

Sea World

(Version 1.6E Dual)

MANUAL

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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	EXTRA - STOP 1		4
5	EXTRA - STOP 2	EXTRA - ALL STOP	5
6	EXTRA - STOP 3		6
7	TICKET OUT BUTTON - panel		7
8	TICKET NOTCH - dispenser		8
9	**START / TAKE**		9
10	**STOP 2 / SMALL** (SHARED)		10
11	**PLAY**		11
12	**STOP 3 / TAKE** (SHARED)		12
13	**STOP 1 / DOUBLE** (SHARED)		13
14			14
15			15
16	**ALL STOP / BIG** (SHARED)		16
17			17
18	COIN 1 IN (point value reference)	NOTE IN	18
19	SERVICE IN	COIN 2 IN	19
20	ACCOUNT	CONFIRM / MONITOR SET UP	20
21	HOPPER PAYOUT - panel	CLEAR - panel	21
22		*HOPPER SWITCH - hopper	22
23	COIN 1 IN METER		23
24	NOTE IN METER		24
25			25
26	COIN 2 IN METER		26
27	HOPPER METER		27
28	CLEAR / TICKET METER		28
29	**START / TAKE** LAMP	EXTRA - ALL STOP LAMP	29
30	**STOP 2 / SMALL** LAMP (SHARED)	EXTRA - STOP 1 LAMP	30
31	**PLAY** LAMP	EXTRA - STOP 2 LAMP	31
32	**STOP 3 / TAKE** LAMP (SHARED)	EXTRA - STOP 3 LAMP	32
33	**STOP 1 / DOUBLE** LAMP (SHARED)		33
34	**ALL STOP / BIG** LAMP (SHARED)		34
35			35
36	GND	GND	36

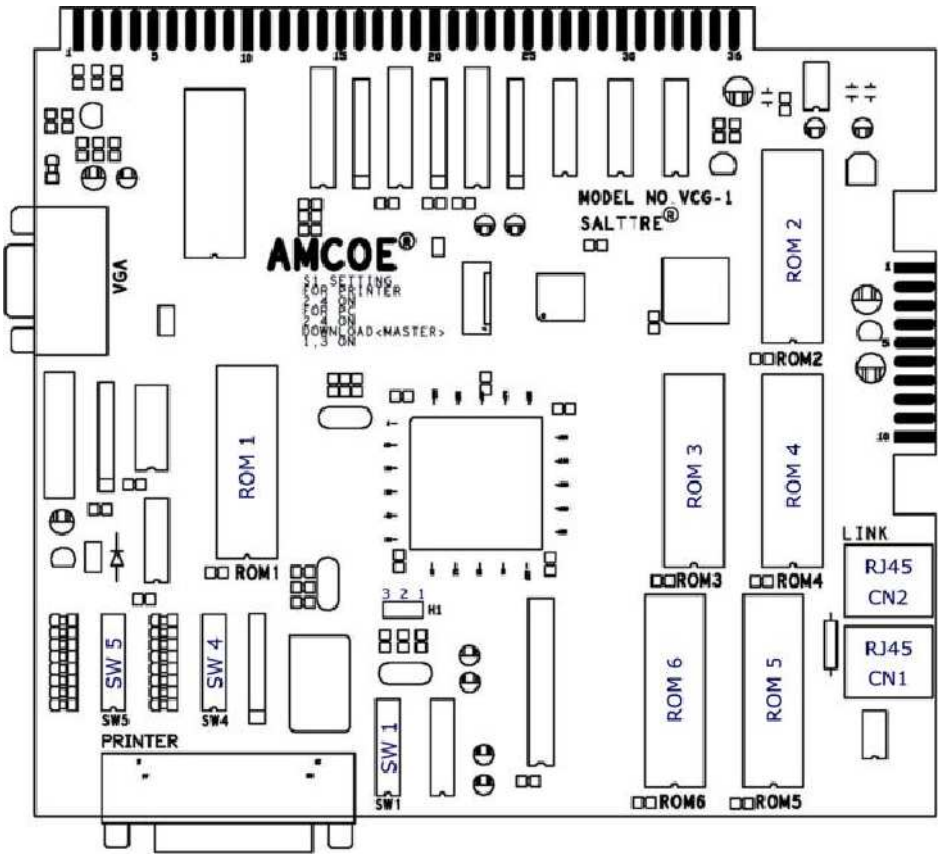
PIN	PARTS SIDE	SOLDER SIDE	PIN
1	GND	GND	1
2	GND	GND	2
3	+5V	+5V	3
4	+5V	+5V	4
5	+12V	+12V	5
6	+12V	+12V	6
7	TICKET DISPENSER ENABLE		7
8	HOPPER SSR		8
9	GND	GND	9
10	GND	GND	10

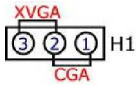
* HOPPER SWITCH - auto detect normal low (mostly micro switch type) or normal high (mostly sensor type)

SHADED PIN OUTS ARE NOT AVAILABLE IN LIMIT WIN VERSION

STOP BUTTONS: SELECT SHARED BUTTON OR EXTRA BUTTON CONFIGURATION.

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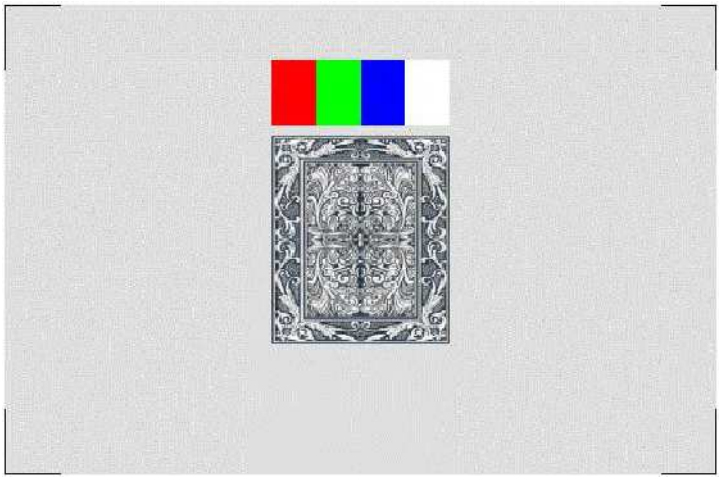




Hardware platform VCG-1 has two types of video output, CGA and XVGA. Jumper H1 (located near SW1) 1 & 2 connected is CGA output; 2 & 3 connected is XVGA output. When using CGA output, connect video output signals on the edge connector. When using XVGA output, use the standard VGA connector on the board; also, monitor used has to support H-scan frequency 31.5kHz and V-scan frequency 120Hz or higher.
ROM1 is the program ROM. ROM1 must match with the type of video output intended to be used.

LINK
Link with all other AMCOE linkable platforms with CAT5 cable. LINK CN1 and CN2 are RJ45.

PRINTER
SW1 #2 & #4 ON is to enable the RS232 port for printer and/or PC download.

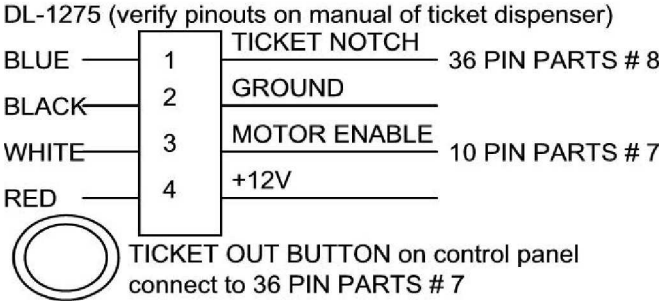


PASSWORD
SW4 #1 ON is default setting. SW4 #1 ON means ***NO*** password. SW4 #1 OFF means password required. The default password is 123456. It can be changed on the Confirm Screen. Reset actions cannot reset user-defined password.

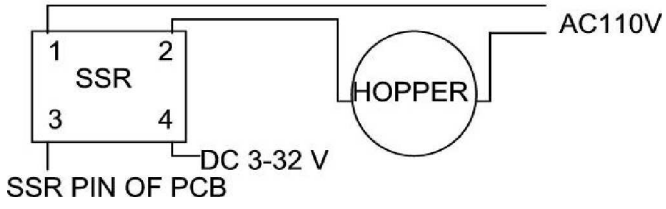
MONITOR ADJUSTMENT
In the monitor adjustment screen, adjust sizes and positions such that the four (4) corner brackets (white color) are visible and close to the corners of the monitor. For CGA monitor, re-tuning of monitor sync may be required in order to obtain the best picture result.

RESET
During power on checking, *before* counting down to 000, press Confirm Switch/Button (36 PIN SOLDER #20). Follow instructions on screen to reset (1) both Adjustment Selections and Data (bookkeeping) or (2) Data (bookkeeping) only.

Ticket Dispenser Connection Diagram
DL-1275 (verify pinouts on manual of ticket dispenser)



Hopper Connection Diagram



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DIP SW 4		1	2	3	4	5	6	7	8
PASSWORD	REQUIRED NOT REQUIRED	OFF ON							
DUAL SUPPORT USE ONLY	CGA OUPUT XVGA OUTPUT		OFF ON						

DIP SW 5		1	2	3	4	5	6	7	8
MONITOR TYPE	KOREAN MADE TAIWANESE MADE	OFF ON	For most monitors used in USA						
UNIT ID SETUP FOR PROGRESSIVE LINK BONUS Each Unit in the Link System must have a unique ID. Monitor used must have an isolation transformer or built-in isolation circuit. Two or more units having the same ID or monitor without an isolation transformer will *DAMAGE* the board. (Link Control Unit and CAT5 patch cable required. To connect with older type 3 pin link connector, a small connector interface board is required. Just one is needed in the entire link system.)	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			
NO USE	MUST BE								OFF

All selections are made on screen except those listed in Dip SW 4 and 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. Check Confirm Screen and make necessary adjustment to suit your operation.

Selections that can be adjusted on screen (**NOT** for all versions) are as follow:

LEVEL OF DIFFICULTY: Default is Level 6.
COIN 1 TO POINT: It relates to 36-pin edge connector part side 18. 1 pulse in =? (Use as reference of the value of each point)
COIN 2 TO POINT: It relates to 36-pin edge connector solder side 19. 1 pulse in =?
KEY IN TO POINT: It relates to 36-pin edge connector solder side 18. 1 pulse in =? (Use key switch signal)
COIN IN LIMIT: Set the total COIN IN limit.
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.
EACH LINE PLAY: Select increment unit on a line play = 1 (default) to 10.
CLEAR / TICKET UNIT: It relates to 36-pin edge connector part side 28. Each pulse out =? point(s).
TICKET MODE: It relates to above and regulates max? pulse(s) out each game. Continuous = no limit.
TICKET OUT: Ticket Dispenser Direct Drive or Interface in Compact Format board. Printer Direct, TDDD or Interface in Full Format board.
PRINTER TYPE: Use one central printer via Link Control Unit (VIA LINK) or individual printer installed in machine (USE SELF).
PRINTER COMMAND: CBM1 (Citizen) (default), ESC/POS (Epson), STAR emulation, Ithaca 70.
SYMBOLS: Fruit or Fish (default).
HOPPER UNIT USE: Use COIN 1 TO POINT or CLEAR / TICKET UNIT as reference.
CHANGE PASSWORD: Select YES when you want to change User Defined Password. Factory Default = 123456
USE SCORE: If yes, "SCORE" will appear on screen. All points won will be collected to "SCORE". Default = NO.
SCORE OUT: Manual (default) or Auto.
LIMIT SCORE PER GAME: Limit SCORE per game play to 10 x PLAY or an equivalent of $5 whichever is less. (Use LW Version instead.)
PLAY REMAIN SCORE: Only when "SCORE" appears on screen. Play directly from "SCORE" when no point left in POINT column.

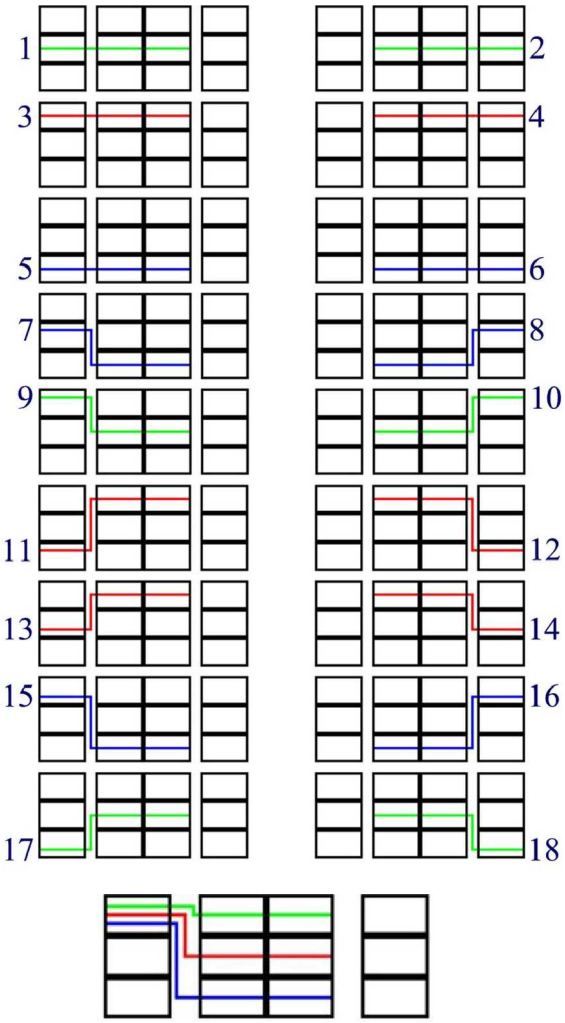
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COUNT GAME: This is an advanced count game feature counting eligible pulses out based on TICKET MODE.
SHOW ACCOUNT: If no, there is no account information on Account Screen.
WITHOUT ODDS TABLE: Show odds table on screen or not. YES = do not show; NO = show.
SKILL SPIN: A non-stop spinning condition and manual stop is mandatory.
REEL SPEED: NORMAL (default) or SLOW.
DOUBLE GAME: YES (default) or NO.
NO REEL SPIN: NO (default) or YES (no reel spinning)
HOLD FEATURE: YES (default) or NO (see explanation note below)
USE AS SKILL HOLD GAME: NO (default) or YES.

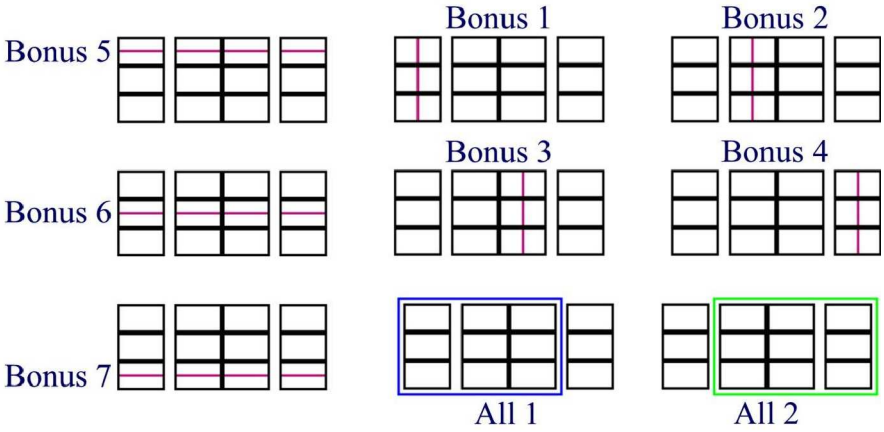
The following are available in LIMIT WIN VERSION only:
WIN LIMIT: Default = (1) $5 & 10X (whichever is less) XT style. (2) $5 & 10X NSW (not show win point) XT style. (3) $5 & 10X (whichever is less) TX style. (4) $5 & 10X NSW (not show win point) TX style. (5) $5 ONLY (do not check 10X). (Available in LIMIT WIN VERSION program only.)
HIT FREQ: Available in LIMIT WIN VERSION program only.

Additional selections not mentioned here maybe available in some versions.
CAUTION: Factory is unable to retrieve your User Defined Password. You must remember it yourself.
WARNING: DO NOT PUT IN PROGRAM ROM THAT IS NOT DESIGNED FOR THIS GAME.
SHADED ADJUSTMENT SELECTIONS ARE NOT AVAILABLE IN LIMIT WIN VERSION.
Access the Link Control Unit (the program of the Link Control Unit must be Version 1.9 or newer): When in LINK, go to Account Screen. Press ACCOUNT button once will go to a download page. Account information of the entire Link System will be downloaded to the screen. After viewing, follow instruction on screen to (1) erase the recent record inside the Link Control Unit, if wanted to, or (2) exit.

SEA WORLD - A new multi-line game of excellent performance



Sea World, which is the first release of the new (patent pending) multi-line game series, has 18 wager lines and 7 non-wager bonus lines. Non-wager bonus line is not a re-use or duplicate of any wager line. There are 2 All Win sections; each section is made up of 9 reel frames.
During wager mode, before start of game, press SMALL to view details.



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FREE GAMES and BONUS GAME

Any type of similar symbols on a bonus line (3 on bonus line 1 – 4 and 4 on bonus line 5 – 7) will get extra free games or bonus game.

(1) There is a total of 11 types of symbol in Sea World. Ten types will be awarded free games and one type (symbol is ANCHOR) will go into bonus game.
(2) The number of free games awarded varies with each type of symbol and depends on which bonus line.
(3) Bonus game is a diver catching fishes underwater. There is no limit of how many chances. Win point depends on the amount of total wager. Total win points in a single bonus game can be very high, much higher than progressive bonus in conventional design. A bonus game ends when a shark comes out to attack the diver.

HOLD FEATURE in main game

This is a selectable option. By default, hold feature is used and it is recommended in Sea World because of the new game structure. If this feature is enabled, when there is no winning at the end of a game play, the player is allowed, but up to his decision, to hold one to two sets of qualified symbol for the next game *if such set(s) is/are present on the screen*.

Qualified symbol set can be one of the following:

(1) a single Dolphin, (2) two symbols of the same type in a wager line, (3) two symbols of a *mixed group* in a wager line, (4) six or more symbols of the same type anywhere, (5) six or more symbols of a mixed group anywhere.

In Line Win, there are 2 mixed groups. (i) GREEN CRAB, BLUE CRAB and RED CRAB form one mixed group; (ii) ANCHOR, STEER WHEEL and BELL form another mixed group.

In All Win section, there are 3 mixed groups. In addition to the two groups used in Line Win, four (4) kinds of fish form a mixed group as well in All Win section. In case of using fruit symbol instead of fish symbol, four (4) kinds of fruit will form a mixed group.

In Sea World, hold for All Win of a mixed group is highly favorable.

Since bonus line is not a re-use or duplicate of wager line, holding symbols on wager line will not affect the probability of bonus line as much as in conventional design.

USE AS SKILL HOLD GAME

Sea World can be used as a skill hold game. In skill hold game mode, each main game is comprised of 2 spins or procedures. The initial spin or procedure will not produce any immediate winning (combination). It will, however, produce two or more sets of qualified symbol for hold. In Sea World, the possible combinations to choose and hold are generally more than in conventional design. The player has to decide and must hold at least one and no more than two sets for the final spin or procedure. A game result is the end result of the final spin or procedure.

LINK BONUS: Link with other S2000 and S2000C series games. When linking, all mixed CRAB (in one of the two All Win sections) will get LINK BONUS. See the manual of LINK as well.

All Version 1.3~ : Verify each item win one-by-one with sub-total shown. After win, during Take/Double waiting mode, lower right corner of screen will display "PRESS PLAY CHECK WIN" with PLAY lamp turned on as well. Press PLAY button repeatedly will go through and show individual item win one by one. Also, each related individual wager X odds of item = win of (that) related item will be shown. Sub-total of number of items gone through will be displayed. At the last item, the final group total will be displayed and it shall be the same as the " YOU WIN xxxxxx " normally displayed during Take/Double waiting mode. This is an added function to aid the player analyzing the win result when he wants to.

VERSION 1.3R~

Special Selection added: **USE DOLLAR VALUE SCREEN**: NO or YES

If YES, all points, including Link Bonus, will be displayed in dollar value style, either **3**21 (underlining the cents) or **3.**21(decimal before cents), without $ sign. The following COIN IN reference table will be used by the program.

COIN MODE	COIN IN SETTING	BILL ACCEPTOR SELECTION		$1 = ? POINTS	LIMIT SCORE
		$1 = 1 PULSE	$1 = 4 PULSES		MAX $5 = ? POINTS
$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			
$0.02 = 1 PT.	50	YES		50	250
$0.01 = 1 PT.	25		YES	100	500
	100	YES			

What are the advantages of using dollar value screen?

1/ The value of each point of a multi-line game is usually lower because it will require more wagered points to cover all the possible lines. In location where it is not flexible enough to deal with machines of varying point values, using dollar value screen will eliminate the burden of calculation and classification.

2/ Using whatever value of each point is more flexible. For example: set bill acceptor to $1 = 1 pulse and Coin 1 = 50 and you will have a 2-penny machine. It will increase your income. Both the player and the attendant do not have to do any math work. When a dollar bill is inserted, it will display **1**00 automatically.

3/ There is no need to set minimum bet to start and minimum bet for bonus to the multiple of number of lines (18). The new format is designed to allow even distribution between left and right side wagers. Any selectable value can be used; just use dollar value as reference to pick what is the minimum bet to start / for bonus you like.

4/ Keep track of actual income in dollar value even when you have changed dollar value of each point during operation and even when USE DOLLAR VALUE SCREEN is selected NO.

5/ On Confirm/Set Up Screen, the dollar value of COIN 1…up to CLEAR/TICKET UNIT will be displayed for easy reference, even if you are NOT using dollar value screen.

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PUSH BUTTON LEGEND

ALL STOP BIG	STOP 1 DOUBLE	STOP 2 SMALL check	STOP 3 TAKE
TAKE START	PLAY		

WITHOUT HOLD FEATURE

ALL STOP BIG HOLD 1	STOP 1 DOUBLE Help Hold	STOP 2 SMALL check	STOP 3 TAKE HOLD 2
	PLAY	TAKE START	

WITH HOLD FEATURE

SHARED BUTTON CONFIGURATION

TAKE START	ALL STOP	STOP 1	STOP 2	STOP 3
PLAY	BIG HOLD 1	DOUBLE Help Hold	SMALL CHECK	TAKE HOLD 2

WITHOUT HOLD FEATURE

TAKE START	ALL STOP	STOP 1	STOP 2	STOP 3
PLAY	BIG HOLD 1	DOUBLE Help Hold	SMALL CHECK	TAKE HOLD 2

WITH HOLD FEATURE

EXTRA BUTTON CONFIGURATION

Note: The function of Hold 1 and Hold 2 is different. Both buttons shall be installed. Buttons on control panel are also used to make selections in Confirm/Adjustment Screen, Printer Setup Screen and Account Screen; therefore, at least all six buttons shown in shared button configuration shall be installed.