

# Nintendo®

## SERVICE DEPARTMENT

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BULLETIN # TRS-01

GAME: Radar Scope

SUBJECT: Frozen picture displaying, "Captain, your duties are to shoot 48 UFO's. Good luck."

It has been discovered that there is a potential problem with the EPROM's on the sound board in early shipments of Radar Scope. The symptom is as described above; the remedy is to replace the EPROM on the sound board with a modified version of the EPROM. The replacement EPROM's are labeled either with a TRS-5Ab for the five-board set or TRS-3Ib for the four-board set. The replacement EPROM's are available through Nintendo's distributors. If they do not have the EPROM in stock, they are available for immediate shipment from our Parts Department.

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BULLETIN # TRS-02

GAME: Radar Scope

SUBJECT: Installation of Speed-up Kit

- 1) Remove P.C. Boards from the game and leave them attached to the P.C. Board bracket.
- 2) Using a pair of needle-nose pliers separate the P.C. Boards, exposing the entire surface of CPU P.C. Board.
- 3) Remove the EPROM's at locations 5-H and 5-K on the CPU P.C. Board.
- 4) Install the speed-up EPROM's labeled 5-HA and 5-KA in the corresponding locations on the CPU P.C. Board.
- 5) Remount the P.C. Boards to their original configuration and reinstall the P.C. Board in the game.

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BULLETIN # TKG-01

GAME: Donkey Kong, Radar Scope

SUBJECT: Frozen and Scrambled Screen Problems

We have found that a great deal of the time the above problem is caused by sockets on the CPU Board intermittently losing connection to the EPROM's. To remedy this problem, replace the sockets with a type that makes contact with the pins on the "flat" side, as opposed to the edges. This problem is found on the four-board sets TKG2, TKG3, and TRS2. Chip locations are 5F, 5G, 5H and 5K. We suggest that you replace these sockets only in the event this problem occurs.

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BULLETIN # TKG-02

GAME: Donkey Kong

SUBJECT: Speed-up Kit #1

To prevent extremely long play times, we are making available a speed-up kit. This kit prevents players from waiting on top of the ladders, on screen #1, while the barrels roll across instead of coming down on top of him. With this kit, barrels will roll on top of a player on a ladder 70 to 80 percent of the time.

Machines above serial #30,000 will have this kit installed at the factory, and all TKG4 board sets will come with this kit.

To install this kit in a four-board set, follow these instructions:

- 1) Remove P.C. Boards from game, leaving them attached to P.C. Board bracket.
- 2) Using a pair of needle-nose pliers, separate the sound P.C. Board from the CPU P.C. Board, exposing the entire surface of the CPU Board.
- 3) Remove the EPROM's at location 5F, 5A, 5H and 5K from the CPU Board.
- 4) Install the speed-up kit EPROM's in the corresponding locations.
- 5) Reconnect the sound P.C. Board to the CPU P.C. Board and mount the P.C. Boards in the game.

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BULLETIN # TKG-03

GAME: Donkey Kong

SUBJECT: Interchangeability of TKG2, TKG3, and TKG4 P.C. Boards

The first Donkey Kongs on the market had either the TKG2 type P.C. Boards or the TKG3 type P.C. Boards. These P.C. Boards are directly interchangeable as a set within the machine. The TKG4 type P.C. Board set is also interchangeable with TKG2 and TKG3 type Boards in the machine as a set with two small differences. The first is, the TKG4 P.C. Board set uses one less power harness connector, namely the 7 pin sound board harness connector. So if a TKG4 P.C. Board set is exchanged with a TKG2 or TKG3 typeset, we suggest that the 7 pin sound harness connector remain with the TKG2 or TKG3 P.C. Board set. This way you will eliminate the need to have extra 7 pin sound harness connectors in stock for exchange purposes.

The second difference is that the "L" brackets which secure the P.C. Board set in the machine, will need to be raised or lowered depending on which P.C. Board set is used. This is due to the fact that the TKG4 P.C. Board set is physically larger than the TKG2 or TKG3 P.C. Board sets.

The TKG4 P.C. Board sets have the speed-up kit already installed at the factory. The TKG2 or TKG3 P.C. Board set may or may not have the speed-up kit installed, depending on whether the operator has purchased the speed-up kit and installed it. The EPROM's on the CPU Board, where the speed-up kit resides, are interchangeable between the TKG2, TKG3, and TKG4 P.C. Board sets according to the following schedule:

Location:	TKG2 & TKG3	TKG4
	5F	5E
	5G	5C
	5H	5B
	5K	5A

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BULLETIN # TKG-04

GAME: Donkey Kong  
SUBJECT: Static Problems

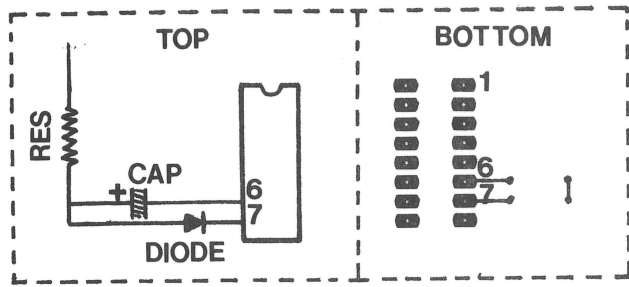
It has come to our attention that static electricity can cause problems with the electronics in our game. Typical problems include flipping of the picture, garbage on the screen or loss of moving objects. Turning the game off and then back on will cure this problem.

To attempt to prevent this problem we suggest two (2) modifications which should be made at the same time.

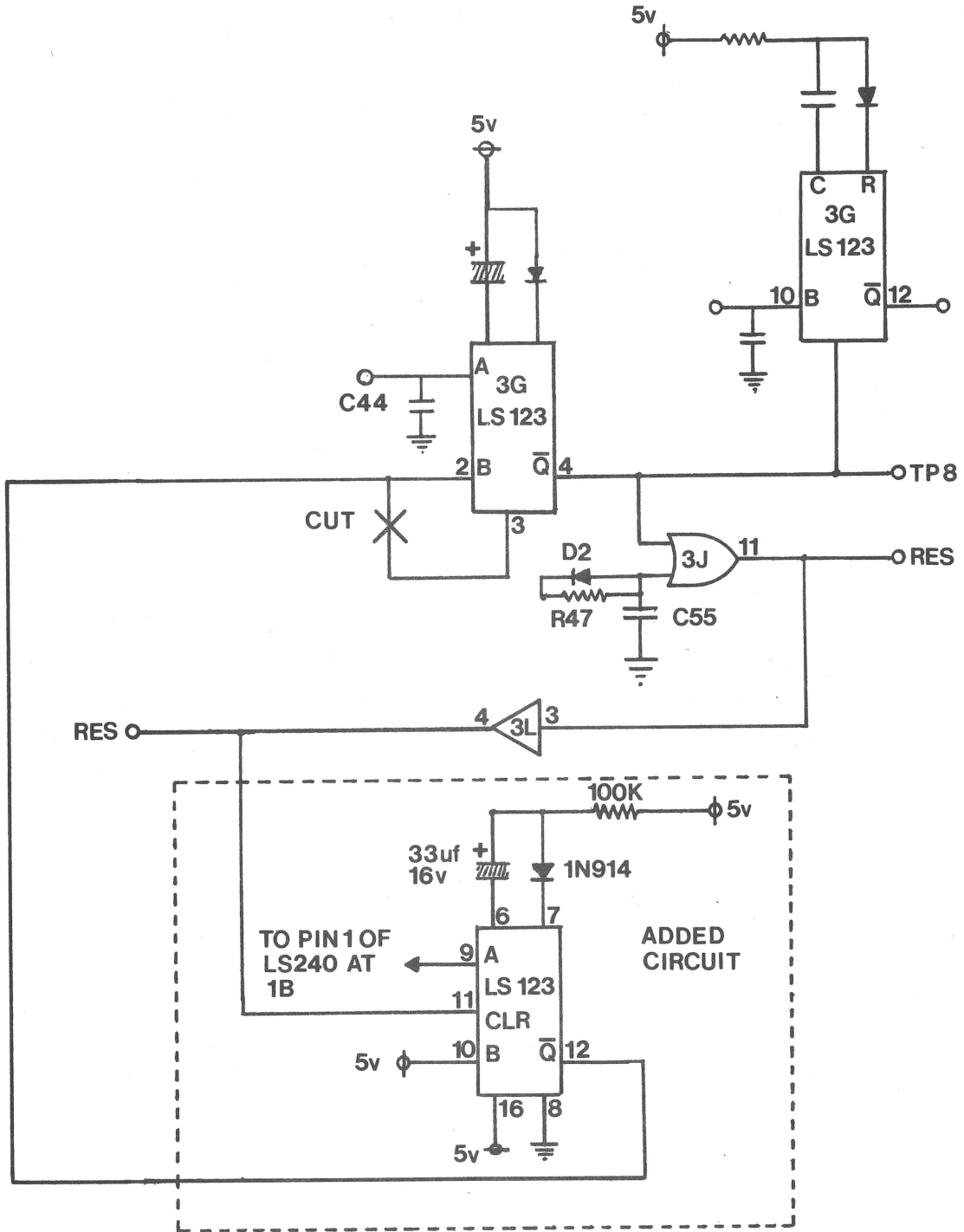
- 1) Increase the grounding system to the coin door and control panel. Run a ground wire from the coin mechs and the control panel ground to the power switch plate at the rear of the cabinet. It is important to keep these wires as short as possible.
- 2) Add a capacitor to the CPU Board. Use a .1 $\mu$ f ceramic disc with a voltage rating above 5 volts. For TKG2 and TKG3 boards the IC location is 3M. For TKG4 boards the location is 5H. In both cases the capacitor ties between pin 15 and pin 8. This should reduce noise being induced onto the reset line.

If these modifications do not prove satisfactory, there is an added circuit which can be used. This requires additional components which are available at any electronics store. A schematic of this circuit follows.





TKG2 AND 3 FOUR BOARD SET  
CPU BOARD

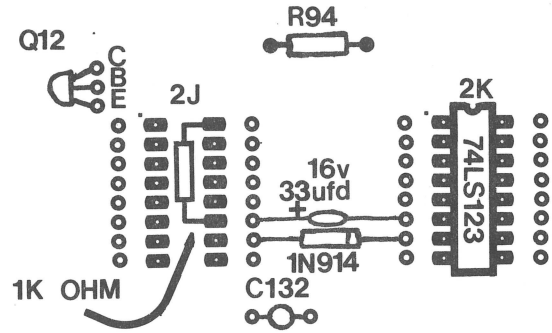
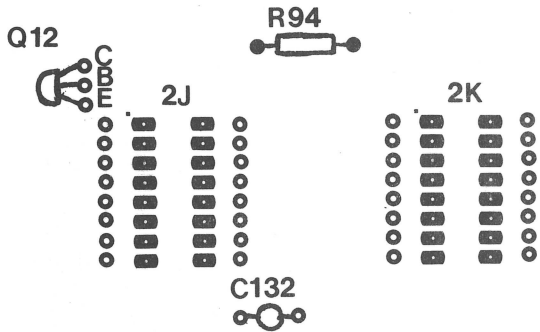




TKG4-11,12,13 CPU BD RESET CIRCUIT

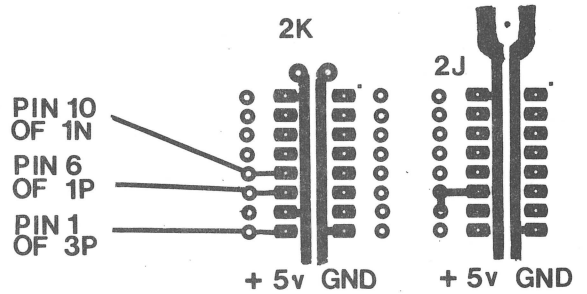
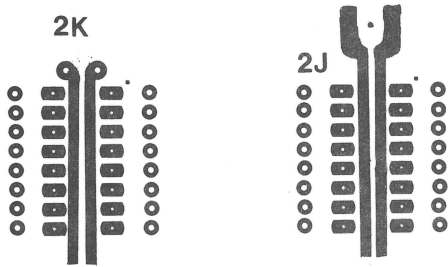
BEFORE

AFTER



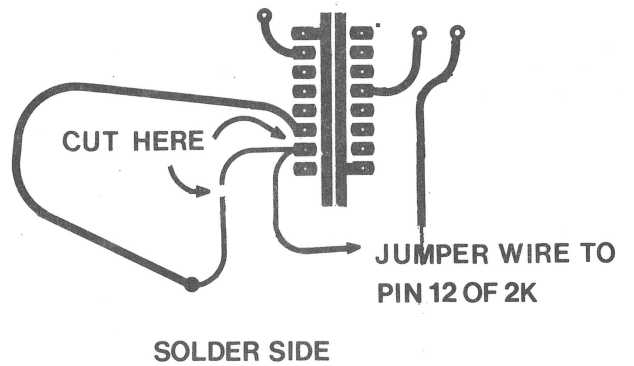
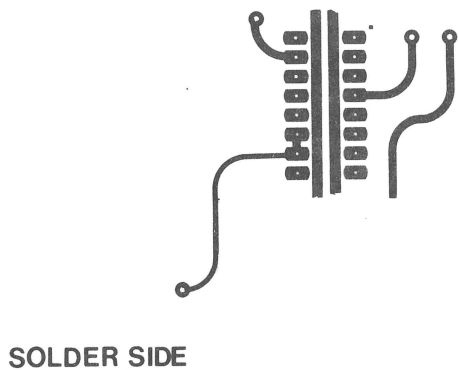
COMPONANT SIDE

COMPONANT SIDE



SOLDER SIDE

SOLDER SIDE



SOLDER SIDE

SOLDER SIDE

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## SERVICE DEPARTMENT

BULLETIN # TKG-05

GAME: Donkey Kong, Donkey Kong Junior, Popeye, Mario Bros.

SUBJECT: Slam Switch

In order to prevent the accumulation of free credits by kicking the coin door, a slam switch should be added.

In all cases the switch (a "normally open" weighted reed switch) should be mounted on the coin door. Connect one side of the slam switch to the brown wire on the coin switch (ground). The other side of the slam switch should be connected to a wire which will be run through the wiring harness to the CPU board. At this point the installations vary for the four (4) games.

### Donkey Kong:

TKG2 and TKG3: Attach to Test Point 8, at board coordinates 3L.

TKG4: Attach to Test Point 2-RESET, at board coordinates 1L.

### Donkey Kong Junior:

Attach to Test Point 2-RESET, at board coordinates 1L.

### Popeye:

Attach to C13 (47 $\mu$ F electrolytic capacitor), "+" side, at board coordinates 2N.

### Mario Bros.:

Attach to C38 (100 $\mu$ F electrolytic capacitor), "+" side, at board coordinates 4F.

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## SERVICE DEPARTMENT

BULLETIN # TKG-06

GAME: Donkey Kong

SUBJECT: Speed-up Kit #2

In an attempt to increase revenue of Donkey Kong we are making available an updated speed-up kit, part number TKG-23-70.

The speed-up kit consists of two (2) EPROM's that are mounted on the CPU P.C. Board. The replacement locations vary depending on the P.C. Board style.

<u>P.C. Board Style</u>	<u>EPROM Location</u>
TKG2 and TKG3	5F, 5K
TKG4	5A, 5E

These kits are available through all Nintendo distributors. If your distributor is out, they can get immediate shipment from our factory.

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## SERVICE DEPARTMENT

BULLETIN # DJR-01

GAME: Donkey Kong Junior

SUBJECT: Upper Coin Door Hinge

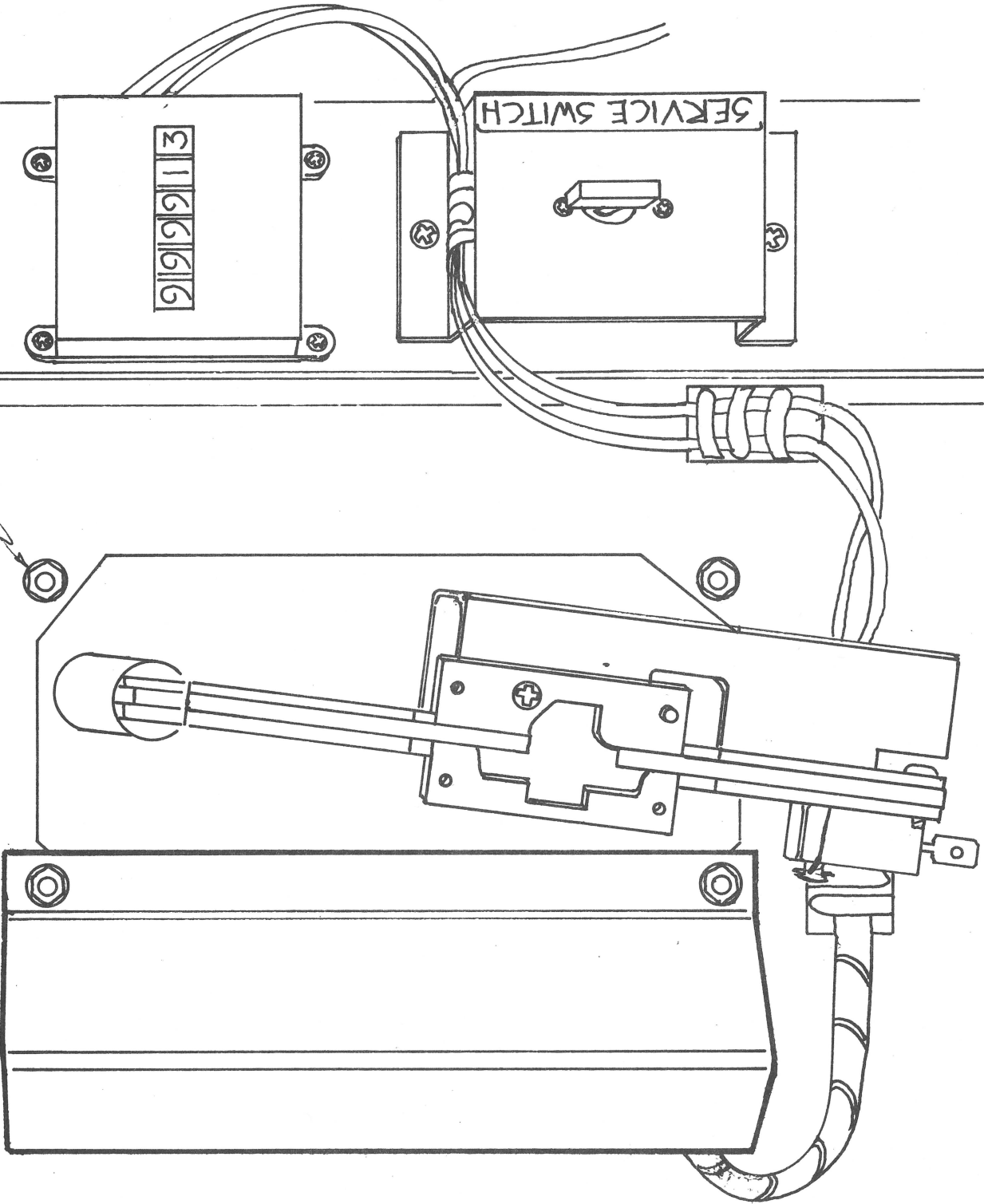
It has been brought to our attention that a flattened straw or similar object can be passed through the center opening in the upper hinge. If the object makes contact with the coin switch, it can be used to run up multiple credits.

The solution is to block the opening with a flange made of wood or metal. This flange should be mounted to the inside of the cabinet and can be obtained from us as a retrofit kit.

This problem is present in all Radar Scope uprights, Donkey Kong uprights and early Donkey Kong Junior uprights.

NOTE: MOUNT  
NEW FLANGE ON  
LEFT COIN MECH  
USING EXISTING  
NUTS AND BOLTS  
SO FLANGE  
COVERS HINGE  
WHEN DOOR IS  
CLOSED.

NEW FLANGE  
7mm NUT



DETAIL COIN MECH.

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BULLETIN # DJR-02

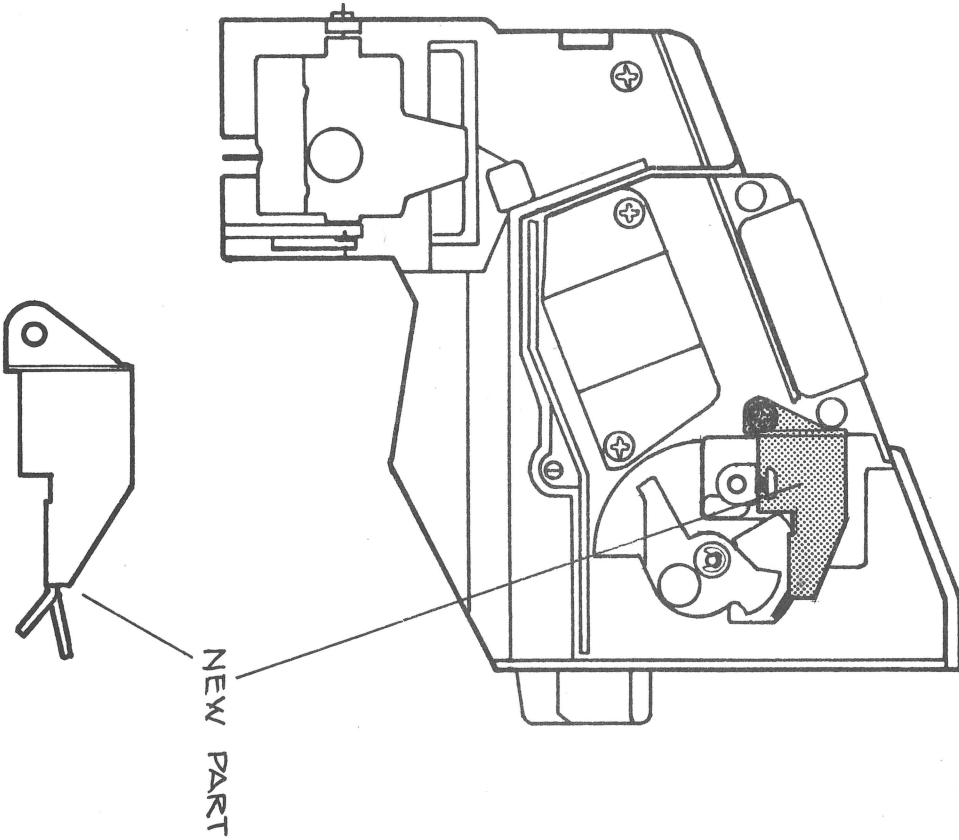
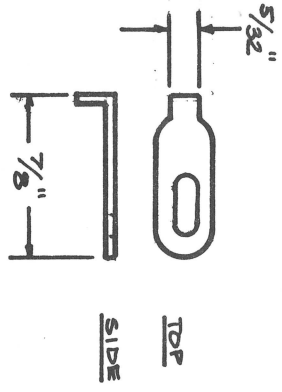
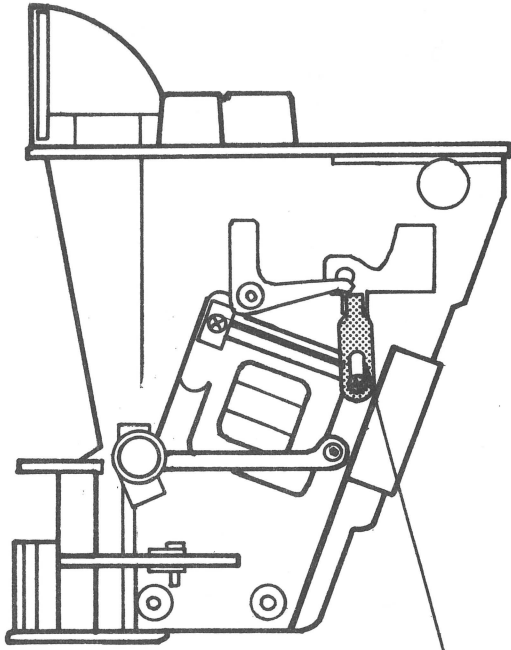
GAME: Donkey Kong Junior

SUBJECT: Model #730A Coin Selector

It has come to our attention that there is a problem with the model #730A coin selector in that a nickel or a penny, if flipped through the entry just right, will continue through the mechanism and establish credits.

The solution to this problem is to add a small metal piece to the selector as shown in the enclosed drawing. This piece can be made from 18 gauge steel or even a paper clip as shown in the drawing. This piece is available at no charge. The threaded hole in the selector is an M3 X 6MM size. If you cannot locate a screw this size, you can remove one of the machine screws from the power supply cage.





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## SERVICE DEPARTMENT

BULLETIN # DJR-03

GAME: Donkey Kong Junior

SUBJECT: Play Time

It has come to our attention that play time on Donkey Kong Junior is, in some cases, excessive, while in other cases there is concern over the ability of players to learn the game and thereby retain an interest in playing.

We are making available, through our Nintendo distributors, two EPROM change kits, designated DJR1-E and DJR1-P.

The E kit consists of four (4) chips and is an easier version of the program. It presents the board sequence in a way which familiarizes the players with the game faster. The board order is vines, springboard, Mario's hideout and keys.

The P kit is a more difficult version consisting of two chips. The board order remains the same while more and faster obstacles (snapjaws, nitpickers, etc.) are presented.

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## SERVICE DEPARTMENT

BULLETIN # DJR-04

GAME: Radarscope, Donkey Kong, Donkey Kong Junior

SUBJECT: Interchangeability of Hybrid IC's in Power Supplies  
PP7A (3D-1000) & PP7B (3D-1001)

- 1) Due to a lack of availability of Hybrid IC 3D-1000, we wish to inform you that the IC 3D-1001 can be used in place of the 3D-1000 with only minor modifications to the power supply circuiting.

To replace a 3D-1000 in the PP7A +5V circuit (IC1), add a polyester capacitor (.1uf/50V) across VR2 (2k pot). Also add an electrolytic capacitor (10uf/16V) between pin 10 (+side) and pin 11 (-side) of the 3D-1001.

- 2) To replace a 3D-1000 in a PP7A -5V circuit (IC2), add an electrolytic capacitor (10uf/16V) between pin 10 (+side) & pin 11 (-side) of the 3D-1001.

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## SERVICE DEPARTMENT

BULLETIN # DJR--05

GAME: Donkey Kong, Donkey Kong Junior

SUBJECT: Video Wrap Around on Left Side of Picture

We have recently received a number of service calls concerning the wrap around or fold over of the picture on the left hand side of the monitor. In most cases the problem may be solved by replacing capacitor C407 on the main monitor PC board. This is located just to the left of the high voltage cage when viewing from the rear of the monitor. The value of this capacitor is 10 microfarads at 160 volts (of course, any capacitor of 10 microfarads with a voltage rating higher will work also).

This capacitor is connected between ground and the B+ supply for the vertical output transistors, so if this capacitor becomes leaky it does not allow full vertical deflection of the screen; consequently, you get video information imposed over the other (wrap around).

If you have questions about this or any other questions concerning Nintendo products, please feel free to contact us.

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## SERVICE DEPARTMENT

BULLETIN # TMA-01

GAME: Mario Bros.  
SUBJECT: Coin/Credit Problems

Recently we have received reports that there may be a problem on Mario Bros. with receiving credit after inserting coins. These reports have been mainly with the Nintendo-Pak™, due to the fact that on our previous games the timing of the coin switch closure was not critical, whereas on Mario Bros. the timing is critical. Many times this may be resolved by just adjusting the coin switch actuator wire such that it "makes" just as the coin starts to come out of the mechanism. This allows for a greater amount of closure time. If problems continue, we have a modified version of the main operating program available through our distributors which decreases the required amount of time of switch closure from 32-48 ms to 16-32 ms. After these measures are taken, you should experience trouble-free operation of the coin/credit circuits.

The part number for this modified program is TMAU-21-05, and as mentioned before, it is available through our distributors.

If you have any questions concerning this or any other problem you may experience with Nintendo products, please feel free to contact us.

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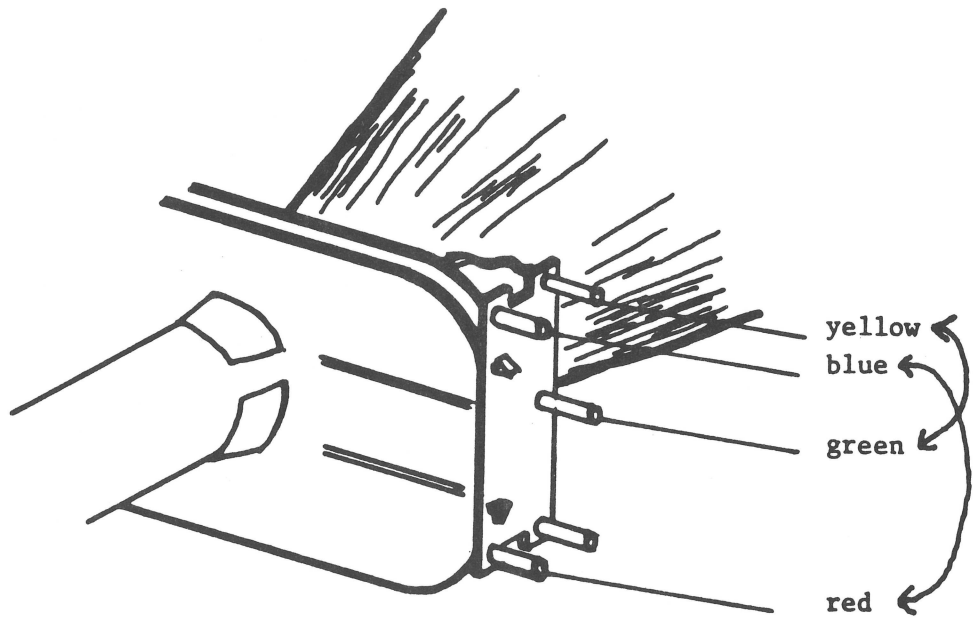
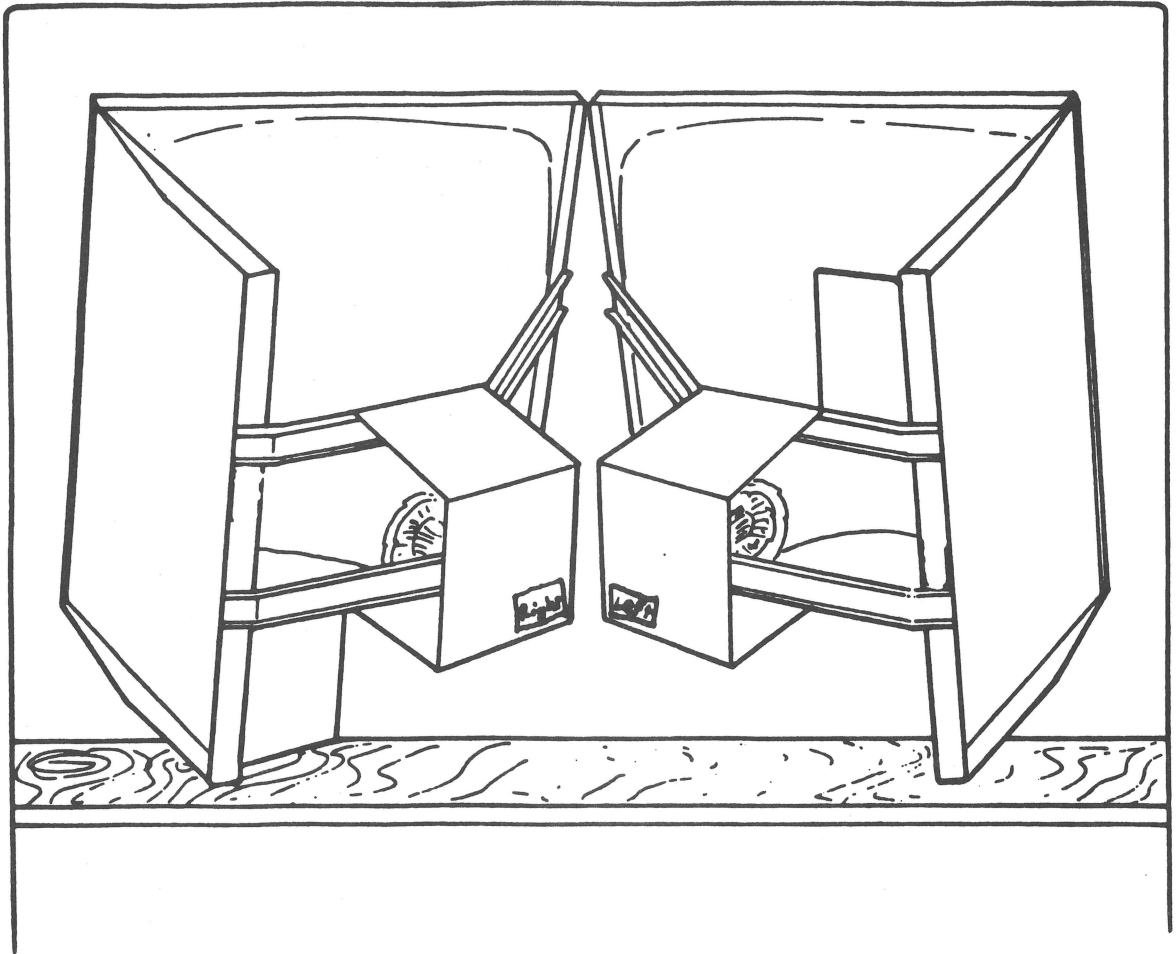
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BULLETIN # MDS-01

GAME: VS. System Upright

SUBJECT: Monitor Interchangeability

The monitors in the VS. System Upright are essentially the same as the monitor used in our previous games except for two minor differences: (1) the brackets which support the CRT are angled differently so as to allow easier mounting; (2) the right hand monitor, as you look at the front of the game, has the vertical and horizontal deflection yoke wires swapped. This allows the monitors to be mounted "top-to-top" as shown in the attached drawing. The monitors are labeled "left" and "right." To use an older monitor to replace the left monitor, simply change the CRT support brackets. To change the right monitor, replace the CRT support brackets and swap the vertical (yellow and green) wires and the horizontal (red and blue) wires as shown in the attached drawing. Do not get the horizontal and vertical wires crossed as this can cause damage to the electronic components.



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## SERVICE DEPARTMENT

BULLETIN # CHP-01

GAME: PUNCH-OUT!!

SUBJECT: POWER SUPPLY, PP-1000A

It has been discovered that the Punch-Out!! power supply, PP-1000A, may potentially develop an oscillation problem, which causes a high pitch noise in the speaker. Should this problem occur, take the following steps to remedy the oscillation.

Replace C27 with a .033mfd 50V Mylar capacitor or add a .022mfd 50V Mylar capacitor to the p.c. board at the points A and B (R24 and R25) on the attached drawing.

If you have any problems with this modification or any other Nintendo product, please do not hesitate to call us at the numbers listed below.



NOTES