

CorelSCSI 2 README Contents

This document provides information you should know before installing CorelSCSI 2. Last minute product information is also provided. The following topics are included in this README:

- [Upgrading to CorelSCSI 2](#)
- [Installing ASPI Managers](#)
- [About Future Domain Host Adapters](#)
- [About Always AL-7000 Host Adapters](#)
- [Using Memory Managers](#)
- [Digital Audio Sampling](#)
- [Support for Kodak Photo CDs](#)
- [Using the Pioneer DRM604X](#)
- [Information about CorelSCSI Windows Utilities](#)
- [Information about CorelSCSI DOS Utilities](#)

If you have any questions about CorelSCSI that your distributor can't answer, contact CorelSCSI Technical Support:

Telephone: (613) 728-1010
CompuServe: Type GO COREL

Upgrading to CorelSCSI 2

If you're upgrading from CorelSCSI for DOS or Windows version 1.2 or earlier, you must remove any system patches, using the existing version of CorelSCSI, before installing CorelSCSI 2.



To remove a patch

1. At the command prompt, enter **PATCH**.
2. Select **Remove Patch**.

Installing ASPI Managers

For your convenience, CorelSCSI includes the ASPI managers for many host adapters, which you can install during the installation. If the ASPI manager for your card isn't provided with CorelSCSI, you must install the ASPI manager and load it in your CONFIG.SYS file before installing CorelSCSI. If you have problems with any ASPI manager, contact the manufacturer of your card.

CorelSCSI provides the following ASPI managers:

Card Type	ASPI Version	File Name
Corel Generic ASPI for BusLogic and Adaptec (154X, 164X) host adapters	1.03	ASPIDRV.SYS
Corel Generic ASPI for IBM host adapters	1.00	ASPIIBM.SYS
Corel Generic ASPI for the Pro Audio Studio 16 card	1.00	ASPIMED.SYS
Corel LS2000	1.10	ASPILS_D.SYS
Acculogic ASPI Interface	3.01.01	ASPFCAM.SYS
Acculogic CAM driver	3.00.05	DOSCAM.SYS
Always AL-500	1.10	ASPILS_D.SYS
Always AL-1000	1.00	ASPIST.SYS
Always AL-7000	837-13.13	AL7ASPI.SYS
Always IN-2000	461-12	ASPIDRVR.SYS
American Megatrends Fast Disk	1.1	ASPIKERN.SYS
DPT ASPI for SCSI BIOS ROMSMARTROM V.001.K	001.K	DPTDDL.SYS
DPT ASPI for SCSI BIOS ROMSMARTROM V.002.B	002.B	DPTDDL.SYS
DTC 3X80/3X50 ASPI Manager	1.5A	ASPI3X80.SYS
New Media 'Visual Media' ASPI Manager	2.03	ASPIMGR.SYS
New Media 'Bus Toaster' ASPI Manager	1.00	BTASPI.SYS
Procomp Pro-Val ASPI Manager	1.0a	PVALASPI.SYS
Procomp Pro-Master ASPI Manager	1.0a	PMASASPI.SYS
FDC ASPI Interface	1.00	ASPIFCAM.SYS
FDC TMC-950 CAM driver	1.02	DCAM950.EXE
FDC TMC-18XX CAM driver	1.03	DCAM1800.EXE
QLogic ASPI Manager	2.17	QLASPI.SYS
QLogic SCSI RAM BIOS	2.17	QL406DOS.SYS
UltraStor Ultra 14/34	2.00	USPI14.SYS
UltraStor Ultra 14N	2.00	USPI14N.SYS
UltraStor Ultra 24FA	1.04	USPI24.SYS

► To help distinguish between the DPT ASPI managers, which both use the name DPTDDL.SYS, two different file names are used. However, the installation renames the selected ASPI manager to DPTDDL.SYS. The DPT ASPI for SCSI BIOS ROMSMARTROM

- V.001.K is in the file DPTDDL1K.SYS
- V.002.B is in the file DPTDDL2B.SYS



To install an ASPI manager that isn't provided with CorelSCSI

1. Copy the ASPI manager from the disk provided with your SCSI card to your hard drive.
2. Add the device driver line to the CONFIG.SYS file using the following syntax:

DEVICE=C:\xxxx.SYS

where xxxx indicates the name of your ASPI manager.

3. Reboot the system before you start the CorelSCSI installation.

While the system is rebooting, you should look for status messages from the ASPI manager. If the status indicates that the installation was unsuccessful, the CorelSCSI device driver won't function.

See also

[About Future Domain Host Adapters](#)

[About Always AL-7000 Host Adapters](#)

About Future Domain Host Adapters

If you're using an 8-bit host adapter with the BIOS version 8.2 or a 16-bit host adapter with the BIOS version 3.2, DCAMxxx.EXE is optional. However, if you're also using the QEMM memory manager, you must use both DCAMxxx.EXE and ASPIFCAM.SYS.

TMC-950 Host Adapter:

DCAM950 can support multiple adapters. The TMC-950 adapter requires that you specify the memory location of the adapter and the IRQ setting of the adapter using the following command line syntax:

DEVICE=DCAM950.EXE /MEM IRQ [/MEM IRQ [/MEM IRQ]]

Valid memory locations for the TMC-950 are CA00, C800, CE00 and DE00. Valid IRQ's are 3, 4, 5, 10, 11, 12, 14, and 15.

The default setting for a single adapter looks like this:

DEVICE=DCAM950.EXE /CA00 5

TMC-18XX Host Adapter:

The TMC-18XX host adapter doesn't require any command line settings:

DEVICE=DCAM1800.EXE

About Always AL-7000 Host Adapters

If your SCSI CD-ROM drive does not support SCSI disconnects. You may add a /d switch to the AL-7000 ASPI Manager (AL7ASPI.SYS) to disable SCSI disconnects.

DEVICE=[path]AL7ASPI.SYS [/d]

[path] - is the directory path to the device driver. E.g. "C:\\" or "C:\DOS\".

[/d] - disable SCSI disconnects.

Notes: When there are no SCSI hard drives attached to the AL-7000, the ASPI driver should display the following message:

Always Int 13 handler not loaded

If you have other SCSI devices, other than hard drives, this message only means that DOS does not see and hard drives.

Make certain to load any caching software (SMARTDRIVE, VCACHE, PC-KWIK etc.) after the ASPI driver, since these software packages are related to the operation of the hard disk.

DO NOT use the BIOS diagnostics or low level format functions when the ASPI driver is loaded.

Using Memory Managers

If you're using a memory manager, you may need to uninstall it before installing CorelSCSI, and then reinstall the memory manager. In rare cases, systems may hang if CorelSCSI is installed while a memory manager is loaded.

Digital Audio Sampling

Using CD-Audio and CDDA for DOS, you can record digital audio. The following drive models support digital audio sampling:

- Toshiba XM3401
- Sony CDU561 (and OEM versions such as Compaq CDV561)
- Apple CD300

Support for Kodak Photo CDs

The Corel CD-ROM device driver, which is named CUNI_ASP.SYS, currently supports Kodak Photo CDs. Although other drives may read the Photo CD format, the following drives have been tested by Corel:

Single session	Multi session
Chinon CDS435	Chinon CDS535
NEC CDR73	NEC CDR74-1
NEC CDR73M	NEC CDR84-1
NEC CDR74	Panasonic CR-532
NEC CDR83	Philips CDD-521
NEC CDR83M	Smart & Friendly HS-2200 i/e
NEC CDR84	Sony CDU-561
Sony CDU-541	Teac CD-50
Sony CDU-6211	Texel DM-3024K
Texel DM-5024	Texel DM-5024K
Texel DM-3024	Toshiba XM3301 (with multi session upgrade)
Toshiba XM3301	Toshiba XM3401

Using the Pioneer DRM604X

If you're using a Pioneer DRM604X in SCSI-1 mode with multi-session discs, the driver may time-out while waiting for the disc to mount and display a "Not ready reading drive..." error. If this error occurs, use Configuration to set the CD-ROM device driver TIMEOUT option to a value between 30 to 45.

Information about CorelSCSI Windows Utilities

- [Backup](#)
- [CD-Audio](#)
- [Corel ArtView Screen Saver](#)
- [CorelBook](#)
- [CorelCDX for Windows](#)
- [CorelTWAIN Device Driver for Windows](#)
- [Tools](#)

Backup

During small tape backups, the status display shows the tape rewinding before the progress bar gets to 100%. This is a graphics update problem. All requested data was written to the tape. To verify that all the data has been backed up, open a log file using Preferences from the File menu and then perform a full verify of the backup. The log file will confirm that all files were properly backed-up.

A problem has been reported with file tagging when you have a directory structure as follows:

```
dir1
|
+---dir_with_files_1
|
|
+--empty_dir_1
|
+---empty_dir_2
|
+---dir_with_files_2
```

If you untag "dir1", then tag some files in "dir_with_files_1", then tag "empty_dir_1", then untag "dir_with_files_2", the application should show the checkbox of "dir1" as gray (meaning that some files will be backed-up). Instead, the checkbox will show that no files will be backed-up, even though the checkbox for "dir_with_files_1" indicates that some of its files will be backed-up.

WARNING: If you proceed with this backup, none of the files in "dir_with_files_1" will be backed-up! The solution is to tag the files and directories in a different order.

CD-Audio

CD-Audio 2 supports Microsoft's Music Box 2.0. Any track information you've entered using MusicBox is imported into CD-Audio.

If you're using an LMSI CM234 CD-ROM drive, the status information may not display the correct information. This is a problem with the drive rather than CD-Audio.

If your drive supports digital audio sampling, you can record sound files using CD-Audio. The following drive models support digital audio sampling:

- Toshiba XM3401
- Sony CDU561 (and OEM versions such as Compaq CDV561)
- Apple CD300

Corel ArtView Screen Saver

If you select the sound option on systems with lower memory configurations, you may experience long delays before an image is displayed or intermittent sound output.

CorelBook

Some systems running ATI Mach 32 video driver version 2.0 may experience problems loading CorelBook.

Some systems running Standard mode Windows may experience problems closing CorelBook when CD-ROM media browser is loaded.

With IBM PC-DOS 6.1, the Operating System Summary page reports the actual DOS version as DOS version 6.0. This is correct, as this version of DOS reports itself as 6.0.

When unloading the CD-ROM Media Browser in Windows standard mode, problems may occur. The only fix, at this time, is to rename the CDMEDIA.CBL file to CDMEDIA.LBC. This means that the CD-ROM Media Browser won't be found by CorelBook. No problems have been found when using CD-ROM Media Browser in standard mode.

There are known problems printing to printers that don't support graphics.

Tabbing between controls doesn't work correctly on all pages.

The page up and page down controls don't work in list boxes. Using these functions flips the page.

CorelCDX for Windows

To work with your CD-ROM drives, you require a CD-ROM extensions program, such as CorelCDX, which interprets the CD-ROM file system format. CorelCDX also provides several types of caches, including a path table, directory, and data cache. These caches are discussed in detail in the Users' Manual. As an extension to CorelCDX, CDXCACHE provides an extended memory data cache.

CDXCACHE, if enabled, is loaded at the same time as CorelCDX. This cache stores information recently read from CD-ROM drives in extended memory. When information requested by an application is located in the cache, the information can be accessed more quickly than re-reading the information from the drive.

CDXCACHE uses a least recently used (LRU) algorithm: frequently used data remains in the cache and infrequently used data is discarded from the cache. CDXCACHE works best with database type applications, which repeatedly read information from the same areas of a CD.

CDXCACHE can cache the first 16 CD-ROM drives connected to your system. The cache page size affects the maximum cacheable sector address.

The following CDXCACHE options may appear in the CorelCDX section of the CRLSCSI.INI file:

- XMSSIZE indicates the cache size in kilobytes. You can set XMSSIZE to
 - 0 to disable the XMS cache. Note that the number of tracks created on a CD by CDCOPY is affected by the amount of available XMS memory, you should disable the extended XMS cache when using CDCOPY.
 - -1 to use a default cache size, which is equal to one-quarter of the free XMS memory.
 - a specific size from 64K to 16384K.
- XMSPAGE configures the number of sectors per cache page, which determines the read-ahead operations. The value of 4 is recommended for smaller cache sizes; it's more important to cache separate disk reads than to perform read aheads. Use the value 8 for larger cache sizes; more data is stored in one operation. The default setting is 4 sectors per cache page.
- XMSBLOCK represents the maximum size of read request in sectors that will be cached. The cache performance may benefit from larger values. However, the cache may fill up more quickly. The default setting is 4 sectors.

Both CDXCACHE and Microsoft's SmartDrive program use extended memory caching. If you're using SmartDrive version 5.0, provided with MS-DOS 6.2, you can use SmartDrive rather than CDXCACHE. However, CDXCACHE has smaller overhead and operates faster than SmartDrive.

SMARTDRV.EXE 5.0 is designed to work exclusively with Microsoft's MSCDEX CD-ROM driver. However, Corel's PATCH_SD.COM modifies SMARTDRV.EXE to recognize CorelCDX as a valid CD-ROM driver.

PATCH_SD creates a copy of the existing SMARTDRV.EXE program and stores the copy as SMARTDRV.MSC. If you've made changes to SMARTDRV.EXE version 5.0 that change its size, such as compressing the file, from 45145 bytes, PATCH_SD won't work.

To modify SmartDrive to recognize CorelCDX

1. At the command prompt, enter PATCH_SD.
2. Check your AUTOEXEC.BAT file to ensure that CorelCDX is loaded before SmartDrive; otherwise, SmartDrive won't find, and therefore cache, CD-ROM drives. Since SmartDrive is loaded after CorelCDX, you can't use the CorelCDX /UNLOAD command.
3. Use the CorelCDX section of Configuration to set the XMS Cache Size option to Disable. The CDXCACHE is enabled, by default. If you don't disable the cache, both CDXCACHE and SmartDrive will cache data, using twice the necessary amount of extended memory.
4. Reboot your system to reinstall SMARTDRV.EXE.

Miscellaneous Information:

If you're using DOS 5.0, Norton Shell 6.0, and CDXCACHE, Windows won't run. Remove or upgrade

any one of the three programs to resolve this problem.

If you run CDSESN, CD-ROM caching software, including CorelCDX/CDXCACHE, will flush any cached data for the specified drive even if the currently selected session is not changed.

The DRIVERNAME option of the CRLSCSI.INI file provides the required name of the CD-ROM device driver, which should be the same as the value of the DRIVERNAME option in the [CD-ROM Drivers] section of this file. CD-ROM device drivers are numbered starting from MSCD001.

If CorelCDX can't find driver names in the CRLSCSI.INI file or if the CRLSCSI.INI file is missing, CorelCDX will try to locate and initialize the CD-ROM device drivers named, by default, 'MSCD001' and 'MSCD099'.

CorelTWAIN Device Driver for Windows

CorelSCSI 2 provides a device driver for scanning images into TWAIN-compliant graphics applications. You can improve the scanning speed of the CorelTWAIN device driver by pre-allocating memory using GRABMEM.EXE. This program, located in the WINDOWS\TWAIN\CORTWAIN directory, pre-allocates up to a 32K block of memory. GRABMEM.EXE must be run before starting Windows.

To run GRABMEM.EXE

Add the following line to your AUTOEXEC.BAT:

```
c:\windows\twain\cortwain\grabmem.exe
```

To remove GRABMEM.EXE from memory

Enter the following at the command prompt:

```
c:\windows\twain\cortwain\grabmem /U
```

Epson and Microtek with Adaptec SCSI controllers:

Your computer may hang during scanning if the Corel ASPI driver is used. Add the following switch to the ASPIDRV.SYS command in your CONFIG.SYS file to fix the problem:

```
DEVICE=ASPIDRV.SYS /Dhan,id,1
```

where han represents the host adapter number, id represents the SCSI ID of the scanner, and 1 is a mandatory option.

Ricoh scanners and Adaptec SCSI controllers:

The Ricoh IS50, IS60, and IS410 will cause your machine to lock up during power-up if:

- (a) the scanner is turned on before you turn on your computer
- (b) you are using some Adaptec controllers such as the 1542B and 1542C

The solution is to power up your Ricoh scanner AFTER you power up your computer.

CTSAMPLE application:

With some video drivers, the scanned image won't appear in the scan windows after a scan in one of the 'Fit-In-Window' or 'Display-1-to-1' modes. The scanned image will often be visible if a different viewing mode in the VIEW menu is selected.

Scanning using an Automatic Document feeder:

If your scanner supports this feature, all multiple scans will not appear on screen in the CorelTwain Sample Application, but rather only the last scanned item will appear. The other scans are stored in your root directory and will be labeled CORELX.BMP where X= the number of the scanned item. You may view the other scans by selecting FILE then the OPEN FILE option from the CorelTwain Sample Application.

Using Supplemental Device Drivers:

Using supplemental device drivers, some other manufacturers' scanners can be supported. These device drivers are located in the WINDOWS\TWAIN\CORTWAIN\OEMTWAIN directory.

The supplemental device driver takes the form of an MS-DOS device driver, often used in conjunction with the manufacturer's own device driver. Only one of these other scanners may be used at a time.

Scanner	Associated Files
EPSON 300C	EPSON.DOC describes the setup procedure. EPSON.SYS is the required MS-DOS device driver.
MICROTEK 600Z	MICROTEK.EXE file is the required MS-DOS device driver.

MICROTEK	MICROTEK.DOC describes the setup procedure if you're using MSCAN.SYS.
ScanMakerII	DOSDRVR.DOC describes the setup procedure if you're using MSCSI.SYS.
HP ScanJet	HPSCANER.DOC describes the setup procedure.
HP ScanJet Plus	HPSCANER.EXE is the required MS-DOS device driver.
HP ScanJet IIc	HPSCANER.EXE is the required MS-DOS device driver.
Logitech	HHSCAND.SYS is the required MS-DOS device driver.
ScanMan 256	SAPI.EXE is the required MS-DOS device driver.
	HHSCAND.DOC describes the setup procedure.
	SAPI.DOC describes the setup procedure.

Tools

If you're using an IBM host adapter and its ASPI manager, the information displayed by the Device Information command is incorrect.

When formatting a hard disk that has previously been formatted with multiple partitions, you should reboot when the format is complete. MS-DOS will let you access the original logical partitions even though they no longer exist.

Corel has detected spurious errors while running diagnostics on various optical drives. These errors should not be thought of as hardware or media failures unless they occur repeatedly while diagnostics is looping continuously.

Information about CorelSCSI DOS Utilities

- [CDCOPY](#)
- [CDSESN](#)
- [CorelCDXfor DOS](#)
- [DOSAUDIO](#)
- [DOSTOOLS](#)

CDCOPY

The number of tracks created on a CD by CDCOPY is affected by the amount of available XMS memory. If you're using CDXCACHE, you should use the Configuration utility to set the XMSSIZE option, which indicates the cache size in kilobytes, to 0. You must reboot the system for the new cache size to take effect.

Some 'multi-session' CD-ROM drives currently only recognize a disc as being multi-session if it's recorded in XA format such as a multi-session Photo CD. As CDCOPY writes Mode 1 data (not XA format), these drives mistakenly interpret the disc as single session. Drives that are known to be able to recognize multi-session Mode 1 data discs include the Chinon CDS535, Sony CDU561, and Toshiba XM3401. Contact the manufacturer of your drive to verify its ability to read multi-session, non-XA discs.

After recording multiple sessions of data on some brands of 74 minute CD-R discs, the Philips CDD521 CD Recorder may experience problems trying to reload the disc at a later date. If you experience this problem, you may need to contact Philips Consumer Electronics Technical Support at 1-800-835-3506 for a possible firmware upgrade. You can also try

- using 63 minutes CD-R discs
- using a different brand of 74 minute CD-R discs
- using CDCOPY with /lw switch, which writes data as the 'final' session on the disc. The disc is then non-writable.

The target directory specifications should not include references to either the "." or ".." sub-directories (this directory or parent directory). Doing so will result in the creation of invalid sub-directories on the target CD.

Sense Codes for the Philips CDD521 Drive

If a SCSI error occurs, the Philips CDD521 drive reports a sense code which may indicate the cause of the error. The following is a partial list of the sense codes reported by this drive.

- x08: COMMUNICATION FAILURE
communication failure internal to drive prevented requested operation from being performed.
- x09: TRACK FOLLOWING ERROR
focusing or radial tracking did not succeed.
- x15: POSITIONING ERROR
seek to requested location on disc failed.
- x29: POWER-ON RESET OR BUS RESET OCCURRED
power-on reset or bus reset occurred since last issued command.
- x2C: COMMAND SEQUENCE ERROR
requested command is not allowed in this sequence.
- x31: MEDIUM FORMAT CORRUPTED
drive is unable to read/write information due to corrupted or unknown disc format.
- x33: MONITOR ATIP ERROR
error occurred in recorded data, likely due to dust or chalk.
- x34: ABSORPTION CONTROL ERROR
error may have occurred in recorded data, due to laser power clipping.
- x44: INTERNAL CONTROLLER ERROR
drives internal controller detected an error which could not be otherwise explained.
- x47: SCSI PARITY ERROR
controller detected a parity error.
- x50: WRITE APPEND ERROR
write command failed.
- x57: UNABLE TO READ TOC, PMA OR SUBCODE
drive was unable to read TOC, PMA, or subcode data from the disc.

- x81: ILLEGAL TRACK
attempt to access a non-existent track.
- xA9: REQUEST FOR FIXATION FAILED
disc could not be fixated due to existence of a area (reserved track) on disc.
- xAA: END OF MEDIUM REACHED
while writing, the end of medium was detected or track limit of 99 was reached.
- xAB: ILLEGAL TRACK NUMBER
invalid track # specified in command descriptor block.
- xAD: BUFFER UNDERRUN
writing stopped because cache buffer emptied - data was not written to the drive quickly enough.
- xAF: OPTIMUM POWER CALIBRATION (OPC) ERROR
power calibration failed, possibly due to wrong type medium installed, laser or drive failure.
- xB0: CALIBRATION AREA ALMOST FULL
few Optimum Power Calibration areas left.
- xB4: CALIBRATION AREA FULL
Calibration area is full - no further writes can be to disc.
- xD1: CAN NOT RECOVER FROM TRACK
recovering from a corrupted track failed.
- xD2: CAN NOT RECOVER FROM PROGRAM MEMORY AREA
recovering from a corrupted PMA failed.
- xD3: CAN NOT RECOVER FROM LEADIN AREA
recovering from corrupted leadin area failed.
- xD4: CAN NOT RECOVER FROM LEADOUT AREA
reverting from corrupted leadout area failed.
- xD5: CAN NOT RECOVER FROM OPTICAL POWER CALIBRATION AREA
recovering from corrupted Optical Power area failed.

CDSESN

If you run CDSESN, CD-ROM caching software, including CorelCDX/CDXCACHE, will flush any cached data for the specified drive even if the currently selected session isn't changed.

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3. Use the CorelCDX section of Configuration to set the XMS Cache Size option to Disable. The CDXCACHE is enabled, by default. If you don't disable the cache, both CDXCACHE and SmartDrive will cache data, using twice the necessary amount of extended memory.
4. Reboot your system to reinstall SMARTDRV.EXE.

Miscellaneous Information:

If you're using DOS 5.0, Norton Shell 6.0, and CDXCACHE, Windows won't run. Remove or upgrade

any one of the three programs to resolve this problem.

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DOSAUDIO

If you're using an LMSI CM234 CD-ROM drive, the status information may not display the correct information. This is a problem with the drive rather than DOSAUDIO.

If your drive supports digital audio sampling, you can record sound files using CDDA. The following drive models support digital audio sampling:

- Toshiba XM3401
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DOSTOOLS

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Corel has detected spurious errors while running diagnostics on various optical drives. These errors should not be thought of as hardware or media failures unless they occur repeatedly while diagnostics is looping continuously.

DOSTools reports a fixed disk as containing removable media.

With MS-DOS version 6.0, DOSTools will hang when you try to format any media. This problem doesn't occur in MS-DOS version 6.2. The MS-DOS upgrade is available electronically, without charge, or from retailers for a nominal fee.

