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PIN	PARTS SIDE	SOLDER SIDE	PIN
1	VIDEO RED	VIDEO GREEN	1
2	VIDEO BLUE	VIDEO SYNC	2
3	SPEAKER +	SPEAKER -	3
4			4
5			5
6			6
7	TICKET OUT BUTTON - panel		7
8	TICKET NOTCH - dispenser		8
9	START / DRAW		9
10	SMALL / STOP 2		10
11	PLAY / RAISE		11
12	TAKE / STOP 3		12
13	DOUBLE / STOP 1 / CHANGE		13
14			14
15			15
16	BIG / ALL STOP		16
17			17
18	COIN IN	NOTE IN	18
19	SERVICE IN		19
20	ACCOUNT / PRINTER SET UP	CONFIRM / MONITOR SET UP	20
21	HOPPER PAYOUT - panel	CLEAR / PRINTER PRINT - panel	21
22		*HOPPER SWITCH - hopper	22
23	COIN IN METER		23
24	NOTE IN METER		24
25			25
26			26
27	HOPPER METER		27
28	CLEAR / TICKET / PRINTER METER		28
29	START / DRAW LAMP		29
30	SMALL / STOP 2 LAMP		30
31	PLAY / RAISE LAMP		31
32	TAKE / STOP 3 LAMP		32
33	CHANGE / STOP 1 LAMP		33
34	BIG / ALL STOP LAMP		34
35			35
36	GND	GND	36

PIN	PARTS SIDE	SOLDER SIDE	PIN
1	GND	GND	1
2	GND	GND	2
3	+5V	+5V	3
4	+5V	+5V	4
5	+12V	+12V	5
6	+12V	+12V	6
7	TICKET DISPENSER ENABLE		7
8	HOPPER SSR		8
9	GND	GND	9
10	GND	GND	10

* HOPPER SWITCH - auto detect normal low (mostly micro switch type) or normal high (mostly sensor type)

START	DRAW
PLAY	RAISE
TAKE	STOP 3
SMALL	STOP 2
CHANGE	STOP 1
BIG	ALL STOP

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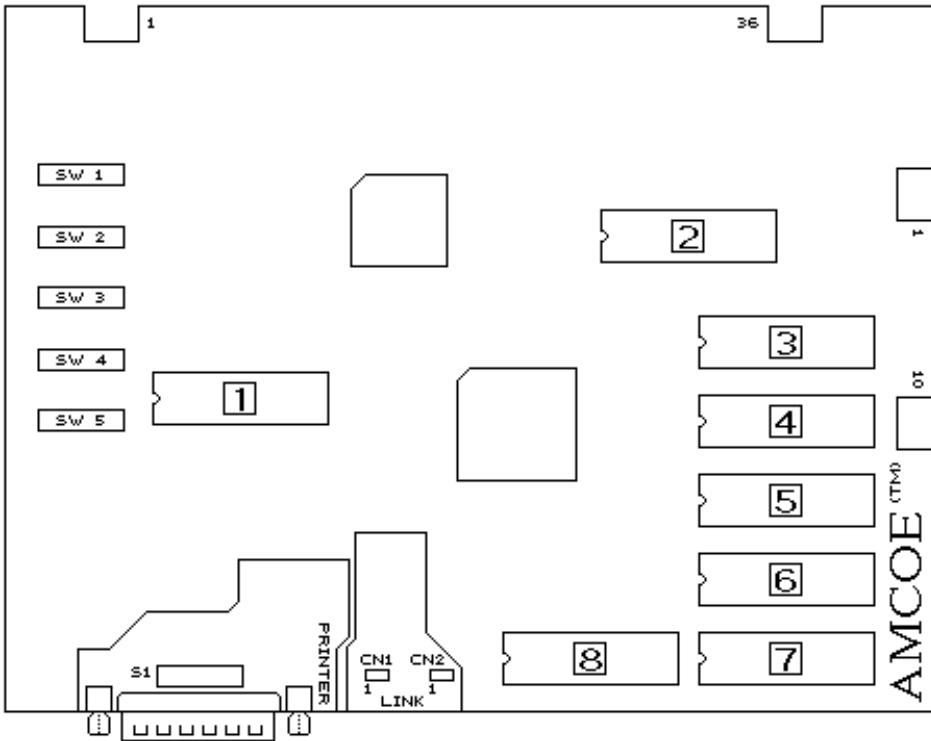
New S2000 board

The new S2000 board is a powerful platform designed to give sophisticated performance, special visual effects, finer resolutions, communication capabilities, and to make it a more cost effective investment.

There are 3 communication ports on the board. The RS232C is primarily used to drive printer to print tickets without any interface. It can also be used to download / upload data and instructions from / to PC. The other 2 communication ports (CN1 and CN2) are mainly for linking with other S2000 boards (and to central console with modem, if required). Application such as linking progressive bonus of all the machines together to display on screen in real time can be done efficiently. (SEE MANUAL OF LINKING)

To drive a printer to print ticket, simply connect with a 25 pin one-to-one cable to the serial port of the printer. Printer ticket set up can be done on screen (or download from PC - SEE MANUAL OF PC DOWNLOAD). Go to Account Screen and follow instructions. The following printer settings have to be adjusted on the printer: BAUD RATE = 9600, WORD LENGTH = 8 BITS, PARITY = NO.
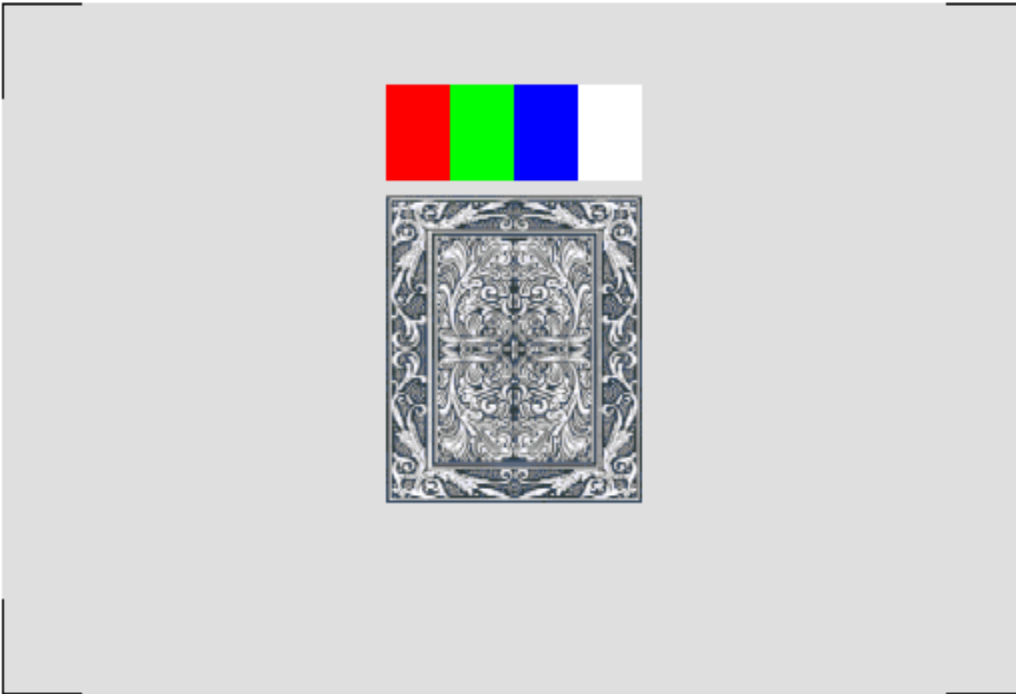
MONITOR ADJUSTMENT

The resolutions of S2000 are 33.3% more than that of New Cherry '96. Sync, V-size, V-pos, H-pos,…etc. may have to be adjusted. After reset or existing Confirm Screen, a test screen (as left) will come up.

1/ Dip Sw 5 # 1 - "OFF" Korean made (most USA brands) monitor; "ON" Taiwanese made.

2/ Adjust Sync to get a stable picture.

3/ Adjust V-size, V-pos, H-size, and H-pos such that all 4 white corner brackets (right-angle shape) can be seen and are a little bit away from the curving edges of monitor.

4/ Adjust color purity. Most monitors may look fine without further adjusting colors, but a re-adjustment will make sure true color representations, not only for the S2000 board but for all other games. There are 4 color bands, a grey & white card, and 4 white corner brackets. The 4 color bands are (pure) red, green, blue, and white. Turn brightness on until background is no longer "black" and turn RGB to the lowest. Turn G up until flare comes out (like a shadow going outside the edge) on white; then, reduce gradually until the flare "just" disappears. Do the same thing with R and B one by one. Lastly, reduce brightness until background is "black".

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DIP SW 5			1	2	3	4	5	6	7	8
MONITOR TYPE	KOREAN MADE		OFF	for most monitors used in USA						
	TAIWANESE MADE		ON							
UNIT ID SETUP FOR PROGRESSIVE LINK BONUS (Control board and link cables required. Program must be Link Version. From Version 2.4 onward.)	NO LINK			OFF	OFF	OFF	OFF			
	UNIT 1			ON	OFF	OFF	OFF			
	UNIT 2			OFF	ON	OFF	OFF			
	UNIT 3			ON	ON	OFF	OFF			
	UNIT 4			OFF	OFF	ON	OFF			
	UNIT 5			ON	OFF	ON	OFF			
	UNIT 6			OFF	ON	ON	OFF			
	UNIT 7			ON	ON	ON	OFF			
	UNIT 8			OFF	OFF	OFF	ON			
	UNIT 9			ON	OFF	OFF	ON			
	UNIT 10			OFF	ON	OFF	ON			
	UNIT 11			ON	ON	OFF	ON			
	UNIT 12			OFF	OFF	ON	ON			
	UNIT 13			ON	OFF	ON	ON			
	UNIT 14			OFF	ON	ON	ON			
	UNIT 15			ON	ON	ON	ON			
RESET DEFAULT Version 2.6 and up	Regular	Texas								
	Coin=1, Clear Unit=1	Coin=5, Clear Unit=10						OFF	OFF	
	Coin=5, Clear Unit=20							ON	OFF	
	Coin=5, Clear Unit=100							OFF	ON	
	Coin=25, Clear Unit=100							ON	ON	
NO USE	MUST BE									OFF

All selections are made on screen or by PC DOWNLOAD except those listed in Dip Sw 5.

Please go to Confirm Screen and following on screen instructions to adjust available selections. Different versions may have different available selections and selectable ranges. Whenever the S2000 board is reset by toggle switch, default settings will be loaded. Check Confirm Screen and make necessary adjustment to suit your operation.

Selections which can be adjusted on screen (not for all versions) are as follow:

LEVEL OF DIFFICULTY: This is game difficulty setting; 8 being the most difficult and 1 being the easiest.

COIN IN TO POINT: It relates to 36 pin edge connector part side 18. 1 pulse in = ?

NOTE IN TO POINT: It relates to 36 pin edge connector solder side 18. 1 pulse in = ?

MIN PLAY TO START: Min point(s) required to start to play a game.

MIN PLAY FOR BONUS: Min points required in order to get bonus features.

MAX PLAY: Max points which can be played in a game.

BONUS BASE: The base point of internal progressive bonus.

BONUS MAX: The max point of internal progressive bonus.

BONUS ACCUMULATE: Whether internal progressive bonus is in fixed mode or progressive mode.

CLEAR / TICKET UNIT: It relates to 36 pin edge connector part side 28. Each pulse out = ? Point(s).

TICKET OUT MODE: It relates to above and regulates max ? pulse(s) out each game. Continuous = no limit.

OLD *AUTO TICKET OUT*: If yes, "SCORE" will appear on screen. All points won will be collected to "SCORE" and pulse(s) will be sent out automatically according to (i) CLEAR / TICKET UNIT and (ii) TICKET OUT MODE.

NEW *USE SCORE*: If yes, "SCORE" will appear on screen. All points won will be collected to "SCORE". Default = NO.

NEW *SCORE OUT*: Manual (default) or Auto.

TICKET OUT BY: It can be Printer Direct*, Ticket Dispenser Direct Drive (TDDD), or Interface.

SHOW ACCOUNT: If no, there is no account information on Account Screen.

SHOW LAST WIN/SCORE: Show the total points won in previous game or procedure (if during bonus features).

WITHOUT ODDS TABLE: Show odds table on screen or not. YES = do not show; NO = show.

LIMIT SCORE PER GAME: Limit SCORE per game play to 10xplay or an equivalent of $5 whichever is less. Recommend to use TX Version instead.

OLD *PLAY REMAIN SCORE*: Only when "SCORE" appears on screen. When no POINT and point in SCORE is less than CLEAR / TICKET UNIT, press PLAY to transfer point from SCORE to play a game.

NEW *PLAY REMAIN SCORE*: Only when "SCORE" appears on screen. Play directly from "SCORE" when no point in POINT column.

COUNT GAME: This is an advanced count game feature counting eligible pulses out based on TICKET OUT MODE.

SKILL SPIN: A non-stop spinning condition and manual stop is mandatory.

DEMO MUSIC: Choose to have it or not.

MATCH BONUS MODE: (i) Beginner Level (ii) Intermediate Level (iii) Advanced Level. (See explanation on screen)

STATE: (for TX version only) Texas, Arkansas, Iowa.

PRINTER TYPE: (Ver 2.5 and up) Use one central printer via Link Control Unit or individual printer installed in machine.

PRINTER COMMAND: (Ver 2.5 and up) CBM1 (Citizen), ESC/POS (Epson), STAR emulation, (Version 2.6~) ithaca70.

USE PASSWORD: (Ver 2.6 & up) NO (default), Service Only, Adjust Only, Service and Adjust. From Version 2.6, reset default = NO password required. Go to Confirm Screen and adjust whatever setting preferred.

NEW! VERSION 2.7 (July 2001) Overall debug, fix, and refinement of program. 2.7I for IOWA, also includes TX refined.

* When using Printer Direct, please go to Account Screen then Printer Ticket Set Up. Remember to do Printer Ticket Set Up again after reset of board!

IMPORTANT: In order to be able to change selections, you must enter a valid password first. Otherwise, you can only view current selections. Obtain your Access Password from your supplier.

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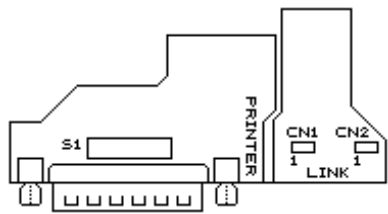
S1	RS232C	1	2	3	4	5	6	7	8
Model S2000	PRINTER PORT & PC DOWNLOAD	OFF	OFF	**ON**	OFF	OFF	**ON**	OFF	OFF
Model S2000A		OFF	**ON**	OFF	**ON**	OFF	OFF	OFF	OFF

*PRINTER: BAUD RATE = 9600, WORD LENGTH = 8 BITS, PARITY = NO.
(Dip Sw settings of Citizen iDP3540/3541 = DS1 # 1,8 ON; DS2 # 2,5,6,7 ON)
(The alarm light of 3550/3551 has to be ON all the time in order to print. 3540/3541/3550/3551 alarm light can be ON all the time)

In Printer Ticket Set Up, there are 3 entries which need to be done carefully. (Others are mainly text messages.)
POINT VALUE: It is the $ value of each point. Immediately after reset, program will detect coin in setting and use the following COIN MODE table to assign the $ value of each point. It can be changed If not using LIMIT SCORE.
TICKET LIMIT: Default is $00.00, meaning no limit. The maximum $ value of a single ticket can be limited from $1 to $99. (CAUTION: do not set TICKET LIMIT-except $00.00-less than POINT VALUE.)
PRINT $ OR POINT ON TICKET: Select between DOLLAR or POINTS (default).

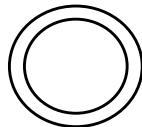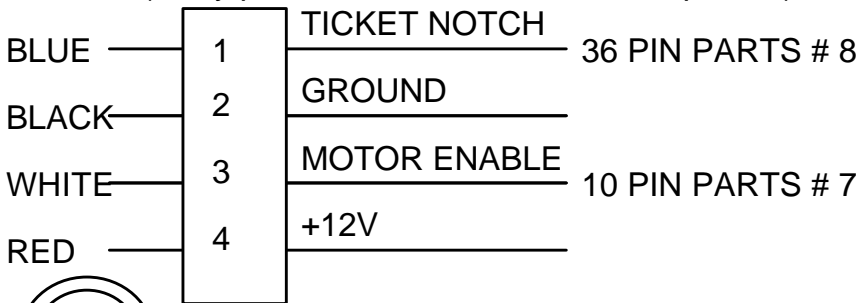## Adjust Ticket Setting and Game Setting by PC DOWNLOAD

S2000 PC DOWNLOAD PROGRAM is distributed FREE. It runs on PC with Windows 95/98. You may obtain a free copy on a 3.5" disk or by downloading it from the internet*. A HELP file will come up the first time you use it after installation. You will find all necessary information on how to adjust BOTH Ticket Setting and Game Setting of your board by PC. PC Download Program will be especially useful in printer ticket set up. Typing name, address, machine number….etc. will be much faster on a computer than through on screen input. On your S2000 board, go to Account Screen and press <DOUBLE> to go to PC download mode. Also, remember to set Dip Sw S1 (near RS232C port) of your board to PC download mode during PC download. Press <TAKE> to exit PC download mode.
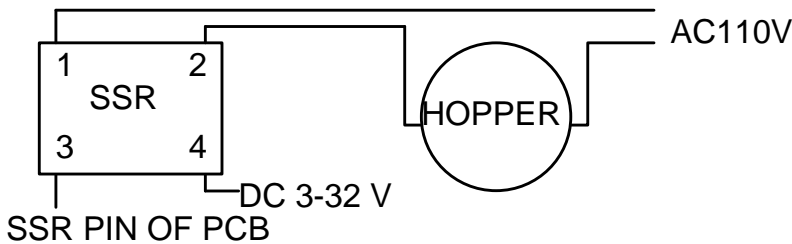* http://www.amcoe.com

COIN MODE	COIN IN SETTING	BILL ACCEPTOR SELECTION		$1 = ? POINTS	LIMIT SCORE
		$1 = 1 PULSE	$1 = 4 PULSES		MAX $5 = ? POINTS
$1 = 1 PT.	1	YES		1	DO NOT USE
$0.50 = 1 PT.	2	YES		2	10
$0.25 = 1 PT.	1		YES	4	20
	4	YES			
$0.10 = 1 PT.	10	YES		10	50
$0.05 = 1 PT.	5		YES	20	100
	20	YES			
$0.01 = 1 PT.	25		YES	100	500
	100	YES			

Ticket Dispenser Direct Drive (TDDD) Connection Diagram

DL-1275 (verify pinouts on manual of ticket dispenser)

BLUE — 1 — TICKET NOTCH — 36 PIN PARTS # 8
BLACK — 2 — GROUND
WHITE — 3 — MOTOR ENABLE — 10 PIN PARTS # 7
RED — 4 — +12V

TICKET OUT BUTTON on control panel connect to 36 PIN PARTS # 7

SSR 1 2 3 4
AC110V
HOPPER
DC 3-32 V
SSR PIN OF PCB

HOPPER CONNECTION

NEW! Detection of Ticket Dispenser being tampered
(using Ticket Dispenser Direct Drive only)
If the ticket dispenser sensor is being tampered, the program will stop the ticket dispenser from running and lock up the game. Power off and on will not cause the game to run again _if you have selected to use SERVICE PASSWORD_. You have to enter a Service Password after power on again in order to resume the game. This will call the attention of an attendant and can deter further attempts.
Service Password is different from Game Setting Access Password.
Also, due to recent reports of variation in ticket dispenser motor speed, sensor timing has been changed to accommodate both old and recent products.
NEW! VERSION 2.7
1/ _Comprehensive_ betting and clearing procedures:
According to your adjustment selections, the program will know how to combine POINT, SCORE, and LINK BONUS WIN POINTS together to bet or to make up CLEAR / TICKET UNIT without mistake or violating desired rules.
2/ Replace AUTO TICKET OUT with USE SCORE and SCORE OUT. When using SCORE, there is an option to choose whether clearing manually or automatically.
3/ If using one printer VIA LINK and another unit is in the process of printing ticket, the program will show "PRINTER BUSY! WAIT" and queue for next available printing. Note: Previous versions will show "PRINTER ERROR" and do not seek for next available printing.

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Game Feature
2 games in 1. A fruit game and a poker game. Player can switch between the 2 during play.

Fruit Game : This one is supposedly the best we ever designed at time of release. There are lots of action. Almost anything won will lead to bonus points or bonus chances.

All Diamond (mixed or same type)	hit 1 time	get All Diamond Bonus Points (progressive)
All Fruit (mixed or same type)	hit 3 times	get All Fruit Bonus Points (progressive)
Match Bonus - (go to Confirm Screen to select)*	win match 9 positions	get Match Bonus Points (x average play)
Red Diamond Line	each line	get 3 Diamond Bonus Chances
Green Diamond Line	each line	get 2 Diamond Bonus Chances
Blue Diamond Line	each line	get 1 Diamond Bonus Chance
Red Bar Line	each line	get 12 Win Double Bonus Chances
Green Bar Line	each line	get 11 Win Double Bonus Chances
Blue Bar Line	each line	get 9 Win Double Bonus Chances
This Special - Grape Line	each line	get 5 Win Double Bonus Chances
This Special - Melon Line	each line	get 5 Win Double Bonus Chances
This Special - Cherry Line	each line	get 5 Win Double Bonus Chances
Reserved for future link progressive: (may vary at time of actual release)		
All Bar (mixed or same type)	hit 1 time	get Link Progressive Mega Bonus

Poker Game : A very simple approach. 2 cards are dealt. The 2 cards may be same or the spread between the 2 cards can be 0 to 11. A third (or middle) card is drawn and placed in between the 2.

2 cards same	pair	no raise	draw	if 3 of a kind, win 11:1; if not, tie - start new hand.
2 cards consecutive (e.g. 7,8)	spread is 0			automatically tie - start new hand.
2 cards (e.g. 9,J)	spread is 1	raise optional	draw	if in between (e.g. 10), win 5:1; If not, lose.
2 cards (e.g. 2,5)	spread is 2	raise optional	draw	if in between (e.g. 3), win 4:1; if not, lose.
2 cards (e.g. 9,K)	spread is 3	raise optional	draw	if in between (e.g. Q), win 3:1; if not, lose.
2 cards	spread 4 to 11	raise optional	draw	if in between, win 1:1; if not, lose.

Raise must be equal to Play. This game allows player to decide what condition is favorable to raise.

Link Bonus
You can link up to 15 units of Action 2000 (and FB2000 & CH2000) together to create a big progressive bonus. A control unit and link cables are required. For detail, please read manual of Linking. Basically, it is very simple, convenient, and cost effective. All mixed Bar is reserved as Link Bonus. Link Bonus Point will appear on screen of each unit in real time. The adjustment of the base, max, and rate of Link Bonus is done in the control unit. All you need on your S2000 board is a program of link version (updated FREE from the internet*) and to set Unit ID by Dip Sw 5.

Match Bonus On the upper left hand corner there is a miniature representation of the reels. It is for Match Bonus. The symbol in Box 1 is the one to be matched. Box 2 to 9 will be filled in sequence. When a similar symbol appears in the waiting box position and it is also on a winning line, it will be posted to the waiting Box. In other words, that Box is filled. When Box 9 is filled, Match Bonus is won.

1	2	3
4	5	6
7	8	9

Match Bonus
(go to Confirm Screen and follow instructions to adjust Match Bonus Mode)

Beginner Level: (Default Level & when board being reset)
(1) Player has to do nothing. The symbol of Box 1 in the first winning line consists of Box 1 will be selected automatically.
(2) Bonus will be carried forward without being erased.

Intermediate Level:
(1) Player is allowed an option to pick which symbol (still symbol of Box 1 in winning line consists of Box 1) as Match Bonus. The reason is some symbols, such as cherry, grape, melon, have less appearance frequency then others, such as red, green, or blue diamond. For example, picking cherry, player has to wait much longer time to win than picking red diamond. Of course, the odds of cherry is higher (x25) than red diamond (x15); but *sometimes* the play time needed to win twice red diamond match is shorter than winning one cherry match. Mathematically, choosing lower odds symbols is sometimes more advantageous. Allowing player to choose

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symbol is allowing player to use strategies.
(2) Bonus will be carried forward without being erased.

Advanced Level:
(1) Player is allowed an option to pick which symbol (still symbol of Box 1 in winning line consists of Box 1) as Match Bonus. Same as Intermediate Level (1).
(2) Player has an option in the first game from demo mode to continue or not the previous Match Bonus left behind by previous player. If he chooses not to continue with the previous Match Bonus, both the Match Bonus Point and the symbol(s) in the box(es) will be erased. He starts anew and picks his preference later (same as (1)). That means Bonus will be carried forward but player has an option to continue or start anew.
Why would player give up what has been accumulated prior to his turn? The answer is strategy - same as explained in Intermediate Level (1). If the match symbol is red bar and has already filled Box 1 & 2, there are 7 more to go. Although it is a x50 win, it is not a bad idea to give it up and pick a blue diamond later, especially if the player does not intend to play for a very long time. For short playing time, it is better to go for lower odds symbols; for prolonged play time and high PLAY, go for higher odds symbols. That is the reason for a smart player to give up prior Bonus. Another example: If the Match Bonus being carried forward is red bar and has only 3 left (Box 7,8,9) to be filled, It is definitely a "continue".
Thus, Advanced Level gives player another option to deal with Match Bonus being carried forward.

In other words, there is a built-in program upgrade which allows operator to gradually introduce something new to the players when the time is right. In new location, put it out in Beginner Level and let the players understand the game first. Then, may be after several months, switch to Intermediate Level. Finally, may be a year later, use Advanced Level. Depend on the learning abilities of the players in a particular location, switch to next level when considered appropriate.

Experiment it yourself if you want to. It is very simple. No reset of board is needed after changing Level.
When Box 1 is empty, reset board if it is not empty, go to Confirm Screen, select Intermediate Level. Back to play the game. You will be asked to pick a symbol when winning line consists of Box 1. Pick it. Play for a little while. Exit to demo mode. Insert coin and see Match Bonus being carried forward. Now, go to select Advanced Level. Back to play the game and exit to demo. Insert coin and you will see what it is like in Advanced Level. You will be asked whether to continue with previous Match Bonus. For safety reason, You have to press your choice twice in order to work. See for yourself.

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TAKE	PLAY	START
STOP 3	RAISE	DRAW
BIG	SMALL	CHANGE
ALL STOP	STOP 2	STOP 1

TAKE	PLAY	START
STOP 3	RAISE	DRAW
BIG	SMALL	CHANGE
ALL STOP	STOP 2	STOP 1

TAKE	PLAY	START
STOP 3	RAISE	DRAW
BIG	SMALL	CHANGE
ALL STOP	STOP 2	STOP 1

TAKE	PLAY	START
STOP 3	RAISE	DRAW
BIG	SMALL	CHANGE
ALL STOP	STOP 2	STOP 1