTE: The sort disk can be partially removed to clean and service the sort disk, remove jammed coins, and clean the coin pad.
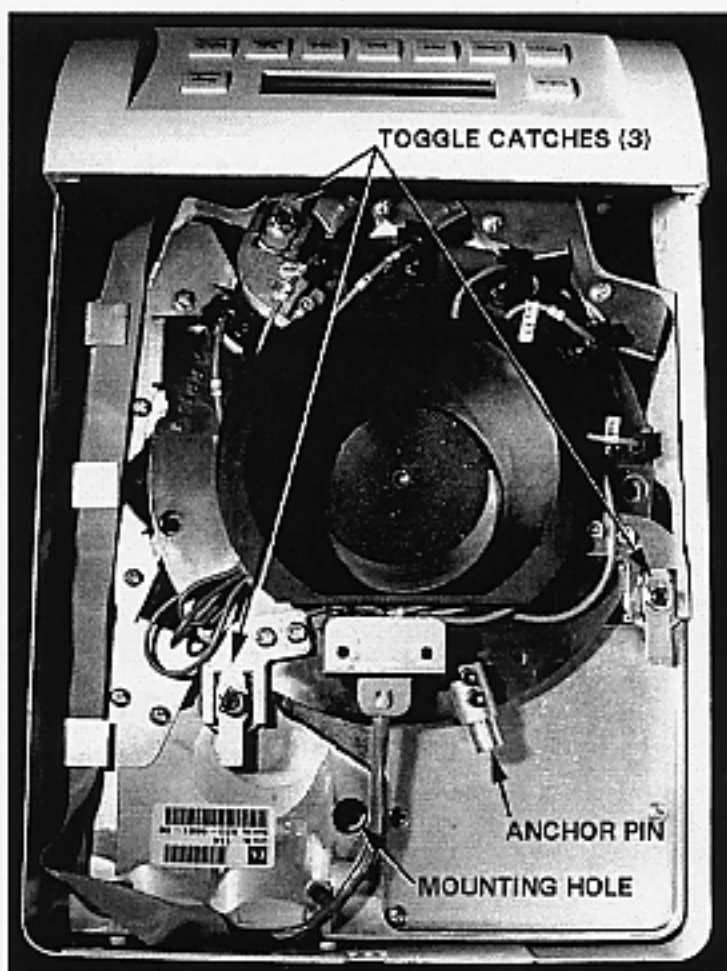

Figure 2 Sort Disk (Top View)

SORT DISK REMOVAL - Figure 2
1. Remove lift tray assembly. See Section 6.
2. Turn the three toggle catches parallel to the arms of the hold-down forks -- see Figure 2.
3. Lift the sort disk up and turn vertically being careful not to pull the connecting wires from their harness. Place the anchor pin in the mounting hole near the rear of the cabinet -- see Figure 3 on the next page.

SORT DISK PARTIAL REMOVAL AND INSTALLATION continued
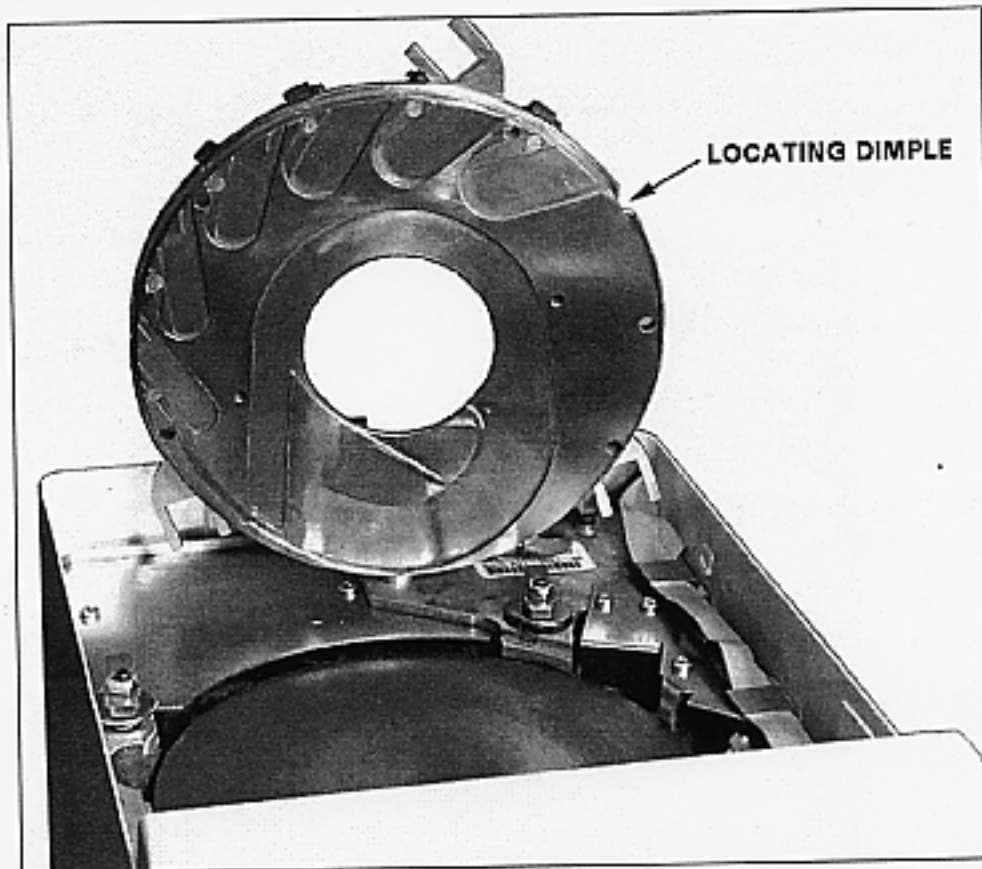
LOCATING DIMPLE

Figure 3 Sort Disk in Vertical Position

SORT DISK INSTALLATION – FIGURE 3

1. Lower the sort disk onto the turntable. Note that the locating dimple (Figure 3) will only allow the disk to drop to the pad when the dimple is next to the matching projection in the base assembly.
2. Turn the three toggle catches until they are perpendicular to the hold-down forks.
3. Reinstall the lift tray assembly. See Section 6.