MANUAL
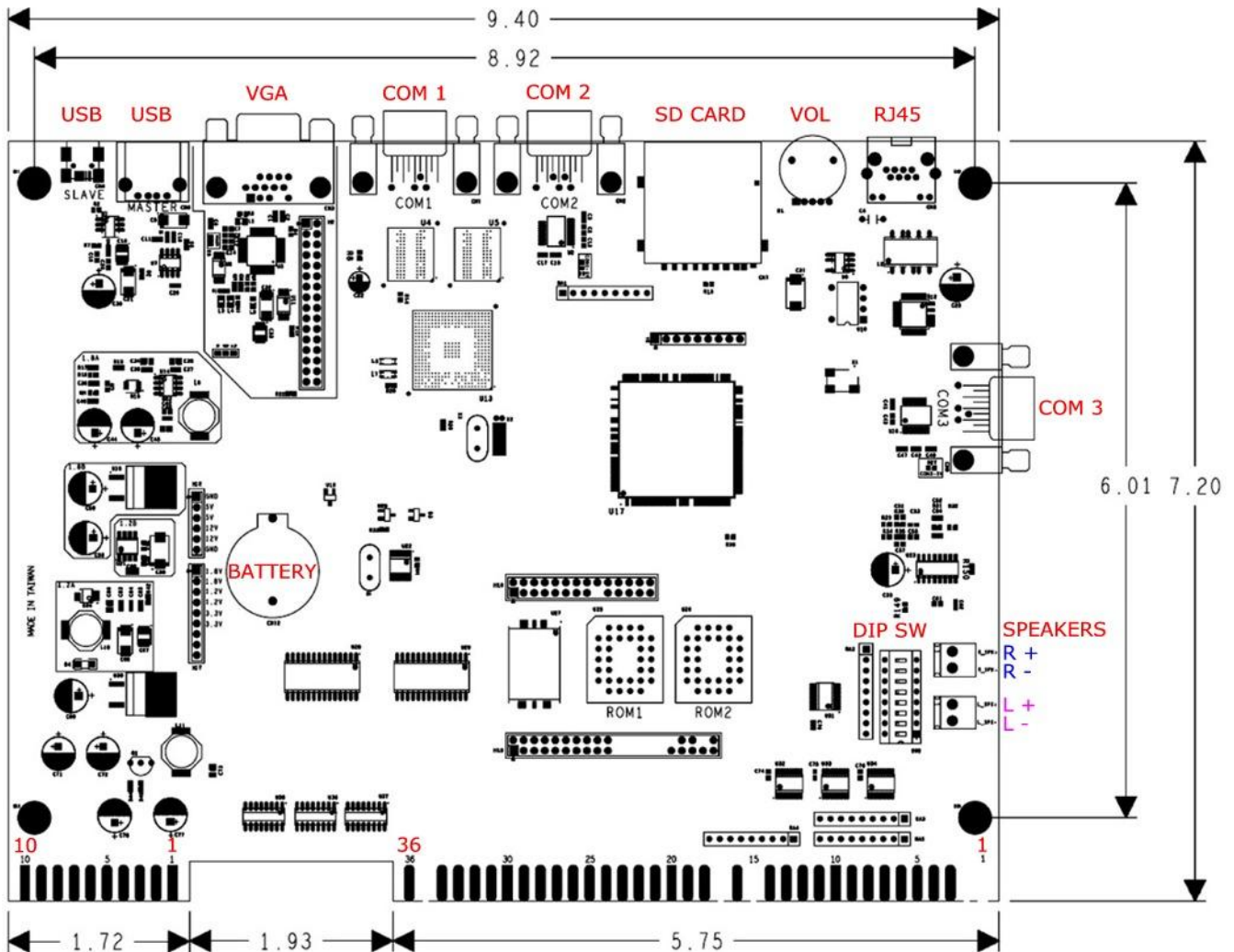**U.S.A. REGULAR VERSION**

Caution: there are components on the solder side; do not press solder side on hard surface or metal surface; elevate the board about ½ inch from surface.

Resolution: XGA 1024 x 768
Color: 32-bit true color
Sound: 44.1 kHz CD quality stereo
Graphic: 2D & 3D
Movie: 3D Motion Pictures

USB 2.0: 2 (slave, master)
VGA DB25 connector: 1
RS232: 3 (COM1, COM2, COM3)
SD CARD READER: 1 (SD card not included)
VOLUME: 1
RJ45: 1
RIGHT CHANNEL: 1
LEFT CHANNEL: 1
DIP SWITCH: 1
BATTERY: CR2032 3.0V

Edge Connectors

	Push Buttons (on control panel)
	Peripherals (Internal)
	Key Switches (on external side of metal cabinet) – short & release type

CAUTION: Speaker (-) negative must NOT be connected to GND; connect to speaker directly.

PIN	PARTS SIDE	SOLDER SIDE	PIN
1			1
2			2
3			3
4			4
5			5
6			6
7	TICKET OUT (button on panel)		7
8	TICKET NOTCH – ticket dispenser		8
9	**START / ALL STOP**		9
10	**RULES / STOP 4 / RIGHT** (SMALL)	SPEAKER LEFT +	10
11	**PLAY / STOP 1 / CHECK** (BET / WAGER)	SPEAKER LEFT -	11
12	**TAKE / STOP 5**		12
13	**DOUBLE / STOP 3**	SPEAKER RIGHT +	13
14	(Not used in this game)	SPEAKER RIGHT -	14
15			15
16	**LINES / STOP 2 / LEFT** (BIG)		16
17			17
18	COIN 1 IN	KEY IN *(optional)*	18
19	SERVICE IN (button inside cabinet)	COIN 2 IN	19
20	SERVICE MENU (button inside cabinet)	SERVICE MENU *(unique)*	20
21	**HOPPER PAYOUT** (button on panel)	KEY OUT (or PRINTER OUT on panel)	2 1
22	(Not used in this game)	*HOPPER SWITCH - hopper	22
23	COIN 1 IN METER		23
24	KEY IN METER *(optional)*		24
25			25
26	COIN 2 IN METER		26
27	HOPPER OUT METER		27
28	KEY OUT METER		28
29	**START / ALL STOP** LAMP		29
30	**RULES / STOP 4 / RIGHT** LAMP		30
31	**PLAY / STOP 1 / CHECK** LAMP		31
32	**TAKE / STOP 5** LAMP		32
33	**DOUBLE / STOP 3** LAMP		33
34	**LINES / STOP 2 / LEFT** 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	TICKET DISPENSER ENABLE	7
8	HOPPER SSR	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)

VERSION: US1.0R

SERVICE MENU

SET-UP & DIP SW & KEY PORT TEST
ACCOUNT INFORMATION
MAIN GAME HISTORY
I/O TIMING
SET DATE & TIME
RS232 PRINTER & TICKET SET-UP
RS232 BILL ACCEPTOR
RESET

SMALL=DOWN BIG=UP DOUBLE=ENTER START=EXIT

SERVICE MENU MAIN PAGE

1/ Press SERVICE MENU button / switch to enter SERVICE MENU main page.

2/ A list of available services will be shown (subject to changes and vary with different program versions).

3/ Press SMALL button to scroll down; press BIG button to scroll up; press DOUBLE button to enter; press START button to exit SERVICE MENU.

4/ Available services (at time of publication) are:
- a) SET-UP & KEY PORT TEST
- b) ACCOUNT INFORMATION
- c) MAIN GAME HISTORY
- d) I/O TIMING
- e) SET DATE & TIME
- f) RS232 PRINTER & TICKET SET-UP
- g) RS232 BILL ACCEPTOR
- h) RESET

VERSION: USA 1.2R

MAIN PERCENTAGE: 92%	DIP SWITCH

MAIN PERCENTAGE: 92%
COIN 1 TO POINT: 25
COIN 2 TO POINT: 25
KEY IN TO POINT: 1000
COIN IN LIMIT: 100000
MIN PLAY TO START: 25
MIN PLAY FOR BONUS: 25
MAX PLAY EACH LINE: 30
BONUS 1 FULL POINTS: 100000
BONUS 2 FULL POINTS: 50000
BONUS 3 FULL POINTS: 20000
KEY OUT/TICKET UNIT: 10
KEY OUT/TICKET MODE: NO LIMIT
TICKET OUT: PRINTER DIRECT
HOPPER UNIT USE: COIN 1
HOPPER LIMIT: 400 TOKENS
USE SCORE: NO
SCORE OUT: MANUAL
LIMIT SCORE PER GAME: NO
PLAY REMAIN SCORE: NO
COUNT GAME: NO
SHOW ACCOUNT: YES
NON-STOP SKILL SPIN: NO
BOUNCE AT END OF SPIN: YES
DOUBLE GAME: YES
BACKGROUND MUSIC: YES

DIP SWITCH

1	2	3	4	5	6	7	8
OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

KEY PORT TEST
START PLAY BIG DOUBLE SMALL TAKE
STOP-1 STOP-2 STOP-3 STOP-4 STOP-5
CANCEL CHECK ACCOUNT SET-UP KEY-IN
PRINTER-OUT TICKET-OUT HOPPER-OUT

TICKET NOTCH=0
HOPPER SWITCH=1

SMALL=DOWN BIG=UP DOUBLE=CHANGE START=EXIT TAKE=DIP SW & KEY PORT TEST

SET-UP & KEY PORT TEST PAGE (Version 1.2~)

1/ This page is divided into two (2) sections – SET-UP and KEY PORT TEST.

2/ In SET-UP, Press SMALL button to scroll down; press BIG button to scroll up; press DOUBLE button to change value; press TAKE button go to KEY PORT TEST; press START button to exit.

3/ In SET-UP, there is a list of items available for adjustment. These items are subject to changes and vary with different program versions. Available items (at time of publication) are:
1) MAIN PERCENTAGE
2) COIN 1 TO POINT (1 pulse signal = how many GAME POINT)
3) COIN 2 TO POINT (1 pulse signal = how many GAME POINT)
4) KEY IN TO POINT (1 pulse signal = how many GAME POINT)
5) COIN IN LIMIT (>=value cannot put in more points; but do not affect the winning of points)
6) MIN PLAY TO START
7) MIN PLAY FOR BONUS
8) MAX PLAY EACH LINE
9) BONUS 1 FULL POINTS (refer to Main Game BONUS 1 – Majestic Scroll – see Game Rules)
10) BONUS 2 FULL POINTS (refer to Main Game BONUS 2 – Treasure Box – see Game Rules)
11) BONUS 3 FULL POINTS (refer to Main Game BONUS 3 – Horn & Flag – see Game Rules)
12) KEY OUT/TICKET UNIT
13) KEY OUT/TICKET MODE (default=NO LIMIT – until GAME POINT < KEY OUT/TICKET UNIT; 1 UNIT/GAME means 1 KEY OUT/TICKET UNIT per game…etc.)
14) TICKET OUT (PRINTER DIRECT, INTERFACE BOARD or DISPENSER DIRECT)
15) HOPPER UNIT USE (can use COIN 1, COIN 2 or KEY OUT/TICKET UNIT as reference)
16) HOPPER LIMIT (UNTIL EMPTY, 500 TOKENS, 400 TOKENS *(default)*, 300 TOKENS)

17) USE SCORE (if YES, Main Game will display a SCORE BOX, winning points will be collected to SCORE BOX and NOT to GAME POINT; only SCORE POINT can be *out*)

18) SCORE OUT (default=MANUAL – player/attendant activates; AUTO=program activates at the end of each game)

19) LIMIT SCORE PER GAME (if YES, same as USE SCORE=YES plus limiting the winning points to SCORE BOX to *not more than ten times of PLAY (BET) or $5.00, whichever the less*)

20) PLAY REMAIN SCORE (if YES, when GAME POINT=0, allow to PLAY (BET) from SCORE POINT.

21) COUNT GAME (use in conjunction with KEY OUT/TICKET MODE to limit *out*)

22) SHOW ACCOUNT

23) NON-STOP SKILL SPIN (if YES, reel spinning will not stop until STOP buttons are activated)

24) BOUNCE AT END OF SPIN

25) DOUBLE GAME

26) BACKGROUND MUSIC (Version 1.2~)

4/ Hopper Payout Limit is adjustable. Default is limited to not over 400 tokens. If over 400 tokens, screen will display "CALL ATTENDANT" when Hopper Payout Button is pressed. Attendant shall use KEY-OUT to payout for the player. If Hopper Payout Limit is 'UNTIL EMPTY', payout until there is no token in the hopper.

5/ In KEY PORT TEST, there are three (3) areas of indication. Press PLAY (BET) to return to SET-UP.

1) DIP SWITCH

2) KEY PORT TEST (highlighted = active or short; press button to see)

3) The status of TICKET NOTCH and HOPPER SWITCH (0 = low; 1=high)

6/ RESET will not change SET-UP.

```
VERSION: US1.0R



MAIN GAMES: 22208
MAIN POINTS PLAYED: 8611600
MAIN GROUP POINTS WON: 7951659
MAIN GROUP PERCENTAGE: 92.34
DOUBLE POINTS PLAYED: 0
DOUBLE POINTS WON: 0
DOUBLE PERCENTAGE: 0.00 (POINTS TOO SMALL TO CALCULATE)
TOTAL POINTS IN: 2071850
TOTAL POINTS OUT: 1402530
TOTAL PAYOUT PERCENTAGE: 67.69
RECENT POINTS IN: 2071850
RECENT POINTS OUT: 1402530
RECENT PAYOUT PERCENTAGE: 67.69
BONUS 1(POINTS): FULL=0 1/2=0 1/4=75000
BONUS 2(POINTS): FULL=0 1/2=25000 1/4=150000
BONUS 3(POINTS): FULL=40000 1/2=60000 1/4=155000
AVERAGE MAIN PLAY (POINTS): 356
AVERAGE POINTS TO ENTER DOUBLE GAME: 0




BIG=CLEAR RECENT IN&OUT START=EXIT
```

ACCOUNT INFORMATION PAGE

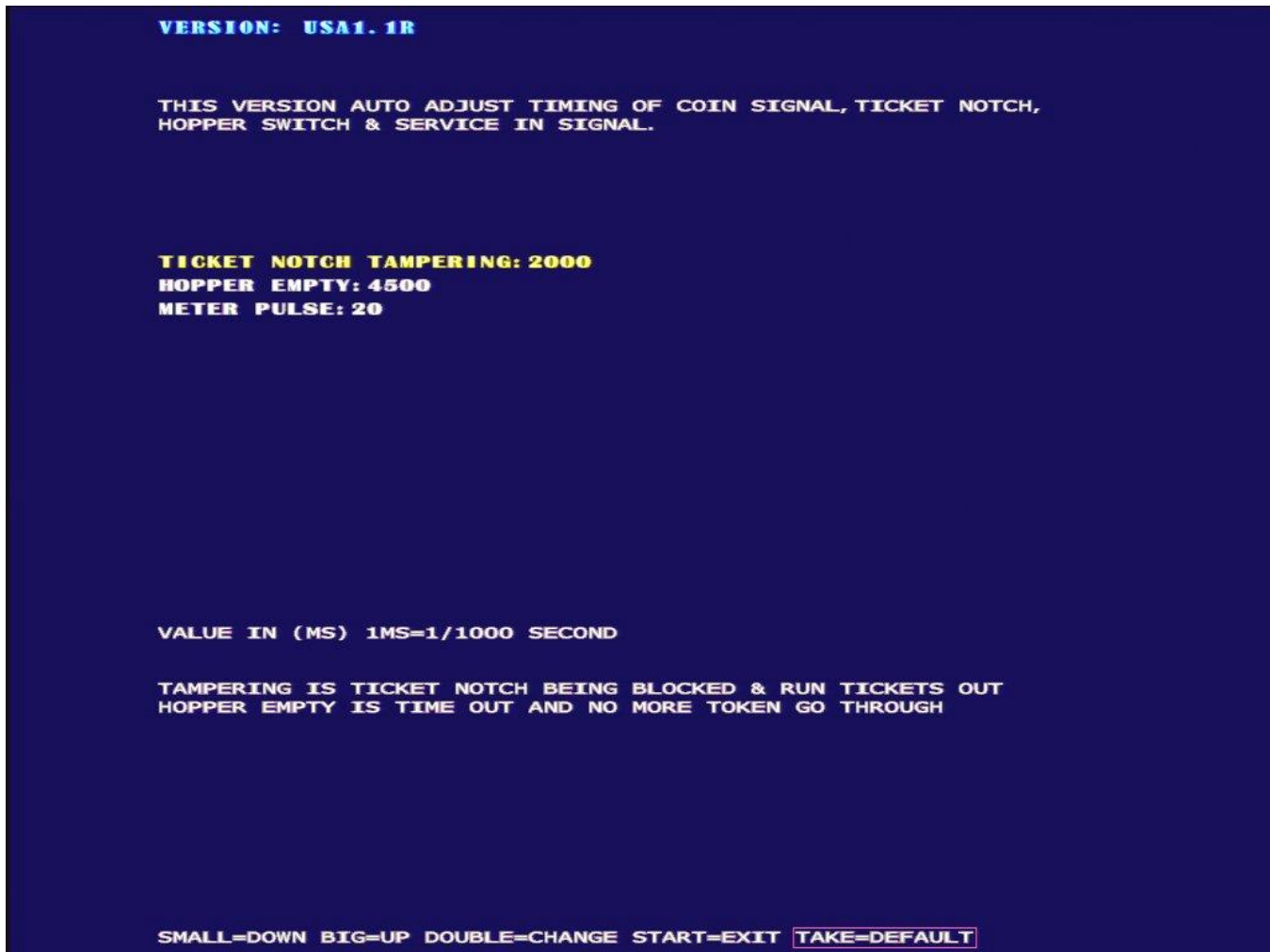1/ RESET will clear account information.

MAIN HISTORY PAGE

1/ The last 50 games are recorded in detail. Each game record not only shows the result of the Main Game graphically but all the winnings and transactions from the instant the game starts to the instant the next game begins are recorded systematically.
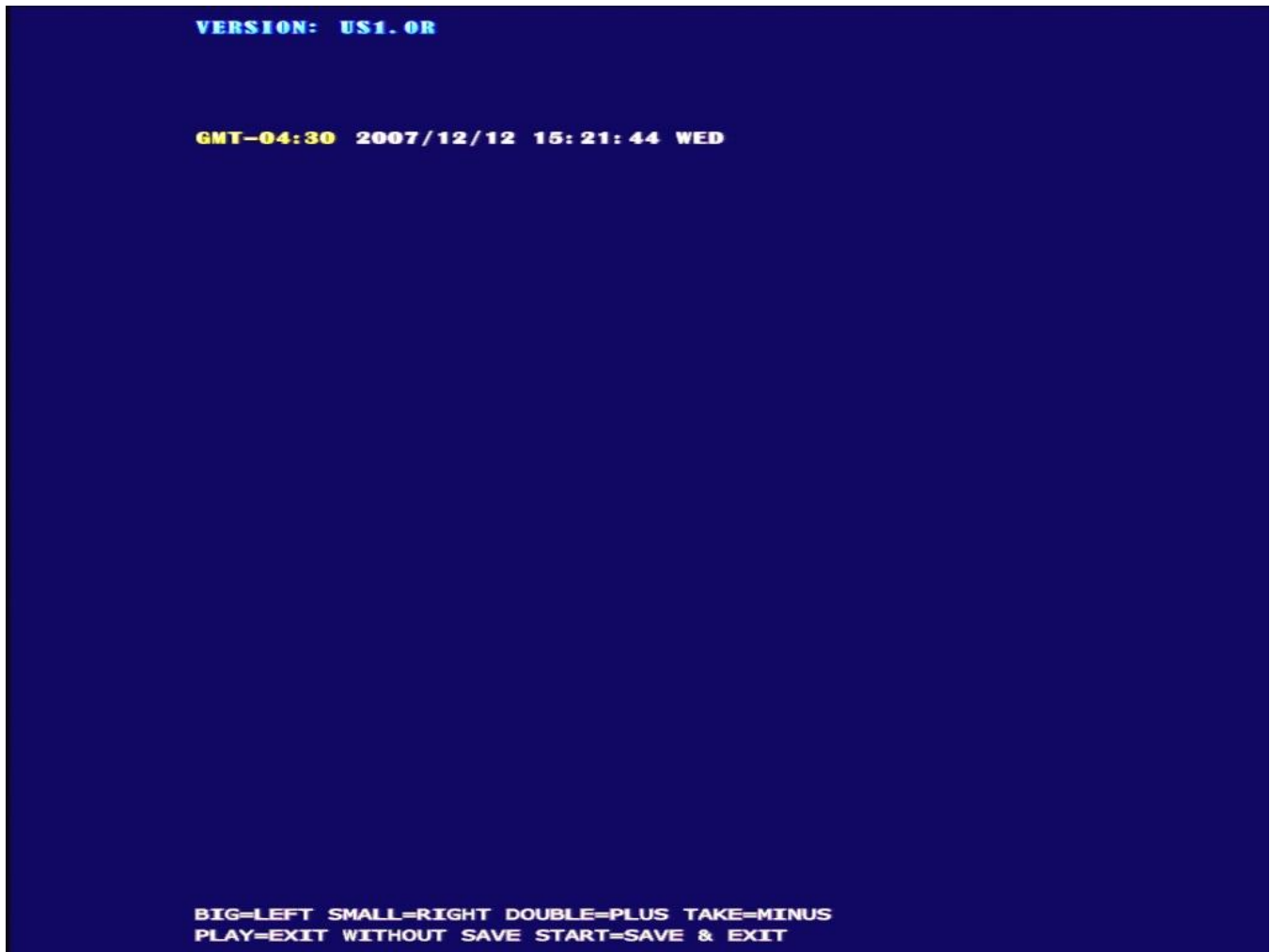
2/ Press SMALL button to go to the next record; press BIG button to return to the previous one; press START button to exit.

3/ RESET will clear main history.

```
VERSION: USA1.1R


THIS VERSION AUTO ADJUST TIMING OF COIN SIGNAL,TICKET NOTCH,
HOPPER SWITCH & SERVICE IN SIGNAL.




TICKET NOTCH TAMPERING: 2000
HOPPER EMPTY: 4500
METER PULSE: 20












VALUE IN (MS) 1MS=1/1000 SECOND

TAMPERING IS TICKET NOTCH BEING BLOCKED & RUN TICKETS OUT
HOPPER EMPTY IS TIME OUT AND NO MORE TOKEN GO THROUGH







SMALL=DOWN BIG=UP DOUBLE=CHANGE START=EXIT  TAKE=DEFAULT
```

I/O TIMING PAGE (Version 1.1~)

1/ From Version 1.1 onward, the signal time length of COIN 1 & 2, SERVICE IN, TICKET NOTCH and HOPPER SWITCH will be automatically adjusted by program. Only TICKET NOTCH TAMPERING, HOPPER EMPTY and METER PULSE can be adjusted. The value used is millisecond (ms).

2/ Press SMALL button to scroll down; press BIG button to scroll up; press DOUBLE button to change value; press START button to exit.

3/ In case adjustment causes confusion, press TAKE button to restore to factory default value. Then, if needed, adjust again.

4/ TICKET NOTCH is fixed at normal low (notch not in sensor) and active high (notch in sensor). Notch is same as blank or nothing in sensor.

5/ RESET will not change I/O timing.

```
VERSION:  US1.OR


GMT-04:30  2007/12/12  15:21:44  WED
```

```
BIG=LEFT SMALL=RIGHT DOUBLE=PLUS TAKE=MINUS
PLAY=EXIT WITHOUT SAVE START=SAVE & EXIT
```

SET DATE & TIME PAGE

1/ CR2032 3.0V battery must be inserted in the battery holder in order to keep date and time.

2/ Press BIG button to scroll left; press SMALL button to scroll right; press DOUBLE button to add; press TAKE button to minus; press PLAY button to exit without saving changes; press START button to exit and save changes.

3/ Date and time are backed up by battery. RESET will not change date and time.

VERSION: US1.0R

PRINTER & TICKET SET-UP

```
█ ! " # $ % & ' ( ) * + , - .
/ 0 1 2 3 4 5 6 7 8 9 : ; < =
> ? @ A B C D E F G H I J K L
M N O P Q R S T U V W X Y Z
```

ENTER TEXT (BIG=COLUMN SMALL=ROW DOUBLE=ENTER TAKE=ERASE)

LOCATION: █ _____
_____

MACHINE: _____

MESSAGE: _____
_____

SHOW VALUE IN: POINTS

BRAND/COMMAND: NONE

COM PORT: COM 2

VERIFY INDEX: 13

(PLAY=SELECT ITEM DOUBLE=CHANGE)

CAUTION

CHECK COM PORT CONFLICT. ONLY 1 DEVICE PER COM PORT.

START=EXIT

RS232 PRINTER & TICKET SET-UP PAGE

1/ By default, BRAND/COMMAND is set to NONE, which disables the use of RS232 printer. When use RS232 printer, SET-UP & KEY PORT TEST PAGE - TICKET OUT must be set to PRINTER DIRECT.

2/ Character Cursor is pink color. Position Cursor is red color.

2/ Enter LOCATION, MACHINE and MESSAGE text by BIG button, SMALL button, DOUBLE button and TAKE button.
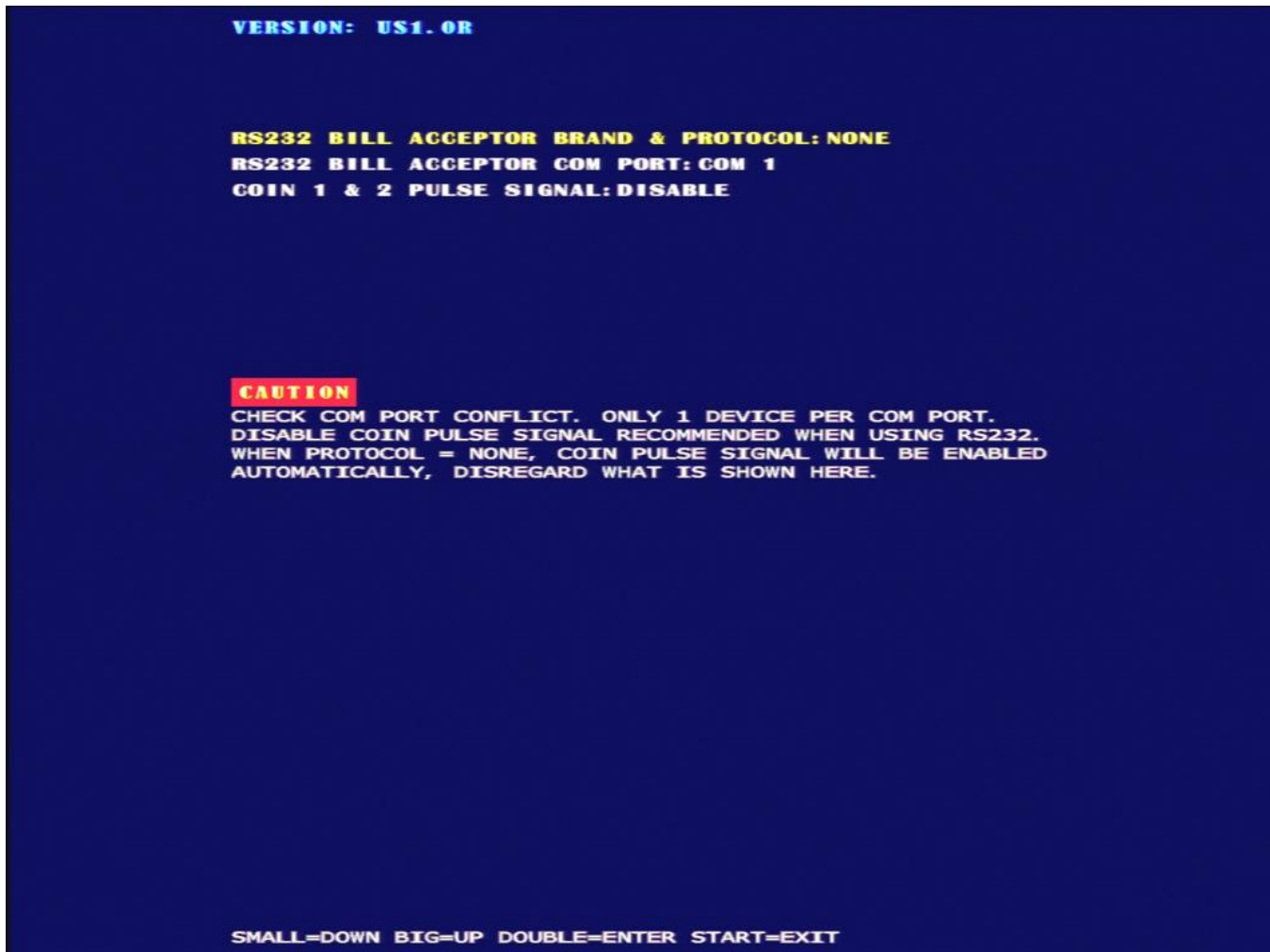
3/ Selection of text character:
1) BIG button = move Character Cursor (pink color) horizontally (column mode)
2) SMALL button = move Character Cursor (pink color) vertically (row mode)
3) DOUBLE button = pick highlighted character (pink color) and put it into the position of Position Cursor (red color)
4) TAKE button = erase the character before the Position Cursor (red color)
5) The first character, upper left top one, is blank, which represents [SPACE]

4/ Press PLAY (BET) button to jump from one item or line to another. Also use DOUBLE button to change selectable items. Selectable items (at time of publication):
1) SHOW VALUE IN: POINTS or DOLLAR
2) BRAND/COMMAND: NONE, CITIZEN CMB1, ESC/POS, START, ITHACA or ITHACA 70
3) COM PORT: COM1 or COM2 (default – recommend don't change)
4) VERIFY INDEX: (verify code on ticket divided by verify index shall have a remainder of 0)

5/ RESET will not change RS232 printer & ticket set-up.

```
VERSION:  US1.0R


RS232 BILL ACCEPTOR BRAND & PROTOCOL:NONE
RS232 BILL ACCEPTOR COM PORT:COM 1
COIN 1 & 2 PULSE SIGNAL:DISABLE




    CAUTION
    CHECK COM PORT CONFLICT.  ONLY 1 DEVICE PER COM PORT.
    DISABLE COIN PULSE SIGNAL RECOMMENDED WHEN USING RS232.
    WHEN PROTOCOL = NONE,  COIN PULSE SIGNAL WILL BE ENABLED
    AUTOMATICALLY,  DISREGARD WHAT IS SHOWN HERE.










    SMALL=DOWN BIG=UP DOUBLE=ENTER START=EXIT
```

RS232 BILL ACCEPTOR PAGE

1/ The use of *true* RS232 bill acceptor (together with coin pulse signal disabled) will eliminate cheating actions such as triggering with electronic devices.

2/ Selectable items (at time of publication);
        a) RS232 BILL ACCEPTOR BRAND & PROTOCOL: NONE (default), JCM ID003 protocol, PYRAMID RS-232 protocol or ICT 002 protocol.
        b) RS232 BILL ACCEPTOR COM PORT: COM 1 (default – recommend don't change) or COM 2
        c) COIN 1 & 2 PULSE SIGNAL: DISABLE (default – recommend don't change) or ENABLE

3/ Unless for special application, COIN 1 & 2 PULSE SIGNAL (in this PAGE) shall be set to DISABLE all the time. When RS232 bill acceptor is not used (PROTOCOL is set to NONE), coin pulse signal will be enabled automatically by program, disregard what is shown here.

4/ Bill acceptors:
    a) JCM WBA (World Bill Acceptor) using protocol ID003
    b) PYRAMID (For example: Apex 5000 series for *true* RS232 – RS232 communication harness P/N 05AA0009 is required; configuration card set-up: section 1 = RS-232, section 2 = None, section 3 = Fast & Solid On, section 4 = select types of bill you want to accept, section 5 = Low & All 4 Ways. Also, see manual of Apex 5000 series.)
    c) ICT (Use models which INTERFACE has ICT PROTOCOL (ICT 002). For example: models with ICT 002 PROTOCOL are A6 and A7 *with* WEL-V706 harness. Also see manual of A6 and A7.)

5/ U.S.A. Version of this game will support US Dollar only. (Some versions of this game can support international currencies.)

6/ RESET will not change RS232 bill acceptor set-up.

VERSION: US1.0R

CAUTION
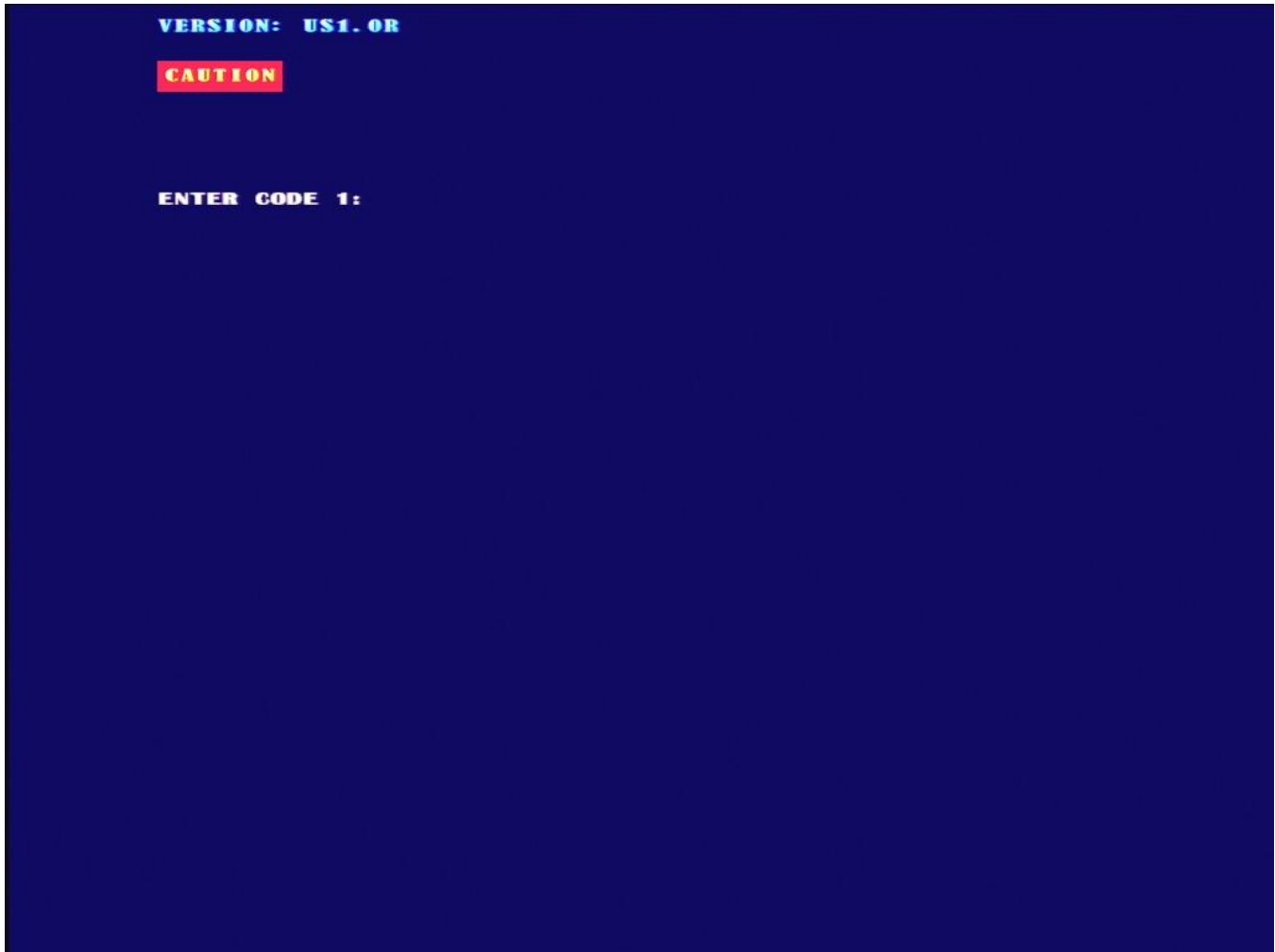
ENTER CODE 1:

RESET PAGE

1/ ENTER CODE 1:

2/ ENTER CODE 2:

3/ After CODE is entered, screen will display additional information.
        a) If CODE is correct, the screen will show:
                i. RESET IS DONE
                ii. PRESS START TO EXIT
        b) If CODE is wrong, the screen will show:
                i. CODE IS INCORRECT AND RESET IS NOT DONE
                ii. PRESS START TO EXIT

4/ Enter CODE 1 by pressing BIG button, SMALL button, DOUBLE button and TAKE button in sequence and one at a time.

5/ Enter CODE 2 by pressing PLAY (BET) button, DOUBLE button, BIG button and SMALL button in sequence and one at a time.

FIXED BONUSES – each and every winning line will count one time.
1. BONUS 1: winning of MAJECTIC SCROLL - 5 symbols (100%); 4 symbols (50%); 3 symbols (25%)
2. BONUS 2: winning of TREASURE CHEST - 5 symbols (100%); 4 symbols (50%); 3 symbols (25%)
3. BONUS 3: winning of HORN & FLAG - 5 symbols (100%); 4 symbols (50%); 3 symbols (25%)

BONUS GAMES – each and every winning line will count and bonus points in game bonuses will vary with total PLAY (bet).
1. GAME TYPE 1: winning of PRINCESS line in Main Game. Princess flying through valley, catching gold coins and diamonds.
2. GAME TYPE 2: winning of KNIGHT line in Main Game. Knight walking through forest and encounter different objects; player has to pick path for him (press any button when asked to pick path). If he can come out of forest, there is a horse waiting for him and, of course, an additional award.
3. GAME TYPE 3: winning of CASTLE line in Main Game. Knight fighting one of the 4 opponents in two different scenes, player has to shoot for him (press any button when asked to shoot). When the Knight comes to fight with the Dragon, the winning points are higher.

Although most parts of the game have been using 3D motion pictures already, Bonus Game Type 3 further enhances the presentation with cinematic motion picture effect.

HIGHER ODDS TABLE THAN OTHERS: The odds of winning lines are comparatively higher than most other games, the lowest being X5 and the highest being X50000.

25 LINES

FREE SPIN - every free spin is guaranteed to win.

RANDOM BONUS CHANCES – *DRAGON CHANCES* - each appearance has 1 to 3 chances; every chance is guaranteed to win; winning points = varying multiples of total PLAY (bet).

(Version 1.2~) Screen will display "THIS CHANGE = PLAY X **n**", where **n** (varying multiple) will keep changing. The last **n** settled when the dragon spits fire is the final multiple. Player can press any button to cause the dragon to spit fire. If player does not press any button, dragon will spit fire after normal (original) waiting time.

RANDOM BONUS CHANCES – *PRINCESS CHANCES* - each appearance has 3 to 5 chances; winning points = varying multiples of total PLAY (bet); player participation is required; may or may not win, depending on player's choice.

DOUBLE GAME – unlimited chances.

AUTO PLAY (Version 1.2~) – Player's choice. If NON-STOP SKILL SPIN is set to NO, after selection of lines and bet of each line, and total PLAY (bet)>= Min For Bonus, screen message "TAKE = AUTO PLAY ON/OFF" will come up. Pess TAKE button (instead of START) will activate AUTO PLAY in Main Game. Double Game, Bonus Chances and Bonus Games that require player interaction will still involve participation of the player. Press any button during reel spin, TAKE button during animation process of winning symbols, and any button before next main game starts will de-activate AUTO PLAY.