Audio Recording Troubleshooting

First of all, be sure that you have permission to record audio, as it is against the law to copy audio without the artists permission. Please contact your legal advisor for further information on this.

Due to the fact that the cause of your problem may be hard to diagnose, please try the following suggestions:

Ensure that you have the latest firmware. New firmware can be obtained from our sight at http://www.ricohcpg.com/firmware.html. To find your version of firmware, go to your Device Manager and under CDRoms, go to Ricoh MP6200. Click on Properties and then go to Settings. At the time of this writing, the latest firmware is 2.03.

Ensure you are also running the latest premastering software. Updates can be obtained from Adaptec's page at http://www.adaptec.com.

If you are trying to do a CD to CD copy, it is highly recommended that your source drive be a SCSI player. If you are encountering a problem with CD to CD copy, try to do the 'burn' from your hard drive to the Ricoh MP6200.

The CD player that you are using to extract audio, must be capable of digital audio extraction. Please contact the manufacturer of your CD player to see if its capable of digital audio extraction.

Keep in mind that a standard CD player cannot read multi session CD's, so when recording audio, record all the tracks at once.

If you are getting pops, clicks or scratches between your audio tracks after you have recorded them to CD, the problem could be one of the following:

 1) Clicks/ Scratches - When an audio track is converted to .wav, header information is added to the beginning and text added at the end of the file. The header tells what type of file it is, and the text at the end is part of the file descriptor. The software does not always strip the data from the end, and it gets recorded to the CD. When an audio player tries to play the data, it comes out as a click at the end of the track. To prevent clicks from occurring, use a .wav editor that will strip the ending data from the .wav file. You can also use the recorder to create the .wav files by doing a Read Track (Easy CD Pro) from the CD-Recorder menu option or Pre-Record to WAV Files (CD Creator) by right mouse clicking on the already added audio file.

2) Pops - When the laser on the recorder disengages between each audio track, this is called Track-at-Once recording. This movement sometimes gets recorded to the CD as extra noise sounding like a soft pop. To prevent
the pop from occurring, the audio tracks will need to be recorded from .wav files on the hard drive using the Disc-at-Once option IF your recorder supports it and IF you have a copy of the Easy CD Pro. The audio tracks need to be copied to the hard drive as .wav files, using the Read Track option in the CD-Recorder menu. Create either a Cue Sheet if using Easy CD Pro/MM or drag the .wav from Explorer to the Audio Track List if using Easy CD Pro 95. If your recorder supports Disc-at-Once, the option will show up at the top of the Write dialog box in Easy CD Pro/MM and at the bottom of the General Tab in Easy CD Pro 95. If the option does not show up, your recorder does not support it. You may be able to upgrade the firmware by contacting the manufacturer. If you have CD Creator, the above options will not be applicable to you.
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The following is information on Buffer Under Runs from Adaptec. This is good information to follow to ensure that you have your system set for optimal performance.

A buffer under run (or over run) is the most common problem in CD recording. A buffer underrun/overrun occurs when the system can not deep up a steady stream of data as required by CD recording. The CD recorder has a buffer to protect against interruptions and slowdowns, but if the interruption is long enough that the recorder's buffer is completely emptied or overflows with too much information, a buffer underrun/overrun occurs, writing halts and most often the recordable CD is irretrievably damaged. You can check out the helpful hints for buffer underruns/overruns on Adaptec's web site to help out your situation at: www.adaptec.corn/support/cdrec/bufunder.html

CD writing is a real-time process which must run constantly at the selected recording speed, without interruptions. The CD recorder's buffer is constantly filled with a reserve of data waiting to be written, so that
small slowdowns or interruptions in the flow of data from the computer do not interrupt writing

A buffer underrun error means that for some reason the flow of data from hard disk to CD recorder was interrupted long enough for the CD recorder's buffer to be emptied, and writing was halted. If this occurs during an actual write operation rather than a test, your recordable disc may be ruined
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Possible Causes of Buffer Underruns

Hard Disk
*   "Dumb" thermal recalibration.
*   Fragmented hard drive.
*   Sector size at 32kb instead of 16kb.

* Not enough space in temporary directory. Hardware
* Slow source devices.
* Source devices that transfer data in bursts.
* Incorrect recorder controller settings.
* Inability of the devices to sync properly.
* Overall system configuration.
* Computer unable to allow fast enough data transfer.
* Old device drivers.
* Memory-Resident Programs
* Any program that may activate on its own
* Anti-virus software
* Screen savers
* System agents
* Schedulers
* TSR (terminate and stay resident) software
* Networks
* System sounds
* Animated icons

Networks
* Recording across the network (usually too slow to maintain adequate throughput speed).
* Incoming e-mail or faxes.
* Other people accessing your computer.

Windows 95
* Modify Virtual Memory Settings
* If you have more than 16 MB of RAM, disable Auto Insert Notification
  * Click on the Settings tab.
  * Deselect "Auto insert notification."
  * Restart your system as prompted.
* If you have more than 16 MB of RAM, change the hard drive's Typical Role to Network Server

Files to Be Recorded
* Recording many small files.
* Damaged source files (data loss).
* Trying to record files in use by the system or other applications. Other
* Copying from a CD that is scratched, dirty, or damaged.
* Recorder malfunction.

Checks / Prevention
* Disable or remove everything in the computer EXCEPT the operating system, the recording software, and the drivers for your source devices.
* De fragment your hard drives at least once a week to prevent files from scattered across the hard drive.
* If you are using any Adaptec SCSI card under Windows 95, please download the latest miniport driver (ftp://ftp.adaptec.com/pub/BBS/win95, filename WIN95MPD.EXE) from the Adaptec FTP site and install it.
* For any Adaptec controller in Windows 95 or NT, we also recommend that you download and install the new 32-bit ASPI layer (Ap://ftp.adaptec.com/pub/BBS/win95, filename ASPI32.EXE).
* Do not record across a network. Copy the desired files to your local hard drive.
* Log out of any networks if possible, including Windows for Workgroups and/or Microsoft Network.
* For best results use SCSI 2 source devices.
* Disc to disc copying, requires a SCSI 2, fully ASPI-compliant CD-ROM drive. We recommend at least 8x for   copying. Audio   requires a source CD-ROM drive which supports digital audio extraction.
* Make sure your hard drive does Smart Thermal Recalibration. (that is, that it won't recalibrate if the CPU is being used).
* Record at a slower speed.
* Write an .ISO image to the hard disk first, if you have enough hard drive space
* In any operating system, always using the newest drivers from your SCSI controller card manufacturer
* Always set audio to write at 1x.
* Keep the CDs, the recorder, and your source CD-ROM drive free.
* Make sure your SCSI controller card is FULLY ASPI-compliant.
* Do not try to copy empty directories, zero byte files, or files that may be in use by the system at the time.
* More than 10,000 very small files should be written to an .ISO image first or recorded at 1x if possible.
* The temporary directory should always have space free at least twice the size of the largest file you are recording.
* The entire computer, from the motherboard bus to the recorder itself, needs to be configured properly for faster recording and highest maximum sync transfer rate.
* Change the DMA transfer rate for the card being used.
* With DOS 6.22 or below and a source hard disk 1 gigabyte or larger, partitions should be kept smaller than one gigabyte so that hard disk sector size is 16kb instead of 32kb.
* Try a different hard disk and /or gold recordable disc.

The following CD-R media is recommended:
Ricoh
Kao

MTC (Mitsui Toatsu Corporation)
TDK
Kodak
Taiyo Yuden