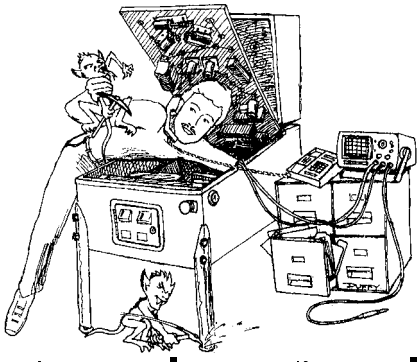
Nº 151 Service Bulletin



Joe Blackwell	Patty Schraps	Dorothy Brown	Chas Siddiqi	Patrick Powers	J. Alfer
Director, Parts Sales & Technical Support	Parts Sales Manager	Parts Sales Representative	Technical Support Engineer	Technical Support Engineer	Technical Support Doc. Administrator

TO: Parts & Service Managers

DATE: July 20, 2004

SUBJ: **The Lord of the Rings™ Ver. 8 Update: Potential Flipper & Ring Magnet Fuse Fatigue**

Symptoms:

1. Flippers feel weaker after extreme amount of use.

2. The Ring Magnet may not be "catching" the ball; F20 *(I/O Bd., 4A Slo-Blo)* fatigues and blows on some games.

3. Upon Power-Up, the game no longer displays the CPU & Display Version of code in the game.

Explanations:

1. After long playtime on **The Lord of the Rings™ Pinball**, some players noticed the flippers feel weaker. This game utilizes very strong *Flipper Coils* (22-900) on the flipper assemblies which after extensive play can heat up and feel weak.

2. During "Destroy the Ring" Mode, while a pinball is captured in the ring, the ball may start to oscillate back and forth due to a number of variables *(i.e. game pitch, Magnet Coil temperature or line voltage variations)*. This action can cause a repetitive number of grab pulses which can fatigue the I/O Board F20 Fuse.

3. The Power-Up Routine was changed *(updated in ver. 5.00)* to **exclude** the delay of displaying your CPU Game & Display Code Versions and Check Sums so game play is available immediately.

Solutions:

1. Upgrade the game's **CPU Game ROM (U210, CPU/Sound Board)** to ver. **A8.00** (Checksum, $94FF, SPI PN: 965-0402-80) and **Display ROM (U5, Display Controller Board)** to ver. **A8.00** (Checksum, $3C88, SPI PN: 965-0407-80). Order through your local distributor if an EPROM Burner is not available. All binary code (USA, German, French, Italian and Spanish) can be downloaded from our website (click Tech Support, then game link).

The new code adds three **Standard Adjustments 53-55**, **Flipper Adj. 1-3** *(see below)*. This will allow the game to use the End-of-Stroke (Flipper) Switches where available, to turn off the power to the flippers earlier. This should generally result in the flippers staying *MUCH* cooler over a longer period of time and reduce player dissatisfaction on a heavily-played game.

Update your Service Manual, Sec. **3**, Chp. **4**, **Go To Adjustments Menu**, with the following *new **Standard** Adjustments:*

53 FLIPPER ADJ 1: Set between **05** to **40**. Default is **10**. This adjustment sets the ***minimum*** fire time for a flipper coil in milliseconds.

54 FLIPPER ADJ 2: Set between **40** to **60**. Default is **50**. This adjustment sets the ***maximum*** fire time for a flipper coil in milliseconds.

55 FLIPPER ADJ 3: Set between **0** to **10**. Default is **3**. This adjustment sets the amount of time to fire the coil ***after the EOS switch is seen*** in milliseconds.

Detailed Explanation: ***CHANGING THE DEFAULTS WITHOUT A COMPLETE UNDERSTANDING OF THESE ADJUSTMENTS IS NOT RECOMMENDED ~ CONTACT TECH SUPPORT IF YOU HAVE ANY QUESTIONS***

Solution 1 Continued next page

Solutions Continued:

Flippers will now fire when the button is pushed until the End-of-Stroke (EOS) Switch closure is seen. When EOS is seen, continue firing for the amount of time in Std. Adj. 55. When this time is expired, if the minimum time has not yet been met (Std. Adj. 53), then keep firing until it has. Otherwise switch to hold power. • If the flipper has been firing and it reaches the maximum (Std. Adj. 54), then switch to hold power. • If the flipper caves-in (EOS re-closes) while the button is still held, then refire the flipper at full power. Switch to hold power as soon as EOS is seen, no minimum times are enforced in this situation. • If the flipper caves in several times on the same single flipper button press, then stop refiring at full power and just stay at hold. • If the flipper fails to open the EOS switch several times, then assume it isn't working and fall back to a "safe" fire time so as not to burn up the coil. Three (3) new STANDARD ADJUSTMENTS were added to control the flippers.

2. Upgrade the game's **CPU Game ROM (U210, CPU/Sound Board)** to ver. **A8.00** (Checksum, $94FF, SPI PN: 965-0402-80) and **Display ROM (U5, Display Controller Board)** to ver. **A8.00** (Checksum, $3C88, SPI PN: 965-0407-80). Order through your local distributor if an EPROM Burner is not available. All binary code (USA, German, French, Italian and Spanish) can be downloaded from our website (click Tech Support, then game link).

The new code adds one **Feature Adjustment 35**, **Destroy Ring # Balls** *(see below).* This will change the Ring Mode from a 2-Ball Mode to a 1-Ball Mode. This elimates the potential of fuse fatigue. Also, the Magnet Ring OPTO dispatches so they won't score during "Destroy the Ring", so now if the Ring Magnet is holding a ball and another ball in play got stuck, the game can initiate a Ball Search to help free it.

Update your Service Manual, Sec. **3**, Chp. **4**, **Go To Adjustments Menu**, with the following *new **Feature** Adjustment:*

35 DESTROY RING # BALLS: Set between **1 - 2**. Default is **1**. When set to **1**, when the first magnet shot is made, the ball will be held briefly, then let go. In order to win *Destroy the Ring*, you must make the ring shot clean through the ring *(the magnet will not turn on)* so that the ball registers the *Backpanel Trough Switch.* When set to **2**, you must shoot the 4 shots, then shoot the ring. This ball is then held in the magnet indefinitely, and the goal is to knock out the first ball with a new ball launched into play.

3. To view your **CPU Game** & **Display Code Versions** *(+ Check-Sums),* ***HOLD IN THE RIGHT FLIPPER BUTTON*** upon Power-Up.

Please phone or eMail with any questions or comments at the below numbers or address.