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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 – for ticket dispenser direct drive		7
8	TICKET NOTCH – ticket 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 / SET UP	20
21	HOPPER PAYOUT - panel	CLEAR / PRINTER / INTERFACE - 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.
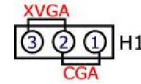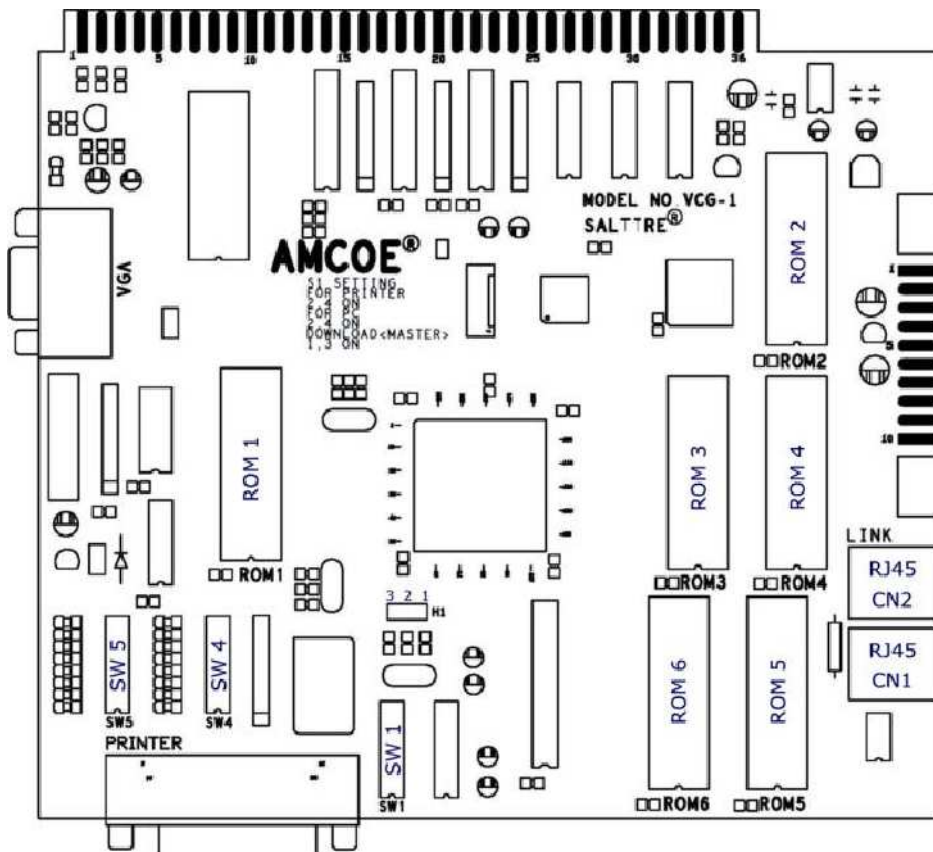
Hardware platform VCG-1 has two types of video output, CGA and XVGA. Jumper H1 (located near SW1) 1 & 2 connected is CGA output; 2 & 3 connected is XVGA output. When using CGA output, connect video output signals on the edge connector. When using XVGA output, use the standard VGA connector on the board; also, monitor used has to support H-scan frequency 31.5kHz and V-scan frequency 120Hz or higher.
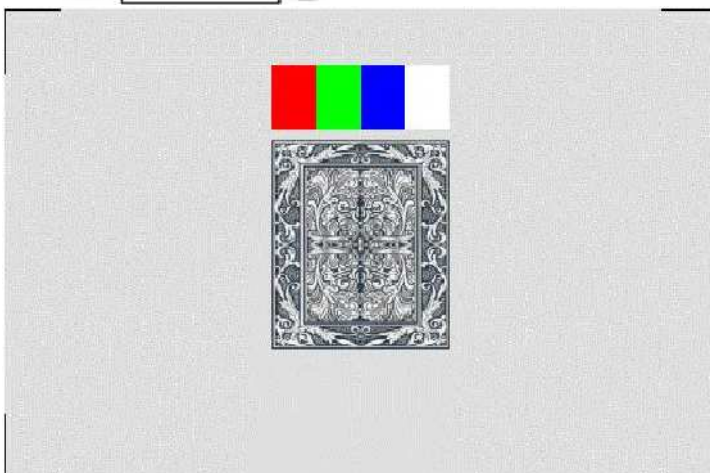
ROM1 is the program ROM. ROM1 must match with the type of video output intended to be used.

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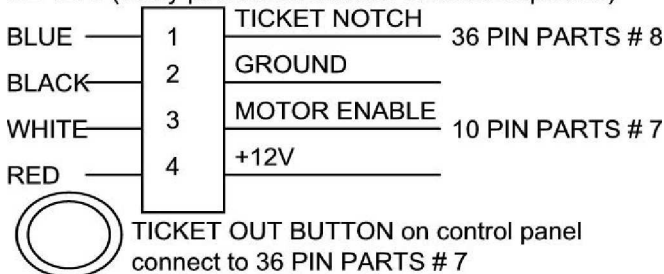
PASSWORD
SW4 #1 ON is default setting. SW4 #1 ON means **NO** password. SW4 #1 OFF means password required. The default password is 123456. It can be changed on the Confirm Screen. Reset actions cannot reset user-defined password.

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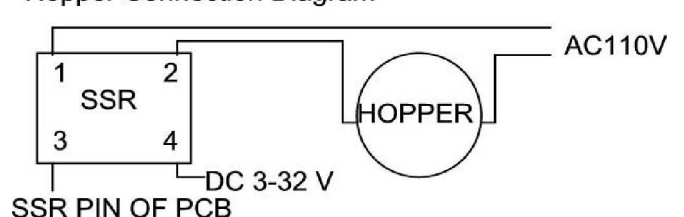
RESET
During power on checking, _before_ counting down to 000, press Confirm Switch/Button (36 PIN SOLDER #20). Follow instructions on screen to reset (1) both Adjustment Selections and Data (bookkeeping) or (2) Data (bookkeeping) only.

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

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

Hopper Connection Diagram

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

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	NO LINK		OFF	OFF	OFF	OFF			
Each Unit in the Link System must have a unique ID.	UNIT 1		ON	OFF	OFF	OFF			
Monitor used must have an isolation transformer or built-in isolation circuit.	UNIT 2		OFF	ON	OFF	OFF			
	UNIT 3		ON	ON	OFF	OFF			
Two or more units having the same ID or monitor without an isolation transformer will *DAMAGE* the board.	UNIT 4		OFF	OFF	ON	OFF			
	UNIT 5		ON	OFF	ON	OFF			
	UNIT 6		OFF	ON	ON	OFF			
	UNIT 7		ON	ON	ON	OFF			
(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.)	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.
FIXED BONUS: Select fixed bonus of ALL ANT.
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.
USE DOLLAR VALUE SCREEN: NO (default) or YES (in Regular Version only).
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.
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)

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SHOW ALL FRUIT FULL PTS: YES or NO (see explanation note (a) below)
AUTO PLAY OPTION: YES or NO (see explanation note (b) below)
HOLD FEATURE: NO (default) or YES (available in VERSION 1.3 & after)

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 might be available in some versions.
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.

SPECIAL SELECTION: **USE DOLLAR VALUE SCREEN** (in Regular Version only)
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 program will use the following table:

COIN MODE	COIN 1 TO POINT	BILL ACCEPTOR SELECTION		$1 = how many POINTS	LIMIT SCORE
		$1 = 1 PULSE	$1 = 4 PULSES		MAX $5 = how many 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/ In location where it is not flexible enough to deal with machines of different point values, using dollar value screen will eliminate the burden of calculation and classification.
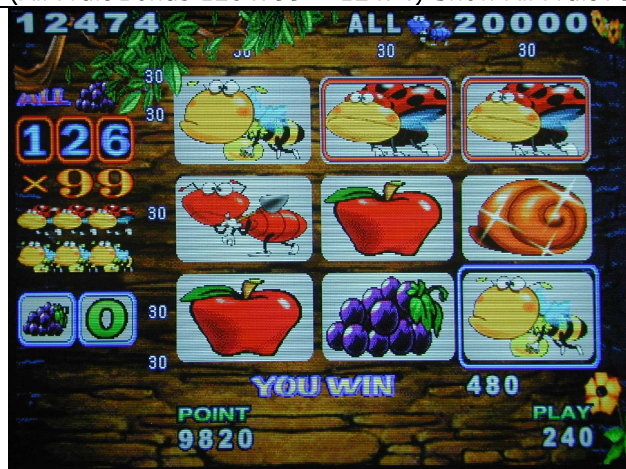2/ Using whatever value of each point is more flexible. For example: set bill acceptor to $1 = 1 pulse and Coin 1 = 50 and you will have a 2-penny machine. Both the player and the attendant do not have to do any math work. When a dollar bill is inserted, it will be displayed as **1**00 automatically.
3/ Keep track of actual income in dollar value even when you have changed the dollar value of each point during operation and even when USE DOLLAR VALUE SCREEN is selected NO.
4/ On Confirm/Set Up Screen, the dollar value of COIN 1…up to CLEAR/TICKET UNIT will be displayed as cross reference, even if you are NOT using dollar value screen.

(a) All Fruit Varying Bonus is made up of 3 rolling digits times a multiplier of 2 digits. The resulting points (after multiplication) will not be displayed normally except when hitting All Fruit. There is an option to display the resulting points (after multiplication) all the time on the top left hand corner. This option is selected by setting **SHOW ALL FRUIT FULL PTS** to YES.

(All Fruit Bonus 126 x 99 = 12474) Show All Fruit Full Pts	(All Fruit Bonus 143 x 99 = 14157) Normal screen

(b) When **AUTO PLAY OPTION** is set to YES, player can press DOUBLE during wager mode to activate auto play mode. Auto play mode will not go into DOUBLE GAME and will play the same amount of points every game according to player's choice before activation. Pressing any valid button (as in usual game play) in wager mode or take/double mode, *except stop buttons during spinning process*, will deactivate it. Red color "auto play" words will appear on screen when auto play mode is active. Auto Play merely replaces pressing START button repeatedly. In non-stop spinning, pressing stop buttons is still needed.

Highlight of **Bugs Fever**™ Game Features

ALL ANT FIXED BONUS
All 9 ants of the same color or mixed color will get ALL ANT FIXED BONUS, which level can be adjusted.

ALL FRUIT VARYING BONUS
This bonus keeps changing every game and depends on the Total Play. It is comprised of 3 rolling digits and a multiplier of 2 digits. Thus, the maximum is 999 x 99 = 98901.

BONUS GAME
The winning of a Beetle-Beetle-Beetle line or a Bee-Bee-Bee line will go into a round of BONUS GAME. That is if there are three winning lines of such in a game, there will be three rounds of BONUS GAME.
In a round of Bonus Game, two ants will dig up something from the ground. If the ant digs up a treasure, points will be awarded. The number of points awarded depends on the Total Play and random factor. If the ant digs up a bomb, there are two scenarios; either the bomb will explode or it will not. The two ants keep on digging up something from the ground until an exploded bomb. If the first ant digs up an exploded bomb, the second ant will still have the last chance to dig one more time.

FREE GAME
There is a small reel window on the left side of the main screen. During every main game spin, the small reel is also spinning simultaneously. There is a blue window frame that will move from one main reel window to another until the spin stops. At the end of the spin, if the symbol inside the small reel window matches the symbol in the main reel where the blue window frame rests, FREE GAME will be given. The number of free games awarded will be determined by a separate process. Next to the small reel that contains symbols is another small reel that contains a group of numbers from 1 to 11. Whenever there is a match situation, after TAKE or DOUBLE, the number reel will spin to get the number of free games that shall be awarded subsequently.

FIREWORK – CHANGING SYMBOL
At the end of a main game or free game spin, there is a possibility that one of the symbols will be replaced. The rule is the symbol change will only generate an end result that is better than the original one. First, the original symbol to be replaced will blink couple times with the alert of special sound effect. Then, it will disappear and firework will come out. Near the end of firework, the new symbol will appear.
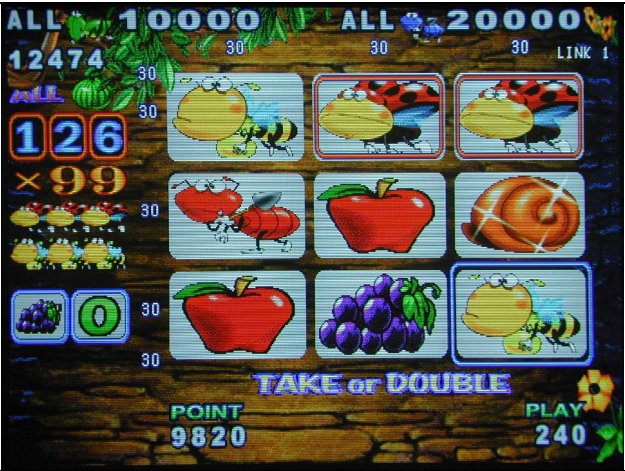
DOUBLE GAME
An ant will bite a chunk of soil that wraps something inside. Any eatable object, hotdog or ice cream, is considered win and a piece of metal such as bolt nut will be considered lost. There is an ant in the right hand side and another in the left hand side. The player's job is simple; he just needs to choose which side will bite an eatable object.

LINK BONUS
Link with other S2000 and S2000C series games. When linking, all 9 bees, grasshoppers, snails or a mix of the three will get LINK BONUS. Link Bonus will appear on the top left hand corner of the screen when in link and will not be displayed when not linking. In case of using SHOW ALL FRUIT FULL PTS, the all fruit full pts will be moved down underneath LINK BONUS on the screen. See the manual of LINK as well.

(Example: LINK BONUS is at 10000)	(GAME RULE Screen – press SMALL during wager mode)

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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**	**DOUBLE**	**SMALL** **CHECK**	**TAKE**

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.