

TAITO AMERICA CORPORATION

1256 ESTES AVENUE • ELK GROVE VILLAGE, IL 60007
(312) 981-1000 • TELEX 253290 CABLE TAMCO ELK GROVE VILLAGE

SERVICE BULLETIN (SB - 100)

February 12, 1980

To All Taito Distributors:

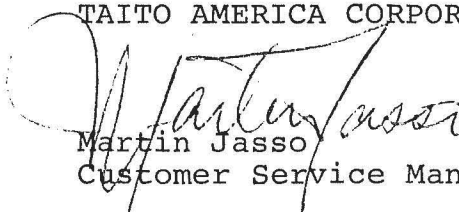
It has been brought to our attention that certain locations are observing nickel and penny cash collections in their color Space Invader cocktail tables.

To correct this problem, it is suggested that adjustment to the coin rejector be made.

Using a small blade screwdriver adjust the slotted set screw located on the movable plate two (2) turns (See attached illustration) so that a gap is formed between the movable plate and back plate. This will allow coins other than quarters to be rejected. Coin test coin rejector after each adjustment. Adjustments may vary on some coin rejectors that may have a thicker rail on which a coin can ride.

Sincerely yours,

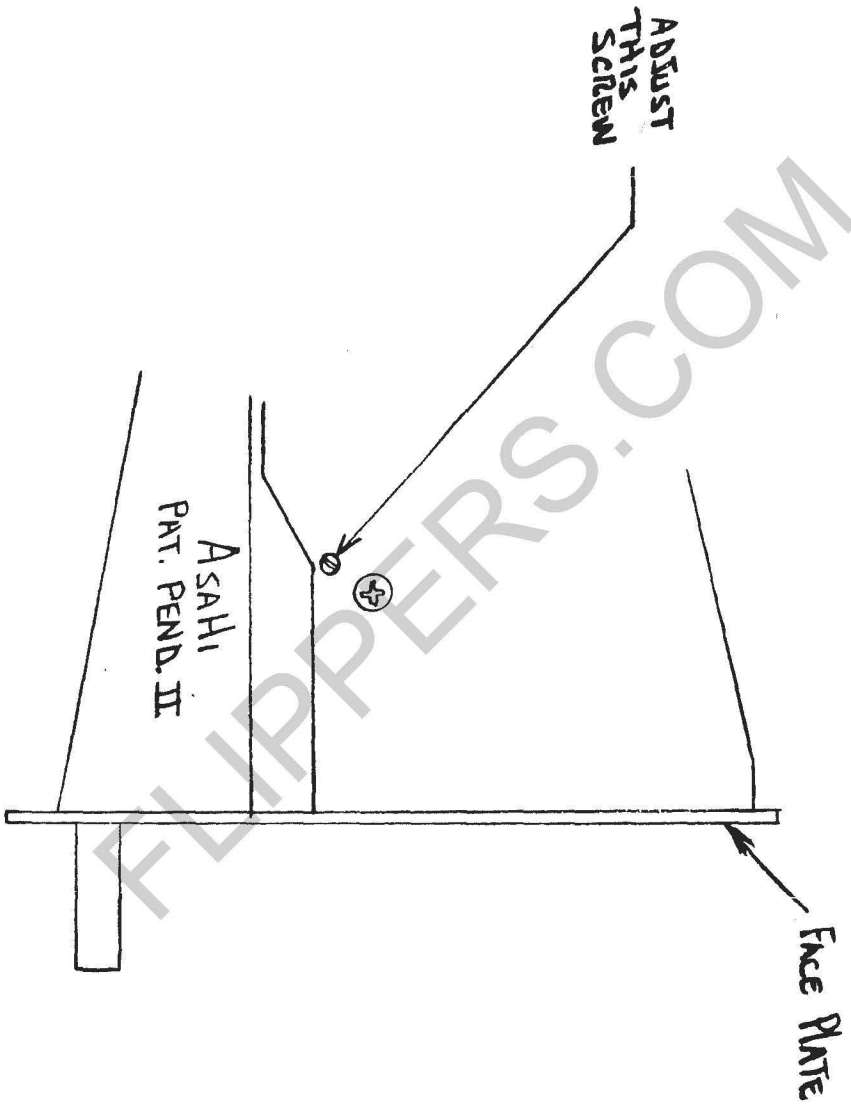
TAITO AMERICA CORPORATION


Martin Jasso
Customer Service Manager

MJ:dd

Enclosure

Coin Retention



APR 8 - 1980

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1256 ESTES AVENUE • ELK GROVE VILLAGE, IL 60007
(312) 981-1000 • TELEX 253290 CABLE TAMCO ELK GROVE VILLAGE

SERVICE BULLETIN (SB 102)

March 19, 1980

To All Taito Distributors:

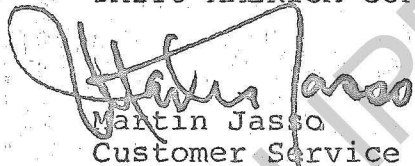
Attention Service Manager

To acquaint you with the Asahi Coin Rejector Model 720-D used on Taito TT Space Invaders Part II color, we have prepared an adjustment procedure which will assist in solving your problems with this coin mechanism. Please provide this information to all of your customers who have experienced similar problems with their coin rejectors.

We hope this will be of assistance to you.

Sincerely,

TAITO AMERICA CORPORATION


Martin Jasso
Customer Service Manager

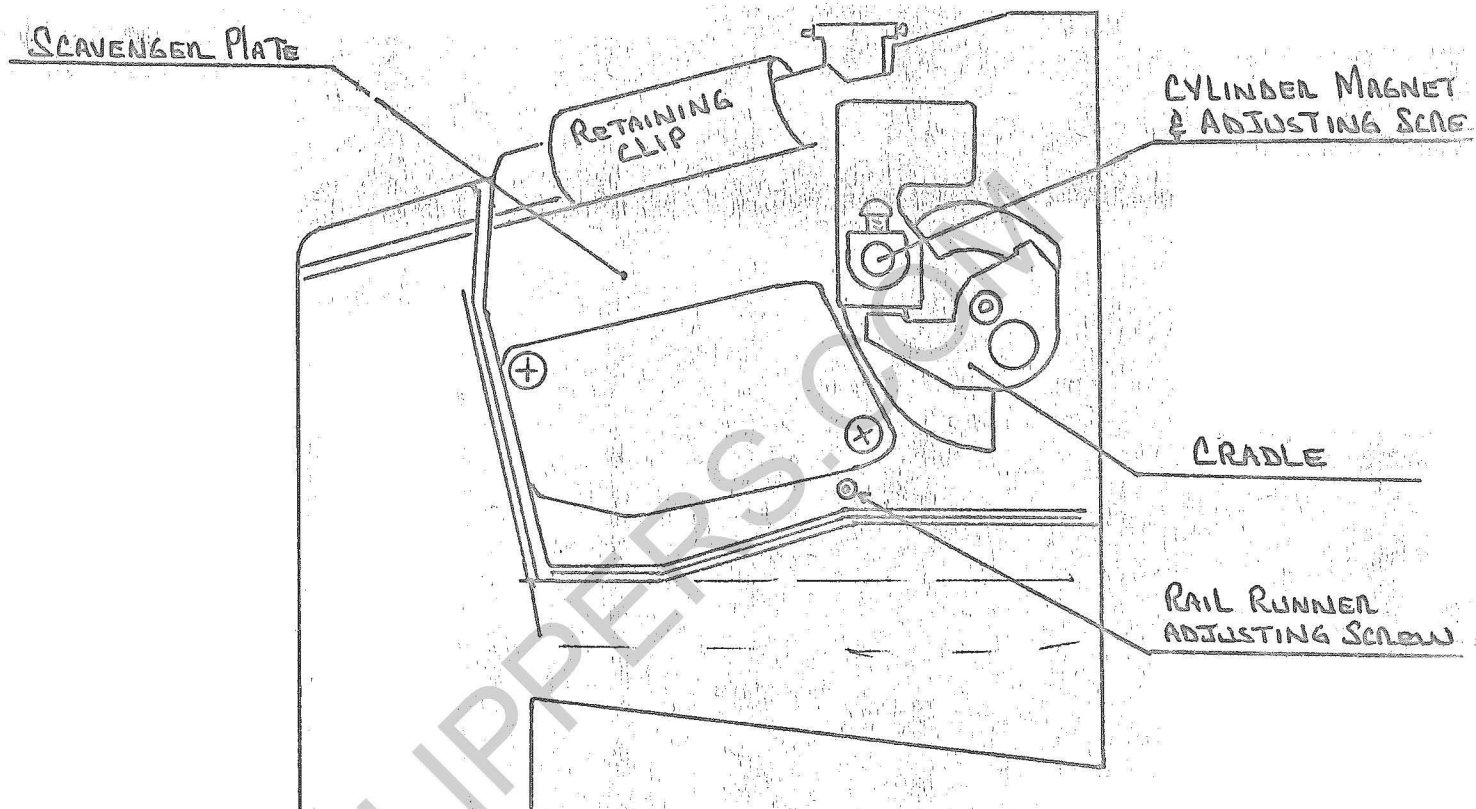
MJ/dd

Enclosure

ADJUSTMENT PROCEDURE
ASAHI COIN REJECTOR MODEL 720 - D

1. Slide retaining clip away from scavenger plate and remove scavenger plate.
2. Loosen cylinder magnet securing screw.
3. Place scavenger plate on a flat surface so that cradle prongs are facing up.
4. Resting a 25¢ U.S. coin against cradle prongs, adjust cylinder magnet to 1/16 inch clearance between 25¢ coin and cylinder magnet surface.
5. Remove 25¢ coin and tighten cylinder magnet securing screw.
6. Replace scavenger plate on mechanism and secure with retaining clip.
7. Adjust separator so that back lip of separator catches back surface of base plate. This will allow 25¢ coins to go through and reject all undersize coins (see illustration two).
8. Adjust set screw on pendulum deflector for 1/8 inch clearance between base plate slot edge and lip of pendulum deflector. Turning set screw in moves deflector back limiting coin striking area of pendulum deflector (see illustration two).
9. Turn rail runner adjustment screw out until screw end is level with scavenger plate surface, then turn set screw in one complete turn. This adjustment checks the thickness of a coin (see illustration one).

ASAHI COIN REJECTOR MODEL 720-D



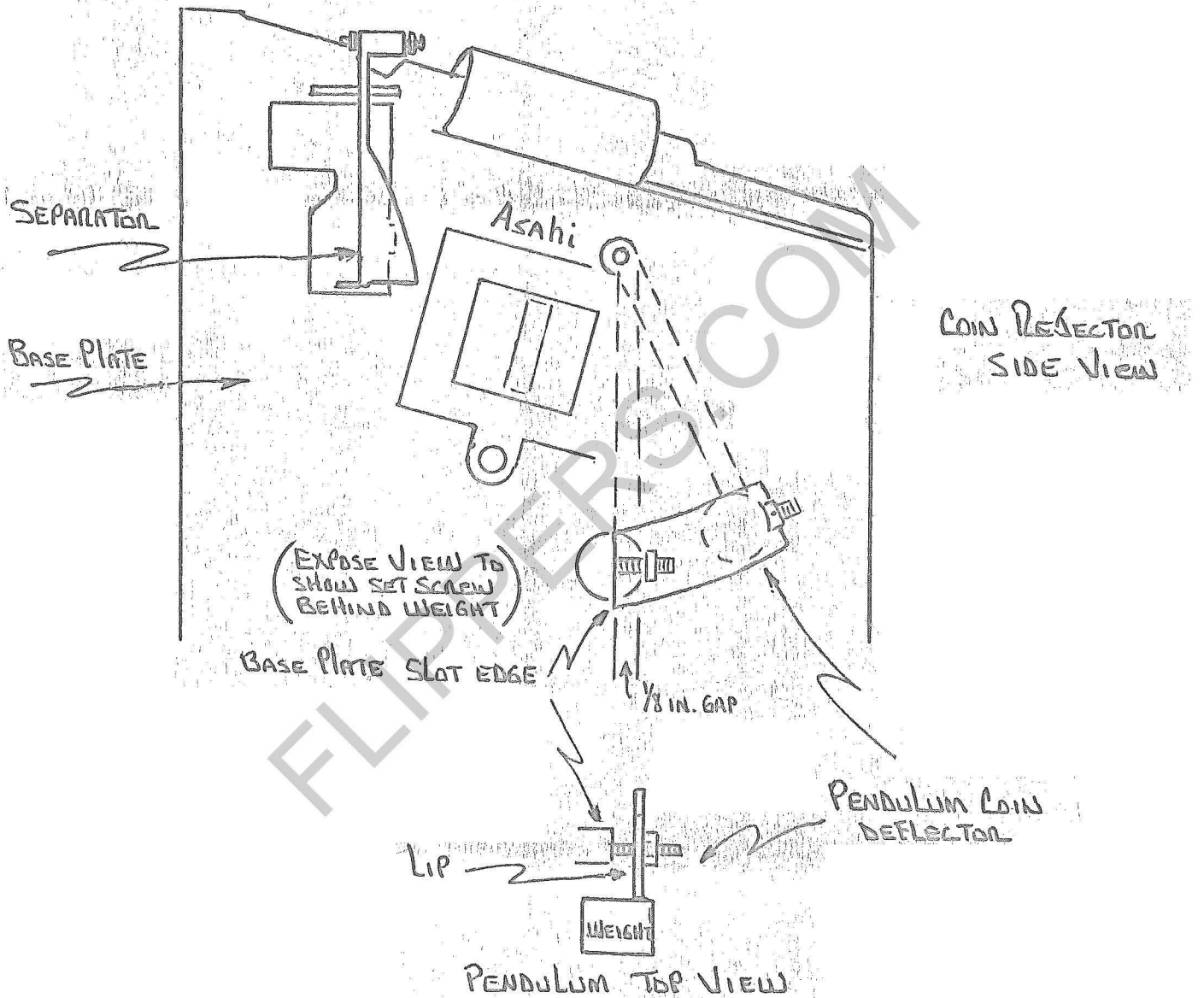
ADJUST CYLINDER MAGNET TO $\frac{1}{16}$ INCH CLEARANCE BETWEEN
25¢ U.S. COIN AND MAGNET SURFACE.

TURN RAIL RUNNER ADJUSTING SCREW OUT UNTIL LEVEL WITH
SCAVENGER PLATE SURFACE THEN TURN SCREW IN ONE COMPLETE
TURN.

(ILLUSTRATION ONE)

ASAHI COIN REJECTOR ADJUSTMENTS

ADJUST SEPARATOR SO THAT BACK LIP OF SEPARATOR CATCHES BACK SURFACE OF BASE PLATE



ADJUST SET SCREW ON PENDULUM FOR A GAP OF $\frac{1}{8}$ INCHES BETWEEN BASE PLATE SLOT EDGE AND LIP OF PENDULUM.

(ILLUSTRATION TWO)

APR 16 1980

March 31, 1980

TO ALL TAITO DISTRIBUTORS

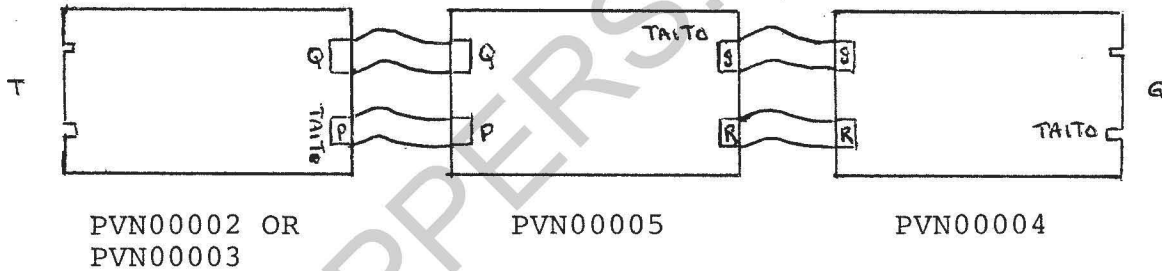
ATTN: SERVICE DEPARTMENT

Due to some mislabeling of connectors, damage has occurred on both PC Boards and Switching Regulators of TT Space Invaders Part II Color. The illustrations below will assist in eliminating this problem. Please provide this information to all your customers to prevent damage to their TT Space Invaders Part II Color PC Boards.

Sincerely yours,

TAITO AMERICA CORPORATION

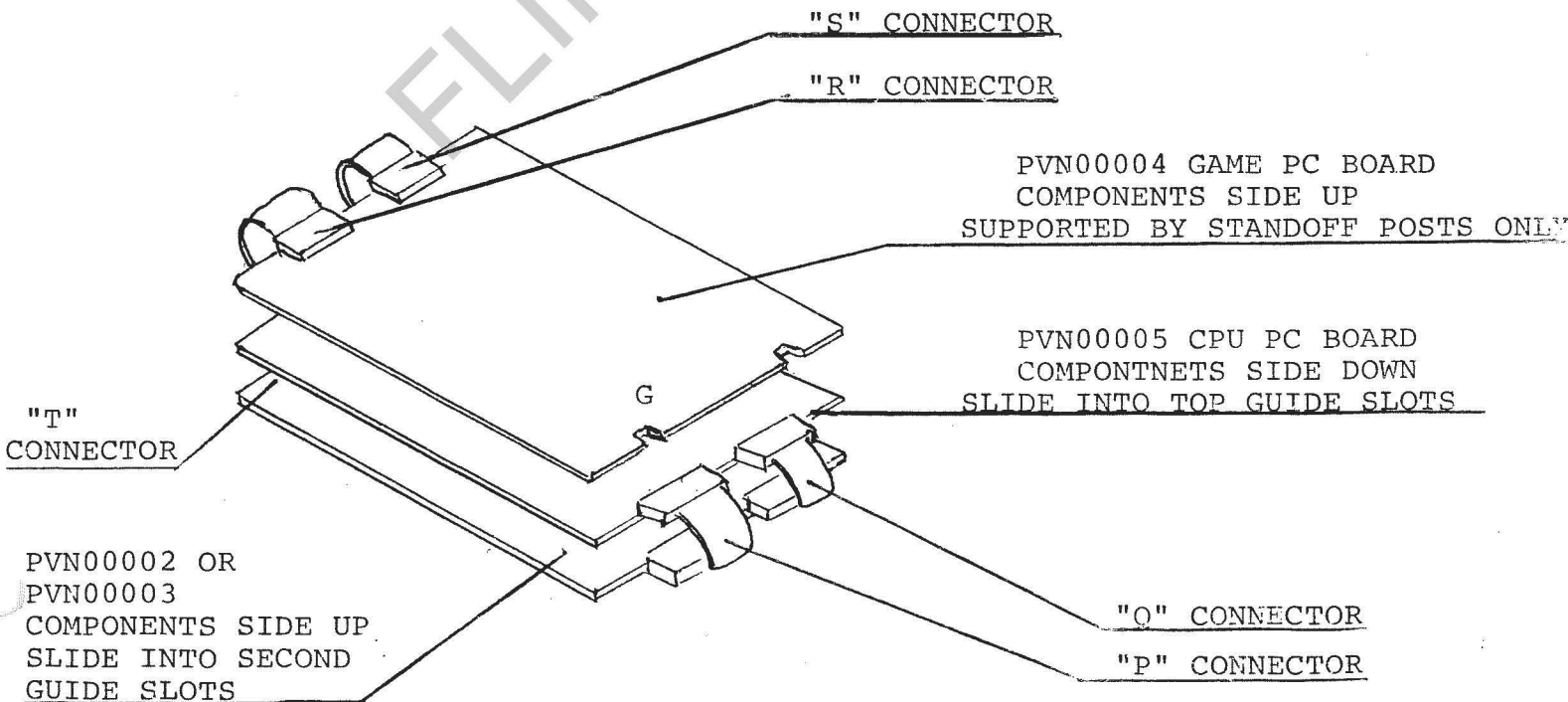
Martin Jasso
 Martin Jasso
 Customer Service Manager



PVN00002 OR
 PVN00003

PVN00005

PVN00004



11/11/80

TAITO AMERICA CORPORATION
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November 11, 1980

ATTENTION: SERVICE DEPARTMENT MANAGER

NOV 18 1980

Enclosed please find a set of instructions for locating bad ram on Space Invaders Black and White. Also enclosed are instructions for switch test mode on Stratovox.

These two sets of instructions are Service Bulletins #104 and #105, respectively.

We hope that they will aid you with some of the problems you may find.

Sincerely,

TAITO AMERICA CORPORATION


R.A. Lopez
Field Service Manager

RAL/dw

Enclosures

TAITO AMERICA CORPORATION

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TECHNICAL BULLETIN

GAME : SPACE INVADERS

SUBJECT: Method of Locating Bad RAM
and IO PORT

1. Set switch #3 to the "ON" position on the game & sound board.
2. When a RAM is defective, the alphanumeric location it is displayed on the screen as shown in Fig. 1.

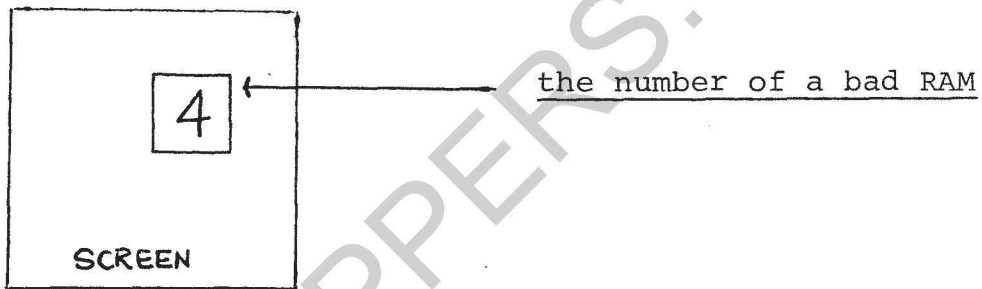


FIG. 1.

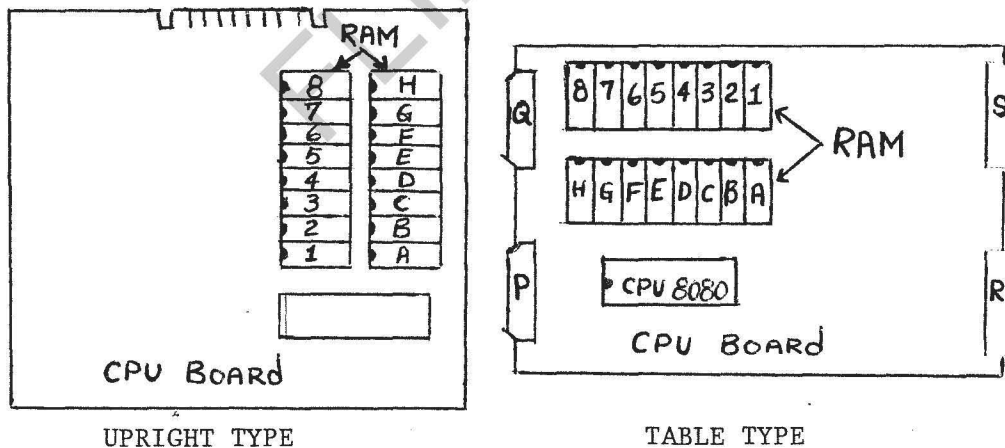
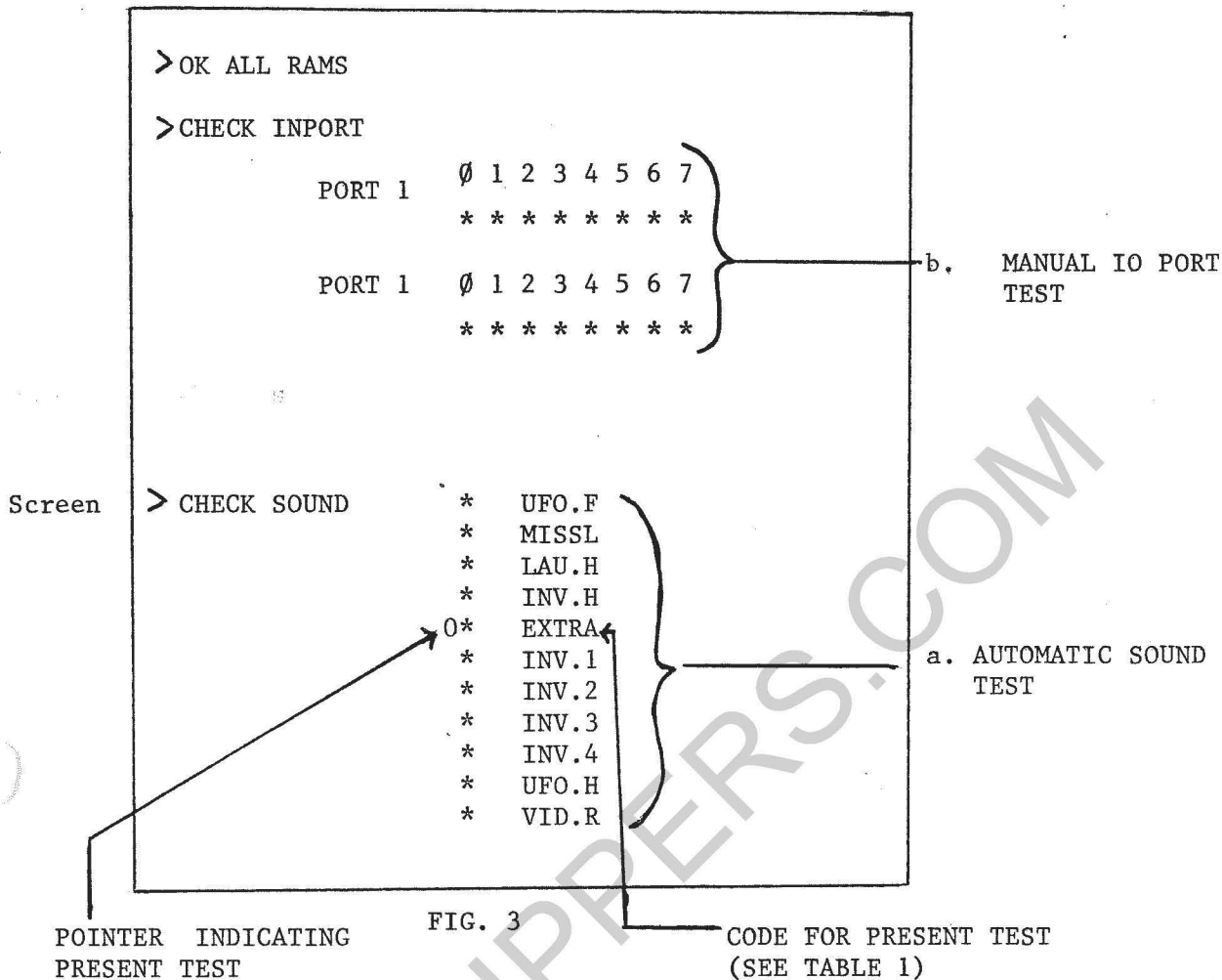


Fig. 2 - RAM Identification

3. When all RAMS are good. Test for IO PORT and sound will automatically start, and the pattern as shown in Fig. 3 will be displayed.



a. Automatic sound test

Symbol "0" indicates present test by sequentially moving downward. Make sure that correct sound is heard. If incorrect, locate the cause of a trouble on reference to your schematic.

Example: When any sound can't be heard, fault is at the OUTPUT stage or speaker, etc. When only UFO hit explosion sound can be heard, fault is at the SIGNAL GENERATOR & AMPLIFIER stage between SX3 and AMP3.

Table 1

UFO.F	---	UFO flying sound
MISSL	---	Firing sound
LAU.H	---	Base explosion sound
INV.H	---	Invader hit explosion sound
EXTR	---	Sound when extra base is awarded
INV.1	---	Invaders moving sound
INV.2	---	"
INV.3	---	"
INV.4	---	"
UFO.H	---	UFO hit explosion sound
VID.R	---	Verification of display inversion

b. MANUAL IO PORT test

This test mode is used to check operation switches. Actuating a switch will cause the corresponding symbol "*" to disappear. If not, the function associated with the PORT is defective.

Table 2

<u>PORT NO.</u>	<u>PORT 1</u>	<u>PORT 2</u>
	<u>Function Tested</u>	<u>Function Tested</u>
0	Ccin sw	-
1	2 player select sw	-
2	1 player select sw	Tilt sw
3	-	-
4	1 player trigger sw	2 player trigger sw
5	1 player MOVE LEFT sw	2 player MOVE LEFT sw
6	1 player MOVE RIGHT sw	2 player MOVE RIGHT sw
7	-	-

Note: At present, CPU board with 6 ROMs is not equipped with self-test ability. So above test can be only made for CPU board with 4 ROMs.

	<u>6 ROMs</u>	<u>4 ROMs</u>
SW2(ROM Pin 21) is jumpered to	-5V	GND
SW3(" Pin 19)	+12V	AD10
SW5(IC74154, 1T, Pin 23) "	AD10	AD11
SW6(" " Pin 22) "	AD11	AD12
SW7(" " Pin 21) "	AD12	AD14
SW8(" " Pin 20) "	AD14	GND

Please notice that your CPU board with 4 ROMs is modified for self-test (i.e. jumpered for 4 ROMs)

SERVICE TIPS

FAST AID HOT LINE: 800-323-0666
EXCEPT ILLINOIS: 312-981-1000 Ext. 215
TELEX: 253290



81-1

- MANDATORY
- ON FAILURE ONLY
- FOR YOUR INFORMATION

ATTN: SERVICE MANAGERS

GAME: SPACE INVADERS TRIMLINE
WITH HITACHI MONITORS

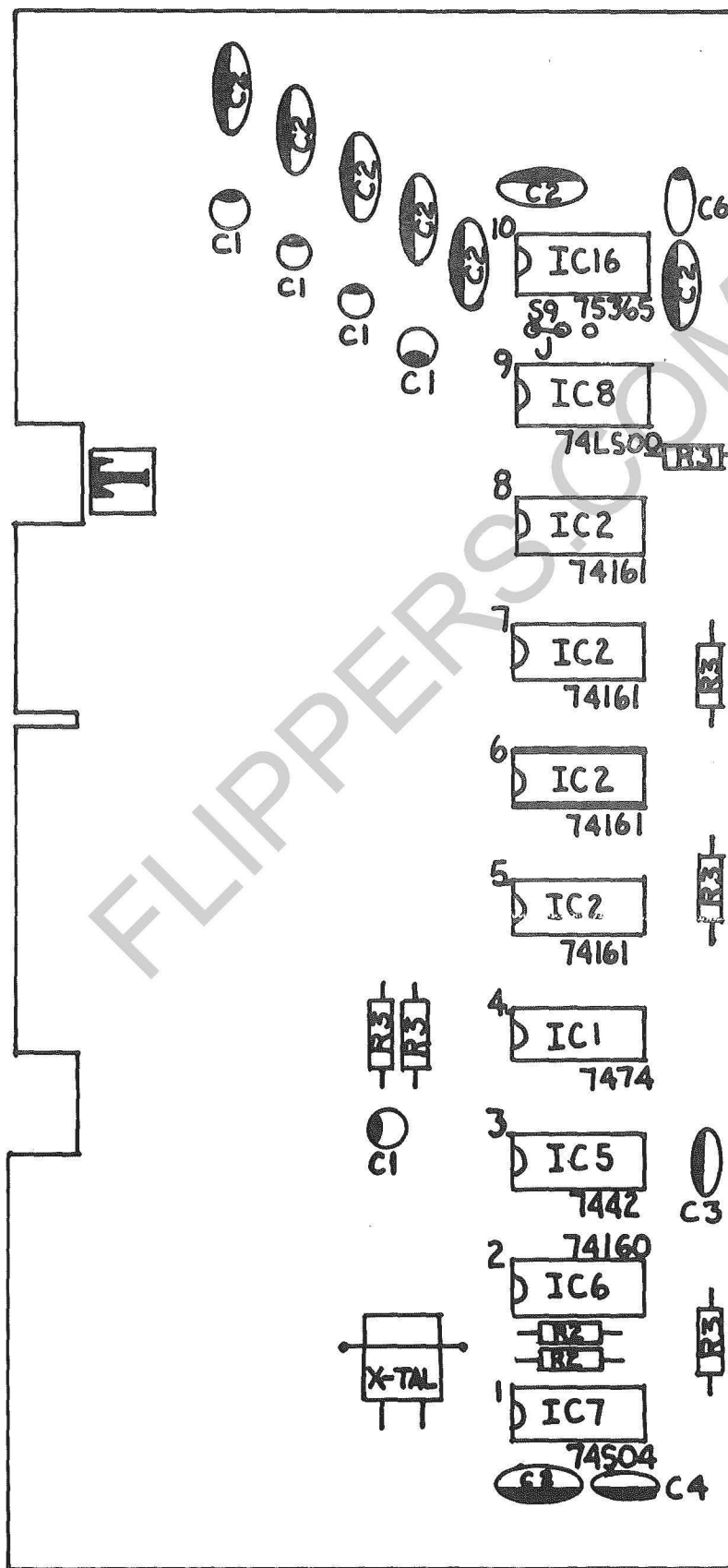
SUBJECT: SCREEN SHAKES WHEN GAME IS WARMED UP

SOLUTION: ADD CAPACITOR TO STABILIZE VERTICAL COUNTER
(PER ILLUSTRATION FIGURE 1)

PARTS NEEDED: ONE 470pf CAPACITOR

DISPOSITION OF OLD PARTS: NONE

PROCEDURE: ATTACH THE 470pf CAPACITOR BETWEEN PINS 8 AND 15 OF IC2
 LOCATION 6 (74161) CHIP PER ILLUSTRATION BELOW:



SERVICE TIPS

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81-8

ATTN: SERVICE MANAGERS

GAME: SPACE INVADERS, TRIMLINE, COCKTAIL TABLE

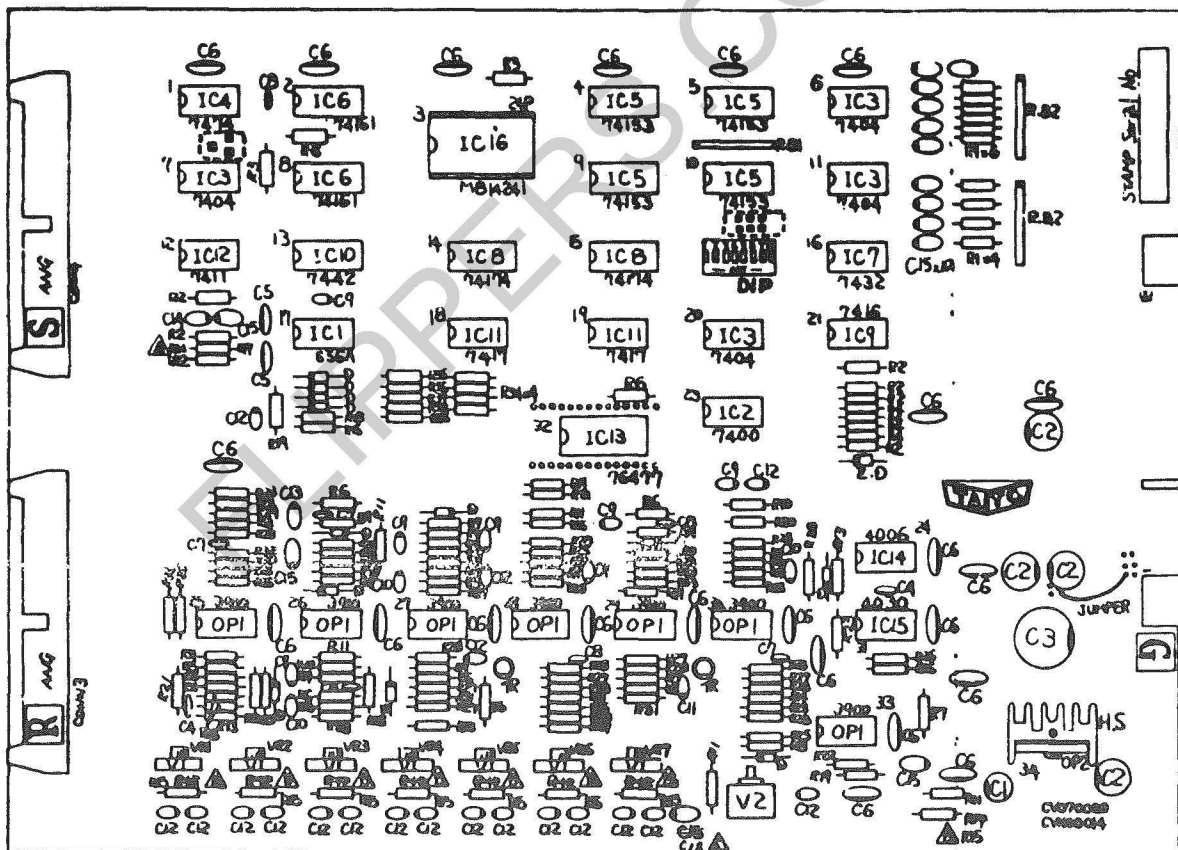
SUBJECT: SWITCHING BOARDS FROM COCKTAIL TABLE TO TRIMLINE

SOLUTION: JUMPER JOYSTICK AND FIRE BUTTON TO ONE CONTROL AND JUMPER
OUT SCREEN INVERSION

PARTS NEEDED: 4 JUMPER WIRES

DISPOSITION OF PARTS: NONE

PROCEDURE: THE JUMPERS YOU NEED TO CHANGE ARE ON THE SOUND BOARD (PVN00004). WITH THE "G" CONNECTOR ON THE RIGHT, THE JUMPER LOCATION IS BETWEEN IC10 AND THE SWITCH BLOCK. PLACE THREE JUMPERS ACCORDING TO FIGURE 1. TURN SWITCHES 5,6, AND 7 OFF. BETWEEN IC1 AND IC7 THERE ARE 3 JUMPER HOLES. JUMPER ACCORDING TO FIGURE 1. ON THE ETCH SIDE OF THE BOARD, BETWEEN IC1 AND IC7 YOU WILL SEE THE SAME 3 JUMPER HOLE. CUT THE ETCH THAT IS CONNECTING THE TWO HOLES ACCORDING TO FIGURE 2.



SERVICE TIPS

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TELEX: 253290



- MANDATORY
- ON FAILURE ONLY
- FOR YOUR INFORMATION

81-17

ATTN: SERVICE MANAGERS

GAME: SPACE INVADERS TRIMLINE

SUBJECT: ATTACHED IS THE CORRECTED WIRING DIAGRAM FOR THE SPACE INVADERS
TRIMLINE.

PARTS NEEDED: NONE

DISPOSITION OF OLD PARTS: NONE

FLIPPERS.COM

