Bally GAMING + SYSTEMS®

ProSlot® 6000

MODULE 2

MK2-S6MOD-0013

SETUP AND OPERATION

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| - Revised, || - New

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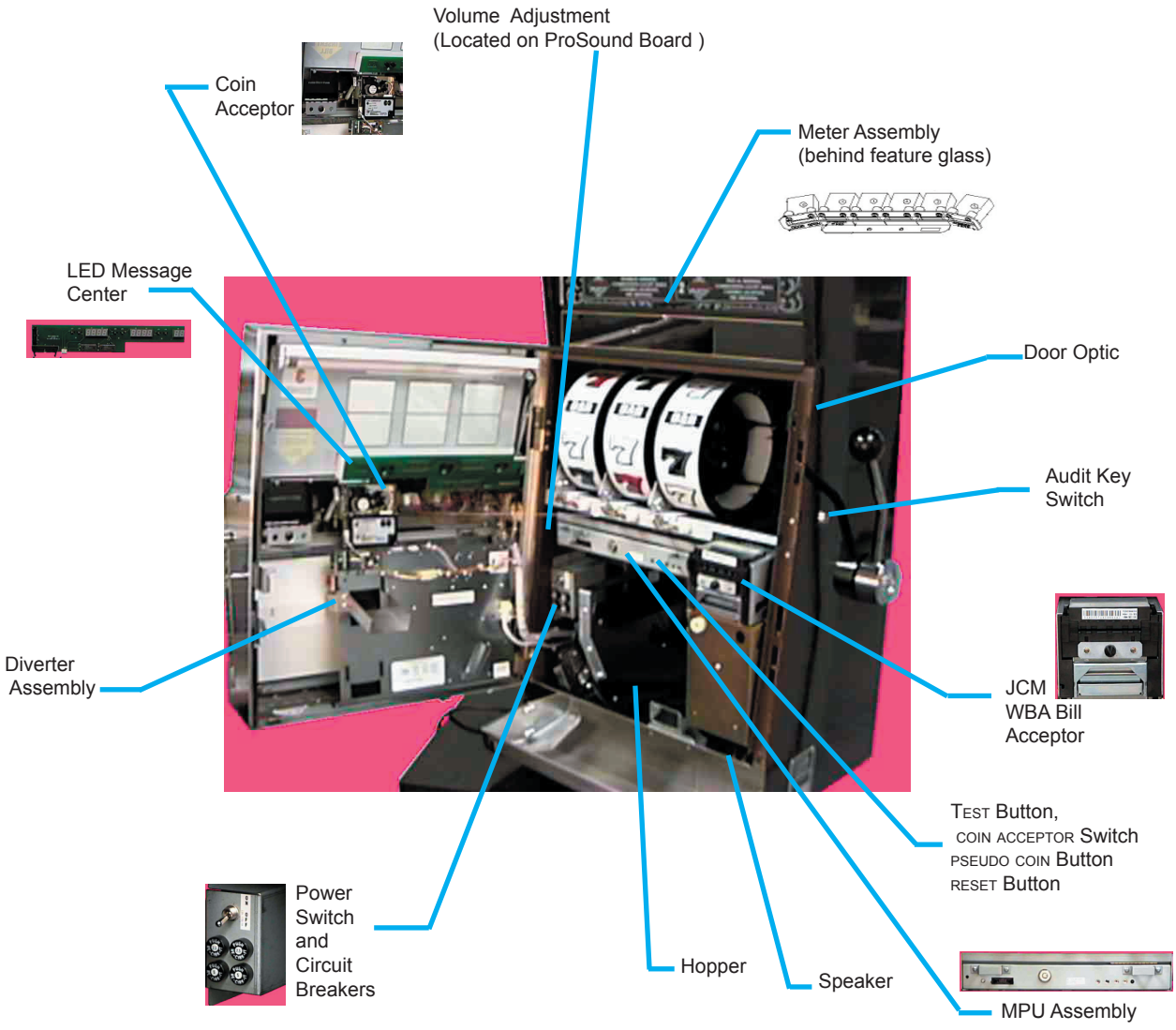
Major Components Diagram

Upright



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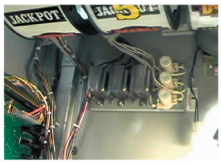
Major Components Diagram

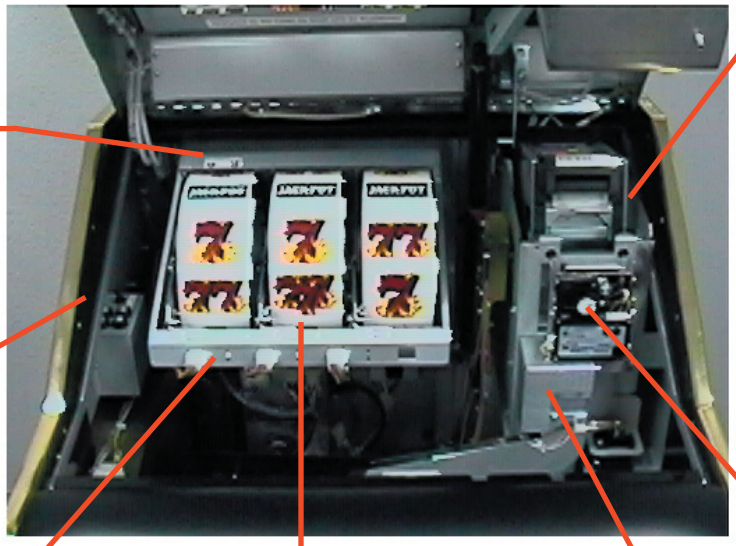
Slant Top

TEST and PSEUDO COIN Buttons

Power Switch and
Circuit Breakers

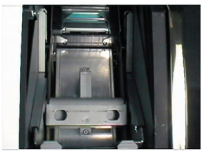


Fluorescent Starters
(Behind Reels)



Reel Shelf
Assembly

JCM WBA Bill Acceptor
(Operating Position)

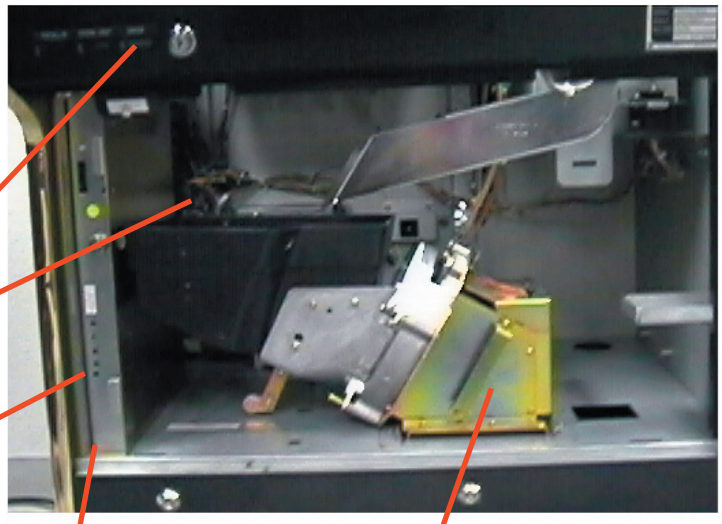


JCM WBA
Bill Acceptor

Coin Acceptor

Coin Optic
Decoder Board

Electromechanical Meters
and Audit Key Switch



Power Supply

TEST Button
COIN ACCEPTOR
Switch
PSEUDO Button
RESET Button

MPU Board

Hopper

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Specifications

Electrical Specifications

Line Voltage		120/240 VAC 50/60 Hz		
Power Supply Outlets		+5, +12, -12, +24 VDC		
Machine State	Idle	Play	Payout	Maximum Theoretical Draw
Current @ 120 VAC	1.1 AMP	1.2 AMP	1.7 AMP	2.35 AMP
Current @ 240 VAC	.55 AMP	.60 AMP	.85 AMP	1.18 AMP
Power	121W	132W	187W	259W

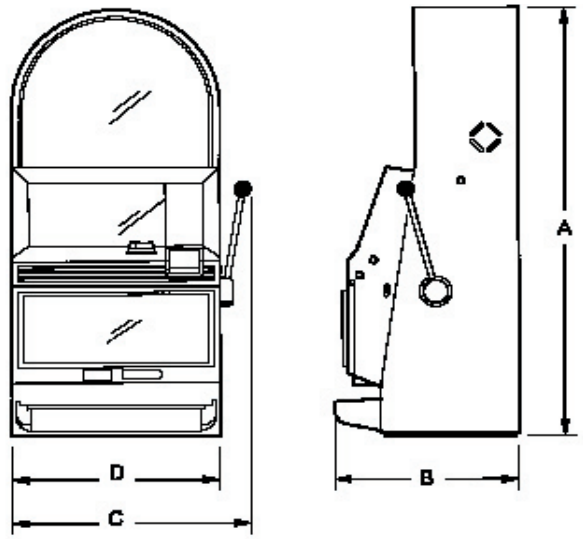
Environmental Specifications

Ambient Temperature:
Max: 100°F (38°C) Min: 40°F (4°C)
Maximum Relative Humidity: 90%
Average Heat from Machine: 500 BTU/Hr.

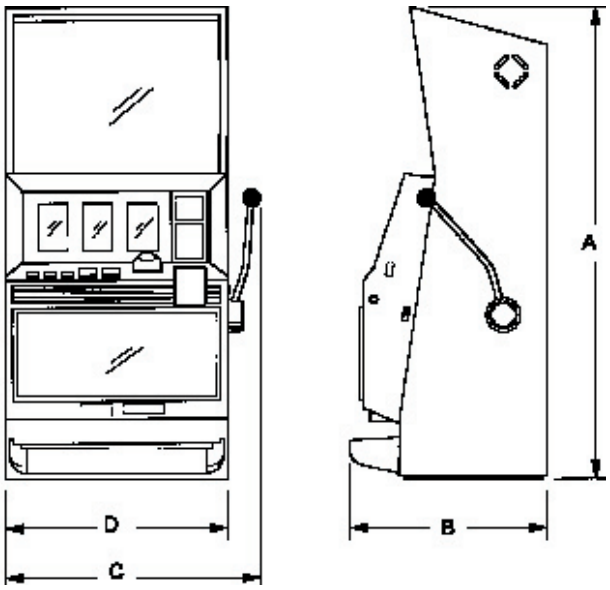
Physical Specifications

Style	A		B	
	Inch	CM	Inch	CM
R6	46 1/4	117.48	20	50.80
R6 (Extended)	49 1/4	125.10	20	50.80
W6	40	101.60	20	50.80
W6 (Extended)	49 1/4	125.10	20	50.80
S	50 7/8	129.24	39 1/4	99.70
E	53 3/8	135.57	39 1/4	99.70
Style	**E**		**F**	
	Inch	CM	Inch	CM
R6				
R6 (Extended)				
W6				
W6 (Extended)				
S	31 13/16	80.80	28 1/16	75.57
E	31 13/16	80.80	28 1/16	75.57
Style	**Weight**			
	Lb	Kg		
R6	217	98.43		
R6 (Extended)	219	99.33		
W6	217	98.73		
W6 (Extended)	220	99.79		
S	286	129.73		
E	348	157.85		

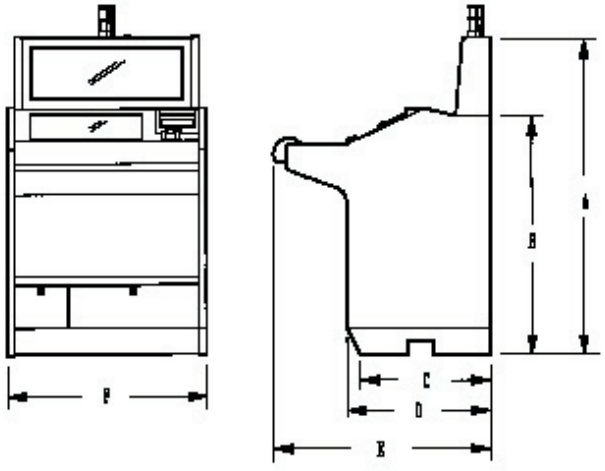
Warning: Use a maximum of six machines for each 120VAC 20A grounded circuit.



"R6" Style Cabinet



"W6" Style Cabinet



"S" and "E" Style Cabinets

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Installing the Machine

Installation Checklist

- ❑ Review environmental and power requirements
- ❑ Unpack and inspect machine
- ❑ Secure the machine to the stand (upright)
- ❑ Install locks
- ❑ Setup
- ❑ SafeRAM™ Clear
- ❑ Set game options

Review Power and Environmental Requirements

Line power must provide an earth ground for safe operation. Do not overload the circuit. See Electrical Specifications (page 2-7) for more information.

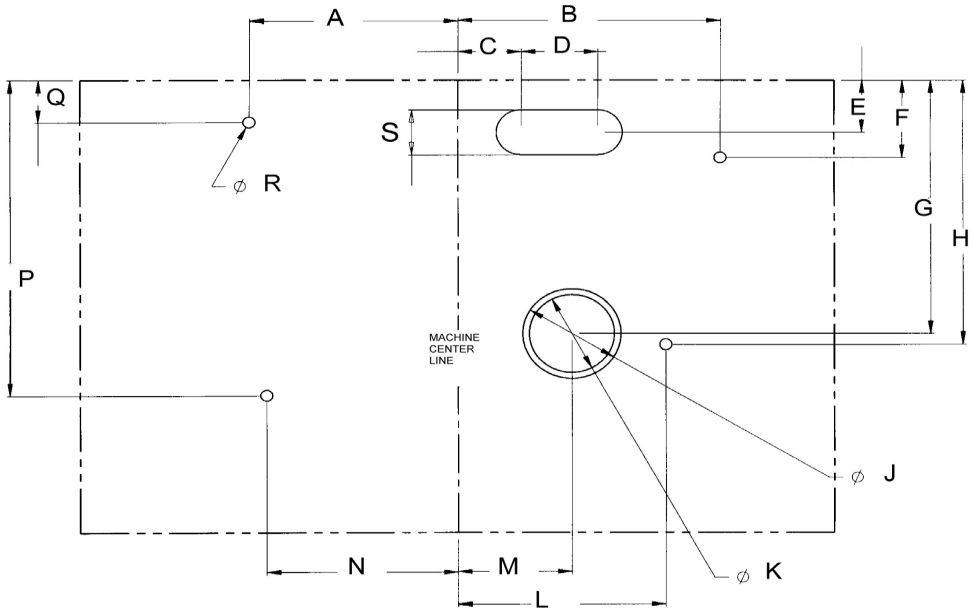
Unpack and Inspect Machine

Unpack and inspect the machine. If the machine is damaged, contact a Bally Gaming and Systems Distributor or Customer Service Representative for Return Merchandise Authorization (RMA) information.

Carefully unpack and remove all loose parts. Verify that the power cord is properly routed out of the cabinet. Remove all packing materials from the hopper. Locate the cloth bag of lock cams and mounting hardware.

Verify Specific Model Information (SMI) information before continuing with installation of the machine.

Warning: When moving the slant top machine, do not grip by the feature box. It can damage the machine or result in serious injury.



Footprint - ProSlot® 6000™

A		B		C		D		E		F	
Inch	CM	Inch	CM	Inch	CM	Inch	CM	Inch	CM	Inch	CM
7 15/32	19	9 13/32	23.90	2 9/32	5.79	2 3/4	6.99	2 1/16	5.26	3 1/16	7.80
G		**H**		**J**		**K**		**L**		**M**	
Inch	CM	Inch	CM	Inch	CM	Inch	CM	Inch	CM	Inch	CM
10 5/64	25.60	10 1/2	26.70	3 17/32	8.97	3 1/16	7.78	7 15/32	18.97	4 3/32	10.40
N		**P**		**Q**		**R**		**S**			
Inch	CM	Inch	CM	Inch	CM	Inch	CM	Inch	CM		
6 7/8	17.46	12 1/2	31.75	1 21/32	4.21	1 7/16	1.11	1 3/4	4.45		

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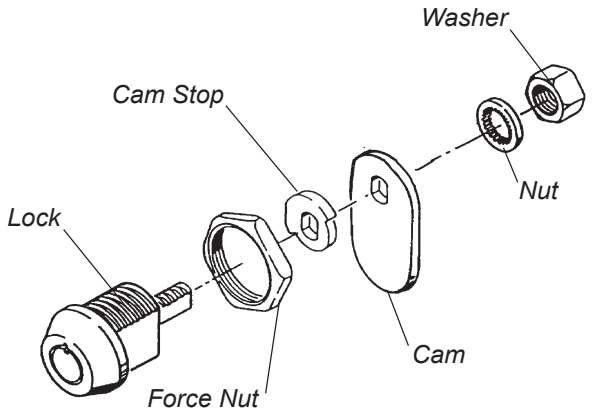
Installing the Machine (cont.)

Securing the Machine

Remove the hopper. Mark the center of the stand.



Typical Lock and Cam Assembly

Drill the required mounting, drop chute, and power cord holes. Using a lifting device, place the machine on the stand and route the power cord through the stand hole. Bolt the machine to the stand. Inspect for loose connectors and verify all printed circuit boards are firmly seated.

Install Locks

Door, stand, and other high-security locks should be ordered by the Operator from a reliable lock supplier. See Module 3 Assemblies, Parts and Hardware for lock specifications.

Remove the large and small nuts from the lock and insert the lock into the lock opening. Check the lock for proper orientation before securing. Secure the lock with the large nut. Place the cam stop on the lock cylinder. Attach the lock cam to the shaft and verify that it moves in the correct direction. Secure the lock cam with the washer and small nut.

Setup

Plug the line cord into a grounded power source, but do not turn the machine on.

MPU Jumper Selections

Battery Enable

The Lithium battery may be disabled for shipping or storage. To enable the battery, locate jumper JW20 left of the battery and place the jumper across the two pins.

Warning: Attempting to charge Lithium batteries can cause them to explode. Replace failed batteries with Bally part E-00628-0023 or its equivalent.

Door Open Detect Circuit

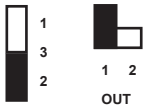
Some jurisdictions require a signal for a door opening while the machine power is OFF. To enable the door open latch, place the jumper at JW15 in position 1 and add a jumper at JW17. Default is OUT (OFF).

MPU Logic Detect Circuit

Some jurisdictions require a signal when the MPU board assembly is disconnected while the power is OFF. To enable the MPU detach latch, place JW15 in position 1 and add a jumper at JW21. Default is OUT (OFF).

The following table lists 2-pin and 3-pin jumper selections:

Position 1



Position 2

Jumper	Shipping Position	Purpose	Pos. 1	Pos. 2
JW1	Out (Off)	External Antenna	In	Out
JW2	2 Meg	Eprom Size	2 Meg	4 Meg
JW3	32K	Personality Eprom Size	32K	64K
JW4	VBB	RAM Power Select	+5	VBB
JW5	RS232	RX Port 3B	RS422	RS232
JW6	Out (Off)	DSR Input 3A	In	Out
JW7	Out (Off)	DTR Output 3A	In	Out
JW8	RS232	Link RX	RS232	RS422
JW9	Enable	Link RS422 Enable	Disable	Enable
JW11	Out (Off)	MPU Detect Feature	In	Out
JW12	In (On)	SafeRAM™ Key	In	Out
JW13	Isol TX	Bill Acceptor TX	ISOL	RS232
JW14	Isol RX	Bill Acceptor RX	ISOL	RS232
JW15	Out (Off)	VBB Door Open Latch	In	Out
JW16	ADC	Smart Socket Enable	ADC	+5
JW17	Out (Off)	Door Open w/Power Off Input	In	Out
JW18	Out (Off)	Alarm	In	Out
JW19	In (On)	MPU Board Antenna	In	Out
JW20	Out (Off)	Battery	In	Out
JW21	Out (Off)	MPU Backplane Detach Detect	In	Out

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Setup (cont.)

DIP Switch Selections

Three eight-switch DIP packages labeled on the MPU board as DS1, DS2, and DS3 set the following machine functions:

Note: If MC=16 denomination must equal 1.00.

DS1 - Switch Functions

Switch	Game Function
SW1	**Message Center**
ON	Four-digit message center CREDIT and WIN PAID
OFF	Five-digit message center CREDIT and WIN PAID
SW2	**Reserved, Leave ON**
SW3	**Bonusing**
ON	No bonusing
OFF	Bonusing enabled
SW7	**Reserved, Leave ON**
SW8	**SafeRAM™ Clear**
Change of State (OFF/ON)	SafeRAM™ Clear procedure enable (International Jurisdictions)

DS1 - Secondary Device Protocol

DIP Switch DS1 (SW1, SW2 and SW5 Secondary Device Protocol)			
System	**SW4**	**SW5**	**SW6**
Anchor 1.6	OFF	ON	ON
Bally Secondary Game (BSG)	OFF	ON	OFF
Secondary Device (SED)[1]	ON	OFF	ON
[1]Requires wheel control chip.			

DS2 - Denomination

Market Code	Table Number
1 - 17	1
18	2
19	3
20	2
21	4
22	1
23	5

Market Code	Table Number
24	1
25	1
26	6
27	6
28	1
29	1
30	1

DIP Switch DS2 SW1 — SW4 Denomination					
Table 1: Market Codes 0 — 17, 22*, 24, 25, 28, 29, 30					
SW1	**SW2**	**SW3**	**SW4**	**Value**	**Denomination**
ON	ON	ON	ON	0000	500
OFF	ON	ON	ON	0001	250
ON	OFF	ON	ON	0002	100
OFF	OFF	ON	ON	0003	50
ON	ON	OFF	ON	0004	25
OFF	ON	OFF	ON	0005	20
ON	OFF	OFF	ON	0006	10
OFF	OFF	OFF	ON	0007	5
ON	ON	ON	OFF	0008	2
OFF	ON	ON	OFF	0009	1
ON	OFF	ON	OFF	0010	0.50
OFF	OFF	ON	OFF	0011	0.25
ON	ON	OFF	OFF	0012	0.20
OFF	ON	OFF	OFF	0013	0.10
ON	OFF	OFF	OFF	0014	0.05
OFF	OFF	OFF	OFF	0015	0.01
ON	ON	ON	ON	0016	4 (MC=07)
*MC 22 does not support denomination less than 2.00					
Table 2: Market Code 18, 20					
SW1	**SW2**	**SW3**	**SW4**	**Value**	**Denomination**
ON	ON	ON	ON	0000	5000
ON	OFF	ON	ON	0002	1000
OFF	OFF	ON	ON	0003	500
OFF	ON	OFF	ON	0005	200
Table 3: Market Code 19					
SW1	**SW2**	**SW3**	**SW4**	**Value**	**Denomination**
ON	ON	ON	ON	0000	1000
OFF	ON	ON	ON	0001	500
ON	OFF	ON	ON	0002	250
ON	ON	OFF	ON	0004	50
OFF	ON	OFF	ON	0005	25
Table 4: Market Code 21					
SW1	**SW2**	**SW3**	**SW4**	**Value**	**Denomination**
ON	ON	ON	ON	0000	1000
OFF	ON	ON	ON	0001	500
ON	OFF	ON	ON	0002	250
OFF	OFF	ON	ON	0003	200
ON	ON	OFF	ON	0004	100
Table 5: Market Code 23					
SW1	**SW2**	**SW3**	**SW4**	**Value**	**Denomination**
ON	ON	ON	ON	0000	500
ON	OFF	ON	ON	0002	100
OFF	OFF	ON	ON	0003	50
ON	ON	OFF	ON	0004	25
ON	OFF	OFF	ON	0006	10
OFF	OFF	OFF	ON	0007	5
ON	ON	ON	OFF	0008	1
OFF	ON	ON	OFF	0009	0.50
ON	OFF	ON	OFF	0010	0.25
OFF	OFF	ON	OFF	0011	0.20
ON	ON	OFF	OFF	0012	0.10
OFF	ON	OFF	OFF	0013	0.05
ON	OFF	OFF	OFF	0014	0.02
OFF	OFF	OFF	OFF	0015	0.01
Table 6: Market Code 26					
SW1	**SW2**	**SW3**	**SW4**	**Value**	**Denomination**
ON	OFF	OFF	ON	0006	5
OFF	OFF	OFF	ON	0007	2
ON	ON	ON	OFF	0008	1
OFF	ON	ON	OFF	0009	0.50
ON	OFF	ON	OFF	0010	0.25
OFF	OFF	ON	OFF	0011	0.20
ON	ON	OFF	OFF	0012	0.10
OFF	ON	OFF	OFF	0013	0.05
ON	OFF	OFF	OFF	0014	0.02
MC26 Supports Denominations greater than 5. See MC 0.					

DS2 Switches 5-6 Bill Acceptor

DIP Switch DS2 SW5 — SW6 (Bill Acceptor)			
SW5	**SW6**	**Value**	**Bill Acceptor**
ON	ON	00	No Bill Acceptor
OFF	ON	01	GPT / Ardac
ON	OFF	02	JCM WBA
OFF	OFF	03	Mars

Note: GPT™ and ARDAC™ bill acceptors must use MPU assembly AS-03356-0451. This assembly consists of MPU assembly AS-03356-0424 and MPU parts kit K-00820-0005.

Setup (cont.)

DIP Switch Selections (cont.)

DS2 Switches 7-8 Special Features

The ProSlot® 6000 supports crazy reel spin where the reels randomly spin forward or reverse. Also, some markets require an optic switch to verify coin diverter position. Market Code 01 (New Jersey) requires an additional protocol selection for Advanced Funds Transfer (AFT).

DIP Switch DS2 SW7 — SW8 (Special Features)	
SW7	**Game Feature**
On	Normal Reel Spin
Off	Crazy (Random Direction) Reel Spin
SW8	**Diverter Optic Support**
On	Not Present
Off	Present
SW8 and MC=1 or 13	**EFT Support**
On	Not Present
Off	Present

DS3 Switches 1-4, 7-8 Market Code

Market	Code
Nevada or VLC	00
New Jersey	01
Deadwood SD or QE	02
France Nominal %	03
France Basic %	04
Puerto Rico	05
South Africa	06
4.00 Denomination	07
Indiana	08
Colorado	10
USAF	11
OLGC	12
Mississippi	13
Germany	14
New Mexico	15

Market	Code
United Kingdom	16
Portugal	17
Italy	18
Greece	19
Russia	20
Chile	21
Venezuela	22
Estonia	23
Philippines	24
Finland	25
Ireland	26
Euro	27
Switzerland	28
Manitoba	29
Hong Kong/Macau	30
Reserved	31-63

Market Code designates specific operation according to the requirements of a gaming control agency.

DIP Switch DS3 (SW1—SW4 and SW7—SW8 Market Code)						
Code	**SW1**	**SW2**	**SW3**	**SW4**	**SW7**	**SW8**
00	ON	ON	ON	ON	ON	ON
01	OFF	ON	ON	ON	ON	ON
02	ON	OFF	ON	ON	ON	ON
03	OFF	OFF	ON	ON	ON	ON
04	ON	ON	OFF	ON	ON	ON
05	OFF	ON	OFF	ON	ON	ON
06	ON	OFF	OFF	ON	ON	ON
07	OFF	OFF	OFF	ON	ON	ON
08	ON	ON	ON	OFF	ON	ON
10	ON	OFF	ON	OFF	ON	ON
11	OFF	OFF	ON	OFF	ON	ON
12	ON	ON	OFF	OFF	ON	ON
13	OFF	OFF	ON	OFF	ON	ON
14	ON	OFF	OFF	OFF	ON	ON
15	OFF	OFF	OFF	OFF	ON	ON
16	ON	ON	ON	ON	OFF	ON

DS3 Switches 1-4, 7-8 Market Code (Cont.)

DIP Switch DS3 (SW1—SW4 and SW7—SW8 Market Code)						
Code	**SW1**	**SW2**	**SW3**	**SW4**	**SW7**	**SW8**
17	OFF	ON	ON	ON	OFF	ON
18	ON	OFF	ON	ON	OFF	ON
19	OFF	OFF	ON	ON	OFF	ON
20	ON	ON	OFF	ON	OFF	ON
21	OFF	ON	OFF	ON	OFF	ON
22	ON	OFF	OFF	ON	OFF	ON
23	OFF	OFF	OFF	ON	OFF	ON
24	ON	ON	ON	OFF	OFF	ON
25	OFF	ON	ON	OFF	OFF	ON
26	ON	OFF	ON	OFF	OFF	ON
27	OFF	OFF	ON	OFF	OFF	ON
28	ON	ON	OFF	OFF	OFF	ON
29	OFF	ON	OFF	OFF	OFF	ON
30	ON	OFF	OFF	OFF	OFF	ON

DS3 Switches 5-6

DS3 Sw5 - Hardware Exception Lock	
Off	Release to 99 Code
On	Lock to 88 Code (requires SafeRAM™ Clear)

DS3 Sw6 - Tokenization	
On	Tokenization unavailable
Off	Tokenization available through Machine Option 22*

*Option 22 is disabled in MC=30 if the coin denomination is more than 100.

SafeRAM™ Clear

A SafeRAM™ Clear erases information stored within battery-backed random access memory (RAM). A Complete SafeRAM™ Clear is essential before the first use, when EPROMs are changed, or if game memory becomes corrupted.

Note: Jumper and DIP switches are enabled only once after each Complete SafeRAM™ Clear.

There are three levels of SafeRAM™ Clear:

- Complete — Erases and reformats SafeRAM™. Game options are restored to factory default. All counters (soft meters) reset to zero.
- Full — Resets all counters to zero except the SafeRAM™ Clear counters. Game options are restored to factory default.
- Partial — Zeros all counters except SafeRAM™ Clear. All game configurations defined by DIP switches, jumper selections and game options are preserved.

For a Complete, Full, or Partial SafeRAM™ Clear, turn the machine power OFF. Unlock and remove the MPU assembly. If SafeRAM™ Clear EPROMs are required, remove the Main EPROMs from U28 and U43 and

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Setup (cont.)

SafeRAM™ Clear (cont.)

replace them with the corresponding clear chips. If EPROMs are not required, turn DIP DS1 sw8 ON. After ensuring that the MPU assembly is firmly seated

NOTE: A SafeRAM™ Clear for MC=28 requires a SafeRAM™ Clear EPROM, and DS1 sw8 to be enabled (ON).

into the backplane board, turn the machine power ON while depressing the appropriate buttons.

Complete - Press and hold the PSEUDO COIN and TEST

NOTE: The TEST and PSEUDO coin buttons can be located by referring to the pictures on pages 2-5 and 2-6.

buttons, then switch power ON. When the message **CH C** displays in WIN PAID, release the PSEUDO COIN and TEST buttons. The **CH C** message is followed by **CL C**.

Full - Press and hold the PSEUDO COIN button, then switch power ON. When the message **CH F** appears in WIN PAID, release the PSEUDO COIN button. The **CH F** message is followed by **CL F**.

Partial - Switch power ON. The message **CH P** displays in WIN PAID. The **CH P** message is followed by **CL P**.

If an error was detected during SafeRAM™ Clear as designated by **E C**, **E F**, **E P** in WIN PAID, repeat the operation.

Upon a successful SafeRAM™ Clear, the button and tower lamps flash. Switch power OFF and replace the SafeRAM™ Clear EPROMs with the Mains, or turn DS1 sw8 OFF. Replace the MPU assembly and switch machine power ON. The machine will enter a Reel Calibration Procedure whereby the home position is recorded in SafeRAM™. For tilt-free operation, it is important that

NOTE: If door open or MPU logic detection circuits are enabled, an audit key switch activation is required to remove the 82/85 code after power is switched ON.

the procedure completes without interruption.

Demo Mode

With Main versions developed to operate with a host terminal, the ProSlot® 6000 enters a nonrevenue state after a Complete SafeRAM™ Clear. **FrEE** appears in WIN PAID to indicate Demo Mode. Entering a value in Option 79, Host Terminal ID, will enable the machine for revenue operation.

Real Time Clock (RTC)

If U53 is populated with a Dallas Timekeeper IC, an opportunity to change the settings occurs after a Complete SafeRAM™ Clear. Set the date using the SPIN button to increment the number in the flashing field (mm/dd/yy/day-of-the-week; 0=Sunday) and the BET MAX button to move to the next field. Set the time (hh/mm/ss) using the same method as the date. Press CHANGE to confirm changes and exit.

Switch Functions

The buttons on the player panel and on the MPU assembly have multiple uses. Note that the slant top model has additional TEST and PSEUDO COIN buttons on a bracket above the reels for easier access.

Switch	Location	Function
Change	Main Door	•Activate change lamp •Restart or activate some tests •Exit time and date settings after SafeRAM™ Clear
Cash/Credit Print Ticket	Main Door	•Cash out credits
Bet One	Main Door	•Wagers 1 credit •Select Previous Option
Spin	Main Door	•Spin reels •Pause test display •Pause meter display •Change options
Bet Max	Main Door	•Wagers maximum credits •Select next option, meter, or game
Audit Key Switch (Upright)	Right Side of Machine	•Displays bookkeeping meters •Releases jackpot lockup •Triggers some output tests
Audit Key Switch (Slant)	Front Panel, Above Door	•Displays bookkeeping meters •Releases jackpot lockup •Triggers some output tests
Second Key Switch	Near Audit Key Switch	•Selects between revenue or tournament game •Same as test (MC=12) •Adds or removes credits (International)
Test	MPU Assembly	•Selects tests or function •Activates next test or function •Selects level of SafeRAM™ Clear
Coin Acceptor	MPU Assembly	•Enable or disable coin acceptor and bill acceptor
Pseudo Coin	MPU Assembly	•Simulates coin in while main door is open •Selects next option •Selects a level of SafeRAM™ Clear
Reset	MPU Assembly	•Releases a machine tilt •Exits test and diagnostics
Volume	ProSound Board	•Adjusts the level of sound

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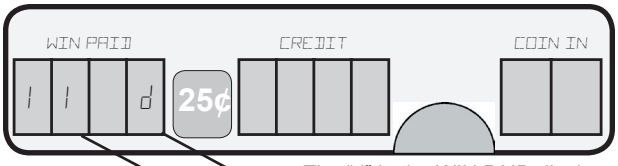
Machine Options

Machine options are set through Diagnostic Function #11, Game Optioning. Options cannot be changed during a game or when credits are available. Attempting to change options with credits will display **Err** in WIN PAID.

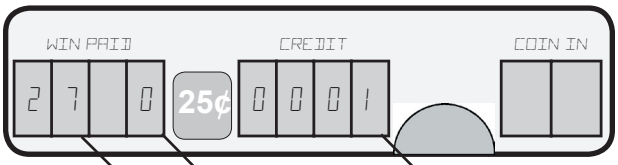
With the door open, press the TEST button until the Message Center displays **11 d** indicating Diagnostic Function #11 selected. The Message Center responds as follows:



The 11 in the WIN PAID display represents Diagnostic Function #11

The "d" in the WIN PAID display indicates a diagnostic function is accessed

The machine then cycles to the first option (see note), Option 27, and displays the current setting as follows:



The 27 in WIN PAID indicates Option 27 Bet Mode (refer to the Option table)

The "O" in WIN PAID indicates an option is accessed

The 0001 in CREDIT shows the machine is optioned for credit as the wager mode

Use the SPIN button to increment or the CHANGE button to decrement the numerical settings. Press and hold the buttons to rapidly advance to the setting.

To advance to the next option, use the PSEUDO COIN or BET MAX button. To review the previous option, use the BET ONE button.

Exit and save the options at any time by pressing the RESET button, TEST button, or by closing the door.

Note: If Market Code = 12, the MPU TEST button is inactive. A second key switch provides TEST functions.

#	Option	Setting	Description
27	Bet Mode	(0001)	Credit game
		0003	Coin to credit (Default if MC=16)
26	Rebet-Autospin	0000	No rebet, no autospin
		(0001)	No rebet, autospin at max wager
		0002	No rebet, autospin at max coins or wager
		0003	Rebet, no autospin
		0004	Rebet, autospin at max credits
		0005	Rebet, autospin at max coins or credits
09	Jackpot Bell	0000	No bell
		0001	Bell rings on all wins
		0002	Rings on wins of 20 or more
		0003	Rings on wins of 50 or more
		0004	Rings on wins of 100 or more
		0005	Rings on wins of 200 or more
		(0006)	Rings on wins causing lockup
10	Coin Denomination (Read-Only; Coin Denomination is set by DS2 Sw 1, 2, 3, and 4.)	0000	500
		0001	250
		0002	100
		0003	50
		0004	25
		0005	20
		0006	10
		0007	5
		0008	2
		0009	1
		0010	0.5
		0011	0.25
		0012	0.2
		0013	0.1
		0014	0.05
		0015	0.01
		0016	4
		0017	2.5
11	Change Coin/Credit	0000	Coins from hopper
		(0001)	Credits to CREDIT meter
02	Progressive Type	(0000)	Off — lockup JPS for awarding prizes
		0001	SPL — Serial Progressive Link
		0002	PPL — Parallel Progressive Link
		0003	MAPS® — Multi Area Progressive System
		0004	S/MPI — Serial/Multiplex Progressive Interface
		0005	MPI — Multiplex Progressive Interface
		0006	SAS® — Progressive V3.XX
		0007	OTT — Over the Top
		0008	SAS® — Progressive V4.XX
07	Number of External Game Jackpots	(0000)	None
		0001	One
		0002	Two
		0003	Three
		0004	Four
18	Jackpot 4 Signal	(0000)	Combination of 2 & 3
		0001	Combination of 1 & 2
		0002	Combination of 1 & 3
		0003	Combination of 1, 2, & 3
		0004	Discrete Serial (Mikohn®)
80	Test 2 & 10 Enable	(0000)	Off
		0001	Test 2 output to electromechanical meters, or Test 10, External Jackpot Signal.
01	Tournament Minutes	(0000)	Off
		0001-0099	Minutes for tournament
47	Attract Feature	0000	Off
		(0001)	On
38	Reel Stop Sound	(0000)	Sound from speaker
		0001	Handle solenoid click
48	Tower Configuration	(0000)	This Option has specialized settings. See page 2-18.
		0001-0007	
50Hi	Machine ID	(0000)	Upper four digits of 8-digit identification number.
		0000-9999	
50Lo	Machine ID	(0000)	Lower four digits of 8-digit identification number.
		0000-9999	
54	Coin Hopper Pay Amount	(0000)	Amount paid from hopper upon a lockup under the settings of 56 Credit Lockup and 51 Credit Limit.
		0000-9999	
56	Credit Collect Lockup	(0800)	Number of credits for a lockup upon any collect. Cannot be greater than Option 67, Maximum Voucher Pay. If MC=16, default is 4999.
		0000-9999	
62	Tournament Kitty	(0000)	Starting amount of credits for tournament operation.
		0000-9999	
63	Reset Prog. Amt. ((MC=3 or MC=4))	(0000)	Credits added to counter upon progressive jackpot reset.
		0000-9999	
78Lo	Machine Number	(0000)	S/MPI indentification number (Must match progressive controller).
		0000-0032	

| - Revised, || - New

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Machine Options (cont.)

#	Option	Setting	Description
78Hi	SAS® ID	(0000) 0001-9997 9998 9999	None SAS® 3.X, 4.X and 5.X / GRIPS Coin Free (MC=6) Non-Cashable Credits
04	Even Hand-pay - Collect Lockup	(0000) 0001 0002 0003 0004	Off Even Handpay by 10's Even Handpay by 100's Even Handpay by 1000's Machine Pays to Next 1.00
51	Credit Top Limit	(0800) 0000-9999	Maximum number of credits allowed on CREDIT meter. Follows Option 56 by default. If MC=16, default is 4999.
03	Tournament Seconds	(0000) 0001-0059	Seconds for Tournament
22*	Tokenization (All Markets Except 16, 27, and 30 - See Below)	(0000) 0001	Off 1.0 Token
	Second Coin Denomination (MC=16)	(0001) 0002 0003 0004 0005	1.0 Wager Coin (1:1) 0.50 Wager Coin (1:2) 0.20 Wager Coin (1:5) 0.10 Wager Coin (1:10) 0.05 Wager Coin (1:20)
	Tokenization (MC = 27)	0001 0002 0003	$2 Token $1 Token $10 Token
	Tokenization (MC = 30)	0001 0002 0003 0004	$2 Token $5 Token $10 Token $100 Token
70 71 72	MAPS® Progressive Cabinet ID	0000	The ID can be represented as XXXXYYYYZZZZ where Option 70=XXXX, Option 71=YYYY and Option 72=ZZZZ.
58	Win Lockup	(0800) 0000-9999	Amount of win for a lockup. follows Option 56 by default. Must be greater than Option 57 SAS® Lockup if SAS® enabled. If MC=16, default is 4999.
06	Progressive Group ID	(0000) 0000-0255	SAS® Progressive V4.XX Group ID
57	SAS® Lockup (MC=6)	0800 (0000)- 9999	A win that is less than the setting of Option 58, Win Lockup, and greater than the setting of Option 57, SAS® Lockup, causes a win lockup that is released by the Host Accounting System. Option 90, Host Remote Jackpot Release, must be set to enable this option.
12	Win Lockup Credit Release	(0000) 0001-9999	Off Win lockup credits lower than the setting of Option 12 which are added to CREDIT meter by actuation of a second key switch.
90	Host Remote Jackpot Release	(0000) 0001	Off Lockups may be released by Host.
91	Host Queue	(0000) 0001	No Queue Multiple lockups queued for processing.
95	Voucher Denomination Mismatch	(0000) 0001	Redeemable vouchers must be evenly divisible by the machine's denomination to be accepted by the machine. Machine accepts all vouchers and prints a change voucher for odd amount.
73	Voucher Validation Level	0000 0001 0002 (0003)	Standard Host Enhanced Validation Host Secure Enhanced Validation Host System Validation
76	Voucher Receipt Enable	(0000) 0001	Printer dispensed only redeemable vouchers. Printer dispenses redeemable vouchers and informational receipts.

#	Option	Setting	Description
61	Machine Directed Payment Configuration	(0001) 0002 0003	Hopper Only Printer Only Printer and Hopper
81	Coin Acceptor Enable	0000 (0001)	No Coin Acceptor Coin Acceptor Enabled
74	Voucher Expiration	0000 (0001)- 0255	No Expiration Days Before Voucher Expires
	(MC=00)	0000 (0030)- 0255	No Expiration Days Before Voucher Expires
64	Minimum Voucher Pay	8000 (0000)- 9999	Minimum credits paid by voucher.
67	Maximum Voucher Pay	(8000) 0000-9999	Maximum credits paid by voucher.
14	Even Voucher Pay	(0000) 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010	Off Even Voucher Pay by 1.00 Even Voucher Pay by 2.00 Even Voucher Pay by 5.00 Even Voucher Pay by 10.00 Even Voucher Pay by 20.00 Even Voucher Pay by 50.00 Even Voucher Pay by 100.00 Even Voucher Pay by 200.00 Even Voucher Pay by 500.00 Even Voucher Pay by 1000.00
77A 77B 77C	Site Location Label	(0100) 00-FF	Allows the operator to enter three (3) lines of address to be printed on vouchers.
08	Credit Snap	(0000) 0001	Wins added incrementally to CREDIT meter. Wins over 20 added as a sum to CREDIT meter.
05	Even Handpay-Win Lockup	(0000) 0001 0002 0003 0004	Off Even Handpay by 10's Even Handpay by 100's Even Handpay by 1000's Machine Pays to Next 1.00
20	Extra Coin	(0000) 0001	Extra coins returned to the player. Extra coins applied to wager for next game.
68	Game Sounds	0000 (0001)	Disables ProSound™ Board I or II, and uses internal device for sound (re-play reelspin sounds) External ProSound I or II Board (regular reelspin sounds)
23	GRIPS® Host	(0000) 0001	No GRIPS® Host, or MC=28 without AFT GRIPS Host (Also 78Hi>0000)
92	SAS® Bonusing	(0000) 0001 0002 0003	Disabled SAS® 5.01 Bonusing Only AFT Bonusing Only Both SAS® 5.01 and AFT Bonusing
98	Primary Host	(0000) 0001 0002	Host Disabled SAS® Host (Also 78Hi>0000) SDS® Host
99	Secondary Host	(0000) 0001 0002	Host Disabled SAS® Host (Also 78Hi>0000) SDS® Host
69	Coin Acceptor	(0000) 0001	Coin Mechanisms, Inc. CC-16 IDX X-20 (Default if MC=16)
19Hi	Asset Number	(0000)- 9999	Allows the operator to enter the upper four digits of the Asset Number.
19Lo	Asset Number	(0000)- 9999	Allows the operator to enter the lower four digits of the Asset Number.
17	Set SAS® Version	(0000) 0001	SAS® 5.01 SAS® 6.01
93	Bank Meter Transfer (MC=16)	(0000) 0001	No transfer to bank meter. Transfers 2£ from bank to credit each time the TRANSFER button is pressed.
75	Coins to Dispense (MC=16)	(0125) 0000-9999	Number of coins to dispense for diagnostic (Float Level).

Machine Options (cont.)

#	Option	Setting	Description
29	AFT Registration	0000 0001 0002	Exit Initiate AFT registration cycle Cancel AFT registration
79	VLC Identification	0000-(4000)	The ID is represented by numbers 0000-4000, 4000 is the default. VLC Jurisdictions only.
24	Print Promotional/ Restricted Vouchers	(0000) 0001	Disallow printing of Promotional/Restricted vouchers. Allow printing of Promotional/Restricted vouchers.

* Option 22, Tokenization, is only displayed if DS 3, Switch 6 is in the OFF position.

Option Descriptions

01 Tournament Minutes

With additional hardware and specific software, the ProSlot® 6000 supports a variety of tournament operations. See Module 12, Tournament Operation for more information.

02 Progressive Type

Progressive operation is controlled by the interaction of Option 02, Progressive Type; Option 07, Number of Jackpots; Option 78Lo, Machine Number; and Option 18, Jackpot 4 Operation. Option 02 defines the protocol.

OFF (0000) no progressive jackpot.

Serial Progressive Link (0001) supports a bidirectional RS-232 serial link.

Parallel Progressive Interface Link (0002) supports discrete jackpot and total in signals through opto-isolators.

Multi-Area Progressive System (0003) supports a bidirectional RS-232 serial link for Bally Thrillions™. Once set, changing the option requires a SafeRAM™ Clear.

Serial Multiplexed Progressive Interface (0004) supports multiplexed jackpot and total in signals. The machine receives jackpot values through the RS-485 connection J14. Used for Game generated and Mystery Jackpots.

Multiplexed Progressive Interface (0005) is the same as setting 0004 without the connection at J14 for RS-485 return.

SAS® 3.x Host Progressive (0006) supports IGT's SAS® 3.x Host Progressive system.

Over the Top (0007) supports the OTT Bonusing feature.

SAS® 4.x Host Progressive (0008) supports IGT's SAS® 4.x Host Progressive system.

03 Tournament Seconds

The number of seconds for a tournament. Added to minutes set by Option 01. See Module 12, Tournament Operation.

04 Even Hand Pay—Collect Lockup

When enabled, Even Hand Pay allows a partial payment upon a Collect Lockup from a coin hopper to an even amount. The partial payment can be configured to even thousands, hundreds, or tens. Alternatively, it can pay to the next 1.00.

For example, a Collect Lockup of 12,924 with Option 54, Coin Hopper Pay Amount, set to 500 will result in the following:

Collect Lockup of 12,924 Coins			
Setting		Hopper Pay	Attendant Pay
0000	Off	500	12424
0001	Even 10's	504	12420
0002	Even 100's	524	12400
0003	Even 1000's	924	12000
0004	Next 1.00	Operation depends upon coin demonination setting of DS2.	

05 Even Hand Pay—Win Lockup

When enabled, Even Hand Pay allows a partial payment from the coin hopper upon a Win Lockup to an even amount. The partial payment can be configured to even thousands, hundreds, or tens. Alternatively, it can pay to the next 1.00 (see example for Option 04).

06 Progressive Group ID

Machine ID to support the SAS® v6.xx Host Progressive system.

07 Number of External Game Jackpots

The available jackpots are determined by the SMI. Option 07 specifies the number of jackpots available for a progressive.

08 Credit Snap

Wins can accumulate incrementally in the credit meter, or wins over 20 can quickly appear in the credit meter as one sum.

09 Jackpot Bell

Option 09 configures the operation of any available bell hardware.

10 Coin Denomination

Denomination is set once after a SafeRAM™ Clear by the switch positions of DS2 on the MPU board. The current selection is shown through Diagnostic Function #1, Model Information, or by Function #11, Option 10.

| - Revised, || - New

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Machine Options (cont.)

11 Change Coin/Credit

Bill acceptor operation can be configured independently from the settings of Option 27, Bet Mode. The setting 0000 dispenses coins from the hopper for all accepted bills.

12 Win Lockup Credit Release

If supported, an Attendant may release a machine from a win lockup less than or equal to the Win Lockup Credit Release value and transfer the jackpot credits to the credit meter instead of canceling the credits and paying the Player in cash.

14 Even Voucher Pay

The machine can be configured to print redeemable vouchers in even values from 1.00 to 1,000.00.

17 Set SAS® Version

The machine can be set for SAS® Version 5.01 or 6.01.

18 Jackpot 4 Signal

The ProSlot® 6000 has only three discrete jackpot signals. If four jackpots are supported by the SMI, the settings of Option 18 determine how the fourth jackpot is represented.

The setting 0000 causes JP2 and JP3 to activate upon the fourth level jackpot. By the combination of JP2 and JP3 signals active simultaneously, JP4 can be inferred.

- 0001 is the same as setting 0000 using JP1 and JP2
- 0002 uses JP1 and JP3
- 0003 uses JP1, JP2, and JP3
- 0004 communicates the jackpot serially

19Hi / 19Lo Asset Number

An eight digit asset number is configurable. The first set of four numbers is entered into 19Hi, the second set of four numbers is entered into 19Lo.

20 Extra Coin

If coins accepted by the machine register in BET (see Option 27, Bet Mode), the machine may accept coins beyond the maximum wager for a game. These additional coins may be applied to the next game, or returned to the Player.

Note: A SafeRAM™ Clear is required to change Tokenization settings.

22 Tokenization (All markets except 16, 27, and 30)

With some versions of Mains, setting Option 27, Bet Mode, to 0003 (Coin to Credit) and Option 22 to 0001 sets the coin value at 1.00. The denomination of the machine as set by DS2 represents the value of each credit. For example, if DS2 is 0011 (.25), then each coin adds four credits. If DS2 is 0014 (.05), then each coin would add 20 credits.

Upon cashout, the credits decrease the number of credits appropriately for each coin paid. If there are fewer credits than the value of the coin, it is possible to have uncollectible credits remaining after a cashout.

ProSlot/ProVideo					
DIP Switch 3				Option Setting	Credits Added per Keyswitch Turn
SW1	SW2	SW3	SW4		
ON	ON	ON	ON	0000 (default)	1000
OFF	ON	ON	ON	0001	750
ON	OFF	ON	ON	0002	500
OFF	OFF	ON	ON	0003	400
ON	ON	OFF	ON	0004	300
OFF	ON	OFF	ON	0005	200
ON	OFF	OFF	ON	0006	100
OFF	OFF	OFF	ON	0007	90
ON	ON	ON	OFF	0008	80
OFF	ON	ON	OFF	0009	70
ON	OFF	ON	OFF	0010	60
OFF	OFF	ON	OFF	0011	50
ON	ON	OFF	OFF	0012	40
OFF	ON	OFF	OFF	0013	30
ON	OFF	OFF	OFF	0014	20
OFF	OFF	OFF	OFF	0015	10

Key-On Credits (Knock-Off) (International Main Programs only)

Note: If MC=16, Option 22 defaults to setting 0001.

If the optional hardware K-00694-0601 is installed, actuation of a key switch will remove all credits. Actuating the key switch while pressing CHANGE/SERVICE will add credits according to the machine's denomination as set by DS2.

22 Second Coin Denomination (MC=16, 27, and 30 ONLY)

If the machine's market code is 16, United Kingdom, or 30, Hong Kong, the ratio of credits per coin is set by Option #22, which can only be displayed if DS3, Switch 6 is in the OFF position.

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Machine Options (cont.)

23 GRIPS® Host

The default setting is 0000, No GRIPS® Host. Enabling a GRIPS® Host requires this option and Option 78Hi to be set to 0001 or greater. If MC=28 and GRIPS® Host and without AFT, Option 23 must be set to 0000 and Option 78Hi to be set to 0001 or greater.

| 24 Print Promotional/Restricted Vouchers

The default setting is 0000, Disallow the printing of Promotional/Restricted Vouchers. This option communicates the machine whether or not to allow or disallow printing Promotional/Restricted Vouchers.

26 Rebet-Autospin

Rebet allows the Player to repeat the previous wager by pressing SPIN.

Autospin completes the game without waiting for the SPIN button to be pressed.

27 Bet Mode

The ProSlot® 6000™ provides two methods of accepting wagers:

- Credit
- Coin to credit

Credit (0001), where coins accepted appear in the credit in (bet) meter. Bill acceptor items, EFT transfers, and wins, appear in the credit meter.

Coin to credit (0003), where coins accepted, bill acceptor items, EFT transfers, and wins appear in the credit meter.

Note: 0003 is the only setting available if Market Code = 16 or 30, or Option 22, Tokenization, is set to 0001.

38 Reel Stop Sound

Each SMI includes digital audio accompaniment to many game functions. Option 38 allows selection of a *mechanical* sound for reel stops. The setting 0001 activates the handle release solenoid for each reel stop instead of a speaker sound.

47 Attract Feature

After a period of inactivity with no credits, feature lights will sequence. Option 47 turns the feature ON or OFF.

48 Tower Configuration

The ProSlot® 6000 can support two-, three-, and four-tier towers. Except in markets where the tower operation is not selectable, the Operator can configure tower operation according to the

48 Tower Configuration (Cont.)

Tower Light Option table following.

Tower Lights Setting	Function	Tower Display
2-Light (0000)	Service Jackpot Tilts Door(s) Hopper Pay	Top Flashing Top Steady Bottom Flashing Bottom Steady Not Applicable
3-Light 0001	Service Jackpot Tilts Door(s) Hopper Pay	Bottom Flashing Top Flashing Middle Steady Middle Flashing Not Applicable
4-Light 0002	Service Jackpot Tilts Door(s) Hopper Pay	Middle Flashing Top Steady Middle Flashing Bottom Steady Not Applicable
2-Light 0003	Service Jackpot Tilts Door(s) Hopper Pay	Top Flashing Top Steady Bottom Flashing Bottom Steady Top Steady
3-Light 0004	Service Jackpot Tilts Door(s) Hopper Pay	Bottom Flashing Top Flashing Middle Flashing Bottom Steady Not Applicable
3-Light 0005	Service Jackpot Tilts Door(s) Hopper Pay	Bottom Flashing Top Flashing Middle Steady Middle Flashing Not Applicable
2-Light 0006	Service Jackpot Tilts Door(s) Hopper Pay Host Disabled	Top Steady Top Flashing Top Flashing Bottom Flash (or Fast Flash if Drop)* Not Applicable Top and Bottom Steady
2-Light 0007	Service Jackpot Tilts Door(s) Hopper Pay Host Disabled Administration	Top Steady Tom and Bottom Slow Flash Top Slow Flash Bottom Flash (or Fast Flash if Drop) Not Applicable Top and Bottom Steady Top Fast Flash
*Light Remains Illuminated until the Start of the Next Game.		

NOTE: Tower configuration is not selectable if the factory option Data Vault™ is installed. In addition, the CHANGE/SERVICE light will flash at five second intervals to indicate an error condition.

50Hi, 50Lo Game ID

Eight-digit Operator-accessible identification field.

51 Credit Top Limit

The Credit Top Limit is the most credits the machine will allow. A win less than Option 58, Win Lockup Limit that causes the limit to be exceeded will instead be paid directly to the Player.

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Machine Options (cont.)

54 Coin Hopper Pay Amount

> **NOTE**: Option #54, Coin Hopper Pay Amount, must equal Option #56 for a partial payment from the hopper.

Maximum coins paid from the hopper upon a collect lockup. Remaining credits must be paid by an Attendant.

56 Credit Collect Lockup

> **NOTE:** The value of Option 56, Credit Collect Lockup, cannot exceed the value of Option 67, Maximum Voucher Pay.

Value of credits if exceeded upon cashout that causes a win lockup. An Attendant must pay the difference of the remaining credits and Option 54, Coin Hopper Pay Amount.

57 SAS® Lockup

If MC=6 and Option 78Hi SAS® ID is 9999 or 9998, Option 57 is available. Any win greater than or equal to Option 57 and less than Option 58, Win Lockup, will cause a lockup. The WIN PAID portion of the Message Center alternates “SP (amount)” and “PD 0.” Upon release of the lockup by the Attendant and a successful transfer of credits to the Player’s card, the Message Center show s“PD (amount)” in WIN PAID.

58 Win Lockup

> **NOTE:** Options 51 and 58 automatically follow Option 56 settings.

The number of credits for a single winning combination when exceeded to cause a collect lockup.

61 Machine Directed Payment Configuration

The machine can be configured for operation with a printer and coin hopper, or with either individually.

62 Tournament Kitty

Starting credits for tournament. See Module 12, Tournament Operation.

63 Reset Progressive Amount

Value in credits to add to a counter each time an external top jackpot award is won. The option is available only in markets 3 and 4.

64 Minimum Voucher Pay

The minimum value of a voucher can be established.

66 PRD Sound Enable

The PRD Sound Enable option setting is for top boxes equipped with separate sound capabilities. It should have PRD Sound disabled as this option can cause incompatibility between machine and top box sound.

67 Maximum Voucher Pay

The maximum value of a coupon or voucher can be established. The maximum voucher pay must be greater than Option 56, Credit Collect Lockup. Software safeguards against conflicting values.

Example: In a 25¢ machine, the default for Option 67 is 8000, and the default for Option 56, Credit Collect Lockup, is 800. Option 67 can be set to any value between 800 and 9999. If Option 67 decrements, once 800 was reached, the next decrement would be 9999 instead of 799.

Alternately, if Option 67 increments, once 9999 was reached, the next increment would be 800 instead of 0.

If Option 67 should need to be set to a value less than 800 (500 for example), Option 56 would need to be changed to 500 first, followed by Option 67 being changed to 500.

Machines with printers use Option 67 as Credit Collect Lockup. Option 56 determines the maximum number of credits as coins that will be dispensed by a hopper, if one is installed; and the Minimum Voucher Pay, overriding the setting of Option #64, Minimum Voucher Pay.

68 Game Sounds

Machines without external ProSound™ I or ProSound™ II sound boards must enable Game Sounds to prevent incompatibility between internally and externally driven sounds.

69 Coin Acceptor

Option 69 selects Coin Acceptor Type. Set it to 0000 for Coin Mechanism, Inc. CC-16 or 0001 for IDX X-20. All jurisdictions except United Kingdom (MC=16) default to 0000. When MC=16, Option 69 is forced to setting 0001. The coin acceptor device

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Machine Options (cont.)

driver interprets coin credit and coin error pulse trains differently based on Option 69.

70, 71, 72 MAPS Progressive Cabinet ID

Bally Multi Area Progressive System (MAPS) requires a unique ID. Options 70, 71, and 72 are 12-digit numbers set four digits at a time.

73 Voucher Validation Level

0000 Standard—The voucher sequence number increments. An eight-digit validation number is calculated from the date and time. The information is logged in the validation buffer and indexed by the sequence number. The host is neither contacted for validation, nor is it notified in advance of the coupon or voucher being printed.

0001 Host Enhanced—The voucher sequence number increments. A 16-digit validation number is calculated from the machine validation ID and the voucher sequence. The information is reported to the host, and logged in the validation buffer indexed by the sequence number. If communication with the host is lost, the machine will operate until the validation buffer is full. Restoration of communication with the host and subsequent reduction of records in the validation buffer restores machine operation.

0002 Host Secure Enhanced—Similar to setting 0001, Host Enhanced, except that communication must be maintained at all times. If communication is lost during a cashout, the machine will lock up requiring an Attendant pay before disabling with a no communication (91-0) tilt.

0003 Host System—The host is contacted for a voucher validation number. Upon receipt of the validation number, the machine prints the voucher, increments the voucher sequence number, and stores the information in the validation buffer indexed by the sequence number.

74 Voucher Expiration

The period of time when vouchers can be redeemed can be configured.

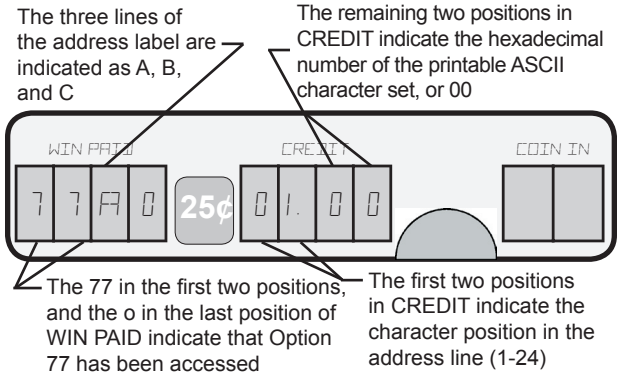
75 Coins to Dispense

Option 75 Coins to Dispense sets the number of coins to eject from the hopper during Diagnostic Test #15, Hopper Dump.

76 Voucher Receipt Enable

The printer can print informational receipts such as paid jackpots, as well as redeemable vouchers.

77 Site Location Label



A three-line address label can appear on each voucher. The information can be downloaded from a host, or entered manually through Option 77ABC.

NOTE: Navigation within an address line ends at a null entry (00).

Each line can have up to 24 characters. The characters are entered as a hexadecimal number of a printable ASCII character. The null character (00h) truncates the line at the point of entry, regardless of subsequent characters. This means that the Operator can blank the entire line by entering 00 in the first position without changing any of the remaining 23 characters.

Within the option, pressing COLLECT confines navigation to within the address line (BET MAX scrolls forward, BET ONE scrolls backward, SPIN increments value, CHANGE/SERVICE decrements value. Press COLLECT again to advance to the next line of address or the next option.

Hex	ASCII	Hex	ASCII	Hex	ASCII	Hex	ASCII
20	space	38	8	50	P	68	h
21	!exclama-tion	39	9	51	Q	69	i
22	"quote	3A	:colon	52	R	6A	j
23	#	3B	;semicolon	53	S	6B	k
24	$	3C	<	54	T	3C	l
25	%	3D	=	55	U	6D	m
26	&	3E	>	56	V	6E	n
27	'apostrophe	3F	?	57	W	6F	o
28	(	40	@	58	X	70	p
29	)	41	A	59	Y	71	q
2A	*asterick	42	B	5A	Z	72	r
2B	+	43	C	5B	[	73	s
2C	,comma	44	D	5C	\	74	t
2D	-hyphen	45	E	5D	]	75	u
2E	.period	46	F	5E	^circumflex	76	v
2F	/	47	G	5F	_underscore	77	w
30	0	48	H	60	`grave	78	x
31	1	49	I	61	a	79	y
32	2	4A	J	62	b	7A	z
33	3	4B	K	63	c	7B	{
34	4	4C	L	64	d	7C	|
35	5	4D	M	65	e	7D	}
36	6	4E	N	66	f	7E	~tilde
37	7	4F	O	67	g		

Hexadecimal numbers for ASCII printable characters.

| - Revised, || - New

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Machine Options (cont.)

78Hi SAS® ID

SAS® 3.x, 4.x, 5.x or 6.x requires a setting—usually 0001. GRIPS® implementation of SAS® requires a setting of 9999.

If MC=06, SAS® includes an autoplay feature enabling a game to play without intervention. The coin and bill acceptors are disabled. Any activity at the machine or a command from the host will terminate autoplay.

If MC=6 and 78Hi=9999, the machine accepts coins and bills. If a Player's card is inserted, credits become non-cashable. A cashout transfers the credits to the Player's card.

If MC=6 and 78Hi=9998, the coin and bill acceptors are disabled until a Player's card is inserted. Credits are then transferred from the Host. A cashout transfers the credits to the Player's card.

78Lo Machine Number

S/MPI Identification Number. The setting must match the physical connection at the controller. See Module 7, Progressives, for more information.

| 79 VLC Identification

VLC Identification Number applies to the VLC jurisdictions only.

80 Test 2 and Test 10 Enable

Electromechanical meters are disabled during diagnostics to preserve accounting information. In addition, external jackpot signals are disabled to prevent corruption of external progressive jackpots and false lockups. Option 80 overrides the feature to allow diagnostic testing of meter and jackpot outputs.

Note: Option 80 is not available in Market Code 10.

81 Coin Acceptor Enable

The coin acceptor can be disabled for coinless operation.

90 Host Remote Jackpot Release

If enabled, the host may release win lockups without a manual key switch actuation by an Attendant.

91 Host Queue

| A queue can be enabled to ensure uninterrupted machine operation if the host is slow to respond.

92 SAS® Bonusing

SAS® Bonusing is a feature of the SAS® system that can provide additional awards to the Player. The default setting is 0000. Enabling SAS® Bonusing requires the setting to be changed to 0001 and Option 78Hi to be set to 0001 or greater.

93 Bank Meter Transfer

Option 93, Bank Meter Transfer, is only valid if MC=16. A Jackpot game is defined as one having a top payout of more than £25. If the Bank Meter Transfer option is set to 0001 and the game has a bank transfer button, then the Player may transfer £2 from the bank meter to the CREDIT meter each time the transfer button is pressed.

95 Voucher/Denomination Mismatch

A voucher presented to a machine for acceptance may not be evenly divisible by the machine's denomination. The setting determines whether a non-matching voucher is either rejected, or added to the credit meter and a redeemable voucher is given to the Player for the indivisible remainder.

98 Primary Host / 99 Secondary Host

A primary Host and secondary Host cannot both use the same protocol. A dual Host system must use a combination of SAS® (2.xx - 6.xx) and SDS®. Primary Host must be set prior to setting Secondary Host. Note: 78Hi still must be set.

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Machine Operation

Message Center

The LED display center consists of 10 seven-segment LEDs plus decimal points. It shows information about the game to a Player. It also displays counters, option settings, status, and test information to the Operator.

During a game, the COIN IN shows the number of credits wagered. The WIN PAID shows the awards for winning combinations or the number of coins paid from the hopper. The CREDIT shows the number of credits available for wagering.

WIN PAID Decimal Points

Decimal points in WIN PAID are used to display information during normal operation with the door closed. They indicate an important event has occurred. The decimal point is in addition to the number displayed. Reading from left to right, the decimal points shown in WIN PAID represent the following:

- Position 1 - System Reset (no malfunction)
- Position 2 - Door Opened / Closed
- Position 3 - Malfunction During Reel Spin/ Replay
- Position 4 - Bill Transaction

Position 1 - System Reset (no malfunction)

The ProSlot® 6000™ has safeguards against tampering or loss of information that usually result in the microprocessor initiating a system reset. A decimal point appears indicating a system reset (not due to a malfunction) has occurred. This decimal point will remain until the reels spin for the second game played.

Position 2 - Opened Door

Note: If a door was opened to correct a spin malfunction, decimal points will be in positions one and two as well as position three.

The machine shows an opened door by displaying a decimal point in the second position. Upon the opening and closure of a door switch, the machine initiates a system reset; therefore, there is a decimal point in both the first and second positions. This decimal point remains until the reels spin for the second game.

Position 3 - Malfunction During Reel Spin/ Replay

If a malfunction occurs while the reels are spinning, the game is suspended. When the malfunction is corrected, the reels return to the positions they were in before the game started. A decimal point appears in the third position of WIN PAID. The SPIN button illuminates and the handle mechanism unlocks, allowing the game to be replayed. Once the game is restarted, the decimal point disappears.

Position 4 - Bill Transaction

When a bill is accepted, its credit value appears in WIN PAID. A decimal point in the fourth position indicates the amount shown in WIN PAID is from a bill transaction. This decimal point will remain until the start of the next game event.

Playing a Game

The Player must wager at least one credit to play a game. If Option 27, Bet Mode, is not 0000 (cash only), credits are awarded from wins; purchased by inserting coins or bills, or by AFTs. With special Main EPROMs, credits may be added with additional hardware.

Credits are wagered by selecting bet one or bet max. Bet max wagers all available credits or the maximum wager for the game, whichever requires the fewer credits.

Once credits are wagered, the game proceeds according to Option 26 (automatically at max bet if at default 0001). Upon completion of the game, winning combinations increment CREDIT and WIN PAID according to Option 27, Bet Mode; Option 58, Win Lockup; Option 51, Credit Meter Limit, and the game's paytable.

To collect, the Player presses the CASH/CREDIT button. Credits are transferred to a Player's card, paid from the hopper, recorded on a redeemable coupon or voucher, or paid by an Attendant as dictated by the settings of machine options.

| - Revised, || - New
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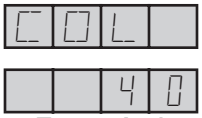
Machine Operation (cont.)

Credit Collect Messages

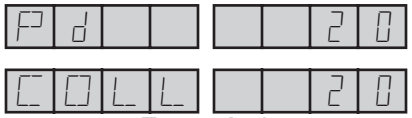
When credits are collected, the WIN PAID display shows a **COL** message followed by the total of credits collected. If credits are collected immediately after a winning combination, a **Pd** message, followed by the number of credits awarded for the winning combination, also displays.

Example 1: A player accumulates 40 credits and decides to cashout. The WIN PAID shows **COL,** then **40**.



Example 1

Example 2: There are 0 credits on the CREDIT display. The Player wins 20 credits. The CREDIT display increments to 20. The Player then decides to cashout. The WIN PAID display shows the sequence of **Pd,** then **20** twice and then the display goes blank, then shows the sequence of **COL**, then **20** twice and then the display goes blank.



Example 2

Example 3: A Player accumulates 20 credits. The Player gets a winning combination that pays 20 credits. The CREDIT display increments to 40. The Player then decides to cash out. The WIN PAID display shows the sequence of **Pd,** then **20** twice and then the display goes blank, then shows the sequence of **COL**, then 4**0** twice and then the display goes blank.

Example 3

Accounting

The ProSlot® 6000 stores accounting information in electromechanical counters (hard meters) and in memory (soft meters).

Electromechanical Meters

The hard meters are visible through a window in the feature glass on an upright, or under the arm rest on a slant top. They are numbered one through five. The information recorded is determined by Market Code. These meters cannot be set to zero by the Operator. The following lists common configurations:

Total In - Increments once for each coin or credit wagered.

Total Out - Increments once for each credit won by a Player without a win lockup.

Coin Drop - Increments once for every coin accepted by the machine when the hopper is full.

Combined Drop - Increments for each coin drop and for each credit from a bill transaction.

Attendant Paid - Increments for each credit paid by an Attendant upon a lockup.

Bill Change - Increments the number of credits added to the CREDIT display or coins dispensed from the hopper for accepted bills.

| **Lockups** - Increments once each time the machine is released from a win or collect lockup by an Attendant.

Games Played - Increments once for each completed game.

Electromechanical Meters					
Market	**Meter #1**	**Meter #2**	**Meter #3**	**Meter #4**	**Meter #5**
00	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
02	Total In	Total Out	Combined Drop	Attendant Paid	Games Played
03, 04	Total In	Coin Drop	Total Out	Attendant Paid	Games Played
05	Total In	Total Out	Combined Drop	Attendant Paid	Lockups
06	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
07	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
08	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin Only)
10	Total In	Total Out	Combined Drop	Attendant Paid	Games Played
11	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
12	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
13	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
14	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)

| - Revised, || - New

Accounting (cont.)

Electromechanical Meters (Cont.)

Electromechanical Meters					
Market	Meter #1	Meter #2	Meter #3	Meter #4	Meter #5
15	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
16	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
17	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
18	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
19	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
20	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
21	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
22	Total In	Total Out	Combined Drop	Attendant Paid	Games Played
23	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
24	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
25	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
26	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
27	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)
28	Total In	Total	Soft Attendant Paid	Drop	Games Played
29	Total In	Total Out	Combined Drop	Attendant Paid	Games Played
30	Total In	Total Out	Combined Drop	Attendant Paid	Bill Change (Coin/Credit)

Machine Meter Groups

The availability of machine meter groups depend upon game configurations, such as Market Code, host protocol, progressives, and accessories, such as a bill acceptor, Data Vault™, and a printer.

Machine meter groups are accessed by turning a key in the audit key switch. Advance through the groups by pressing CHANGE. Pressing and holding SPIN pauses the automatic cycling.

#	Meter Group	Description
00	Model Information	Display of Personality EPROM ID, reel map and win table, and hold percentage.
01	Bookkeeping	Record of totals for all wagers, all payments, and other game activity.
02	Win Records	Listing of the total number of wins for each possible wining combination.
03	Game Recall	Record of the reel positions, number of coins played, win amount, and credits for the last 10 games.
04	Games Summary	Tally of games and wagers.
05	Bill Acceptor Records	Listing of the number of bill transactions by denomination. This group also includes counters for the total number of bills in the stacker, and the total number of credits awarded from bill transactions.
06	Bill Acceptor Transaction History	A record of credits incremented or coins dispensed for each of the last 10 bill transactions.
07	Progressive Jackpots	A record or amount of jackpots paid for up to four (4) jackpot groups.
08	Current Progressive Values	Active display of the current jackpot values as transmitted from the progressive controller. Requires configuration for S/MPI progressive operation (Option 02=0004).
09	Host EFT History	A record of Advanced Fund Transfers, including EFT credits and debits. Requires configuration for SDS® or SAS® protocol.
10	Host EFT Totals	A record of promotional credits, blocked credits, non-blocked credits, and collected credits.
11	Doors (MC=8)	Time and date of the last access through main door, drop door, and bill acceptor cashbox door.
12	Secondary Game Bookkeeping	Record of secondary games.
13	DataVault™	Redundant bookkeeping meters stored off-board.
14	Voucher Out Transaction History	Record of last 35 redeemable vouchers or informational receipts, including status, time and date, validation type, system ID, validation number, and amount.
15	Coinless Payment System Transaction Records	Totals and values for all redeemable coupons, vouchers and informational receipts.
16	Voucher In Transaction History	Record of last 35 redeemable vouchers or informational receipts, including status, time and date, validation type, system ID, validation number, and amount.
17	Meter Dump (MC=3,4)	Downloads and displays the DataVault™ information.
18	SAS® General Meters	Tracks the total value of additional amounts awarded as a result of an external bonusing system and paid by the slot machine.
19	NGCB Bookkeeping Meters	Specific meter regulations as mandated by the Nevada Gaming Control Board.
20	NGCB Bill Meters	Bill meter regulations as mandated by the Nevada Gaming Control Board.
21	Payback Percentage Display	Record of the theoretical payback percentage. The display also shows the total amount bet at that wager level.
22	Fund Transfer History	Record of the last 35 transactions, including the date and time, type, and amount of the transaction.

Note: The availability of some meter groups depends upon Market Code and accessories.

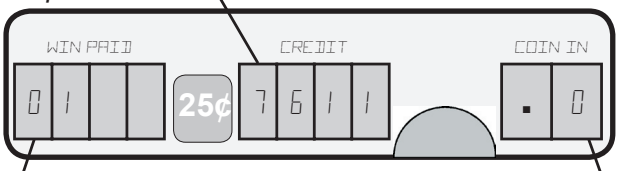
00: Model Information

The following is an example of model information for SMI 8670, which uses EPROM #E761121X-05.

Seq.	Sub Group	Description
1	01	EPROM Program Number
2	02	Reel Map and Win Table (Usually 0000)
3	03	Payback Percentage of the Game (MC=3 or MC=4)
4	04	Main Part Number

Sequence One

The number shown in CREDIT is the first four numbers of the Personality EPROMs in U18 and U20 of the MPU Board



The **01** in the first two positions of WIN PAID indicates that the information shown is the EPROM Number

The **.0** in COIN IN indicates the information shown is the Model Information Group

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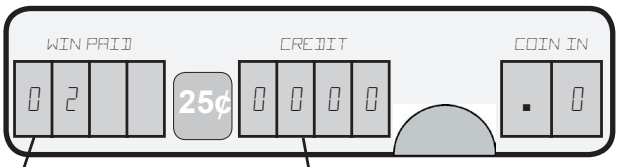
Accounting (cont.)

00: Model Information (cont.)

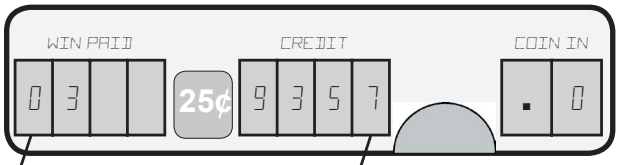
Sequence Two



The **02** in the first two positions of WIN PAID indicates that the information shown is the reel map and win table configuration

The number shown in CREDIT is the reel map and win table configuration

Sequence Three



The **03** in the first two positions of WIN PAID indicates that the information shown is the payback percentage of the game

The number shown in CREDIT is the payback percentage for the game

01: Bookkeeping

Sub Group	Meter	Description
00	Total In	Credits wagered.
01	Total Out	Credits won without a win lockup.
02	Coin Drop	Credits sent to a separate container because the hopper was full.
03	Combined Drop	Coin drop plus CHNG Bill (Bill Drop) (see Bill Transaction meter group).
04	Coin In	Credits accepted by the machine.
05	Coin Out	Credits dispensed by the hopper.
06	Total Games	Games played. Incremented at the beginning of each spin.
07	Current Credits	Credits available to the Player when the machine returns to revenue operation.
08	Lockups	Number of times an Attendant has released a jackpot lockup. It is incremented when the Attendant activates the audit key switch.
09	Attendant Paid Credits	Credits paid by an Attendant upon a lockup.
10*	Credit Collect Lockup Credits	Attendant paid credits for a lockup from the setting of Option 56, Credit Collect.
11*	Win Lockup Credits	Attendant paid credits for a lockup from the setting of Option 58, Win Lockup (if not SDS® AFT) (Win Handpaid credits for a lockup SDS® EFT only).
12* (10VLC)	Super Jackpots	Number of times the top awards have been won when Option 07, Number of External Jackpots, is greater than zero.
13* (11 VLC)	Door Opens	Number of times the main door of the machine was opened with power ON.
14*	Cash Box Door Opens	Number of times the bill acceptor cash box door was opened with power ON.
15* (12 VLC)	Games Since Door Open	Games played since the last time the door was opened.
16* (13 VLC)	Games Since Reset	Games played since a system reset.

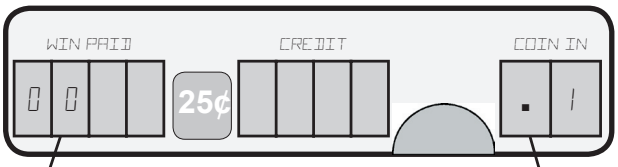
01: Bookkeeping (cont.)

Sub Group	Meter	Description
17* (14 VLC)	Drop Door Opens	Number of times the drop door has been opened (if drop door switch is connected).
18* (15 VLC)	Partial SafeRAM™ Clears	Number of times the Partial SafeRAM™ Clear procedure has been executed.
19* (16 VLC)	Full SafeRAM™ Clears	Number of times the Full SafeRAM™ Clear procedure has been executed.
20* (17 VLC)	Extra Coins Sent to Drop	Coins that should have been rejected by the coin acceptor, but were diverted into the drop bucket becaus the hopper was full.
21* (18 VLC)	Soft Attendant Paid	Purchased credits paid by an Attendant. Purchased credits are from a bill transaction, key on, AFT, ACT, or from coins when 27=03.
22* (19 VLC)	Soft Credit Collects	Coins paid by the hopper from purchased credits.
23* (20 VLC)	Bill Stacker Door	Number of times the stacker has been opened with power ON.
24* (21 VLC)	Current Non-Cashable Credits	Current credits (Meter #7) that must be wagered.
25* (22 VLC)	Cashable Coupon/Voucher Credits	Credits from non-government bills that can be paid by the hopper upon cashout.
26* (23 VLC)	Non-Cashable Coupon/Voucher Credits	Credits from non-government bills that must be wagered.
27* (24 VLC)	Tokens Out	For a machine with two hoppers, the number of tokens dispensed by the second hopper.
28* (25 VLC)	Knock-Off (Key On) Credits	Credits added by optional knock-off (key on) key switch.
29* (26 VLC)	Hopper Fills	Coins added to hopper after 32 (hopper empty) tilt recovery.
27* VLC	MPU Access	Number of times the MPU board assembly has been removed.
28* VLC	Door Opens with Power Off	Number of times the main door was opened with power off.
30*	Games Since Power Fail	Games played since power ON.
31*	Wins	All wins (not including MC=16)
32	Belly Door Open	Number of times Belly Door and the Top Box door are opened.
33	Slant Style Lower Door Open	Number of times the Lower Door of the Slant cabinet style has been epened.

*Sequence and inclusion depends upon Main software version.

The following is an example of the display of total in the Bookkeeping Meter Group:

Sequence One



The **00** in the first two positions of WIN PAID indicates that the information is total in

The **.1** in COIN IN represents the Bookkeeping Meter Group

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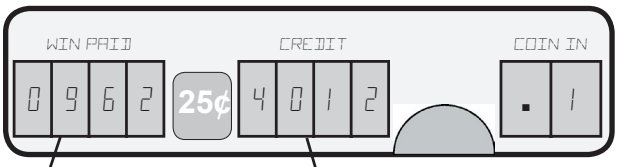
Accounting (cont.)

01: Bookkeeping (cont.)

Sequence Two



962 in WIN PAID and 4012 in CREDIT shows that the number of credits wagered is 9,624,012

01: Bookkeeping (MC=3 or MC=4)

Sub Group	Meter
00	Total In
01	Coin Drop
02	Total Out
03	Attendant Paid Credits
04	Credit Collect Lockup Credits
05	Win Lockup Credits
06	Total Games
07	Coin In
08	Coin Out
09	Combined Drop
10	Current Credits
11	Lockups
12	Super Jackpots
13	Door Opens

Sub Group	Meter
14	Cash Box Door Opens
15	Games Since Door Open
16	Games Since Reset
17	Drop Door Opens
18	Partial SafeRAM™ Clears
19	Full SafeRAM™ Clears
20	Extra Coins Sent to Drop
21	Soft Attendant Paid
22	Soft Credit Collects
23	Tokens Out
24	Knock Off (Key On) Credits
25	Total Win Meter
26	Belly Door Open
27	Slant Style Door Open

01: Bookkeeping (MC=16)

Sub Group	Meter
00	Total In
01	Total Out
02	Coin Drop Credits
03	Combined Drop
04	Extra Coin Credits Sent to Drop
05	Coin-In Credits
06	Coin-Out Credits
07	Games Played
08	Current Credits
09	Door Open
10	Cash Box Door Opens

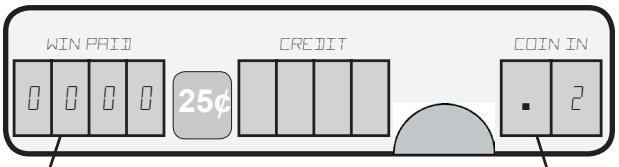
Sub Group	Meter
11	Drop Door Opens
12	Bill Stacker Door
13	Games Since Door Open
14	Games Since Reset
15	Games Since Power Fail
16	Number of Partial SafeRAM™ Clears
17	Number of Full SafeRAM™ Clears
18	Hopper Fills
19	Belly Door Open
20	Slant Style Door Open

02: Win Records

The Win Record meter group displays the quantity of wins for each winning reel combination. The sequence begins at **0000,** representing the highest win. The setting **0001** would represent the next highest, etc. The process continues until every possible winning combination has been displayed.

The following is an example of the Message Center as it displays Win Records.

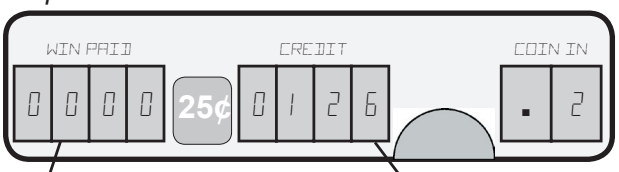
Sequence One



The 0000 in WIN PAID represents the highest winning combination

The .2 in COIN IN indicates Win Records Meter Group

Sequence Two



0000 in WIN PAID and 0126 in CREDIT indicates that the highest award has occurred 126 times

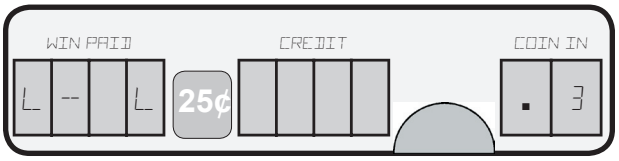
03: Game Recall

Game Recall shows information about completed games.

For the first cycle, WIN PAID shows the game sequence as **L** for last, P for previous, **3** for third game back—through **A** for tenth game back. If the game includes multiple spins they are shown according to the following table:

10 Game Recall Including up to 9 Respins									
Last Game / Respins	Previous Game / Respins	3rd Previous Game / Respins	4th Previous Game / Respins	5th Previous Game / Respins	6th Previous Game / Respins	7th Previous Game / Respins	8th Previous Game / Respins	9th Previous Game / Respins	10th Previous Game / Respins
L-L	P-L	3-L	4-L	5-L	6-L	7-L	8-L	9-L	A-L
L-9	P-9	3-9	4-9	5-9	6-9	7-9	8-9	9-9	A-9
L-8	P-8	3-8	4-8	5-8	6-8	7-8	8-8	9-8	A-8
L-7	P-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	A-7
L-6	P-6	3-6	4-6	5-6	6-6	7-6	8-6	9-6	A-6
L-5	P-5	3-5	4-5	5-5	6-5	7-5	8-5	9-5	A-5
L-4	P-4	3-4	4-4	5-4	6-4	7-4	8-4	9-4	A-4
L-3	P-3	3-3	4-3	5-3	6-3	7-3	8-3	9-3	A-3
L-2	P-2	3-2	4-2	5-2	6-2	7-2	8-2	9-2	A-2
L-1	P-1	3-1	4-1	5-1	6-1	7-1	8-1	9-1	A-1

Sequence One



In MC=28, the time is shown. In WIN PAID, the hour is shown as ".hh", the minutes and seconds are shown in CREDIT as "mm.ss", and a decimal point followed by a 3 is shown in COIN IN. The date is shown as MM.DD for the month and day in WIN PAID, and YYYY for the year in CREDIT.

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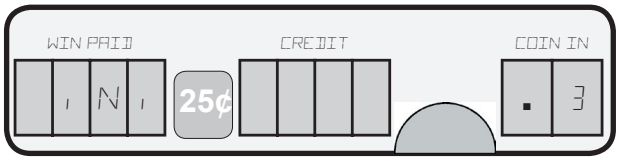
Accounting (cont.)

03: Game Recall (cont.)

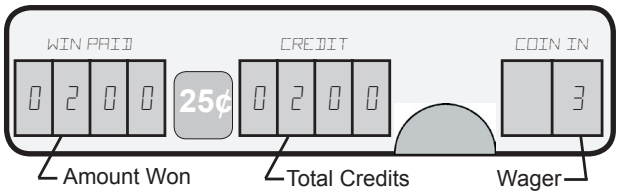
The second cycle shows the initial value of the credit meter after the bet was wagered. For example, if the Player has 100 credits, and then wagers 3 credits, the value of the initial credits meter displays 97.

Sequence Two



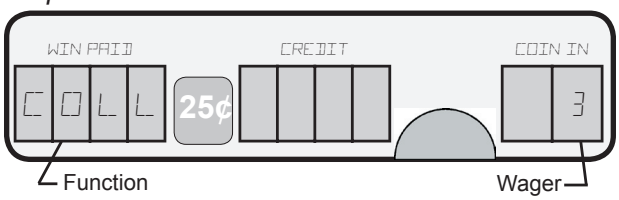
The third cycle shows the wager amount in COIN IN, the amount paid in WIN PAID. If the amount is unknown or the amount cannot be shown, "JP" displays. For MC=16, there is no jackpot flag. The amount paid for the last spin of the game (not the total win) is shown in WIN PAID. The remaining credits is shown in CREDIT.

Sequence Third



The fourth cycle shows information only for the last spin of a game. **COLL** in is shown in WIN PAID, and COIN IN, and CREDIT are shown as blank.

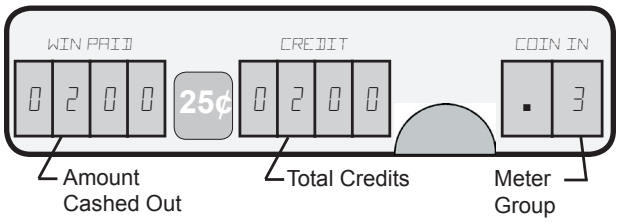
Sequence Four



NOTE: During the fourth cycle, the normal SPIN/BET MAX operation does not work.

The fifth cycle shows information only for the last spin of a game. The amount cashed out is shown in WIN PAID, the total credits is shown in CREDIT, and a decimal point followed by meter group number **3** is shown in COIN IN.

Sequence Five

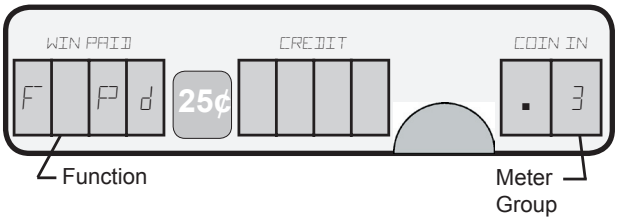


The time and date are shown the same as in the first cycle.

The sixth display cycle shows information only for the last spin of a game. The final amount paid (**F Pd**) is shown in WIN PAID, and a blank COIN IN and CREDIT display is shown.

The seventh display cycle shows the wager amount in

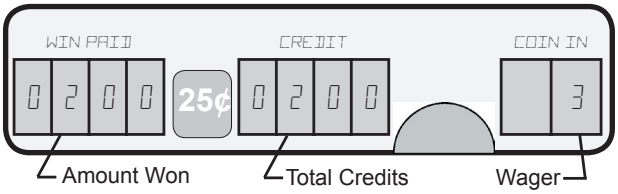
Sequence Six



NOTE: During the sixth cycle, the normal SPIN/BET MAX operation does not work.

COIN IN, the total amount paid (total of all spins included as part of the game) in WIN PAID, and the remaining

Sequence Seven



NOTE: During the seventh cycle, the normal SPIN/BET MAX operation does not work.

credits in CREDIT. If the amount is unknown or cannot be shown, WIN PAID shows "JP". The complete cycle repeats.

The reels reposition and the cycle repeats for each of the remaining games and respins or 2nd chance spins if applicable.

L- L in WIN PAID indicates last game and last spin. Previous game is P- L, and games 3-A are indicated by its numbers. Reels position to display game.

Display of Respins or 2nd chance spins stops here twice before going to the next spin for the current game.

Last Spin shows COLLECT. The entire cycle repeats.

The eigth and ninth sequences show the bonus amount. The eigth sequence displays the function name and the ninth sequence shows the amount of

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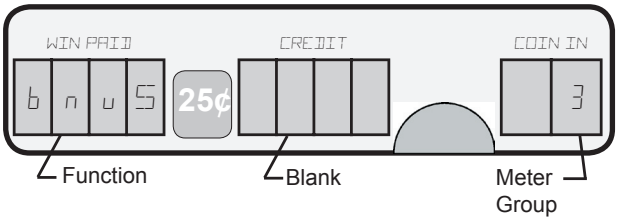
Accounting (cont.)

the bonus. If using a four-digit display, the first four numbers of the amount are shown in the WIN PAID, and the last four numbers are shown in the CREDIT display. If using a five-digit display, the first three numbers of the amount are shown in WIN PAID, and the last five numbers are shown in the CREDIT display.

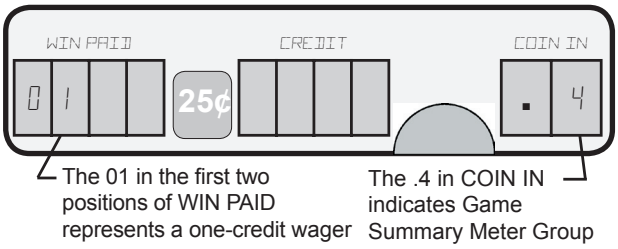
Sequence Eight



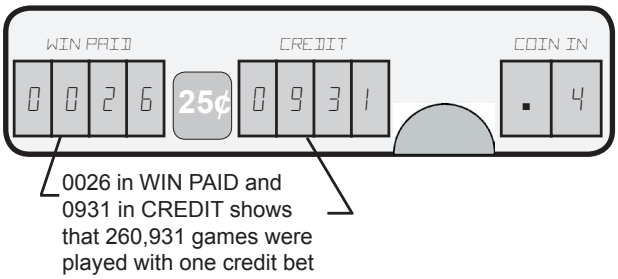
04: Game Summary

The Game Summary meter group shows the number of games played for each quantity of credits wagered. The following is an example of Game Summary:

Sequence One



Sequence Two



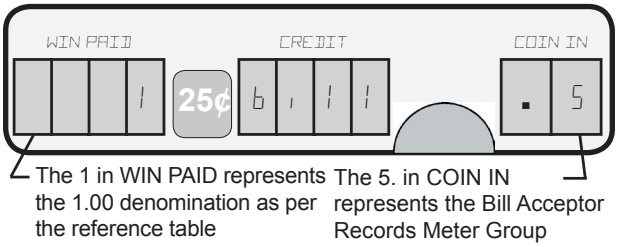
05: Bill Acceptor Records

The Bill Acceptor Records meter group displays information about bills, coupons, and vouchers accepted by the bill acceptor. Included is the number of bills by denomination, coupons and vouchers; the value in credits of all bills, coupons, and vouchers; the number of bills, coupons, and vouchers currently in the stacker; and, optionally, the value in dollars of all bills, coupons, and vouchers accepted.

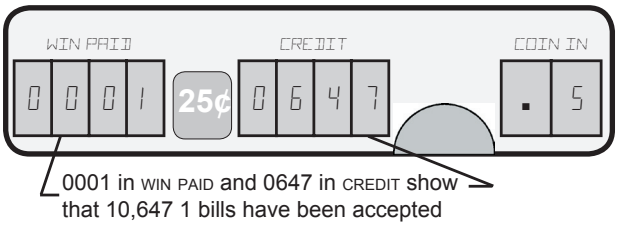
ID Message	Description
1 Bill	Number of 1 bills accepted
2 Bill	Number of 2 bills accepted
5 Bill	Number of 5 bills accepted
10 Bill	Number of 10 bills accepted
20 Bill	Number of 20 bills accepted
50 Bill	Number of 50 bills accepted
100 Bill	Number of 100 bills accepted
200 Bill	Number of 200 bills accepted (MC=6)
500 Bill	Number of 500 bills accepted (International)
CHNG Bill	Total pounds for all bills accepted (MC=16)
CASH Bill	Total number of bills currently in the cashbox/stacker (resets to 0 during soft drop)
ACCP DOLL	Total value in dollars for all bills and coupons/vouchers accepted

The following is an example of the Message Center when viewing the Bill Acceptor Records meter group:

Sequence One

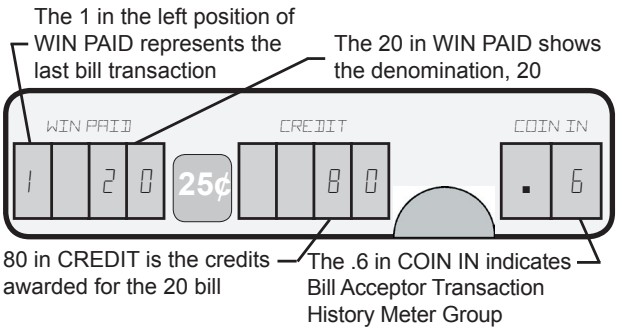


Sequence Two



06: Bill Acceptor Transaction History

The Bill Acceptor Transaction History meter group displays the last 100 bills, coupons, or vouchers accepted and the coins or credits given for each transaction. The sequence of transactions is shown in the left position of WIN PAID, with "1" being the most recent transaction. The remaining positions of WIN PAID show the denomination of the bill, COUP for a coupon or VCHR for a voucher.



The most significant digit in WIN PAID displays the sequence number from 1 to 0 and wraps around for every 10, i.e. 1 is the most recent event, then 2, 3, ...9, 0 is the 10th event, then 1 again for the 11th and so on. Next, the LED displays time in HH MM SS format

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Accounting (cont.)

across digits 3 and 4 in WIN PAID and CREDIT. After time, the LED displays the date in MM DD YYYY format across WIN PAID and CREDIT. After date, digits 3 and 4 in WIN PAID displays the denomination of the bill inserted, COU for a coupon, or UCH for voucher. CREDIT DISPLAYS the credit value. If a non-matched ticket was inserted, the change amount would be displayed next.

CREDIT shows the number of credits given for the transaction. For example, the figure below shows the last transaction was a $20.00 bill for which 80 credits were given.

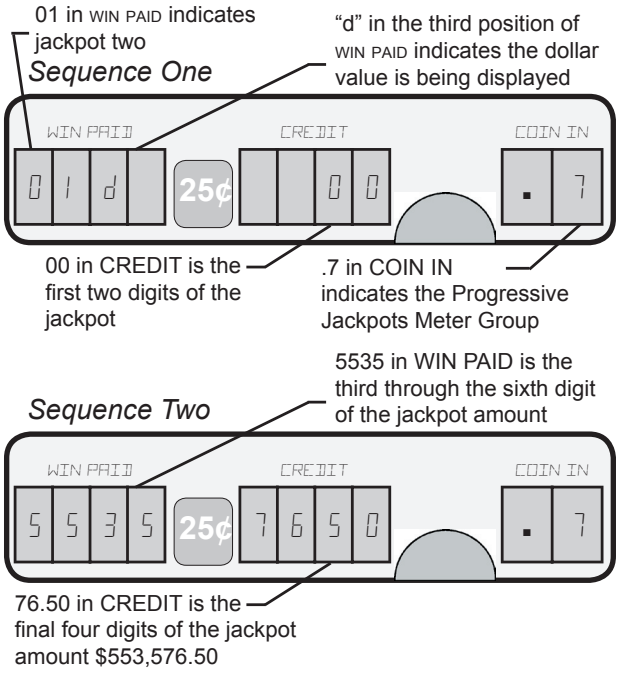
07: Progressive Jackpots

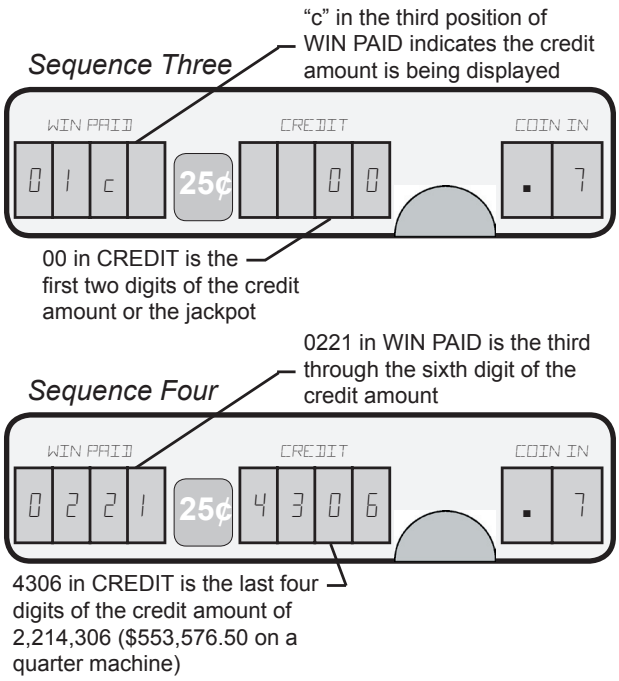
If the game is configured for progressive jackpots with serial return, the Progressive Jackpots meter group displays the most recent amount paid for up to eight progressive jackpots. It is shown in monetary units (d) and in credits (c) rounded up.

The following table lists the progressive jackpot Information:

Sub Group	Description
00	Jackpot One (JP0)
01	Jackpot Two (JP1)
02	Jackpot Three (JP2)
03	Jackpot Four (JP3)
04	Jackpot Five (Mystery Machine Only)
05	Jackpot Six (Mystery Machine Only)
06	Jackpot Seven (Mystery Machine Only)
07	Jackpot Eight (Mystery Machine Only)

The following is an example of the Message Center as it shows progressive jackpot sub group 01, jackpot two for a 25¢ machine:





08: Current Progressive Values

If configured for S/MPI operation (Option 02 = 0004) or OTT (Option 02=0007, see Game Options table page 2-12), the Current Progressive Values meter group displays active jackpot values as transmitted from the progressive controller.

The jackpot values display in dollars-and-cents. The values are 10-digit numbers requiring two cycles of the Message Center for each jackpot level.

The first cycle shows the jackpot number (e.g. JP1, JP2) in WIN PAID, and the upper two digits of its value in CREDIT. The second cycle displays the last eight digits of the jackpot value.

The display auto sequences through all the jackpot levels. Pressing BET MAX immediately advances to the next jackpot value. Pressing CHANGE/SERVICE terminates the display.

If an error occurs while viewing the jackpot values, the message **Err** appears in WIN PAID, accompanied by an error code in CREDIT. The following table lists error codes and explanations:

Code	Description	Explanation
ERR 0	No Serial Traffic Found Within the Last 500 Milliseconds	The game is not receiving serial data from the progressive controller. This is most likely caused by an open connection between the machine and the progressive controller, or incorrect configuration of the progressive controller.
ERR 1	Serial Checksum Error	The data received by the game is not the same data sent by the progressive controller. This can be caused by an intermittant connection, or too much noise on the data lines.
ERR 2	Option Error	This error results when Option 02, Progressive Type, is set to 0004 and Option 78Hi, Machine Number, is set to 0000.
ERR 3	Coining Error	Current progressive values are unavailable during a game. Exit the meter group and finish the game. The values will display upon re-entering the meter group.

| - Revised, || - New

Accounting (cont.)

09: Host EFT History

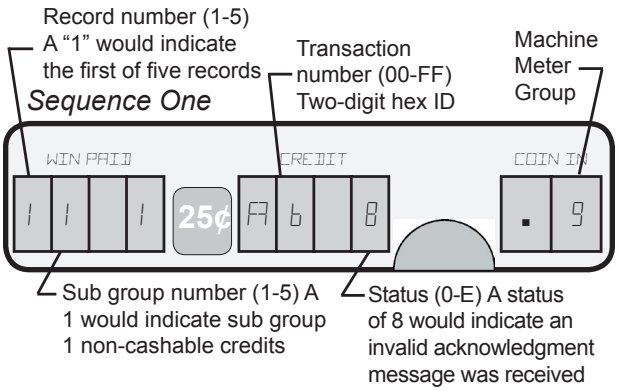
If EFT is enabled by DIP Switch DS1 or Option 98, accounting records dedicated to host operation are available. The following SAS® Host EFT History table assumes that Option 98, Primary Host is set to 0001. Five of the most recent records of each of the five sub groups are presented. Pressing the SPIN button advances to the next record number. Pressing the BET MAX. button circularly advances to the next sub group.

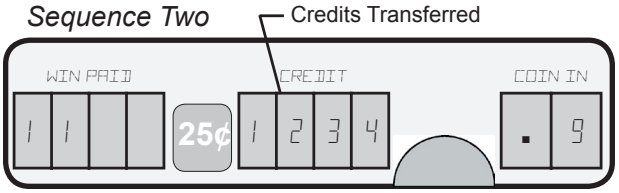
SAS® Host EFT History		
Sup Group	**Meter Name**	**Description**
01	Non-Cashable	Credits transferred that must be wagered.
02	Cashable	Credits transferred that could be wagered or cashed out.
03	Promotional	Credits not won or purchased by a Player (casino promotion).
04	Forced Cashout to the System	Credtis returned to the system when the Player pressed CASH/CREDIT.
05	Forced Cashout from the Hopper	Credits paid in coins by the hopper as instructed by the system from a cashout when the Player pressed CASH/CREDIT.

If Option 98, Primary Host is set to 0002, SDS® Host, five of the most recent events of each of the four sub groups are presented. Pressing the SPIN button advances to the next record number. Pressing the BET MAX. button circularly advances to the next sub group.

The following is an example of the Message Center as it displays Host EFT History:

SAS® Host EFT History		
Sup Group	**Meter Name**	**Description**
00	Current Promotional Credits	Credits not won or purchased by a Player (casino promotion).
01	Promotional Credits Received	Total of all EFT credits sent to the game from the system which are promotional credits (non-cashable).
02	Total EFT In	Total of all EFT credits sent to the game from the system which are soft, cashable credits.
03	Total EFT Out	Total of all hard/soft EFT credits cashed out to the system because 1) Player pressed CASH/CREDIT, 2) a win to system (certify pay) occured (a prize was won that was too large to pay to the CREDIT meter, so it was directly paid back to the EFT Host system).





Status Codes		
Code	**Description**	**Definition**
0	Operation Successful	The entire transfer amount has been accepted.
2	Machine Door Open	No transfers to or from the machine are allowed when the door is open. The entire transfer amount is rejected.
4	Transfer Exceeded the Machine's Credit Limit	Transfers to the machine are accepted only up to its credit limit. If a transfer is received that exceeds the machine's credit limit, only a portion of the transfer up to the credit limit is accepted. *Note: does not apply to transfers from the gaming machine.*
5	Invalid Transaction Number	Transaction numbers for all transfers are controlled by the Host and have a valid range of 1 to FF. This number identifies individual transactions. There is only one transaction number per transfer. Any transfer sent with a transaction number of zero is rejected by the machine. Also, if the acknowledgment message by the machine has a different transaction number than the initiation message, the transfer is rejected.
6	Gaming Machine Does Not Possess a Credit Switch	All accepted transfers to the machine are shown in the machine's CREDIT meter. If a machine is configured for non-credit operation, transfers are rejected. *Note: a machine configured for player-selectable credit operation in non-credit mode will default to credit mode, and this status will not be reported.*
7	Machine in a Tilt Condition	A machine in a tilt condition rejects all transfer attempts and reports this status.
8	Invalid "ACK" Message Received	When a machine receives a transfer initiation message from the Host, it checks the "ACK" flag for zero. When receiving the Host acknowledgment message, the gaming machine checks the "ACK" flag for one. If the "ACK" flag is not zero for initiation messages, or one for acknowledgment message, the transfer is rejected.
9	Machine is in a Game	When the gaming machine is in a condition where credits cannot be wagered, it rejects all transfers. This includes game play, operator configuration menus, meter display meters, etc.
A	Data Field Contains Non-BCD Data	When a transfer message is received by the gaming machine, it will verify that the transfer amount in in a BCD format. If the amount field does not contain BCD data, the transfer is rejected.
B	Host Transfer Request Already Completed	When the machine receives a transfer initiation message from the Host, it compares the transaction number, command, and transfer amount to the last logged transfer. If they match, the gaming machine responds with this status and the transfer amount of zero.
C	Machine Disabled	If the Host attempts a transfer to a machine that it has disabled, the machine will reject the transfer and report the status. However, if the Host attempts to transfer credits from a disabled machine that has credits available, the message can be processed, and this status is reported.

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Accounting (cont.)

Status Codes		
Code	**Description**	**Definition**
D	Machine Out of Service	Machines configured to be out of service by an Attendant will reject all transfers and report this status.
E	Machine Busy	If a machine receives a new transfer before completing a prior transfer, it rejects the current transfer and sends this status. If the machine is processing a time-sensitive task when a transfer is received, it responds with "Machine Busy."

10: Host EFT Totals

If EFT is enabled by DIP Switch DS1 or Option 98, accounting totals for host operation are available.

SAS® Host EFT Totals	
Sub Group	**Meter Name**
01	Promotional
02	Non-Cashable (Blocked) Credits
03	Cashable (Non-Blocked) Credits
04	Forced Cashout to the System
05	Credits Won
06	Third from Last Bonus
07	Second from Last Bonus
08	Last Bonus
09	Total Bonus for Tax Status Deductible
10	Total Bonus for Tax Status Non-Deductible
11	Total Bonus for Tax Status Wager Match
12	Last Multiplier Bonus for Tax Status Deductible
13	Last Multiplier Bonus for Tax Status Non-Deductible
14	Total Multiplier Bonus for Tax Status Deductible
15	Total Multiplier Bonus for Tax Status Non-Deductible

11: Doors

If MC=8, the time and date of the last door access is available as described in the following table:

Sub Group	Description
00	Main Door Access
01	Drop Door Access
02	Bill Acceptor Cashbox Access

12: Secondary Game Bookkeeping Meters

If a machine includes a factory-installed secondary feature game, entering Machine Meter Group 12 triggers the display of Bookkeeping Meters for the secondary feature. The information recorded and displayed depends upon the feature. Consult the documentation for the secondary game for more information.

13: Data Vault™ Redundant Bookkeeping System

The Data Vault™ Meter Group collects important machine data and secures it. Meters remain secure within the machine even if the circuit boards change—even if the machine is without power.

The core of the Data Vault™ is a Dallas Semiconductor iButton™ memory and interface. The iButton™ is a computer chip armored in a rugged steel can. The manufacturer guarantees data retention for 10 years without power.

The Data Vault™ interfaces asynchronously with the machine's bookkeeping so the numbers are recorded at the same, yet they are separate from the operations of the machine's meters. Thus accuracy is assured even if the machine's memory becomes corrupted.

The following table describes the sub groups of Data Vault™ meter group:

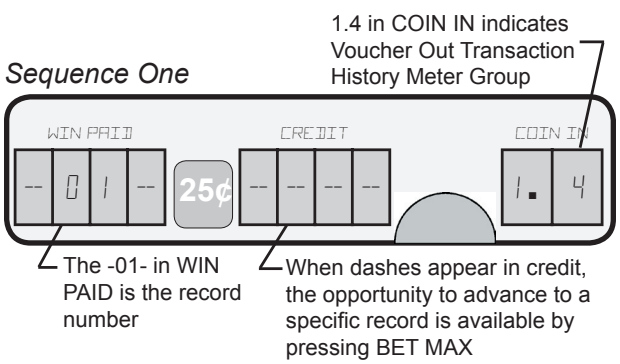
Sub Group	Name	Description
00	Total In	Increments for each coin or credit wagered.
01	Total Out	Increments for each unit won by a Player.
02	Attendant Paid	Increments for each credit paid by an Attendant upon a jackpot lockup.
03	Coin Drop	Increments for each coin diverted to a container because the hopper was full.
04	Door Opens	Times the main door of the machine was opened with the power ON.
05	Games Played	Increments once for each completed game.
06	Super Jackpots	Number of times the top award(s) have been won when Option 07, Number of External Jackpots, is greater than zero.

14: Voucher Out Transaction History

Information from the most recent 35 vouchers printed by the machine are kept in memory for review. The following table lists the sub groups of the Voucher Out Coinless Payment System History meter group:

The following is an example of the Message Center as it displays information about a voucher:

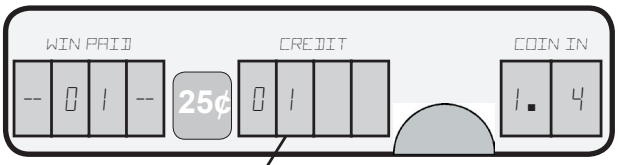
Sub Group	Description
01	Status
02	Date
03	Time
04	Transaction Type/System ID
05	Validation Number
06	Amount



Accounting (cont.)

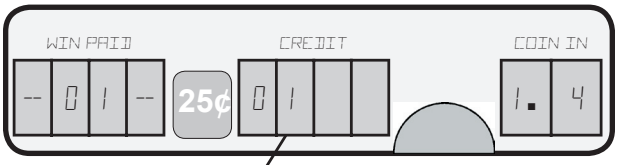
14: Voucher Out Transaction History (cont.)

Sequence Two



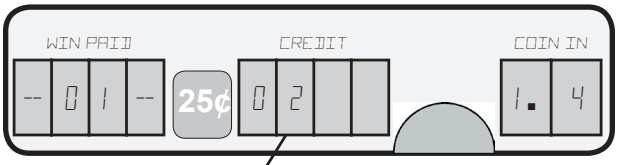
The 01 in CREDIT is the sub group number for status

Sequence Three



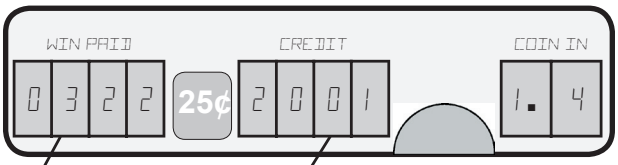
The status can be 01 for unverified or 02 for verified

Sequence Four



The 02 in CREDIT is the sub group number for date

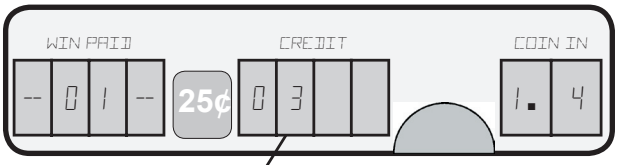
Sequence Five



The month and day is shown in WIN PAID

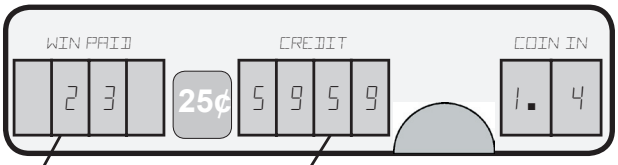
The year is shown in CREDIT

Sequence Six



03 in CREDIT indicates the time sub group

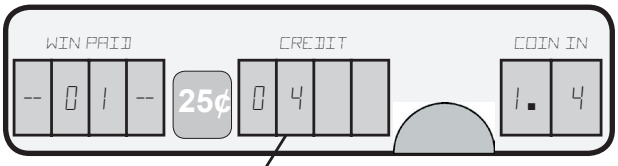
Sequence Seven



Hours are shown in WIN PAID

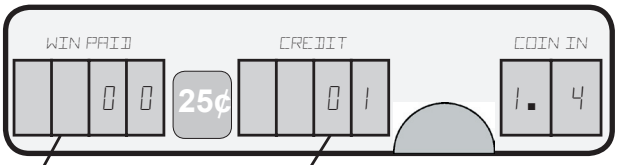
The minutes and seconds are shown in CREDIT

Sequence Eight



04 in CREDIT indicates the transaction type and system ID sub group

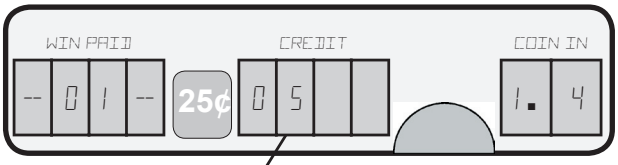
Sequence Nine



Transaction type is shown in WIN PAID

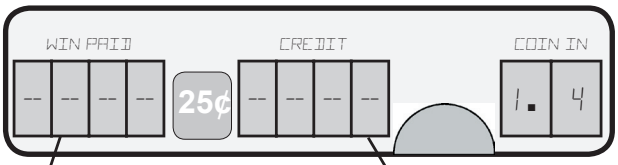
The system ID is shown in CREDIT

Sequence Ten



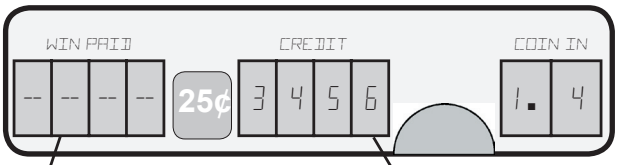
05 in CREDIT indicates the validation number sub group

Sequence Eleven



The high-order eight digits of the 16-digit validation number is shown in WIN PAID and CREDIT

Sequence Twelve



The low-order eight digits of the 16-digit validation number is shown in WIN PAID and CREDIT

Note: Meter 16: Voucher Out Transaction History, displays the first twelve numbers in Sequences Eleven and Twelve.

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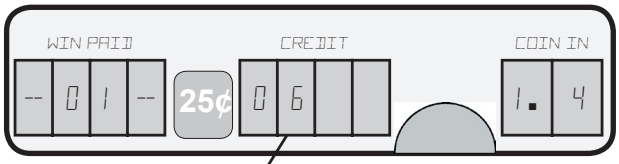
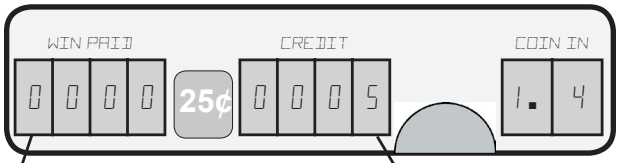
14: Voucher Out Transaction History (cont.)

Sequence Thirteen



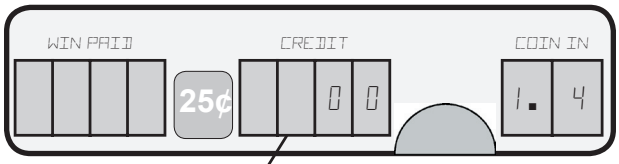
06 in CREDIT indicates the AMOUNT sub group

Sequence Fourteen



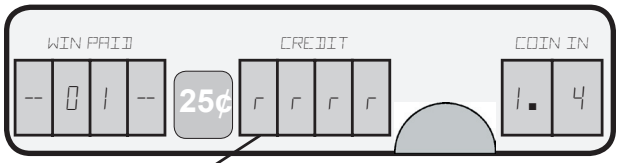
The integer amount of the voucher is shown in WIN PAID and CREDIT

Sequence Fifteen



The decimal amount of the voucher is shown in CREDIT

Sequence Sixteen



When rrrr appears in CREDIT, an opportunity to repeat the sequences for the record is available by pressing SPIN. Advance to a specific record by pressing BET MAX.

15: Coinless Payment System Transaction Records

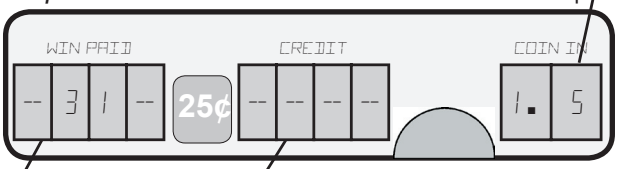
A summary of transactions is available for auditing coinless activity on the machine. The information is listed in the following table:

Sub Group	Description
01	Cashable Coupon Redeemed
02	Non-Cashable Coupon Redeemed
21	Cashable Voucher Redeemed
22	Promotional Voucher Redeemed
23	Cashable Promotional Voucher Redeemed
31	Cashable Voucher with no Lockup
32	Promotional Voucher from Cashout
33	Attendant Pay from Collect Lockup (Receipt Printed)
34	Attendant Pay from Win Lockup (Receipt Printed)
35	Attendant Pay from Collect Lockup (No Receipt)
36	Attendant Pay from Win Lockup (No Receipt)

The following is an example of the Message Center as it displays the information for coinless transactions. Each sub group is further divided into quantity (01), amount (02), and current amount in cashbox (03).

Sequence One

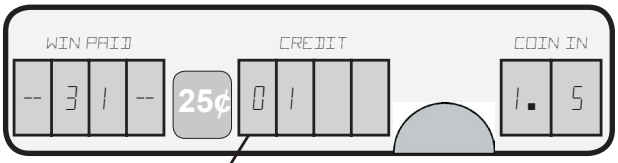
1.5 in CON IN indicates Coinless Payment System Transactions Meter Group



The -31- in WIN PAID is the sub group for cashable voucher with no lockup

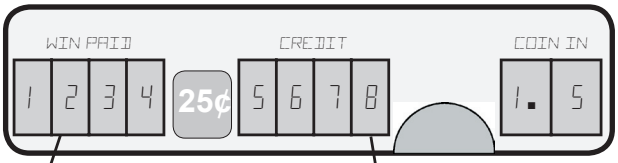
When dashes appear in credit, the opportunity to advance to a specific record is available by pressing BET MAX

Sequence Two



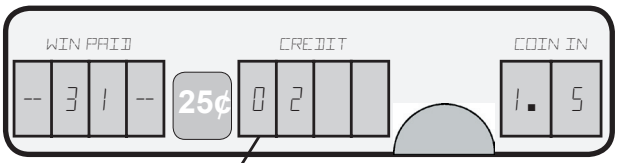
01 in CREDIT indicates that the information to be shown will be quantity

Sequence Three



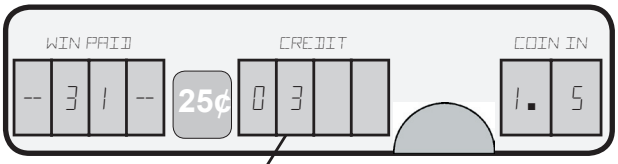
The numbers in WIN PAID and CREDIT is the quantity of cashable vouchers with no lockup

Sequence Four



02 in CREDIT indicates that the information to be shown will be amount

Sequence Five



03 in CREDIT indicates that the information to be shown will be the current amount in cashbox

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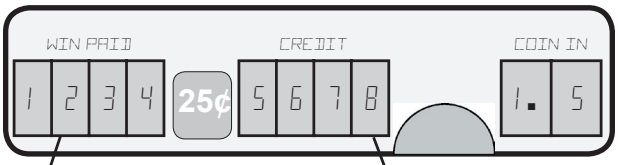
Accounting

15: Coinless Payment System Transaction Records (cont.)

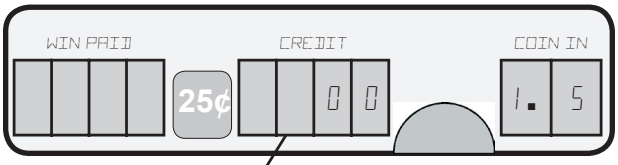
Note: Current amount in cashbox only applies to redeemed coupons or vouchers.

Sequence Six



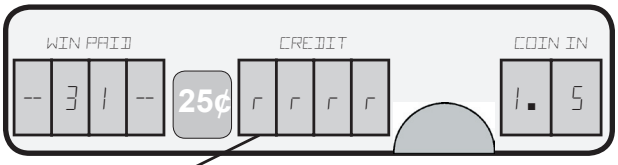
The numbers in WIN PAID and CREDIT is the integer amount of cashable vouchers with no lockup

Sequence Seven



The decimal amount of cashable vouchers with no lockup are shown in CREDIT

Sequence Eight



When rrrr appears in CREDIT, an opportunity to repeat the sequences for the record is available by pressing SPIN. Advance to a specific record by pressing BET MAX.

The sequence is similar for each of the eight sub groups.

16: Voucher In Transaction History

Information from the most recent 35 vouchers redeemed by the machine are kept in memory for review. The following table lists the sub groups of the Voucher In Transaction History Meter Group:

Sub Group	Description
01	Status
02	Date
03	Time

Sub Group	Description
04	Transaction Type/System ID
05	Validation Number
06	Amount

Examples of the Message Center as it displays information about a voucher are identical to those shown in Meter 14, Voucher Out Transaction History (page 2-28).

Note: Meter 16: Voucher Out Transaction History, displays the first twelve numbers in Sequences Eleven and Twelve.

17: Meter Dump

Information stored in the DataVault™ is downloaded, and its value is displayed in ASCII form. Meter Group 17, Meter Dump is available only for the French Market, Jurisdictions 3 and 4. The following table shows the meters in the order that they are displayed:

METERS DISPLAYED IN ENGLISH	METERS DISPLAYED IN FRENCH
TOTAL IN	ENTREES
TOTAL OUT	SORTIES
HOPPER OUT	TOTAL DE LA TREMIE
NET ATTEN. PAID	NET PAYE PAR EMPLOYE
COIN ACCEPTOR	ACCEPTEUR DE PIECES
TOTAL DROP	RECETTES
ATTEN. PAID	JACKPOT ET LOTS CUMULES
COIN TO DROP	PIECE INSEREE
HOPPER REFILL	REMPLISSAGE DE TREMIE
GAMES PLAYED	JEUX JOUES
GAMES WON	JEUX GAGNE
CREDIT PLAYED	CREDITS JOUES
CREDIT WON	CREDITS GAGNE

18: SAS® General Meters

SAS® General Meters tracks the total value of additional amounts awarded as a result of an external bonusing system and paid by the slot machine.

The following is an example of the Message Center as it displays the information for coinless transactions. Each sub group is further divided into Machine Paid External Bonus Deductible (00), Machine Paid External Bonus Non-deductible (01), Machine Paid External Bonus Wager Match (02) and Machine Paid External Bonus Payout (03).

Sub Group	Name	Description
00	Machine Paid External Bonus Deductible	SAS® legacy bonus tax status deductible.
01	Machine Paid External Bonus Non-Deductible	SAS® legacy bonus tax status non-deductible.
02	Machine Paid External Bonus Wager Match	SAS® legacy bonus tax status wager match.
03	Machine Paid External Bonus Payout	SAS® legacy bonus cumulative total.

| - Revised, || - New
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19: NGCB Bookkeeping Meters

Regulations for specific meters, as mandated by the Nevada Gaming Control Board, are displayed in Meter Group 19, NGCB Bookeeping Meters. The WIN PAID display shows the meter number, followed by the meter value. The following table is a description of the meters included:

Sub Group	Meter	Description
00	Coin In	Credits wagered, except Double-or-Nothing wagers.
01	Coin Out	Credits won, not including Progressive Awards and Win Lockups.
02	Coin Drop	Credits sent to a separate container because the hopper was full.
03	Physical Coin In	Coins accepted by the machine.
04	Physical Coin Out	Coins dispensed by the hopper.
05	Attendant Paid Jackpots	Credits paid an Attendant for a Win Lockup.
06	Attendant Paid Cancelled Credits	Soft credits paid by an Attendant.
07	Bill In	Credits from currency.
08	Voucher In	Credits from items other than currency.
09	Voucher Out	Credits vended to the Player.
10	Electronic Fund Transfer In	Credits transferred electronically from a financial institution.
11	Wagering Account Transfer In	Credits transferred electronically to machine from wagering account.
12	Wagering Account Transfer Out	Credits transferred electronically from machine to wagering account.
13	Non-Cashable Electronic Promotion In	Non-Cashable Credits transferred electronically to machine from a promotional account.
14	Cashable Electronic Promotion In	Credits transferred electronically to machine from a promotional account.
15	Non-Cashable Electronic Promotion Out	Non-Cashable Credits transferred electronically from machine to a promotional account.
16	Cashable Electronic Promotion Out	Credits transferred electronically from machine to a promotional account.
17	Coupon Promotion In	Total amount accepted from coupons. (dollar values)
18	Coupon Promotion Out	Total amount dispensed from coupons. (dollar values)
19	Machine Paid External Bonus Payout	Total amount awarded from external bonus, paid by machine.
20	Attendant Paid External Bonus Payout	Total amount awarded from external bonus, paid by Attendant.
21	Attendant Paid Progressive Payout	Progressive awards paid by Attendant.
22	Machine Paid Progressive Payout	Progressive awards paid by machine.
23	Games Since Power Reset	Games played since a system reset.
24	Games Since Door Close	Games played since the last time the door was closed.
25	Games Since Game Initialization	Total of revenued games.

20: NGCB Bill Meters

NGCB Bill Meters records the amount of bills for each denomination that is entered in the machine.

The WIN PAID display shows the value of the currency, and the CREDIT display shows "BILL". The display then shows the amount for the particular denomination entered.

21: Payback Percentage Display

Payback Percentage Display shows, for each wager level, the theoretical payback percentage and the actual payback percentage.

The WIN PAID display shows the amount of coins for each wager level, and "COIN" in the CREDIT display. It then shows the theoretical payback percentage in the WIN PAID display, and the actual payback percentage in the CREDIT display.

If no bets were placed at a particular wager level, it is displayed as dashes. The display also shows the total amount bet at each particular wager level.

22: Fund Transfer History

Fund Transfer History records the date, time, type, and amount of the most recent 35 transactions. The time is separated by decimal points and shows the hour, minutes, and seconds. The following is a table of the types of fund transfer history:

NGCB Fund Transfer Record Types	
Type Number	Description
0	Voucher In
1	Voucher Out
2	Electronic Fund Transfer In
3	Wagering Account Transfer In
4	Wagering Account Transfer Out
5	Non-Cashable Electronic Promotion In
6	Cashable Electronic Promotion In
7	Non-Cashable Electronic Promotion Out
8	Cashable Electronic Promotion Out
9	Coupon Promotion In
10	Coupon Promotion Out

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Diagnostic Tests and Functions

The ProSlot® 6000 has diagnostic tests and functions used to evaluate or change machine operation. Each is accessed by opening the main door and pressing the TEST button located on the front of the MPU assembly.

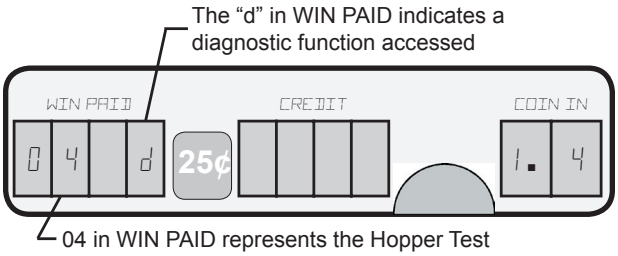
Every press of the button advances to the next test or function. Pressing CHANGE restarts most tests. Closing the door or pressing RESET exits diagnostics.

WIN PAID shows the number of the test followed by a **d**. COIN IN and CREDIT show information relating to each function.

The following illustration shows a Hopper Test (04).

Diagnostic tests consist of:

- 01 Model Information
- 02 Output Test
- 03 Input Test
- 04 Hopper Test
- 05 Reel Function Test
- 06 Reel Tape Test
- 07 Reel Tilt Records
- 08 Slot Communications
- 09 Display Test
- 10 Payout Test
- 11 Game Optioning
- 12 Peripherals Test
- 13 Data Vault™ Meters
- 14 Memory View
- 15 Hopper Dump
- 16 Top Box Test



#1 - Model Information

This function enables the Operator to view information stored in the Personality EPROM and SafeRAM™ without removing the MPU board. The SMI documentation verifies the following information:

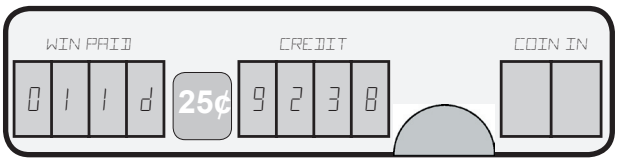
Code	Description
010D	Personality EPROM ID
011D	Payback Percentage(s)
012D	Reel Map and Win Table
013D	Market Code
014D	Diverter Optic

Code	Description
015D	Crazy Reels
016D	Bill Acceptor
017D	Denomination
018D	WBA CRC Checksum
019D	Reel Time Clock

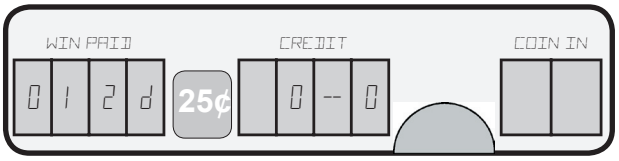
To access Test #1, press and release the TEST button until **01 d** appears in WIN PAID. Each item of information automatically appears in the Message Center. The Operator can manually advance by successively pressing BET MAX, or pause the display by pressing and holding SPIN.

The third digit of WIN PAID shows the number of each item. For the first item, 01**0**d appears in WIN PAID. CREDIT shows the Personality EPROM identification number.

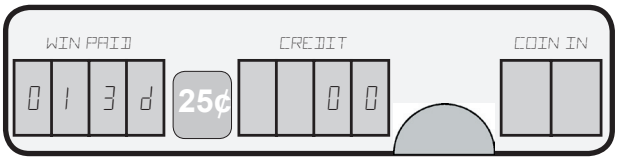
When WIN PAID shows 01**1**d, CREDIT sequentially shows the nominal and/or basic game percentages.



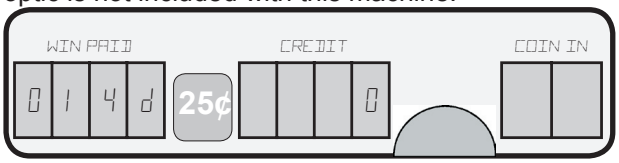
Item 01**2**d displays the reel map and win table configuration stored in SafeRAM™. In the example, reel map is #0 and the win table is #0. Currently all SMIs are 0-0.



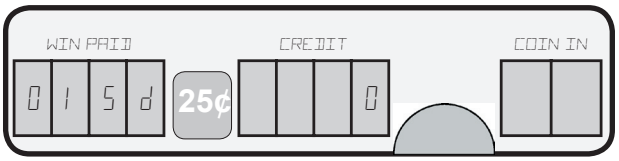
Item 01**3**d displays the two digit Market Code stored in SafeRAM™. Refer to DS3 DIP Switch table (page 2-10) in this module. The example shows configuration for operating within Nevada.



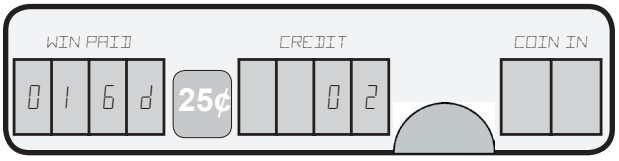
Item 01**4**d indicates diverter optic configuration in SafeRAM™. **0** in the example indicates a diverter optic is not included with this machine.



Item 01**5**d indicates the reel operation in SafeRAM™. **0** in the example indicates normal reel spin. A **“1”** would indicate crazy reel operation.



Item 01**6**d shows the bill acceptor stored in SafeRAM™. Refer to the DS2 sw5-sw6 DIP Switch table (page 2-10). The example indicates a machine configured for a JCM WBA bill acceptor.



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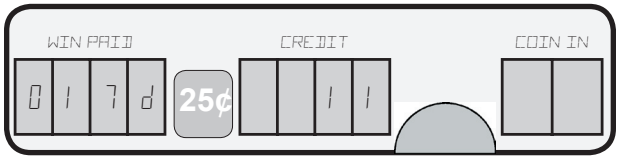
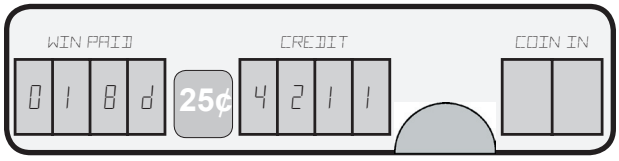
Diagnostic Tests and Functions

#1 - Model Information (cont.)

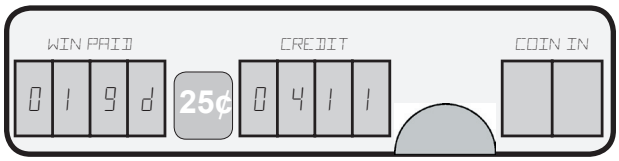
Item 017d shows the two-digit code representing the machine's denomination stored in SafeRAM™. Refer to the DS2 DIP Switch table (page 2-10). The example indicates a denomination of .25.



Item 018d displays the Cyclic Redundancy Check, CRC, of a JCM WBA bill acceptor ROM.



Item 019d shows, when the Dallas Timekeeper IC is installed at MPU U53, the date (mm dd: dw yy) and time (hh mm: ss). The information takes four cycles to complete and continues until exit. It can be paused by holding SPIN.



#2 - Output Test

The Output Test begins a routine that selects and turns on or off every output under microprocessor control. There are 64 address locations numbered in hexadecimal from 00 to 3F. The first digit of the number represents the port and the second digit represents the bit. For example, the number 28 represents port 2 bit 8.

Note: If game Option 80 is set to default 0000 (OFF), the electro-mechanical meters will not be tested.

The test is either *auto-step* or *manual*. Auto-step advances through all ports while manual operation allows the Operator to select the port and bit. Refer to the Output table (page 2-37 - page 2-38).

Note: Upon entering Output Test, the first output tested is Port 2 Bit 0, Coin Deflector Solenoid. Thereafter, the ports cycle sequentially.

To select the Output Test, press and release the TEST button until the message **02 d** appears in WIN PAID.

The test starts in auto-step operation as indicated by **020d** in WIN PAID. The CREDIT display shows the two-digit output number and port status (logic level). The status toggles between **1** (logic high) and **0** (logic low).

The process repeats for all outputs. Pressing the CHANGE button while auto-cycling restarts the test.

To manually select an output, press the PSEUDO COIN button on the front of the MPU assembly. WIN PAID changes from **020d** to **021d**. Press the CHANGE button to select an output. Once selected, press the TEST button. WIN PAID shows **022d**. The port status in CREDIT toggles between **1** (logic high) and **0** (logic low) reflecting the state of the output. Press the TEST button again to constantly activate the output in either state. The Message Center shows **021d** in WIN PAID. Exit by pressing the PSEUDO COIN switch until **020d** displays in WIN PAID, indicating return to auto-step operation.

Exit the test by pressing TEST to advance to the next diagnostic test; or by either pressing RESET or closing the door to cause a system reset.

Port	Bit	Output Description	Output Voltage
0	0	Top Tower Lamp	6.5 VAC
0	1	Bottom Tower Lamp	6.5 VAC
0	2	Bill Acceptor Ready	6.5 VAC
0	3	Bill Acceptor Not Ready	6.5 VAC
0	4	Coin Accepted Lamp	6.5 VAC
0	5	Insert Coin Lamp	6.5 VAC
0	6	Hold 3 Lamp	6.5 VAC
0	7	Hold 4 Lamp	6.5 VAC
0	8	Hold 5 Lamp	6.5 VAC
0	9	Hold 8 / Hold Attract Lamp	6.5 VAC
0	A	Coin 7 / Hold 2 Lamp	6.5 VAC
0	B	Coin 6 / Hold 1 Lamp	6.5 VAC
0	C	Cash/Credit Lamp	6.5 VAC
0	D	Bet One and Bet Max Lamps	6.5 VAC
0	E	Spin Lamp	6.5 VAC
0	F	Change Lamp	6.5 VAC
1	0	Coin 1 Lamp	6.5 VAC
1	1	Coin 2 Lamp	6.5 VAC
1	2	Coin 3 Lamp	6.5 VAC
1	3	Coin 4 Lamp	6.5 VAC
1	4	Coin 5 Lamp	6.5 VAC
1	5	Middle Tower Lamp	6.5 VAC
1	6	4th Tower Lamp	6.5 VAC
1	7	Jackpot Bell	6.5 VAC
1	8	Feature 1 Lamp	6.5 VAC
1	9	Feature 2 Lamp	6.5 VAC
1	A	Feature 3 Lamp	6.5 VAC
1	B	Feature 4 Lamp	6.5 VAC
1	C	Feature 5 Lamp	6.5 VAC
1	D	Feature 6 Lamp	6.5 VAC
1	E	Feature 7 Lamp	6.5 VAC
1	F	Feature 8 Lamp	6.5 VAC
2	0	Coin Deflector Solenoid	+24 VDC
2	1	Total In Meter	+24 VDC
2	2	Total Out Meter	+24 VDC

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Diagnostic Tests and Functions

#2 - Output Test (cont.)

Port	Bit	Output Description	Output Voltage
2	3	Combined Drop Meter	+24 VDC
2	4	Attendant Paid Meter	+24 VDC
2	5	Bill Hopper Motor	+24 VDC
2	6	Spare Meter	+24 VDC
2	7	Coin Acceptor Enable	+24 VDC
2	8	Jackpot 1 Relay	+24 VDC
2	9	Jackpot 2 Relay	+24 VDC
2	A	Jackpot 3 Relay	+24 VDC
2	B	Tilt Relay	+24 VDC
2	C	Tivoli Lamps (chase lights for Millionaire Sevens)	+24 VDC
2	D	Total In Relay	+24 VDC
2	E	Game Door Open Signal	+24 VDC
2	F	Handle Release Solenoid	+24 VDC
3	8	Total In Signal	+5 VDC
3	9	Jackpot 1 Signal	+5 VDC
3	A	End of Game Signal	+5 VDC
3	B	Door Switch Signal	+5 VDC
3	C	Key Switch Signal	+5 VDC
3	D	Jackpot / Auxillary Hopper Signal	+5 VDC
3	E	Reserved	
3	F	Reserved	

Note: Some of the possible output tests may be disabled by Jurisdiction or Market Code.

#3 - Input Test

The Input Test verifies machine inputs, including button and door switches. Each input is referenced by a two-digit hexadecimal number. The first digit represents the input port and the second digit represents the bit. For example, 08 represents port 0 bit 8 (see Input Ports table page 2-39).

Press and release the TEST button until **03 d** appears in WIN PAID, indicating the Input Test is selected. Select any button or switch to a test that does not exit the function (RESET button or TEST button). Verify the appropriate code appears. The CREDIT display shows the input's port number and the port status (1=logic high, 0=logic low). Deactivation of the input reverses the logic level.

Bill Acceptor Input Test

Bill acceptor functions can be tested during Input Test #3. They include:

- Acceptance or rejection of bills.
- Value in coins or credits vended for each bill denomination.
- Enabling and disabling of the bill acceptor in response to Cash Door, Cash Box, or COIN ACCEPTOR switch.
- Recognition of coupons or vouchers (WBA only).

Acceptance and Value of Bills

Insert a bill into the bill acceptor. The bill will be returned. An invalid bill is rejected and returned with nothing displayed.

An accepted valid bill will have the bill denomination displayed as a **d** in COIN IN and the denomination in CREDIT. THE number of coins or credits to be vended for the bill displays as a **c** in COIN IN and the value in CREDIT.

A rejected valid bill will generate one of the following codes:

Bill Rejection Codes	
Code	Description
8A	Rejected by the Machine
8B	Rejected by the Bill Acceptor
8C	Failure; Abnormal
8D	Stacker Full

Common Reasons for 8a Codes

8a means that the bill was rejected by the game. The bill denomination could be incompatible with the machine's coin denomination. For example, a $1 bill cannot be accepted by a $5 machine.

Credits vended for the bill would cause the game to exceed the credit limit (Option 51). For example, a $5 game with 990 credits and a credit limit of 1000 cannot add 20 credits from a $100 bill transaction.

Bill Acceptor Doors

Open the cashbox door or toggle the COIN ACCEPTOR switch on the MPU assembly. The bill acceptor should refuse all bills.

WBA Coupon/Voucher Acceptance

With the JCM® WBA bill acceptor, a coupon or voucher is identified by a display of **d** in COIN IN and **coup** in CREDIT.

Coin Acceptor Test

The coin acceptor is active, indicated by the steady amber LED on the COD board or the green LED on the Coin Mechanisms CC-16 acceptor.

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Diagnostic Tests and Functions

#3 - Input Test

Coin Acceptor Test

An accepted coin will cause **09**, Coin Credit, to appear in the first two digits of the CREDIT display. A count of accepted coins display in the right two digits of CREDIT.

A malfunction or improper coin travel will display as **0A**, Coin Error Signal, in CREDIT as indicated in the following table:

Input Ports		
Port	**Bit**	**Input Description**
0	0	Hold 1 Switch
0	1	Hold 2 Switch
0	2	Hold 3 Switch
0	3	Hold 4 Switch
0	4	Hold 5 Switch
0	5	Hopper Low (Probe) Switch
0	6	Coin Out Switch
0	7	Meter Detection
0	8	Belly Door Switch
0	9	Coin Credit Signal
0	A	Coin Error Signal
0	B	Change Switch
0	C	Spin Switch
0	D	Bet One Switch
0	E	Bet Max Switch
0	F	Cash/Credit Switch
1	0	Bill Door Switch
1	1	Drop Door Switch
1	2	Key Switch
1	3	Hopper Full (Probe) Signal
1	4	Bill Acceptor Busy Signal
1	5	Handle Signal
1	6	Stacker Switch
1	7	Tournament Switch
1	8	Bill Hopper Bill Out Signal
1	9	Bill Hopper Diverter Signal
1	A	Bill Hopper Present Switch
1	B	Bill Hopper Mid Signal
1	C	Bill Hopper Cassette In Switch
1	D	Bonus Trigger
1	E	Bill Hopper Rear Signal
1	F	Reserved
2	3	"Knockoff" Switch
2	4	Coin Mech Switch
2	6	Slant Door
2	9	Pseudo Coin Button
2	B	Drop/Diverter Optic

#4 - Hopper/Printer Test

To enter the Hopper/Printer Test, press and release the TEST button until **04 d** appears in WIN PAID, indicating the Hopper/Printer Test is selected. The Message Center display alternates between Coin and CouP. Press SPIN when the device appears.

Coin—The hopper attempts to pay out 10 coins.

As each coin is dispensed from the hopper, CREDIT increments from 0 to 10. Pressing the CHANGE button repeats the test. If an error occurs, the error code appears in the first two positions of the CREDIT display. Refer to the Malfunction and Game Codes table (page 2-39) for error descriptions. If the machine has a second hopper, press the SPIN button at the start to select the second hopper.

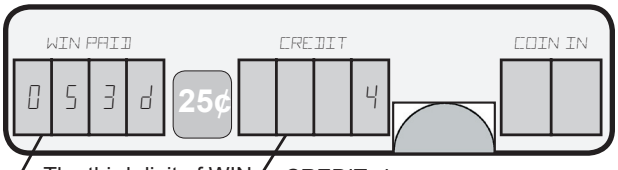
CouP—The printer will dispense a voided coupon or voucher.

#5 - Reel Function Test

The Reel Function Test verifies the reels are operating correctly. When started, the reels spin and stop at consecutive reel positions in reverse order (21-0). The spin-stop sequence continues until the test is exited.

To start the test, press and release the TEST button until **05 d** appears in WIN PAID, indicating the Reel Function Test is selected.

The reels index to the "0" position, then spin and stop at the highest number reel position. The CREDIT display shows the number of times the spin-stop sequence occurred. After a brief pause the reels spin and stop at the next lower position.



The third digit of WIN PAID shows which reel malfunctioned. Example, reel 3.

CREDIT shows the number of reel malfunctions for all reels

If a reel malfunctions during the spin cycle, the reel number appears in the third position of WIN PAID. The total number of reel malfunctions appears in the CREDIT display. When the reels spin again, the CREDIT display returns to show the number of correct reel spins.

Note: Holding CHANGE when entering Test #5 initiates a reel calibration and store the reel-stop center position in SafeRAM™.

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Diagnostic Tests and Functions

#6 - Reel Tape Test

Test #6 provides a means for the Operator to confirm that the reel symbols are in the correct positions and match the information listed in the SMI document.

To begin, press and release the TEST button until **06 d** appears in WIN PAID, indicating the Reel Tape test is selected. The reels slow-spin to position 0 and stop. After a pause the reels simultaneously advance to position 21. The CREDIT display shows the reel position. The sequence continues until this test is exited.

#7 - Reel Tilt and System Reset Records

Test #7 displays the number of reel tilts and system resets recorded.

To enter, press and release the TEST button until the **07 d** appears in WIN PAID, indicating Reel Tilt and System Reset Records is selected. WIN PAID shows a **2** in the third position indicating information on reel tilts is being displayed. The CREDIT display shows the total number of reel tilts that occurred.

To view information on tilt types **4** through **7,** turn the audit key switch once. To view information on resets **8** through **b**, turn the audit key switch again. The Message Center automatically cycles through the reset types. The reset type number appears in the third position of WIN PAID, and the total number of tilts appears in the CREDIT display.

An MPU board with CPU error resets should be removed from service.

Tilt	Description
2	Reels Moving Improperly
4	Accelerating Improperly
5	Running Improperly
6	Decelerating Improperly
7	Reels in Wrong Position
8	Power Fail Resets
9	Door Resets
A	Hardware Resets
B	CPU Error Resets

Note: Reel tilts generated with the main door open are not recorded.

#8 - Slot Communications

The Slot Communication test confirms the serial ports are working properly. The test checks for shorts and opens.

Press and release the TEST button until **08 d** appears in WIN PAID, indicating the Slot Communications test is selected. A dash (**-**) appears in the CREDIT display if a channel is not found.

Note: Test #8 cannot test signal reception without loopback jumpers installed.

Next, **081d** appears in WIN PAID. The test checks for shorts on ports 1A, 1b, 2A, 2b, 3A, and 3b. An **S** appears in the CREDIT display if a short exists. When the machine is finished testing for shorts, the message **082d** appears in the WIN PAID at which time a test pulse is transmitted. Each receiving port is tested for reception of a signal. Physical connection is required. The following table lists the ports and its locations on the game:

Port	Duart	Name	Location	Connector	Jumper
0	1A (U38)	Link RS-485	Backplane Board	J14	CBL-30284-0001
1	1B	Auxiliary	MPU Board	J3	CBL-30293-0001
2	2A (U39)	Bill Acceptor	Backplane Board	J4	CBL-20243-0001
3	2B	System	Backplane Board	J10	CBL-30298-0001
4	3A (U37)	Spare RS-232	Backplane Board	J18	CBL-30283-0001
5	3B	Spare RS-485	Backplane Board	J15	CBL-20239-0001

#9 - Display Test

Test #9 tests the Message Center. Observe to make sure all LED segments in each of the 10 display positions are properly functioning.

Press and release the TEST button until **09 d** appears in WIN PAID, indicating the Display test is selected. A pattern cycles in the Message Center that illuminates each segment and decimal point.

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Diagnostic Tests and Functions

#10 - Payout Test

The Payout test confirms that reel symbol combinations match the game's pay table as it appears on the feature glass. By positioning the reel symbols on the payline, entering a wager, and pressing SPIN, the win amount appears in WIN PAID. It should match the glass for the same winning combination.

Note: Jackpot signals through connector J13 are disabled to prevent false progressive win lockups. See Option 80 (page 2-13).

Press and release the TEST button until the message **10 d** appears in WIN PAID, indicating the Payout test is selected. Press and hold CHANGE. The message **"rl 1"** appears in CREDIT, indicating reel one is selected. While holding CHANGE, press the SPIN button. Reel one moves to the next stop position. Release and press SPIN (still holding down the CHANGE button) until the desired reel symbol lines up on the pay line, then release the CHANGE button. Repeat to select positions for the remaining reels.

After selecting the reel positions, press BET ONE to select the number of credits to wager. Press SPIN. The CREDIT display shows the win for the reel-symbol combination, the wager, and the credits to be paid from the hopper.

Repeat the procedures above to confirm payouts for any reel combination and wager.

#11 - Game Optioning

Game Optioning is set from Diagnostic Function #11. See the Machine Options section (page 2-14) for detailed instructions on accessing and setting options.

#12 - Peripherals Test

Test #12 allows the operator to evaluate peripheral devices on the ProSlot® 6000.

The results of the test are indicated in the Message Center. Each value shows for two seconds before automatically advancing to the next item. The Operator may also manually advance by successively pressing BET MAX, or may pause the display by pressing and holding SPIN.

To access, press and release the TEST button until **12 d** appears in WIN PAID, indicating the Peripherals test is selected.

Win Paid	Credit	Device
121D	Value	DIP Switch DS1 in Hexadecimal
122D	Value	DIP Switch DS2 in Hexadecimal
123D	Value	DIP Switch DS3 in Hexadecimal
124D	Value	Battery Voltage in Hexadecimal
125D	- 0	Bet One Sound at Current Volume Level
125D	- 1	Bet Max at Full Volume (Alarm)
126D	Value	Current Real Time Clock
127D	E400	Expanded EPROM Memory Status for 2MG

The third digit in WIN PAID shows the identification number for each item in this test. For the first item, **121d** appears in the display. The last two digits of the CREDIT display show the settings of DIP Switch DS1 in hexadecimal representing the value of the eight switches. Refer to the following table to determine the switch settings:

SW 1 & 5	SW 2 & 6	SW 3 & 7	SW 4 & 8	Hex Digits 1st & 2nd
ON	ON	ON	ON	0
OFF	ON	ON	ON	1
ON	OFF	ON	ON	2
OFF	OFF	ON	ON	3
ON	ON	OFF	ON	4
OFF	ON	OFF	ON	5
ON	OFF	OFF	ON	6
OFF	OFF	OFF	ON	7
ON	ON	ON	OFF	8
OFF	ON	ON	OFF	9
ON	OFF	ON	OFF	A
OFF	OFF	ON	OFF	B
ON	ON	OFF	OFF	C
OFF	ON	OFF	OFF	D
ON	OFF	OFF	OFF	E
OFF	OFF	OFF	OFF	F

The first digit represents switches 5-8. The second digit is switches 1-4. For example, a value of **11** for DS1 can be interpreted as 1 = switches 5 through 8 = OFF, ON, ON, ON; 1 = switches 1 through 4 = OFF, ON, ON, ON. The value **11** indicates that the machine is configured for SAS® EFT protocol v4.x or v5.x with no bonus. Refer to the DS1 Switch Communication Protocol table (page 2-9).

DIP Switch settings for DS2, display **122d**, and DS3, display **123d,** can be determined in a similar manner.

When **125d** appears, CREDIT shows **0** in the last digit. The diagnostic function sends the BET ONE sound to the speaker at the current volume level. After two seconds, the last digit of CREDIT shows **1**. The diagnostic function then sends the alarm sound, which is the BET MAX sound at full volume. It requires jumper JW18 to be installed on the MPU board. Refer to the Jumper table (page 2-9).

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Diagnostic Tests and Functions

#12 - Peripherals Test, cont.

When **126d** appears, CREDIT displays the current value of the real time clock in a series of readouts. The first is the month as 01 to 12, and the day as 01 to 31. After two seconds, the next cycle is two digits of the year as 00 to 99, and the day of the week as 01 to 07. Next is the time in hours as 00 to 24, and the minutes as 00 to 59. After two seconds, the seconds as 00 to 59.

When WIN PAID shows **127d**, the CREDIT display shows the status of four megabits of EPROM memory. CREDIT shows PASS if the full four megabits of expanded EPROM memory are functional. If not, it shows an offset address where the test failed. To obtain a PASS, 4Mb EPROMs must be installed and jumper JW2 must be in the 4Mb position. A display of **E400** is normal if the MPU board is properly configured with 2Mb EPROMs.

#13 - Data Vault™ Records

If the Data Vault™ is installed, Test #13 will load the contents of the Data Vault™ into RAM and display it in the Message Center in the manner of machine meter groups (page 2-21). The information shown is described in the following table:

Sub Group	Name	Description
00	Total In	Increments for each coin or credit wagered.
01	Total Out	Increments for each unit won by a Player without a win lockup.
02	Attendant Paid	Increments for each credit paid by an Attendant upon a jackpot lockup.
03	Coin Drop	Increments for each coin diverted to a container because the hopper was full.
04	Door Opens	Times the main door of the machine was opened with power ON.
05	Games Played	Increments once for each completed game.
06	Super Jackpots	Number of times the top award(s) have been won when Option 7, Number of External Jackpots, is greater than zero.

If the unit is defective, WIN PAID indicates the error as “bb-n”, where “n” is the error code according to the following table:

Code	Description
1	No Response
2	Bad Data Transfer
3	No Response and Bad Data
4	Bad CRC
5	No Response and Bad CRC
6	Bad Data and Bad CRC
7	No Response, Bad Data, and Bad CRC

#15 - Hopper Dump

Test #15 is designated for Market Code 16, UK. To begin test, press SPIN. The amount configured for Machine Option 75 is paid to the hopper, and is displayed in the WIN PAID meter.

If the amount of coins in the hopper is less than the amount set in Option 75, Coins to Dispense, the WIN PAID meter reads X/LESS. "X" being the difference between the amount set in Option 75 and the actual amount of coins in the hopper.

If the amount of coins in the hopper is equal to the amount set in Option 75, the WIN PAID meter reads X/FULL. "X" being the amount set in Option 75.

If the amount of coins in the hopper is more than the amount set in Option 75, the WIN PAID meter reads X/PLUS. "X" being the difference between the actual amount of coins in the hopper, and the amount set in Option 75.

To pause the test, press SPIN again. To abort the test, press COLLECT or close the door.

The hopper turns off if no coins are dispensed within 3 seconds, the amount of coins set in Option 75 is dispensed, the door is closed or COLLECT is pressed, or if a tilt, malfunction, or power surge occurs.

#16 - Topbox Test

Test #16 verifies the proper operation of a topbox feature. The specific operation depends upon the feature installed.

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Troubleshooting

Overview

This section includes resolutions for common malfunctions. Charts defining the numerical codes for malfunctions and normal game operations are included.

Power ON Malfunctions

If the reel and feature fluorescent lamps do not illuminate, check the following:

1. Turn power switch OFF and confirm the machine is plugged into a powered, grounded outlet.
2. Using the overall wiring diagram as a reference, confirm the power supply is properly connected.
3. Check circuit breakers.
4. Confirm the power switch is connected and functioning.
5. Check for loose or frayed wires.
6. Observe the system reset LED on the MPU board. It should illuminate briefly on power ON.

Tilt Messages

If a tilt occurs, the machine exhibits the following:

1. The numerical tilt code displays in WIN PAID.
2. The machine will not accept or dispense coins or bills.
3. All game play is suspended until the condition is resolved by authorized service personnel.

Coin Acceptor Malfunctions, 2x Series Exception Codes

The ProSlot® 6000 contains a coin acceptor with built-in security features to prevent cheating. The most common problems are coins jamming in the bill acceptor because of a bent coin, or shingling from coins inserted at a high rate of speed. For a coin jam, or a 2x code, check the following:

1. If jammed, open the door and remove the bill acceptor module. Once removed, coins can be gently extracted with a small screwdriver or similar tool.
2. Confirm the coin optic decoder board optic sensors and prism are clean. Dirt can block the light path and prevent proper operation.

The acceptor module can be quickly replaced. See Module 8, Peripherals, for further information.

Hopper Malfunctions, 3x Series Malfunction Codes

If a hopper malfunction occurs, a **3x** tilt code displays. The hopper control circuit board also includes status LEDs. Common hopper malfunctions include hopper jams, empty hoppers and jammed mixers. If these problems occur, check the following:

1. Hopper jams usually occur because of a bent coin stuck under the hopper knife, or foreign objects freezing the mixer or pinwheel.
2. An empty hopper condition exists when no coins exit the hopper for approximately 15 seconds. This can be a hopper out of coins, or a hopper that has jammed.
3. Ensure the hopper plug is firmly seated in the connector. Confirm the hopper cable is connected and no wires are frayed or broken. On rare occasions, the hopper motor or control board may need replacement.

If a **30** code for hopper overpays displays, the machine should be taken out of service until hopper operation has been checked through the machine's diagnostics functions (Test #4). The machine should also be checked for possible tampering. A one-coin overpay may indicate a faulty hopper control board. If the problem persists, contact a Bally Field Service Technician.

A **31** code coin-out jam may indicate tampering or defective hopper components. Always check the hopper control board LEDs for activity indicated in the following chart:

Hopper LED	Error Description
Green (FWD) LED Flashing	A reverse entry condition occurred. The dual optic switches detected an incorrect direction of coin travel and notified the microcontroller. It may be caused by a failed optic.
Red (REV) LED Flashing	A coin reverse condition occurred. The dual coin-out optic switches detected an incorrect transition while trying to clear a coin jam.
Red and Green LED's Flashing	An external light source struck the optic switch. The optic switches are modulated and an out-of-phase light source was detected.

Troubleshooting (cont.)

Reel Malfunctions, 4x and 7x Series Malfunction Codes

Reels unable to find the proper stop position result in 4x tilts. 7x tilts are from movement after stopping. Check the following:

1. The optic sensors are not clean. Dirt may block the light path through the code ring of the reel.
2. Check alignment of the code ring to the opto-interrupter on the reel control board.
3. Check for a loose connection of the reel cable.
4. Ensure proper calibration by entering Test #5 and holding the CHANGE button (See #5-Reel Function Test page 2-35).

Memory Malfunctions, 8x Series Malfunction Codes

The ProSlot® 6000 enters a self-test upon each system reset (power or RESET button). A malfunction in system memory will generate an 8x code and flash the tower and button lamps at a coded rate. Refer to the following table for flash codes:

Flash Rate (Per Second)	Error
1	Main EPROM Checksum Error (U28 and U43)
2	Personality EPROM Checksum Error (U18 and U20)
3	Volatile RAM Write/Read Failure (U30 and U45)
4	Non-Volatile RAM (SafeRAM™) Write/Read Failure (U30 and U45)
Continuous	Battery Low (BAT1)

Communication Errors, 9x Series Malfunction Codes

If the machine is configured for S/MPI or VLC host protocol (See Game Optioning on page 2-14 for Progressive Type or Terminal ID), faulty operation will generate one of the following tilt codes:

Code	Message	Description
91-0	No Serial Traffic Found Within the Last 500 Milliseconds	The machine is not receiving data from the progressive controller. This is most likely caused by an open connection between the machine and the progressive controller, or incorrect configuration of the progressive controller.
91-1	Serial Checksum Error	The data received by the machine is not the same data sent by the progressive controller. This can be caused by an intermittent connection, or too much noise on the data lines.
91-2	Option Error	Results when Option 02, Progressive Type, is set to 0004, and Option 78Lo, Machine Number, is set to 0000.
91-4	Mystery Machine Pay Timing Error	Jackpot award data from the progressive controller is present in the serial stream at an inappropriate time. Actuate the audit key switch and observe the jackpot level in the right-most digit of the WIN PAID display (preceded by EHP), and the jackpot amount in the CREDIT display. A key switch activationis required for each jackpot award present. If the condition persists, a loss of communication between the machine and the progressive controller may have occurred.
91-5	Jackpot Information Missing	No jackpot data from MAPS Atomic Progressive Controller.
91-7	Game Error Lockout	Host status poll timeout was detected by the game.
91-8	Host Defined Lockout in Configuration	Game disabled by holiday/non-holiday enable/disable configuration.
91-9	Game in Host Configuration	Host is in the process of configuring the game.
91-A	Game Not Configured by Host	The Host has not configured the game.
91-B	Game in Host Disable	The game has been disabled by the Host.
91-C	Game Disabled by Daily Timeout	The game has been disabled by the daily poll timeout shutdown.
91-D	Game Disabled for Status	The game has been disabled by the Host disable flag in the status poll.
91-E	Even Log Full	The event log has more than 1200 events.
EP EP HP	Awards Available but not Acknowledged by Progressive Controller	The alternation of EP, EP, HP in the WIN PAID display indicates the pulse link is not operating correctly. It can be caused by a machine tilt between coining and payout, or a system reset (including doors) between coining and payout. Activate the audit key switch and observe EP PD on the WIN PAID display. A 91-4 display may result if the progressive controller does not recognize acknowledgment of the award by the machine.

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Malfunction and Game Codes

Code	Description	Definition
20	Coin In Jam	The optics on the coin optic decoder board have been blocked for too long.
21	Inappropriate Coin In	A coin has been accepted by the machine after the maximum number of extra coins wagered have been registered. Extra coins up to the maximum (currently 15) are paid from the hopper upon completion of the game.
22	Invalid Coin	A coin has passed the coin optics during a reel spin.
23	Coin Not Sensed	Coin was not sensed by the drop optic (DS2-8=OFF Diverter Optic Installed)
24	Coin Reverse	A coin was sensed traveling from bottom to top of the optic block.
50-26[1]	Bill Paused	A bill was detained from entering the bill acceptor stacker within the normal time.
50-27[1]	Bill Jam	A bill was prevented from entering the stacker.
50-29[1]	Bill Acceptor Communication Error	Communication between the bill acceptor and the machine has failed.
30	Hopper Overpay	More coins than expected have been sensed by the hopper's coin-out optic during a payout.
31	Hopper Coin-Out Jam	The hopper's coin-out optic has been blocked too long (see Troubleshooting, Hopper LED Error Codes).
32	Hopper Empty	The hopper circuitry has run in forward direction for longer than 15 seconds with no coins sensed by the coin-out optic.
33	Reset During Payout	A system reset has occurred while the hopper was running.
5[x]-36[1]	Printer Failure	General Printer Failure
5[x]-37[1]	Printer Jammed	The printer is jammed at the platen.
5[x]-38[1]	Printer Empty	The printer is out of paper.
5[x]-39[1]	Printer Low[3]	The paper sensor has detected a low paper condition.
40	Reel Initialization Error	The reels were unable to complete initialization after a system reset.
41	Reel #1 Improper Spin	The reel did not spin to the expected position.
42	Reel #2 Improper Spin	The reel did not spin to the expected position.
43	Reel #3 Improper Spin	The reel did not spin to the expected position.
44	Reel #4 Improper Spin	The reel did not spin to the expected position.
45	Reel #5 Improper Spin	The reel did not spin to the expected position.
50	Slot Door Open	The main door switch senses the door is open.
51	Belly Door Open	The belly door switch senses the door is open.
52	Bill Acceptor Stacker Access	The stacker access switch senses the door is open.
53	Lower Door Open (Slant)	The lower door switch senses the door is open.
54	Drop Door Open	The drop door switch senses the door is open.
55	Bill Acceptor Stacker Removed	Signal received from the bill acceptor that there is no stacker.
|| 56[4]	Logic Door Access	The MPU board is removed or not seated correctly.
|| 57[4]	System (sView/Tahoe) Door Access	The sView door is open.
|| 58[4]	Latched Door Detector Board	The battery is low for the latched (Main, Logic, System, and Cashbox doors) input circuit.
60	Reset During Bill Change	A system reset has occurred during a bill transaction.
65	Mechanical Meter Disconnect	The electromechanical meters are disconnected from the machine (Market Codes 3, 4, 12, 28, and 29).

Code	Description	Definition
70	Door Open During Reel Spin	Any of the door switches have sensed a door open during a reel spin.
71	Reel #1 Movement	The reel moved at an inappropriate time.
72	Reel #2 Movement	The reel moved at an inappropriate time.
73	Reel #3 Movement	The reel moved at an inappropriate time.
74	Reel #4 Movement	The reel moved at an inappropriate time.
75	Reel #5 Movement	The reel moved at an inappropriate time.
77	Secondary Device Communication Fault During Game/Topbox Wheel Feature Tilt	Topbox tilt condition has occurred in the Monte Carlo and Lucky Wheel machines.
80[2]	ROM Checksum Error	The checksum of the Main program (U12, U15, U3, U4), or the Personality (U20, U18) does not match the expected checksum.
81[2]	Battery Low	SafeRAM™ battery is below 2.2 VDC.
82	Door Open with Power OFF	The machine door was opened while the main power was OFF (requires JW11 in).
83[2]	SafeRAM™ Error	SafeRAM™ failed to retain information during self-test.
83F-0	Invalid SafeRAM™ EPROM	Wrong EPROM's used for SafeRAM™ Clear.
83F-1	Invalid Main EPROM	Wrong Main EPROM's detected after SafeRAM™ Clear.
83F-2	Invalid Personality EPROM	Incompatible Personality EPROM's detected after SafeRAM™ Clear.
83F-3	Invalid Coin Denomination	Coin denomination not supported in Market Code.
84[2]	RAM Error	Volatile RAM failed to retain information during a self-test.
85	MPU Removed with Power OFF	The MPU board assembly was disconnected from the backplane while power was OFF (requires JW15 and JW21 in).
88	Catastrophic Failure	The MPU board has failed for an unknown reason (if SafeRAM™ Clear does not resolve error code, replace MPU board).
89	Cashout to Host Error	Cashout to host fails with AFT enabled and cashout to Host set to Hard. Open and close door to clear error code.
90	Display Error	The controller for the LED message center or vacuum fluorescent display has failed.
91	Communication Error	The machine is expecting and not receiving serial communication from the progressive controller (refer to Troubleshooting, Communication Errors). The machine will not tilt, and requires a SafeRAM™ clear to resume operation if the door is opened before releasing progressive win lockup.
91-0	No Communication	No serial traffic found within the last 500 milliseconds.
91-1	Serial Checksum Error	Data received by the machine is not the same as sent by the controller.
91-2	Optioning Error	Conflicting machine options (for example 02=04 and 78Lo=0).
| 91-4	Mystery Progressive Hit during Game Over	Award data is in the serial stream at an unexpected time. A Handpay is required for the Mystery Award. Turning the Keyswitch displays the Handpay information. The tilt will clear in five seconds and the amount awarded is displayed in WIN PAID.
91-5	Jackpot Missing	MAPS jackpot information missing from APC communication.
91-7	Game Error Lockout	Host status poll timeout detected by game.
91-8	Host Defined Lockout in Configuration	Game disabled by holiday/non-holiday enable/disable configuration.
91-9	Game in Host Configuration	Host is in the process of configuring the game.

Malfunction and Game Codes (cont.)

Code	Description	Definition
91-A	Game Not Configured	Host has not configured the game.
91-B	Game in Host Disabled	Game disabled by the Host.
91-C	Host Disabled for Timeout	Game disabled by the Host daily poll timeout shutdown.
91-D	Host Disabled	Game disabled by Host disable flag in status poll.
91-E	Even Log Full	More than 1200 events are in the event log.
EP EP HP	Awards Available But Not Acknowledged by Controller	Awards available but not acknowledged by progressive controller.
HDIS	Communication Loss	No communication with the SAS® Host for five seconds.
99	Severe Failure	An error has been detected with the MPU board. A diagnostic self check has determined that memory is uncorrupted. The error is recoverable.

[x]Door Codes: 50=Main Door, 51=Belly Door, 52=Bill Acceptor Cash Box Door, 53=Slant Lower Door, 54=Drop Door, 55=Bill Acceptor Cash Box.

[1]Malfunction codes with prefix "5x" appear only while the door is open.

[2]Malfunction codes 80, 81, 83, and 84 are part of the machine self-test during power ON or a system reset. Upon an error, all of the machine's lamps flash. The lamps flash one or more times per second depending on the problem.

[3]The tower service light will flash for $^1/_2$ second every 2 $^1/_2$ seconds.

[4] Requires Latched Door Detector Board for proper operation.

The following codes pertain to West Virginia only:

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Code	Description	Definition
91-p	SAS Poll Timeout	SAS host not polling game.
91-d	Game in ROM Signature Calculation	Game receives a ROM signature request from the host.
91-b	Game Locked Out by the Host	Game locked out by the host.

| - Revised, || - New
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