D.U.C.K.y

DIGITAL UNIVERSAL CONTOLLER KIT

VERSION 12

KEVIN SHARP ENTERPRISES
2335 SOUTH PARK DRIVE,
MURFREESBORO, TENNESSEE
37129

A D.U.C.K.y kit consists of the following items.....

.....1.....D.U.C.K.y circuit board
.....1.....LCD display board
.....1.....A Printer, an Epson TM267IIA *or* a Citizen iDP 3541
.....1.....A stand for the Printer
.....1.....A Bezel
.....1.....Printer harness with a DB25 connector
.....1.....An Instruction Manual

Read and follow all instructions in the manual before attempting installation.

Theory Of Operation

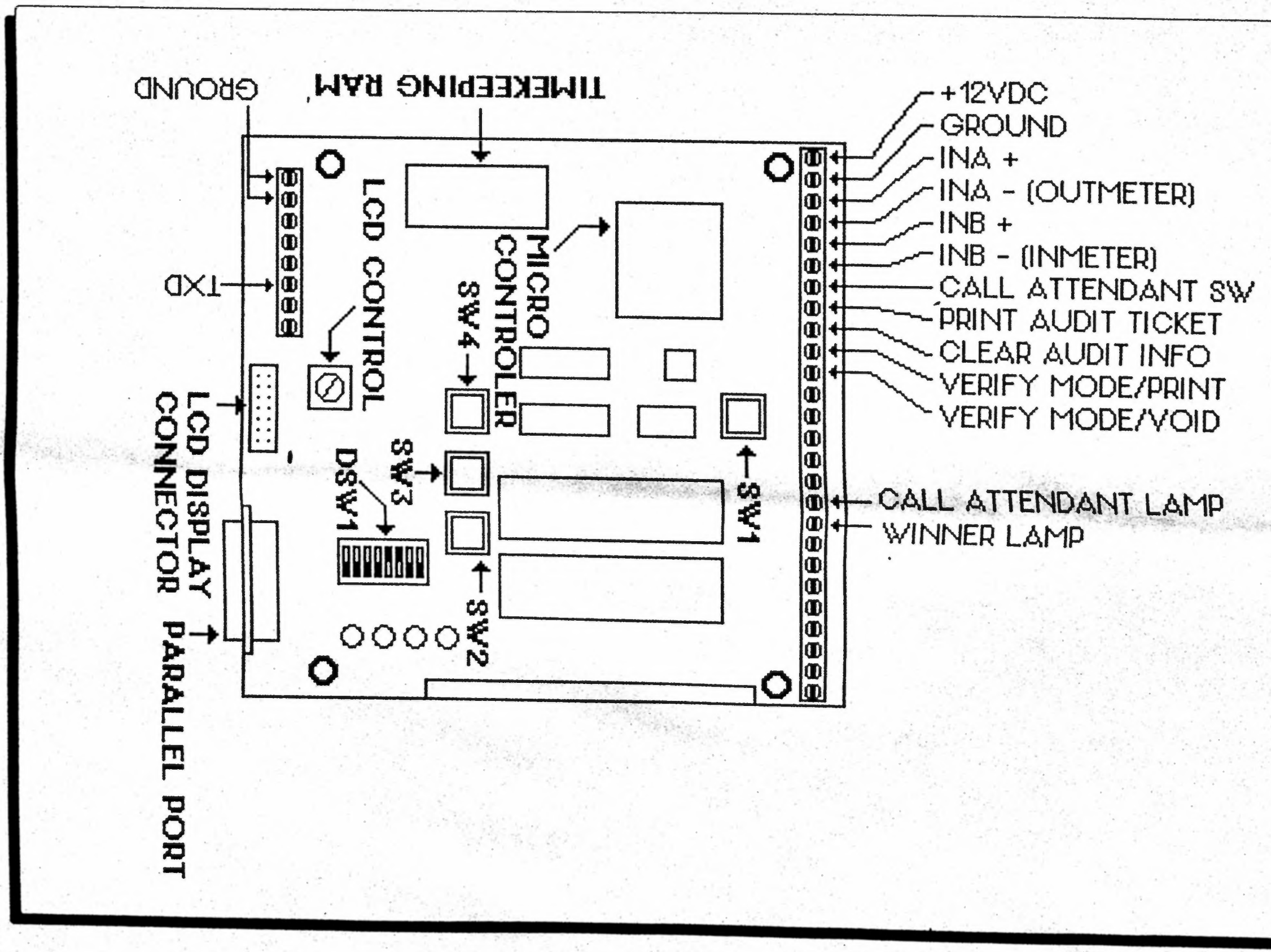
The **Digital Universal Controller Kit** (D.U.C.K.y) is designed to interface existing gaming equipment to a printer, thus allowing a higher level of accountability and security. By usage of a dual copy printer, the operator is given both printed and electronic accounting information. The operator is given the capability to customize the interface by entering information such as the time, date, location's name, address, phone number, etc.. The operator also has 4 lines of 33 characters to use to put a custom message on the printed ticket. { See the User Fields Setup in this Manual }. This information is then printed on each voucher and audit report, thus simplifying the tracking of information.

The D.U.C.K.y interface board works by monitoring the *CREDITS IN* and/or *CLEAR SCORE* meters of a particular piece of equipment. After accumulating pulses from these meters, the interface board converts them into a "Points" value or an actual monetary ($0.00) value. The interface board is capable of using different exchange rates via the LCD display and setup menus. Once the pulses are accumulated the board starts printing the voucher. In addition, there are several operator adjustable options via the Dipswitch Bank located on the D.U.C.K.y.

At the end of a collection period, the operator/attendant can print a report of the machines transactions by activating the **PRINT AUDIT** switch. This report shows the location's name, address, last ten (10) tickets printed with time and date, credits in and out values, and the machine number that the report originated from. After collecting the audit report the operator/attendant can then activate the **CLEAR AUDIT** switch to clear the accounting totals. The **CLEAR AUDIT** function *clears ONLY the Audit totals* not the last 10 ticket reports.

Other features include the control of a **CALL ATTENDANT** lamp and a **WINNER** lamp for games that would otherwise not have this capability.

A newly added feature is the **SPLIT TICKET** function. By using this function the operator can make the printer mimic a coupon dispenser by printing multiple tickets at an operator selectable value.


GROUND
TIMEKEEPING RAM
+12VDC
GROUND
INA +
INA - (OUTMETER)
INB +
INB - (INMETER)
CALL ATTENDANT SW
PRINT AUDIT TICKET
CLEAR AUDIT INFO
VERIFY MODE/PRINT
VERIFY MODE/VOID
TXD
LCD CONTROL
MICRO CONTROLER
SW4
SW3
DSW1
SW2
SW1
CALL ATTENDANT LAMP
WINNER LAMP
LCD DISPLAY CONNECTOR PARALLEL PORT

INSTALLATION.....(Power Supply).....

1. Connect +12VDC and GROUND from the power supply to the two (2) terminals at connector CN1. Please *pay special attention* to the labels on the individual inputs.

INSTALLATION.....(Tracking the meters).....

CAUTION !!!!! DO NOT ATTACH TO GAMES THAT USE 110 VAC METERS!!!!!

1. Connect the POSITIVE side, (usually +5VDC or +12VDC) of your CLEAR SCORE meter to the input labeled **INA+** on the connector **CN6**.
2. Connect the NEGATIVE side, (the signal side) of your CLEAR SCORE meter to the input labeled **INA-** on connector **CN6**.
3. Connect the POSITVE side, (usually +5VDC or +12VDC) of your COIN IN meter to the input labeled **INB+** on connector **CN6**.
4. Connect the NEGATIVE side (the signal side) of your COIN IN meter to the input labeled **INB-** on the connector **CN6**.

INSTALLATION.....(Single Button Audit).....

1. Connect one side of a SPST switch to the input labeled **P1.1 (PRINT AUDIT)** to print an **AUDIT TICKET.**
2. Connect the other side of the switch to logic ground (GND).
3. Connect one side of a SPST switch to the input labeled **P1.2 (CLEAR AUDIT)** to clear the **BOOKS. NOTE:** The **CLEAR AUDIT** function *clears only the audit totals NOT* the last 10 tickets report.
4. Connect the other side of the switch to logic ground (GND).

INSTALLATION.....(Printer Output).....

1. The printer kit is supplied with a small harness with a DB25 connector soldered to one end. Connect the wire coming from pin 3 (WHITE) on the DB25 connector to the output labeled **TXD** on connector **CN3**.
2. Connect the wire coming from pin 7 (BLACK) on the DB25 connector to the **GND** output on connector **CN3**.

INSTALLATION.....PRINTER SETUP.....

1. Two Printers are currently in use by K.S.E. Inc.. They are the Epson TM-267IIA and the Citizen iDP 3541. The Printers MUST be set in order to receive the data from the D.U.C.K.y. Set the printers as follows:

Epson TM-267IIA

On the back of the Epson printer there is a *10 position Dipswitch Bank* and a single position *slide switch* marked " I / O ".

1. Set the *slide switch* " I / O " to the " I " position.
2. Set *switch 10* on the Dipswitch Bank to the " ON " position. All other switches on this bank " OFF ".

Citizen iDP 3541

The Citizen printer has TWO Dipswitch Banks. These are located at the left front of the printer.

1. DS1 is the left Dipswitch Bank { Closest to the outside of the printer }
2. DS2 is to your right.
3. On DS1 *switch 1* turn " ON " , all other switches " OFF "
4. On DS2 *switches 2, 5, 6, & 7* turn " ON " ; all others " OFF ".

INSTALLATION.....(Tower Lamp Control).....

1. Connect the Normal Open side of the CALL ATTENDANT *SWITCH* to the input labeled P1.0.
2. Connect the Common side of the CALL ATTENDANT *SWITCH* to a ground (GND).
3. Connect one side of the CALL ATTENDANT *LAMP* to the output labeled M1.
4. Connect the other side of the CALL ATTENDANT *LAMP* to +12VDC or +5VDC depending on the type of bulb in the assembly.
5. If your CALL ATTENDANT *Panel Button* has a *lamp in its assembly*, you may use it also by simply connecting it in parallel to the CALL ATTENDANT LAMP.
6. Connect one side of the WINNER LAMP to the output labeled M2.
7. Connect the other side of the WINNER LAMP to +12VDC or +5VDC, depending on the type of bulb in the assembly.

OPERATION.....(Attach Display Unit).....

1. Attach the LCD display to connector CN5. The RED wire should be positioned on pin 1 of this connector. Pin 1 is located in the upper right hand corner of the connector closest to the CN5 marking on the D.U.C.K.y board.
2. Apply power to the unit. A test ticket will be printed. Adjust POT1 until the display is viewable, (normally fully counterclockwise).

OPERATION.....(Programming Custom Functions).....

1. Locate the three (3) pushbutton switches labeled SW2, SW3, & SW4. These pushbuttons are used to change all of the user modified options.

SW2..... NEXT FIELD
SW3..... INCREMENT VALUE
SW4..... SETUP MODE/ NEXT OPTION

2. Press SW4 (SETUP MODE). After a short delay, the LCD will display USER SETUP MODE. At this point we can change the TIME option. Press the INC VALUE button to change the current value. Press the NEXT FIELD button to move between the HOURS and MINUTES positions. The clock uses a twenty-four hour (24 hour) format.

3. Press the SETUP MODE button again. You can now change the DATE option. Pessing the NEXT FIELD button will move you between the MONTH, DATE, and YEAR settings. Press the INC VALUE button to change the selected value.

4. Press the SETUP MODE button again. You may now enter or modify the LOCATION NAME option. Pressing the INC VALUE button scrolls through the character set that is available. Press the NEXT FIELD button to move the cursor to the next character.

5. Press the SETUP MODE button again. You may now enter or modify the LOCATION ADDRESS option. Pressing the INC VALUE button scrolls through the character set. Press the NEXT FIELD button to move to the next character.

6. Press the SETUP MODE button again. You may now enter or modify the LOCATION CITY/STATE/ZIP CODE option. Pressing the INC VALUE button scrolls through the character set. Press the NEXT FIELD button to move the cursor to the next character.

7. Press the SETUP MODE button again. You may now enter or modify the LOCATION PHONE option. Pressing the INC VALUE button scrolls through the character set. Press the NEXT FIELD button to move the cursor to the next character.

8. Press the SETUP MODE button again. You may now enter or change the MACHINE NUMBER option. This value is used to identify which machine a printed ticket came from. Press the INC VALUE button to change this setting.

9. Press the SETUP MODE button again. You are now presented with two (2) options. You may press the INC VALUE button to PRINT AUDIT TICKET or press the NEXT FIELD button to CLEAR BOOKS.

10. Press the **SETUP MODE** button again. You can now set the exchange value for the pulses coming from the **IN METER.** Press the **INC VALUE** button to change the rate.

11. Press the **SETUP MODE** button again. You can now set the exchange value for the pulses coming from the **OUT METER.** Press the **INC VALUE** button to change the rate.

12. Press the **SETUP MODE** button again. You can now edit the **USER #1** field. There are 33 spaces provided for your message on each of the 4 USER fields. Pressing the **INC VALUE** button scrolls through the character set that is available. Press the **NEXT FIELD** button to move the cursor to the next character.

13. Press the **SETUP MODE** button again. You can now edit the **USER #2** field. Pressing the **INC VALUE** button scrolls through the character set. Press the **NEXT FIELD** button to move the cursor to the next character.

14. Press the **SETUP MODE** button again. You can now edit the **USER #3** field. Pressing the **INC VALUE** button scrolls through the character set. Press the **NEXT FIELD** button to move the cursor to the next character.

15. Press the **SETUP MODE** button again. You can now edit the **USER #4** field. Pressing the **INC VALUE** button scrolls through the character set. Press the **NEXT FIELD** button to move the cursor to the next character.

16. Press the **SETUP MODE** button again. You can now set the **Split Ticket Value.** This will allow the operator to print multiple vouchers similar to a ticket dispenser operation. The operator may set the **Split Ticket Value** from $5.00 to a maximum of $2000.00. **Default value is 0000.** If the **Split Ticket Value** is left at zero, the *total amount* is printed on one ticket. The operator may change the value in $5 increments by pressing SW3 (INC VALUE).The operator may change the value in $100 increments by pressing SW2 (NEXT FIELD). The **Split Ticket Value** *cannot be used* if the D.U.C.K.y is set *to print points.*

To read the **Split Ticket Value** see the examples.

If the Display shows.....0005.....then the Split Ticket Value is $5
If the Display shows.....0100.....then the Split Ticket Value is $100
If the Display shows.....1000.....then the Split Ticket Value is $1000

Caution: Advancing beyond $2000 resets the value back to zero.

17. Press the **SETUP MODE** button again. You can now set the **Out Scalar** multiplier. This feature is for use with game boards that allow you to select the ticket value. The operator may set the **Out Scalar** multiplier from 1 - 100. This feature is for <u>points only</u>, you must turn on dip switch #3 for this to work. **Default value is 001.** If the **Out Scalar** multiplier is left at one, the pulse count per ticket value will be multiplied by one. The operator may change the value in 1 point increments by pressing SW3 (INC VALUE) or many change the value in 10 point increments by pressing SW2 (NEXT FIELD). The **Out Scalar** multiplier cannot be used if the D.U.C.K.y is set to print dollars.

The following are some examples.
Talking Skill Cherry 97 set for 500 credits per ticket ...Out Scalar set for 1 ... will print ticket for 1 point per 500 credits.
Ch96SE Board set for 100 credits per ticket ...Out Scalar set for 2 ... will print ticket for 2 points per 100 credits.
Treasure Bonus set for 20 credits per ticket ...Out Scalar set for 5 ... will print ticket for 5 points per 20 credits.

Caution: Advancing beyond 100 resets the value to 1.

18. Press the SETUP MODE button again to EXIT back to the operate mode.

19. When the phrase " OPERATE MODE " appears in the LCD display, press the Reset Button { SW 1 } located on the D.U.C.K.y to enable changes.

OPERATION.....(Setting the Dipswitches).....

DIPSWITCH BANK DSW1		1	2	3	4	5	6	7	8
Print Diagnostics Ticket	Normal	OFF							
	Print Diagnostic	On							
High Score Message	Disabled		Off						
	Enabled		On						
Print Mode	Dollars			Off					
	Points			On					
Printer Type	Citizen iDP3541				Off				
	Epson TM267IIA				On				
Game Style	Wood Cabinet					Off			
	Metal Cabinet					On			
Disclaimer	Disabled						Off		
	Enabled						On		
Reserved { Leave Off }	NOT USED							OFF	
Clear Ram	Operate Mode								OFF
	Clear								On

Switch # 1.....Print Diagnostic Ticket..... When switch is in the ON position the D.U.C.K.y will print a diagnostic ticket continuosly. **Normally OFF.**
Switch # 2.....High Score Message..... When enabled, the phrase "**Your High Score:**" appears on the ticket. This will be printed with either Dollar or Point values.
Switch # 3.....Print Mode..... Determines if credit amount is printed as a " **Points** " value, or as a " **Monetary ($)** " value .
Switch # 4.....Printer Type..... Selects type of printer being used. Either the Citizen iDP 3541 or the Epson TM-267IIA.
Switch # 5.....Game Style..... Selects a print mode for either a Wood cabinet or for a Metal cabinet. When Metal cabinet is selected, 15 extra non-printed lines are added before the cut is made. This is so the ticket can be spotted easier when issued from a metal cabinet game.
Switch # 6.....Disclaimer Printed..... For use in locations that require a disclaimer printed on the ticket.Prints a disclaimer when enabled.
Switch # 7.....Reserved..... This switch is reserved. It is *NOT USED, LEAVE OFF.*
Switch # 8.....Clear Ram..... Used to clear the Timekeeping ram before programming, changing messages or if "garbage" appears in setup sceens. ***It is a good idea to Clear Ram on initial power up. Be sure to turn switch # 8 back OFF before programming.***