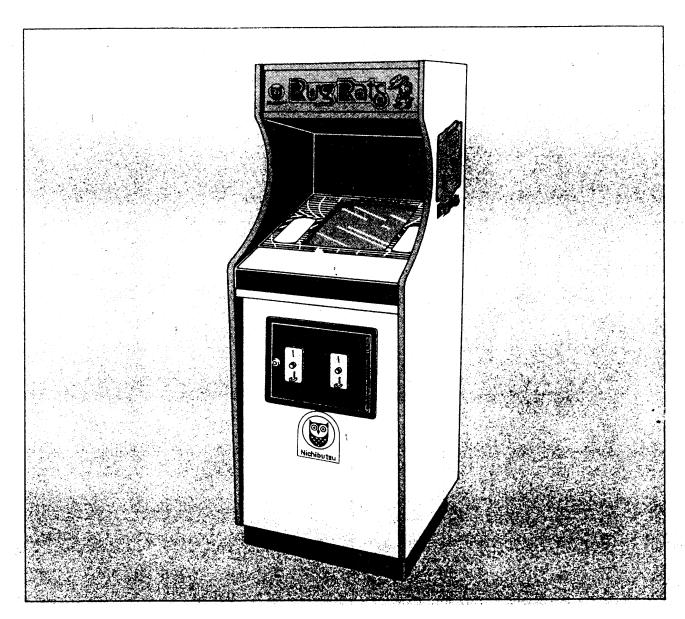


INSTRUCTION





1. LICENSE SEAL

The "RUG RATS" is the trade mark and the copyright of Nihon Bussan Co., Ltd. (Nichibutsu)

The license seal can be displayed on the game machine as FIGURE 1. It is essential for the license seal to be visible but use caution not to be peeled away and lose the identity of the board. Nichibutsu issued only one license seal per each board sold and no duplicates will ever be made.

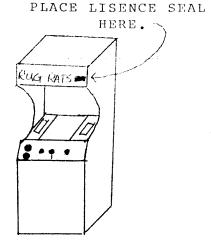


FIGURE 1

Put the seal on the back of the little window provided on our marquee or on the back of any clear glass or plastic overlay that you might be using.

2. POWER REQUIREMENTS

The P.C.Board requires a power supply of +5V 2A (+5%) for game logics, +12V 1A (+10%) for audio IC only.

3. CONTROL PANEL SECTION

A 4-way joystick and a shoot button are required. RUG RATS will not work properly with a 8-way joystick.

4. COIN SELECTOR WIRING

A coin selector, switch may be connected to either pin 32 (coin 1) or pin 31 (coin

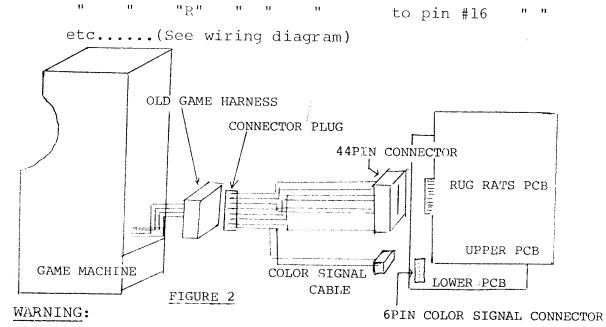
2) N.C. N.O.

5. HARNESS

RUG RATS KIT comes with one connector plug for your convenience when converting it on other game machines.

- 1) Cut the connector-plug as needed, so that it can plug into your game machine connector.
- 2) Insert the connector-plug into your own game connector and using a pencil to mark "R", "L", "+5", etc.... according to signal at the pin on the connector.
- 3) Connect the connector-plug and 44-pin conncetor of RUG RATS with wires. (FIGURE 2)

Pin Marked "L" will be connected to pin #15 of RUG RATS' connector.



Wiring of the harness that supplys the power (+5V, +12V) to the P.C.BOard must be connected as specified, or elese, damage may occur.

Before inserting a RUG RATS P.C.B. into the connector, check the voltage of these pins carefully.

Pin #1,2,3,4,41,42,43,44 = GND (0V)Pin #5,6,7,8,37,38,39,40 = +5VPin #8,9 = +12V A color singel able is provided to connect R.G.S. and SYNC since is from K-Ward domination.

Togated at right conner of the lower P.C.Board to the harness or to the TV Monitor directly

Pin No	Signal	
1.	RED	
2.	BLUE	
3.	GREEN	
4.	SYNC	
5.	GND	
6.	N.C.	

TV monitor has to be equipped with TTL input level.

TV monitor must be placed vertical.

RUG RATS P.C.Board is designed

to be used with "1-SYNC" signal

monitor.

However, if your TV monitor is a "2-SYNC" signals one, please connect as dash line in FIGURE 3. Then, pin #4 = V SYNC

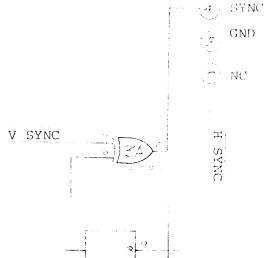
On some kinds of monitors, it is necessary:

pin #6 = H SYNC

- * To add 2 resistors to fit the input impedance of the monitor(FIGURE 4)
- * To turn the picture tube 180 degrees if the screen is displayed up-side-down.

7. THE KITS INCLUDE:

Α.	Instruction	1pc
В.	License Seal	1pc
C.	Marquee	lpc
D.	"How to play" card	2pcs
Ε.	Z-Bracket	4pcs
F.	Color Signal Cable	1pc
G	44-pin Connector	lpc
Η.	Connector Plug	lpc



a RITE

- H-1-1-1-4-

141,146

FIGURE 3.

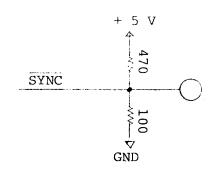
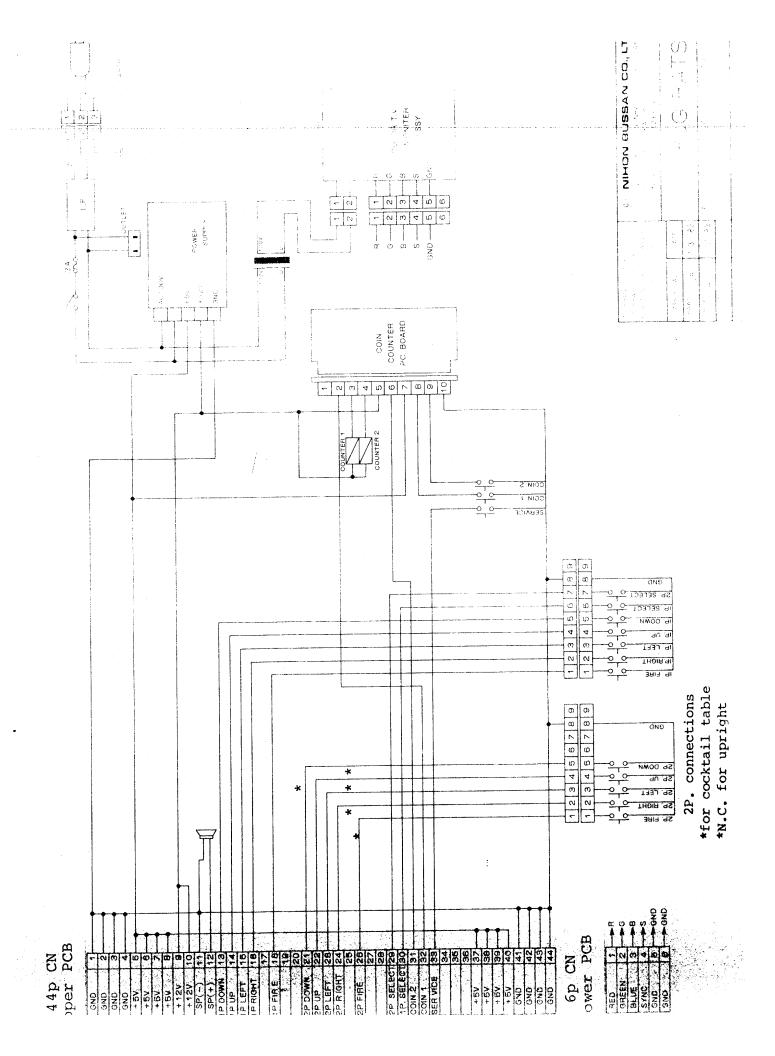
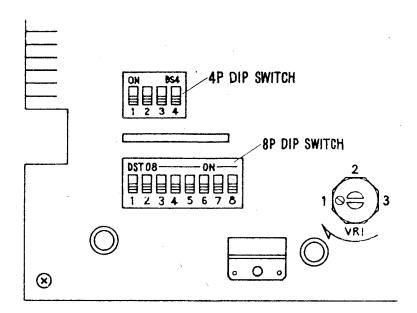


FIGURE 4.





4P DIP SWITCH

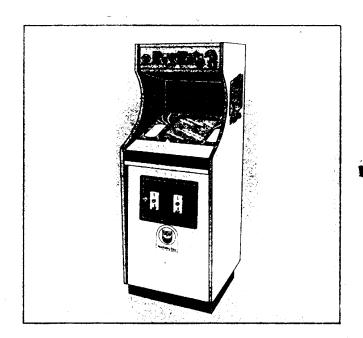
OPTION	DIP SWITCH NUMBER						
OFTION	1	2	3	4.			
TABLE			OFF	OFF			
UPRIGHT			ON	OFF			
TEST		ON		OFF			
NORMAL		OFF		OFF			
BONUS POINTS 100000 & 200000	OFF			OFF			
BONUS POINTS 150000&300000	ON			OFF			

8P DIP SWITCH

	ORTION	DIP SWITCH NUMBER								
OPTION			1	2	3	4	5	6	7	8
COIN	FREE PLAY	,					OFF	OFF	OFF	
	1 coin/1 credit						ON	OFF	ÖFF	
	1 coin/2 credits						OFF	ON	OFF	
	1 coin/3 credits						ON	ON	OFF	
CELECTOR	1 coin/4 credits	:					OFF	OFF	ON	
COINAGE	1 coin/5 credits						ON	OFF	ON	
	1 coin/6 credits						OFF	ON	ON	
	1 coin/7 credits						ON	ON	ON	
COIN CELECTOR 2 COINAGE	1 coin /1 credit				OFF	OFF				ON
	2 coins/1 credit				OFF	ON				OFF
	3 coins/1 credit				OFF	ON				ON
	4 coins/1 credit				ON	OFF				OFF
	5 coins/1 credit				ON	OFF				ON
	6 coins/1 credit				ON	ON				OFF
	7 conis/1 credit				ON	ON				ON
NUMBER of CLEANERS	2 cleaners	C)FF	OFF	na anna in the sa					
	3 cleaners	C)FF	ON	•					
	4 cleaners	<u> </u> C	N	OFF						
	5 cleaners	. 0	N	ON						

V.R.I.

V.R. for the adjustment of sound volume. It will become smaller in turning it to arrow mark.





Nichibutsu Nihon Bussan Co., Ltd.

12-9, 1-chome, Tenjinbashi, Kita-ku, Osaka Tel (06) 353-5211 Telex 523-5891 NCBCOL J

Nichibutsu U.S.A. Corp.

15407 S. Broadway, Gardena, Calif., 90248 Tel(213) 538-2162TWX 9103466952 NCBTUSA

