

Product Support Bulletin

Subject: EPSON Equity 4+ and Sound Blaster Discovery CD 16

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Originator: JAM

The purpose of this bulletin is to provide information regarding the installation and compatibility of the Sound Blaster Discovery CD 16.

1. Hardware Configuration: Product Code

CPU:	Epson Equity 4+ 80486SX/25 Processor	
Memory:	4.0 Mb Standard	
Additional:	not applicable	
BIOS Rev:	AMI/Seiko Epson Corp. D486-6080-112593KF	
FDD:	Mitsumi D-359T3, 1.44Kb 3.5" disk drive	
HDC:	Integrated on Main Logic Board	
HDD:	Conner CP-3104	
Video:	Cirrus GD5442 Video chip, 512KB, Upgradeable to 1 MB [External VGA port provided on rear of unit]	
Display:	Epson Professional Series VGA monitor	(A804241)

2. Operating Systems:

Microsoft DOS Version 6.2
Microsoft Windows Version 3.1

Microsoft DOS was loaded in a default mode.

3. Windows Installation:

Microsoft Windows Version 3.1 installed. 'Express Setup' (Microsoft Recommended) installation routine used for the install.

4. Compatibility:

The system is compatible with the Sound Blaster Discovery CD 16 Multimedia system by Creative Labs Incorporated using Microsoft DOS version 6.2. Installation time approximately 30 minutes.

The system was also tested with Microsoft DOS version 6.0 and Microsoft DOS version 5.0. The Sound Blaster Discovery CD 16 Multimedia product is compatible with those operating systems.

The following information is provided for reference purposes only. The AUTOEXEC.BAT and the CONFIG.SYS files are actual examples of the tested system.

5. Memory Allocation information:

c:\>chkdsk

Volume MS-DOS_6 created 12-16-1993 10:00a
Volume Serial Number is 1A25-9203

104515584 bytes total disk space
4042752 bytes in 6 hidden files
163840 bytes 68 directories
78866432 bytes in 1876 user files
21442560 bytes available on disk.

2048 bytes in each allocation unit
51033 total allocation units on disk
10470 available allocation units on disk

655360 bytes total memory
532080 largest executable program size

6. AUTOEXEC.BAT file Information

```
@ECHO OFF
SET BLASTER=A220 [5 D1 H5 P330 T6
SET SOUND=C:\SB16
C:\SB16\SB16SET /M:220 /VOC:220 /CD:220 /MIDI:220 /LINE:220 /TREBLE:0
C:\SB16\SBCONFIG.EXE /S
C:\WINDOWS\SMARTDRV.EXE /X
PROMPT $p$g
PATH C:\WINDOWS;C:\DOS;
SET TEMP=C:\DOS
C:\DOS\MSCDEX.EXE /D:MSCD001 /V /M:15
C:\DOS\MOUSE
c:\
```

7. CONFIG.SYS file information

```
DEVICE=C:\DOS\SETVER.EXE
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH
FILES=10
STACKS=9,256
DEVICE=C:\SB16\DRV\BCD.SYS /D:MSCD001 /P:220
SHELL=C:\DOS\COMMAND.COM C:\DOS\ /p
```

8. General Installation Tips:

Hardware:

The Discovery CD 16 uses a Sound Blaster 16 sound card. The product was used in its default configuration. The following are the factory defaults:

<u>Feature:</u>	<u>Jumper position:</u>	<u>Setting used:</u>
Base I/O address	IOS0 closed	220(H)ex
Midi address	IOS1 closed	330(H)ex
Board Interrupt	IS0 open IS1 closed	IRQ5
8-bit DMA channel	DAS0 open DAS1 closed	Channel 1
16-bit DMA channel	DBS0 closed DBS1 closed	Channel 5
Joystick port	JYEN closed	Enabled
Audio Output Amp	OPSL pins 2 & 3 closed OPSR pins 2 & 3 closed	Audio amplified internally: no external amp needed

These settings can be found in the 'GETTING STARTED' manual that comes with the product. The system uses a Matsushita model CR-563-B CD-ROM. From the factory the drive ID is set to 0. This jumper is on the rear of the drive between the power connector and the data/ribbon cable.

Software:

The Discovery CD 16 Multimedia system comes with 5 3.5" diskettes. Three diskettes are for the sound card, one is for a 'Text-to-Speech' application, and one disk is for the CD-ROM device driver and utilities.

The Sound Blaster files are copied to the hard disk drive by an INSTALL-EXE utility on disk 1. The utility will prompt the installer for the second and third disks. The routine will modify the AUTOEXEC.BAT and CONFIG.SYS files. Upon completion, the user is prompted to re-boot the system so that the changes can take effect. The utility will also modify the Windows SYSTEM.INI file. When you run Windows, a SB routine will modify and add the Sound Blaster utilities to a new Program group. The routine will re-start Windows so that the changes can take effect. The sound card can be tested in a DOS environment by running TESTSB16. This file is located in the sound blaster sub-directory SB16.

The utility will test the existence and functionality of the following areas:

I/O Address:	IRQ:	DMA channels:	DSP Version:
220H	5	1,5	4.05

The bold face values above are typical for the default configuration. The Sound card passed all of the tests listed below:

2-Operator FM Music
4-Operator FM Music
8-Bit Sound
16-Bit Sound

The CD-ROM files are copied to the hard disk drive by an INSTALL.EXE utility on the disk 1. The routine will modify the AUTOEXEC.BAT and CONFIG.SYS files. Upon completion, the user is prompted to re-boot the system so that the changes can take effect. To install CD-ROM into Windows, the user must manually add the 'QuickCD' to the Sound Blaster 16 program group. Open the Sound Blaster 16 group, and from Program Manager File select New. Program Item should have the bullet marked. Select the OK button. From the Program Item Properties box select the Browse button. Scroll to the C:\SB16\PLAYCD sub-directory. Select QCD.EXE as the file name and click the OK button. This bring you back to the Program Item Properties box. For a Description enter QCD. Click on the Change Icon button and choose a CD symbol for the icon button. Click on the OK button and the 'QuickCD' icon is present in the Sound Blaster 16 program group. Insert an analog/music CD into player. If you click on the CD icon without a disc installed you will get the following warning: 'Ensure that you have a CD audio ready in your drive and CD MCI driver installed in your system. The system is ready for use.'

9. MultiMedia Kit Applications tested:

- | | |
|---|----|
| 1. Aldus PhotoStyler SE | Ok |
| 2. San Diego Zoo Presents... The Animals | Ok |
| 3. Software Toolworks Multimedia Encyclopedia | Ok |
| 4. Just Grandma and Me - Broderbund | Ok |
| 5. Where in the world is Carmen SanDiego? | Ok |

Miscellaneous packages tested:

- | | |
|---|----|
| 6. DOS Version "Eye of the Beholder II" | Ok |
| 7. DOS Version 'Wolfenstein 3-D' | Ok |
| 8. MS Dinosaurs for Windows | Ok |
| 9. DOS Version "Battle Chess" | Ok |

10. Company Address:

Creative Labs Inc.
1901 McCarthy Boulevard,
Milpitas, CA 95035

Phone: 408 428-6622
Fax: 408 428-6633
BBS: 408 428-6660
Baud: 300 to 14400 (V.32N.42 bis)
Data bits: 8
Parity: none
Stop bits: 1

Misc: (405) 742-6622 Technical Support

11. Anomalies/Issues:

This Product Support Bulletin was specifically generated to address concerns about compatibility of the Sound Blaster Kit in this system running under DOS 6.0. As documented the system is fully functional in that operating environment. Concern was also expressed about using the DOS 6.0 memory manager EMM386.EXE. Various packages that must run in expanded memory were tested and experienced no errors.

Note: There is a known compatibility issue recording a digital file from any audio input device at a sampling rate of 44Khz. The problem is apparent on various PCs. **The issue is NOT problem on this system.** A large digital file was created using SB 16 Mixer and SB Wave Studio from Windows. The file was approximately 20Mb large after sampling a dynamic ROCK source. Playback of the file rendered no dropouts of the original material. The process is compatible on this system.