

## PLAYSTATION TECHNICAL NOTE

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Date: August, 1996  
Ref:  
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Subject: Bug Fix: Instructions when Switching CD Subsystem Motor  
Rotation Speed

### ABSTRACT

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It turns out that special instructions need to be followed upon switching PlayStation CD subsystem rotation speeds (standard/double). Please make sure to follow these instructions since this problem has a great possibility to become one of the worst field complaints.

### SYMPTOM AND REMEDY

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Symptom: Issuing CD head move commands (CdSeekL/P, CdReadS/N) immediately after switching the CD transfer speed may result in head runaway and the production of strange noise.

This symptom occurs because there is a brief time where the head cannot be controlled properly after switching the transfer speed during the CD subsystem operation.

If a command related to CD head movement is issued during this time, at worst, the head goes into runaway and comes into collision with the mechanical stopper. When this symptom arises, the head control mechanism will be recovered by the CD subsystem and the program will not be terminated. When the head comes into collision with the stopper, the safety mechanism will be activated, and the parts will not be damaged. However, a strange noise will be produced upon starting the safety mechanism, and this may be reported as a field complaint.

Currently available CD head move functions/commands are as follows:

```
CdRead (int sectors, u_long *buf, int mode)
CdRead2 (long mode)
CdSearchFile (CdLFILE *fp, char *name)
CdReadFile (char *file, u_long *addr, int nbyte)
CdReadExec (char *file)
CdPlay (int mode, int *tracks, int offset)
CdSeekP, CdSeekL, CdReadS, CdReadN, CdPlay
```

When calling/issuing the above functions/commands after switching the rotation speed, make sure to follow the instructions below to avoid field complaints.

Remedy: Allow more than 3 vsync spacings to occur before issuing a CD head movement command after switching the CD transfer speed.