

marked as copyable, and they must change the flag to "don't copy" or "no more copies" if the source is marked "copy once." Digital CPS is designed for the next generation of digital TVs, digital receivers and digital video recorders. It will require new DVD players with digital connectors (such as those on DV equipment). Since the encryption is done by the player, no changes would be needed to the existing disc format.

DVD-ROM drives, including DVD-ROM upgrade kits, are required to support the first three copy protection systems. PC video cards with TV outputs that do not support Macrovision will not work with encrypted movies. Computers with IEEE 1394/FireWire connections must support the final DCPS standard to be able to work with other DCPS devices.

DCPS is performed by the DVD player, not by the disc developer.

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## **4. What do I need to play DVD on my computer?**

You will need a DVD-ROM drive, an MPEG decoder card or a software MPEG-2 decoder application, a sound card and DVD playback software. The playback software, or computer operating system, must support regional codes. The software also has to be licensed to descramble copy-protected movies and must be able to read the MicroUDF file format used by DVDs. If the computer has TV video out, it must support Macrovision in order to play copy-protected movies.

If your system uses software decoding of MPEG, your system must be fast enough to handle it. A 300 MHz Pentium II or MAC G3 is recommended for decent playback.

If you have any doubt about your computer speed or capability, purchase a DVD kit, which should include everything you need for playback of DVD on your system. The PC and MAC kits come with everything you need to play Digital Video Discs and can be purchased with or without sound cards .

If you want to hook a DVD computer to a TV, the decoder card or the VGA card must have a TV output for composite video or S-video. S-Video is higher quality but it does not carry sound which has to be connected separately. Another alternative is a scan converter connected to the VGA output. The quality of the video will depend on the quality of the decoder, the TV encoder chip and other factors, but it will usually be inferior to a good consumer DVD player connected to the TV.

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Volume in drive D is XF\_S4\_D3  
Volume Serial Number is 893B-0D20  
Directory of D:\

XFILES INCLUDES  
PROGRAM TO  
PLAY DVD ON WIN32

ALWAYS MUST HAVE THIS

VIDEO_TS	<DIR>	07-26-01	1:35a	VIDEO_TS
AUTORUN	INF	73	07-26-01	1:35a AUTORUN.INF
README	TXT	14,914	07-26-01	1:35a README.TXT
COMMON	<DIR>	07-26-01	1:35a	common
DISC	ID	164	07-26-01	1:35a disc.id
INSTALL	EXE	667,648	07-26-01	1:35a install.exe
WIN	<DIR>	07-26-01	1:35a	win

4 file(s) 682,799 bytes  
3 dir(s) 0.00 MB free

USE MPLAYER  
OR OTHER  
SOFTWARE ON  
LINUX

Volume in drive D is XF\_S4\_D3  
Volume Serial Number is 893B-0D20  
Directory of D:\VIDEO\_TS

.	<DIR>	07-26-01	1:35a	.
..	<DIR>	07-26-01	1:35a	..
VIDEO_TS	BUP	20,480	07-26-01	1:35a VIDEO_TS.BUP
VIDEO_TS	IFO	20,480	07-26-01	1:35a VIDEO_TS.IFO
VIDEO_TS	VOB	1,392,640	07-26-01	1:35a VIDEO_TS.VOB
VTS_01_0	BUP	18,432	07-26-01	1:35a VTS_01_0.BUP
VTS_01_0	IFO	18,432	07-26-01	1:35a VTS_01_0.IFO
VTS_01_0	VOB	231,424	07-26-01	1:35a VTS_01_0.VOB
VTS_01_1	VOB	10,240	07-26-01	1:35a VTS_01_1.VOB
VTS_02_0	BUP	143,360	07-26-01	1:35a VTS_02_0.BUP
VTS_02_0	IFO	143,360	07-26-01	1:35a VTS_02_0.IFO
VTS_02_0	VOB	113,172,480	07-26-01	1:35a VTS_02_0.VOB
VTS_02_1	VOB	1,073,709,056	07-26-01	1:35a VTS_02_1.VOB
VTS_02_2	VOB	1,073,709,056	07-26-01	1:35a VTS_02_2.VOB
VTS_02_3	VOB	1,073,709,056	07-26-01	1:35a VTS_02_3.VOB
VTS_02_4	VOB	1,073,709,056	07-26-01	1:35a VTS_02_4.VOB
VTS_02_5	VOB	1,073,709,056	07-26-01	1:35a VTS_02_5.VOB
VTS_02_6	VOB	1,073,709,056	07-26-01	1:35a VTS_02_6.VOB
VTS_02_7	VOB	1,073,709,056	07-26-01	1:35a VTS_02_7.VOB
VTS_02_8	VOB	221,218,816	07-26-01	1:35a VTS_02_8.VOB
VTS_03_0	BUP	12,288	07-26-01	1:35a VTS_03_0.BUP
VTS_03_0	IFO	12,288	07-26-01	1:35a VTS_03_0.IFO
VTS_03_1	VOB	7,931,904	07-26-01	1:35a VTS_03_1.VOB
VTS_04_0	BUP	16,384	07-26-01	1:35a VTS_04_0.BUP
VTS_04_0	IFO	16,384	07-26-01	1:35a VTS_04_0.IFO
VTS_04_0	VOB	69,632	07-26-01	1:35a VTS_04_0.VOB
VTS_04_1	VOB	12,845,056	07-26-01	1:35a VTS_04_1.VOB
VTS_05_0	BUP	16,384	07-26-01	1:35a VTS_05_0.BUP
VTS_05_0	IFO	16,384	07-26-01	1:35a VTS_05_0.IFO
VTS_05_0	VOB	231,424	07-26-01	1:35a VTS_05_0.VOB
VTS_05_1	VOB	139,182,080	07-26-01	1:35a VTS_05_1.VOB

29 file(s) 7,641.51 MB  
2 dir(s) 0.00 MB free

TYPICAL  
PICTURE  
AND SOUND  
FILE

Volume in drive D is XF\_S4\_D3  
Volume Serial Number is 893B-0D20  
Directory of D:\common

.	<DIR>	07-26-01	1:35a	.
..	<DIR>	07-26-01	1:35a	..
INDEXI	HTM	1,513	07-26-01	1:35a indexi.htm

# MY FIRST BURNED DVD

animal.dvd

Volume in drive E is ROXIO DVDM 1.0  
Volume Serial Number is 40A5-0A44

Directory of E:\VIDEO\_TS

11/22/2002	11:33 PM	<DIR>	.
11/22/2002	11:33 PM	<DIR>	..
11/22/2002	11:33 PM		6,144 VIDEO_TS.BUP
11/22/2002	11:33 PM		6,144 VIDEO_TS.IFO
11/22/2002	11:33 PM		24,576 VTS_01_0.BUP
11/22/2002	11:33 PM		24,576 VTS_01_0.IFO
11/22/2002	11:33 PM		47,104 VTS_01_0.VOB
11/22/2002	11:33 PM		463,736,832 VTS_01_1.VOB
	6 File(s)		463,845,376 bytes
	2 Dir(s)		0 bytes free

≈ 10% OF DVD

VIDEO WAVE 5 POWER EDITION —  
11/24/02 \$69 [www.roxio.com](http://www.roxio.com)

## MY EXPERIENCE :

MS WINDOWS 95 — COULD NOT RUN DVD WRITING SOFTWARE  
MS WINDOWS 98 — " "  
MS NT — " "  
LINUX SUSSE 8.1 — " "  
WINDOWS XP WITH SOFTWARE \$ > 59 COULD WRITE  
NEED CDRECORD PRO (BEYOND ALPHA)

ls -al

```
total 7
dr-xr-xr-x 1 root root 2048 Aug 13 1999 .
drwxr-xr-x 6 root root 123 Dec 2 18:40 ..
dr-xr-xr-x 1 root root 4096 Aug 13 1999 video_ts
```

cd video\_ts

ls -al

MULAN AS SEEN BY LINUX

```
total 8174372
dr-xr-xr-x 1 root root 4096 Aug 13 1999 .
dr-xr-xr-x 1 root root 2048 Aug 13 1999 ..
-r-xr-xr-x 1 root root 22528 Aug 13 1999 video_ts.bup
-r-xr-xr-x 1 root root 22528 Aug 13 1999 video_ts.ifo
-r-xr-xr-x 1 root root 8476672 Aug 13 1999 video_ts.vob
-r-xr-xr-x 1 root root 18432 Aug 13 1999 vts_01_0.bup
-r-xr-xr-x 1 root root 18432 Aug 13 1999 vts_01_0.ifo
-r-xr-xr-x 1 root root 231424 Aug 13 1999 vts_01_0.vob
-r-xr-xr-x 1 root root 10240 Aug 13 1999 vts_01_1.vob
-r-xr-xr-x 1 root root 18432 Aug 13 1999 vts_02_0.bup
-r-xr-xr-x 1 root root 18432 Aug 13 1999 vts_02_0.ifo
-r-xr-xr-x 1 root root 10240 Aug 13 1999 vts_02_0.vob
-r-xr-xr-x 1 root root 6750208 Aug 13 1999 vts_02_1.vob
-r-xr-xr-x 1 root root 16384 Aug 13 1999 vts_03_0.bup
-r-xr-xr-x 1 root root 16384 Aug 13 1999 vts_03_0.ifo
-r-xr-xr-x 1 root root 10240 Aug 13 1999 vts_03_0.vob
-r-xr-xr-x 1 root root 5580800 Aug 13 1999 vts_03_1.vob
-r-xr-xr-x 1 root root 16384 Aug 13 1999 vts_04_0.bup
-r-xr-xr-x 1 root root 16384 Aug 13 1999 vts_04_0.ifo
-r-xr-xr-x 1 root root 10240 Aug 13 1999 vts_04_0.vob
-r-xr-xr-x 1 root root 203710464 Aug 13 1999 vts_04_1.vob
-r-xr-xr-x 1 root root 75776 Aug 13 1999 vts_05_0.bup
-r-xr-xr-x 1 root root 75776 Aug 13 1999 vts_05_0.ifo
-r-xr-xr-x 1 root root 3983360 Aug 13 1999 vts_05_0.vob
-r-xr-xr-x 1 root root 1073709056 Aug 13 1999 vts_05_1.vob
-r-xr-xr-x 1 root root 1073709056 Aug 13 1999 vts_05_2.vob
-r-xr-xr-x 1 root root 1073709056 Aug 13 1999 vts_05_3.vob
-r-xr-xr-x 1 root root 761556992 Aug 13 1999 vts_05_4.vob
-r-xr-xr-x 1 root root 75776 Aug 13 1999 vts_06_0.bup
-r-xr-xr-x 1 root root 75776 Aug 13 1999 vts_06_0.ifo
-r-xr-xr-x 1 root root 3983360 Aug 13 1999 vts_06_0.vob
-r-xr-xr-x 1 root root 1073709056 Aug 13 1999 vts_06_1.vob
-r-xr-xr-x 1 root root 1073709056 Aug 13 1999 vts_06_2.vob
-r-xr-xr-x 1 root root 1073709056 Aug 13 1999 vts_06_3.vob
-r-xr-xr-x 1 root root 685395968 Aug 13 1999 vts_06_4.vob
-r-xr-xr-x 1 root root 18432 Aug 13 1999 vts_07_0.bup
-r-xr-xr-x 1 root root 18432 Aug 13 1999 vts_07_0.ifo
-r-xr-xr-x 1 root root 10240 Aug 13 1999 vts_07_0.vob
-r-xr-xr-x 1 root root 231663616 Aug 13 1999 vts_07_1.vob
```

Volume in drive D is MULAN  
Volume Serial Number is 3F6D-20D1  
Directory of D:\

```
VIDEO_TS      <DIR>          08-13-99  9:20p VIDEO_TS
  0 file(s)                0 bytes
  1 dir(s)                 0.00 MB free
```

Volume in drive D is MULAN  
Volume Serial Number is 3F6D-20D1  
Directory of D:\VIDEO\_TS

```
.          <DIR>          08-13-99  9:20p .
..         <DIR>          08-13-99  9:20p ..
VIDEO_TS  BUP           22,528  08-13-99  9:20p VIDEO_TS.BUP
VIDEO_TS  IFO           22,528  08-13-99  9:20p VIDEO_TS.IFO
VIDEO_TS  VOB          8,476,672 08-13-99  9:20p VIDEO_TS.VOB ← START
VTS_01_0  BUP           18,432  08-13-99  9:20p VTS_01_0.BUP
VTS_01_0  IFO           18,432  08-13-99  9:20p VTS_01_0.IFO
VTS_01_0  VOB          231,424  08-13-99  9:20p VTS_01_0.VOB
VTS_01_1  VOB           10,240  08-13-99  9:20p VTS_01_1.VOB
VTS_02_0  BUP           18,432  08-13-99  9:20p VTS_02_0.BUP
VTS_02_0  IFO           18,432  08-13-99  9:20p VTS_02_0.IFO
VTS_02_0  VOB           10,240  08-13-99  9:20p VTS_02_0.VOB
VTS_02_1  VOB          6,750,208 08-13-99  9:20p VTS_02_1.VOB
VTS_03_0  BUP           16,384  08-13-99  9:20p VTS_03_0.BUP
VTS_03_0  IFO           16,384  08-13-99  9:20p VTS_03_0.IFO
VTS_03_0  VOB           10,240  08-13-99  9:20p VTS_03_0.VOB
VTS_03_1  VOB          5,580,800 08-13-99  9:20p VTS_03_1.VOB
VTS_04_0  BUP           16,384  08-13-99  9:20p VTS_04_0.BUP
VTS_04_0  IFO           16,384  08-13-99  9:20p VTS_04_0.IFO
VTS_04_0  VOB           10,240  08-13-99  9:20p VTS_04_0.VOB
VTS_04_1  VOB          203,710,464 08-13-99  9:20p VTS_04_1.VOB
VTS_05_0  BUP           75,776  08-13-99  9:20p VTS_05_0.BUP
VTS_05_0  IFO           75,776  08-13-99  9:20p VTS_05_0.IFO
VTS_05_0  VOB          3,983,360 08-13-99  9:20p VTS_05_0.VOB
VTS_05_1  VOB          1,073,709,056 08-13-99  9:20p VTS_05_1.VOB
VTS_05_2  VOB          1,073,709,056 08-13-99  9:20p VTS_05_2.VOB
VTS_05_3  VOB          1,073,709,056 08-13-99  9:20p VTS_05_3.VOB
VTS_05_4  VOB          761,556,992 08-13-99  9:20p VTS_05_4.VOB
VTS_06_0  BUP           75,776  08-13-99  9:20p VTS_06_0.BUP
VTS_06_0  IFO           75,776  08-13-99  9:20p VTS_06_0.IFO
VTS_06_0  VOB          3,983,360 08-13-99  9:20p VTS_06_0.VOB
VTS_06_1  VOB          1,073,709,056 08-13-99  9:20p VTS_06_1.VOB
VTS_06_2  VOB          1,073,709,056 08-13-99  9:20p VTS_06_2.VOB
VTS_06_3  VOB          1,073,709,056 08-13-99  9:20p VTS_06_3.VOB
VTS_06_4  VOB          685,395,968 08-13-99  9:20p VTS_06_4.VOB
VTS_07_0  BUP           18,432  08-13-99  9:20p VTS_07_0.BUP
VTS_07_0  IFO           18,432  08-13-99  9:20p VTS_07_0.IFO
VTS_07_0  VOB           10,240  08-13-99  9:20p VTS_07_0.VOB
VTS_07_1  VOB          231,663,616 08-13-99  9:20p VTS_07_1.VOB
  37 file(s)              7,967.15 MB
   2 dir(s)                0.00 MB free
```

.VOB ARE CSS  
ENCRYPTED  
XCOPY IS D:\ C:\DVDIR

DVD-9 SS/DL  
THEORY 7.95 GB  
4 HOURS PLAY TIME  
6 MINUT COPY TIME

Volume in drive D is MULAN  
Volume Serial Number is 3F6D-20D1  
Directory of D:\

VIDEO_TS	<DIR>	08-13-99	9:20p	VIDEO_TS
<del>VIDEO_TS</del>	0 file(s)		0 bytes	
<del>VIDEO_TS</del>	1 dir(s)		0.00 MB free	

Volume in drive D is MULAN  
Volume Serial Number is 3F6D-20D1  
Directory of D:\VIDEO\_TS

.	<DIR>	08-13-99	9:20p	.
..	<DIR>	08-13-99	9:20p	..
VIDEO_TS BUP	22,528	08-13-99	9:20p	VIDEO_TS.BUP
VIDEO_TS IFO	22,528	08-13-99	9:20p	VIDEO_TS.IFO
VIDEO_TS VOB	8,476,672	08-13-99	9:20p	VIDEO_TS.VOB ← START
VTS_01_0 BUP	18,432	08-13-99	9:20p	VTS_01_0.BUP
VTS_01_0 IFO	18,432	08-13-99	9:20p	VTS_01_0.IFO
VTS_01_0 VOB	231,424	08-13-99	9:20p	VTS_01_0.VOB
VTS_01_1 VOB	10,240	08-13-99	9:20p	VTS_01_1.VOB
VTS_02_0 BUP	18,432	08-13-99	9:20p	VTS_02_0.BUP
VTS_02_0 IFO	18,432	08-13-99	9:20p	VTS_02_0.IFO
VTS_02_0 VOB	10,240	08-13-99	9:20p	VTS_02_0.VOB
VTS_02_1 VOB	6,750,208	08-13-99	9:20p	VTS_02_1.VOB
VTS_03_0 BUP	16,384	08-13-99	9:20p	VTS_03_0.BUP
VTS_03_0 IFO	16,384	08-13-99	9:20p	VTS_03_0.IFO
VTS_03_0 VOB	10,240	08-13-99	9:20p	VTS_03_0.VOB
VTS_03_1 VOB	5,580,800	08-13-99	9:20p	VTS_03_1.VOB
VTS_04_0 BUP	16,384	08-13-99	9:20p	VTS_04_0.BUP
VTS_04_0 IFO	16,384	08-13-99	9:20p	VTS_04_0.IFO
VTS_04_0 VOB	10,240	08-13-99	9:20p	VTS_04_0.VOB
VTS_04_1 VOB	203,710,464	08-13-99	9:20p	VTS_04_1.VOB
VTS_05_0 BUP	75,776	08-13-99	9:20p	VTS_05_0.BUP
VTS_05_0 IFO	75,776	08-13-99	9:20p	VTS_05_0.IFO
VTS_05_0 VOB	3,983,360	08-13-99	9:20p	VTS_05_0.VOB
VTS_05_1 VOB	1,073,709,056	08-13-99	9:20p	VTS_05_1.VOB
VTS_05_2 VOB	1,073,709,056	08-13-99	9:20p	VTS_05_2.VOB
VTS_05_3 VOB	1,073,709,056	08-13-99	9:20p	VTS_05_3.VOB
VTS_05_4 VOB	761,556,992	08-13-99	9:20p	VTS_05_4.VOB
VTS_06_0 BUP	75,776	08-13-99	9:20p	VTS_06_0.BUP
VTS_06_0 IFO	75,776	08-13-99	9:20p	VTS_06_0.IFO
VTS_06_0 VOB	3,983,360	08-13-99	9:20p	VTS_06_0.VOB
VTS_06_1 VOB	1,073,709,056	08-13-99	9:20p	VTS_06_1.VOB
VTS_06_2 VOB	1,073,709,056	08-13-99	9:20p	VTS_06_2.VOB
VTS_06_3 VOB	1,073,709,056	08-13-99	9:20p	VTS_06_3.VOB
VTS_06_4 VOB	685,395,968	08-13-99	9:20p	VTS_06_4.VOB
VTS_07_0 BUP	18,432	08-13-99	9:20p	VTS_07_0.BUP
VTS_07_0 IFO	18,432	08-13-99	9:20p	VTS_07_0.IFO
VTS_07_0 VOB	10,240	08-13-99	9:20p	VTS_07_0.VOB
VTS_07_1 VOB	231,663,616	08-13-99	9:20p	VTS_07_1.VOB
37 file(s)	7,967.15 MB			
2 dir(s)	0.00 MB free			

DVD-9 SS/DL  
THEORY 7.95 GB  
4 HOURS PLAY TIME  
6 MINUT COPY TIME

.VOB ARE CSS  
ENCRYPTED  
XCOPY /S D:\ C:\DVDIR

Volume in drive D is FROSTY  
Volume Serial Number is 3D14-3C4D  
Directory of D:\

AUDIO_TS	<DIR>	09-07-00	10:08a	AUDIO_TS
JACKET_P	<DIR>	09-07-00	11:07a	JACKET_P
VIDEO_TS	<DIR>	09-07-00	10:59a	VIDEO_TS
	0 file(s)			0 bytes
	3 dir(s)			0.00 MB free

Volume in drive D is FROSTY  
Volume Serial Number is 3D14-3C4D  
Directory of D:\VIDEO\_TS

.	<DIR>	09-07-00	10:08a	.
..	<DIR>	09-07-00	10:08a	..
VIDEO_TS BUP	10,240	09-07-00	10:26a	VIDEO_TS.BUP
VIDEO_TS IFO	10,240	09-07-00	10:26a	VIDEO_TS.IFO
VTS_01_0 BUP	75,776	09-07-00	10:26a	VTS_01_0.BUP
VTS_01_0 IFO	75,776	09-07-00	10:26a	VTS_01_0.IFO
VTS_01_0 VOB	239,044,608	09-07-00	10:28a	VTS_01_0.VOB
VTS_01_1 VOB	1,073,373,184	09-07-00	10:39a	VTS_01_1.VOB
VTS_01_2 VOB	1,073,362,944	09-07-00	10:50a	VTS_01_2.VOB
VTS_01_3 VOB	1,073,592,320	09-07-00	10:59a	VTS_01_3.VOB
VTS_01_4 VOB	1,051,281,408	09-07-00	11:07a	VTS_01_4.VOB
	9 file(s)			4,301.86 MB
	2 dir(s)			0.00 MB free

Volume in drive D is FROSTY  
Volume Serial Number is 3D14-3C4D  
Directory of D:\AUDIO\_TS

.	<DIR>	09-07-00	10:08a	.
..	<DIR>	09-07-00	10:08a	..
	0 file(s)			0 bytes
	2 dir(s)			0.00 MB free

Volume in drive D is FROSTY  
Volume Serial Number is 3D14-3C4D  
Directory of D:\JACKET\_P

.	<DIR>	09-07-00	10:08a	.
..	<DIR>	09-07-00	10:08a	..
J00___5L MP2	10,240	09-07-00	11:07a	J00___5L.MP2
J00___5M MP2	6,144	09-07-00	11:07a	J00___5M.MP2
J00___5S MP2	2,048	09-07-00	11:07a	J00___5S.MP2
J00___6L MP2	38,912	09-07-00	11:07a	J00___6L.MP2
J00___6M MP2	8,192	09-07-00	11:07a	J00___6M.MP2
J00___6S MP2	4,096	09-07-00	11:07a	J00___6S.MP2
	6 file(s)			69,632 bytes
	2 dir(s)			0.00 MB free