



## **Auditing the Slot Machine**

This chapter provides the instructions to access information regarding the usage and performance of the slot machine and its games. You access the information by using the MMS or the service port.

## Overview

To access machine audit and accounting information, you use the graphic interface of the Machine Management System (MMS). Four online Accounting pages are provided:

- ◆ Machine
- ◆ Games
- ◆ Logs
- ◆ Tickets

To use the service port for your auditing needs, see "Using the Service Port" on page 5-9.

## Viewing Machine Accounting Values

Using the MMS Machine Accounting page, you can view

- ◆ period meters
- ◆ SafeStore time and date
- ◆ machine accounting data
- ◆ machine statistics
- ◆ the number of games played
- ◆ the last ten bills accepted
- ◆ bill acceptor statistics

To view the data listed above, perform the following steps:

1. Invoke the MMS and access the Accounting page. Refer to "Invoking the MMS" on page 2-23.
2. Touch the Machine tab at the top of the screen. The Machine Accounting page is displayed. See Figure 5-1 on page 5-3.

Figure 5-1 Machine Accounting Page

Accounting

Time: 2:35:15p  
Date: 8-21-98  
Loc: 0

Machine
Games
Logs
Tickets

**Period Meters:** Reset

**Safe Store:**

Machine Accounting	Period	To Date
Coin In	0.00	0.00
Physical Coin In	0.00	0.00
Coin Out	0.00	0.00
Physical Coin Out	20.00	20.00
Other Instrumentalities In	0.00	0.00
Credits Cancelled	0.00	0.00
<b>Current Player Credits Available</b>	<b>0.00</b>	

**Machine Statistics**

	Period	To Date
Number of Games Played	0-0-00 12:00:00a	0 0
Cold Starts	8-13-98 12:50:00p	2 2
Warm Resets	0-0-00 12:00:00a	0 0
Belly Door Accesses	8-20-98 2:57:11p	2 2
Electronics Box Door Accesses	0-0-00 12:00:00a	0 0
Currency Column Door Accesses	8-21-98 2:34:23p	9 9
Currency Cartridge Lock Accesses	0-0-00 12:00:00a	0 0
Currency Cartridge Removals	8-14-98 9:24:46a	1 1
Drop Door Accesses	0-0-00 12:00:00a	0 0

**Number of Games Played** Counted Before Entering MMS

Since Machine Power-On: 0 Since Last Door Closed: 0

**Last 10 Bills Accepted** Touch a bill for details

Newest Oldest

20

1 bill has been accepted

**Bill Acceptor Statistics**

	Period	To Date
\$1 Bills	0	0
\$2 Bills	0	0
\$5 Bills	0	0
\$10 Bills	0	0
\$20 Bills	0	1
\$50 Bills	0	0
\$100 Bills	0	0
<b>Bill TOTALS</b>	<b>0</b>	<b>1</b>

Calibrate Screen
Take Machine Out of Service
Next Page

Game Play Monitor  
Accounting  
Configuration  
Diagnostics

Table 5-1 on page 5-4 describes the items on the page.


 *Note: Machine Accounting parameters are different for each jurisdiction. Some of the parameters may have different orders or are hidden in the scroll box.*

Table 5-1 Machine Accounting Page

<b>Period Meters</b>	A period is an operator-initiated time period and is global for all kinds of accounting, including games. The date and time the period was last reset is displayed at the top of the <b>Machine</b> page. To reset the period, press the <i>Reset</i> button.
<b>Safe Store</b>	The date and time that SafeStore was last cleared. When SafeStore is cleared, it wipes all statistics from memory.
<b>Machine Accounting</b>	Lists the money statistics by current period and to date.
<b>Coin In</b>	The number of coins or credits applied to wagers. Physical coin-in is not included.
<b>Physical Coin In</b>	The number of coins accepted by the machine. The number does not include bills.
<b>Coin Out</b>	The number of coins or credits won during play, excluding jackpot winnings. Physical coins paid from the hopper are not included.
<b>Physical Coin Out</b>	The number of coins paid out by the hopper. The number includes cash-outs.
<b>Other Instrumentalities In</b>	The total value of wagering credits transferred to the machine from a back-end system, specifically as a result of an electronic fund transfer (EFT).
<b>Credits Canceled</b>	The total value of wagering credits transferred from the machine to a back-end system, specifically as a result of an EFT.
<b>Total Drop</b>	The number of coins or credits from bills and coins diverted to the drop.
<b>Coin Drop</b>	The number of coins diverted to the drop. Bills dropped are not included.
<b>Coins Hand Paid</b>	The total number of coins paid by an attendant. These coins are mainly jackpot payments.
<b>Total Coins Paid Out</b>	The total number of coins paid out. The total includes the <i>Coin Out</i> plus the <i>Coins Hand Paid</i> .
<b>Hopper Coins Overpaid</b>	The number of coins overpaid by the hopper
<b>Current Player Credits Available</b>	The total credits available if the meters were accessed during game play.
<b>Machine Statistics</b>	Lists the machine statistics by current period and to date.
<b>Number of Games Played</b>	The total number of games that have been played on the slot machine.
<b>Cold Starts</b>	The number of power-up resets.
<b>Warm Restarts</b>	The total number of times the reset has been pressed.
<b>Belly Door Accesses</b>	The total number of times the lower cavity has been opened.
<b>Electronics Box Door Accesses</b>	The total number of times the electronics box door has been opened.
<b>Currency Column Door Accesses</b>	The total number of times the currency column door has been opened.
<b>Currency Cartridge Lock Accesses</b>	The total number of times the currency cartridge lock has been opened.
<b>Currency Cartridge Removals</b>	The total number of times the currency cartridge has been removed.
<b>Drop Door Accesses</b>	The total number of times the drop door has been accessed.
<b>Number of Games Played</b>	The total number of games played since the last system power reset and the last time a door was closed.
<b>Last 10 Bills Accepted</b>	The last ten bills accepted by the bill acceptor are displayed with the most recent bill displayed first. The denomination of each bill is displayed in the bill icons. To view detail information about each bill, touch the bill icon.

Table 5-1 Machine Accounting Page

Bill Acceptor Statistics	The total number of \$1 to \$100 bills accepted during the period and also to date.
Bill Totals	The total number of bills accepted during the period and to date.
Currency Totals	The total dollar amount of all bills accepted during the period and also to date.

3. Exit the MMS. Refer to "Exiting the MMS" on page 2-25.

## Viewing Games Accounting Values

Using the MMS Games Accounting page, you can track the financial performance of each game. You can

- ◆ view and reset the period meters
- ◆ view game accounting values
- ◆ view theoretical hold percentages
- ◆ view game statistics

To do the above tasks, perform the following steps:

1. Invoke the MMS and access the Accounting page. Refer to "Invoking the MMS" on page 2-23.
2. Touch the Games tab at the top of the screen. The Games Accounting page, shown in Figure 5-2 on page 5-6, is displayed.

Figure 5-2 Games Accounting Page

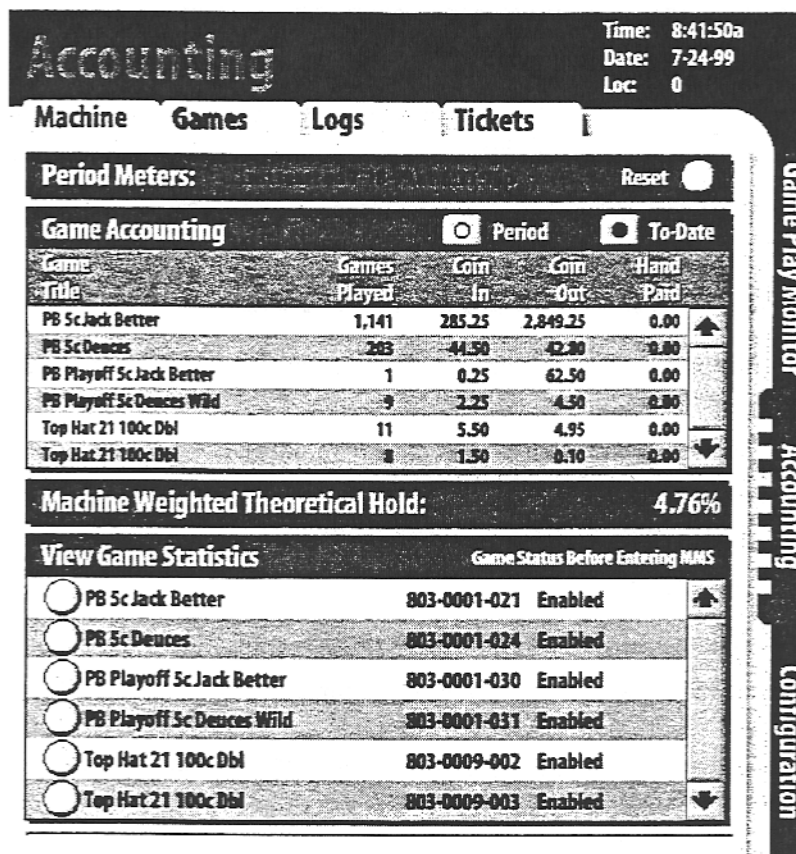


Table 5-2 describes the items on the page.

Table 5-2 Games Accounting Page

<b>Period Meters</b>	A period is an operator-initiated time period and is global for all kinds of accounting, including games. The date and time the period was last reset is displayed at the top of the <b>Games Accounting</b> page. To reset the period, press the <i>Reset</i> button.
<b>Game Accounting</b>	For each enabled game, statistics are displayed for <i>Games Played</i> , <i>Coin In</i> , <i>Coin Out</i> , and <i>Hand Paid</i> . To display values for the current period, press the <i>Period</i> button. To display values to date, touch the <i>To-Date</i> button. <i>Note:</i> To view accounting for games not displayed, touch the up- or down-arrows in the scroll box.
<b>Machine Weighted Theoretical Hold</b>	The theoretical hold percentage of the system weighted by game play across all games played
<b>Viewing Game Statistics</b>	This scroll box lists the games enabled on the machine. To view statistics, touch the button to the left of the game. Game statistics vary for each game. <i>Note:</i> To view statistics for games not displayed, touch the up- or down-arrows in the scroll box.

- Exit the MMS. Refer to "Exiting the MMS" on page 2-25.

## Viewing Accounting Logs

Using the MMS Logs Accounting page, you can see the past events on the machine by type and you can view and print details for each log.

To view accounting logs, perform the following steps:

1. Invoke the MMS and access the Accounting page. Refer to “Invoking the MMS” on page 2-23.
2. Touch the Logs tab at the top of the screen. The Logs Accounting page is displayed with a list of available logs and the number of entries in each log. See Figure 5-3.

Figure 5-3 Accounting Logs

View Log	Entries
<input type="radio"/> Top Award Log	20
<input type="radio"/> Tilt Log	44
<input type="radio"/> Event Log	64
<input type="radio"/> Error Log	64
<input type="radio"/> Network Log	0

Table 5-3 shows the logs that are available on the Logs Accounting page. Each contains a scroll box.

**Note:** To view an item not shown on the screen, touch the up- or down-arrows in the scroll box.

Table 5-3 Accounting Logs

Voucher Log	Each scroll box contains the last 20 vouchers recorded by the system in the order of voucher occurrence.
Top Award Log	Each scroll box contains the last 20 top awards recorded by the system in order of occurrence.
Tilt Log	Each scroll box displays the last ten tilt events recorded by the system in order of occurrence.
Event Log	Each scroll box contains the last 64 system events recorded by the system in order of occurrence.
Error Log	Each scroll box contains the last 64 software errors in order of occurrence. Errors include initialization sequence events and system errors recorded by the system.
Network Log	This scroll box is a message trace log that shows the last 64 communication events between the slot machine and the Hubble board. The log lists C3 messages communicated between Hubble and the slot machine.

3. To display the detail, touch the *View* button to the left of the log name. The detail is displayed. See Figure 5-4 on page 5-8 for an example.


Figure 5-4 Top Award Log

Top Award Log		
Date	Time	Details
8-17-98	10:19:24p	803-0013-001 PAID \$37.50 WAGER:\$0.00 PNM: 375 X 2 (d1)
8-17-98	10:13:23p	803-0013-001 PAID \$30.00 WAGER:\$0.00 KPL: 300 X 2 (d3)
8-17-98	9:59:28p	803-0013-001 PAID \$50.00 WAGER:\$0.00 IW: 500 X 2 (d3)
8-17-98	9:50:45p	803-0013-001 PAID \$50.00 WAGER:\$0.00 IW: 500 X 2 (d3)
8-17-98	9:40:44p	803-0013-001 PAID \$45.00 WAGER:\$0.00 IW: 450 X 2 (d2)
8-17-98	9:21:38p	803-0013-001 PAID \$35.00 WAGER:\$0.00 IW: 350 X 2 (d3)
8-17-98	9:17:12p	803-0013-001 PAID \$50.00 WAGER:\$0.00 IW: 500 X 2 (d1)
8-17-98	8:40:35p	803-0013-001 PAID \$50.00 WAGER:\$0.00 PNM: 500 X 2 (d2)
8-17-98	8:26:10p	803-0013-001 PAID \$37.50 WAGER:\$0.00 KPL: 375 X 2 (d3)
8-17-98	8:19:31p	803-0013-001 PAID \$62.50 WAGER:\$0.00 KPL: 625 X 2 (d1)
8-17-98	8:08:14p	803-0013-001 PAID \$75.00 WAGER:\$0.00 PNM: 750 X 2 (d3)
8-14-98	11:58:43p	803-0013-001 PAID \$45.00 WAGER:\$0.00 IW: 450 X 2 (d1)
8-14-98	11:38:09p	803-0013-001 PAID \$37.50 WAGER:\$0.00 KPL: 375 X 2 (d3)
8-14-98	10:59:46p	803-0013-001 PAID \$50.00 WAGER:\$0.00 PNM: 500 X 2 (d2)
8-14-98	10:55:29p	803-0013-001 PAID \$62.50 WAGER:\$0.00 IW: 625 X 2 (d2)
8-14-98	10:32:22p	803-0013-001 PAID \$37.50 WAGER:\$0.00 KPL: 375 X 2 (d1)
8-14-98	10:24:02p	803-0013-001 PAID \$30.00 WAGER:\$0.00 KPL: 300 X 2 (d2)
8-14-98	9:31:57p	803-0013-001 PAID \$45.00 WAGER:\$0.00 IW: 450 X 2 (d2)
8-14-98	9:17:04p	803-0013-001 PAID \$100.00 WAGER:\$0.00 PNM: 1000 X 2 (d2)
8-14-98	9:12:48p	803-0013-001 PAID \$75.00 WAGER:\$0.00 PNM: 750 X 2 (d3)

4. If the machine has a ticket printer, you can print the log by touching the *Print* button.
5. Exit the MMS. Refer to "Exiting the MMS" on page 2-25.

## Printing Accounting Tickets

Using the Tickets Accounting page, you can print accounting reports.

 *Note:* To print the reports, the machine must have a ticket printer.

To print accounting reports, perform the following steps:

1. Invoke the MMS and access the **Accounting** page. Refer to "Invoking the MMS" on page 2-23.
2. Touch the **Tickets** tab at the top of the screen. The printable accounting tickets are displayed. See Figure 5-5 on page 5-9.



Figure 5-5 Accounting Tickets Page

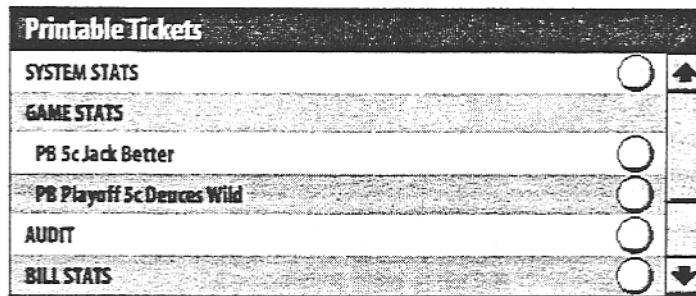


Table 5-4 describes each of the parameters in Figure 5-5 and some additional parameters not shown. To view the parameters not shown, touch the up- and down-arrows in the scroll box.

Table 5-4 Printable Tickets

System Stats	Prints all the tickets that follow (except Game Stats)
Game Stats	Prints accounting information for a particular game
Audit	Prints the machine accounting for coins and bills statistics
Bill Stats	Prints the bill statistics
Coin Stats	Prints the machine accounting for coins
Machine Stats	Prints machine statistics related to nonmonetary functions
Game Accounting	Prints accounting for games by game ID


3. Touch the button to the right of the ticket you want to print.
4. Exit the MMS. Refer to "Exiting the MMS" on page 2-25.

## Using the Service Port

You use the service port to obtain machine and game accounting information. You can also use it to perform authentication of files on the hard disk and to put the machine in and out of service. You enable and disable the service port from the MMS.

To use the service port inside the currency column, you need the following items:

- ◆ computing device (such as a portable computer) with an RS-232 interface and terminal emulation software
- ◆ null-modem serial cable with a DB-9 connector

 **Note:** Verify the service port is enabled. See "Configuring the Network" on page 4-20.

To connect the computing device to the service port, perform the following steps while the machine is powered on:

1. Open the currency column door. Refer to "Opening the Currency Column Door" on page 2-8.
2. Flip the power switch to the On position.
3. Connect the null-modem cable from the computing device to the service port.

4. From the terminal emulation software, open a connection to the serial port. The serial port should be communicating at 19200 baud, 8-N-1.
5. When a connection is made, the service prompt is displayed on the terminal screen. From the prompt, you can enter commands listed in Figure 5-5.

Table 5-5 Service Port Commands

Command	Function
?	Display this command list
accounting	Display machine accounting data
authenticate	Authenticate all enabled games
bill [crc]	Display the country descriptor of the bill acceptor. If the <i>crc</i> option is included, the current reference CRC value is displayed.
cd	Change directory
config	Display machine configuration information
check [art   control]	Performs demand authentication of control or art files (or both, if no options are specified)  <i>Note:</i> If no options are specified or art is specified, this command takes approximately 30 minutes to complete.
dir	Display directory listing of files in the current directory
gameaccounting [game_ID]	Display game accounting data for all games or a particular game, as identified by the game ID (usually the directory name as shown by the <i>gamedir</i> command)
gamedir	Display game directory listing
help	Display this command list
info	Display machine IDs
inservice	Put machine back in service (if out of service)
log	Display recent events
outofservice	Put machine out of service
periodreset	Reset period meters
send [filename]	Send a file (BINARY transfer) from the slot machine hard disk to the device connected to the service port  <i>Note:</i> This option is not currently implemented.