



Euphonix Technical Bulletin 0603-4

R-1 Multi-Track Digital Recorder Disk Drive Preventive Maintenance, Failure, and Troubleshooting

Systems Affected: S5 Max Air R1 X

Unit's Affected: R-1

Preventive Maintenance: Preventive maintenance of your disk drives will improve system reliability by removing bad drives from your drive inventory. This is easily accomplished by performing a test recording that is ten percent less than the drive capacity.

Use the Destructive Mode, set the Window to the desired length, and record all tracks. Next, Playback the entire session. Drive failures appear as a Firewire failure and crash the system. Remove and discard the faulty drive using the process outlined below. Record and Playback can be run unattended, and performed over successive days as a part of routine studio operations.

Perform this step before using a new drive (see exception on Euphonix supplied drives), before critical live performances, and periodically as a part of regular studio operations.

Background: Data is streaming to the drives at a very high rate during recording. If a bad sector has developed during normal use the R-1 streams the data over the sector but the data on this sector(s) is not recoverable -- imagine a small bad spot on an analog tape. During playback this bad spot is presented as a Firewire fault. A fault can occur immediately upon start of playback but usually occurs at the end of long recordings -- last 20% of drive capacity.

Procedure: Recovery is focused on determining, and editing out, the bad data. Through trial and error first determine which drive has taken the fault, then isolate to the time of fault-start and stop. Then edit out the bad section, which may be as small as a few seconds on one track.

The TransferStation affords a faster method. First back up the material, then reload to the Audio Deck drives -- do not use the previously identified bad drive. Then, playback the material looking/listening for the bad data and remove the data. (With this approach the R-1 will not crash when playing back the bad sections.)

Always discard a drive on which a bad sector has developed.