



## Service Bulletin #35

To: Service Managers  
From: Data East Pinball Service Department  
Date: April 16, 1992  
Subject: Star Trek Game Program

Symptom -1. Recently we have encountered Star Trek Games that intermittently freeze-up during the course of play. On some games the condition occurs in a few hours, or maybe once a day, in other games the condition seems to never occur. Generally, when it happens, there are 2 balls in the trough and 1 on the right Vertical Up Kicker, or all 3 Balls in the Trough. When the freeze-up occurs the display may appear normal and there may be controlled lamps on the playfield either on or flashing, but, closing switches on the playfield generally don't produce any reaction with lights, sounds or display effects.

Cause - 1A. During some scoring circumstances the display becomes busy, at which time it tells the CPU board to wait. This should normally take milliseconds, but, if the display is lost, the CPU board will continue to wait until it believes the display is no longer busy.

Cause - 1B. During ball search, if certain switches are closed at just the right instant, the CPU will discontinue the search, freezing the game and preventing further play.

Symptom -2 Some Star Trek Games will intermittently kick the Knocker or Turbo Boost Kicker in the shooter lane rather than fire the Flash Lamps.

Cause - 2. The normally closed 50 volt contacts on the Left/Right Relay of the PPB Board have become pitted and are beginning to stick together.

Solution - Replace Cpu ROM location C5 with enclosed version 2.00. -Note we are also enclosing display version 1.09 for those of you that didn't receive it with our December mailing.

- This CPU version will automatically reset the display if the display appears to be busy for too long a period of time.
- The Cpu board will now continue to run, even if the constant resets to the display do not wake up the display.
- The switch timing during ball search has been improved.
- The Left/Right Relay control has been modified to further minimize arcing on the contacts and extend the life of the relay.