USER MANUAL

ISA - SOUND CARD

March 1998

A-115-0054
Version 1.0

A381F20

The information in this document is subject
to change without notice

Federal Communications Commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- **Reorient or relocate the receiving antenna.**
- **Increase the separation between the equipment and receiver.**
- **Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.**
- **Consult the dealer or an experienced radio/TV technician for help.**

Warning:
Use only shielded cables to connect I/O devices to this equipment.
You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

Note:
The user may find the following booklet prepared by the Federal Communications Commission helpful:
   " How to Identify and Resolve Radio-TV Interference Problems. "
This booklet is available from the U.S. Government Printing Office,
   Washington, DC 20402
   Stock No. 004-000-00345-4.

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1. DESCRIPTION

This is a 16-bit PC stereo sound card using the AVANCE LOGIC ALS120 chipset with the Bundle Software "SOFT SYNTH" Software Wavetable.
This Plug-and-Play sound card is comprised of the following functions:
3D sound effect and a Hardware Wavetable Upgrade function which lets you add a stereo audio to your personal computer system. Our add-in sound card provides an integrated audio sub-system and is completely jumper and switch free.

1.1. Features

⇒ Single mixed-signal, high performance VLSI sound ASIC
⇒ Compatible with Sound Blaster, Sound Blaster Pro , Sound Blaster 16 Emulation and Windows Sound System
⇒ Built-in 3D Sound Effect Processor
⇒ Built-in ALSFM Synthesizer w/ external wavetable support
⇒ ISA Plug-and-Play support logic
⇒ Supports Sound Blaster ADPCM decompression
⇒ MPU-401 MIDI controller with FIFO
⇒ Supports 8-bit Type F DMA lines (0, 1, 3)
⇒ Software selectable interrupt lines (5, 7, 9, 10, 11)
⇒ 8/16 bit mono/stereo digital audio from 4 kHz to 48 kHz
⇒ Enhanced normal & digital game port support
⇒ MIDI port with input and output FIFO
⇒ Full duplex for concurrent recording and playback
⇒ 16-bit PNP address I/O decoder
⇒ 5.0 V digital/analog mode
⇒ 100-pin PQFP package

1.2. Applications

- Windows and MPC level 2 compatible audio sub-system
- PC games
- Computer vased audio reproduction
- Karoke/music sound box
- Voice annotations or voice E-mail interface

1.3. System Requirements

- An 80386 / 80486 PC computer or higher, or Pentium with a VGA card installed
- 5 MB of free hard disk space
- An available 16-bit expansion slot

1.4.   Card Figure
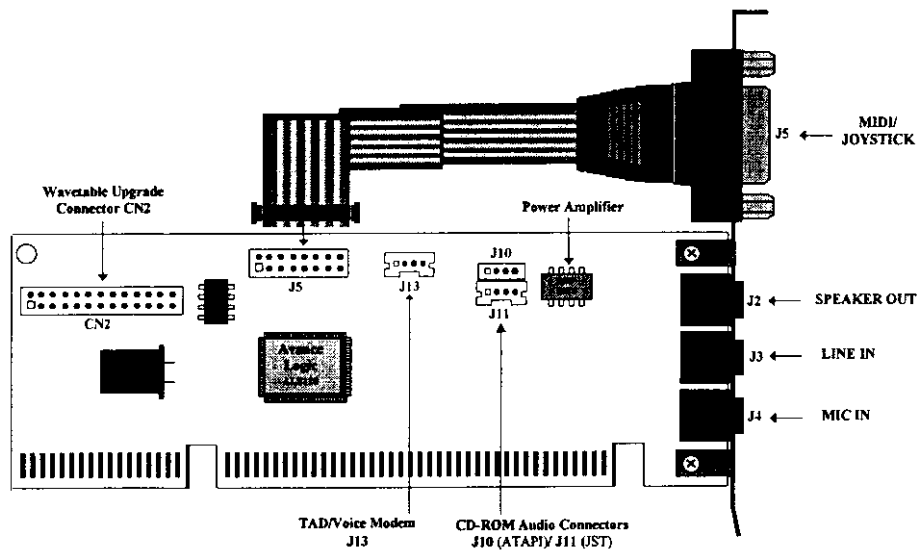
1.5.   Connectors

This Sound Card includes up to five internal Connectors, three external Jack Ports, and one external MIDI/Joystick Connector.

1.5.1.   Standard Connectors:

J2:................. φ3.5mm Phone Jack for **SPEAKER OUT.**

J3:................. φ3.5mm Phone Jack for **LINE IN.**

J4:................. φ3.5mm Phone Jack for **MIC IN.**

J5:................. Connector for **MIDI/JOYSTICK** internal/external.

1.5.2.   Optional Connectors:

CN2:............. 26-pin Connector for **WAVETABLE UPGRADE.**

J10:.............. Connector for **IDE CD-ROM AUDIO-IN. (ATAPI)**

J11:.............. Connector for **IDE CD-ROM AUDIO-IN. (JST)**

J13:.............. Connector for **VOICE MODEM.**

1.5.3.   Audio Connectors:

J10: IDE

L G G R

L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J11: IDE

R G L G

L: LEFT CHANNEL SIGNAL
G: GROUND
R: RIGHT CHANNEL SIGNAL

J13: TAD

Mo G   G   Mi

Mo: MONO OUT
G: GROUND
Mi: MONO IN
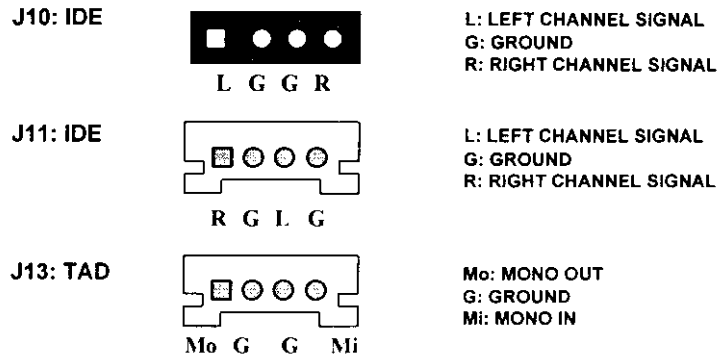
2.   HARDWARE INSTALLATION

2.1.   Handling the Avance Logic ALS120 Sound Card

WARNING: Static electricity can damage your equipment. Do not take the card out of its static protective bag until you are ready to work with it.

Follow these precautions when handling the card:

- Before you open the static protective bag, touch it to a metal expansion slot cover on the back of your computer. This drains static electricity from the package and from your body.
- Do not touch any exposed printed circuitry after opening the package.
- Keep other people from touching the card. They might have a static-electricity build-up.
- Limit your movement. Movement causes a build-up of static electricity.

2.2.   Installing the Avance Logic ALS120 Sound Card

Step 1.   Turn off the system and all peripheral devices.

Step 2.   Disconnect the power cord and all peripheral devices from the system.

Step 3.   Remove the system cover and identify an unused 16-bit slot.

Step 4.   Unscrew the slot cover plate, plug in the Sound Card and tighten it with the screw.

Step 5.   If you have speakers or amplifiers, plug the cable into the Audio Out Jack on the back of the Sound Card.

Step 6.   Depending on what type of CD Audio cable you have, connect **J10** or **J11** on the Sound Card and the Audio output at the back of the CD-ROM drive. Make sure **pin 1** of **J10** or **J11** is connected to the leftmost pin of the CD-ROM Audio output.

Step 7.   Put back the system cover, reconnect the system power cord and all peripheral devices. Check and make sure all connections are correct before you turn on the system.

3.   Software Installation

3.1.   Software Contents

There is one installation diskette which is included in this package.

Applications	Diskette Name
Windows 3.1	ALS120 DOS/Windows 3.1/Windows 95 Drivers and Utilities
DOS	ALS120 DOS/Windows 3.1/Windows 95 Drivers and Utilities
Windows 95	ALS120 DOS/Windows 3.1/Windows 95 Drivers and Utilities
Windows NT 3.51/4.0	ALS120 Windows NT 3.51/4.0 Drivers

3.2.   Software Driver Installation under Windows® 3.1

1. Start up Microsoft® Windows® 3.1 operating system.

2. Insert the ALS120 DOS/Windows 3.1/Windows 95 Drivers and Utilities diskette into the floppy disk drive A or B.

3. Select the RUN item from the Program Manager File menu and type **A:\Win31_95\Setup** into the command line.

4. A Welcome dialog box will appear. Click on the "Next" push button to continue the installation.

5. A "Choose Destination Location" dialog box will appear. Click on the "Next" push button in the "Choose Destination" dialog box to install the ALS120 sound driver to the default directory or click on the "Browse" push button if you want to install to a different directory.

6. Setup will automatically create a folder and icons for the sound application.

7. A Modifying AUTOEXEC.BAT dialog box will appear. Click on the "Next" push button to accept the default to "Let Setup modify the AUTOEXEC.BAT.file".

8. A Configuration Panel dialog box will appear during the first time installation. Please check the hardware settings and make changes appropriate to the hardware installation and in case you cannot hear sound during tests.

9. Click on the "Finish" push button. Setup will configure the hardware settings. Refer to the Setup Utility Program in the next chapter to configure your sound card.

10. After the configuration in complete, remove the diskette from the diskette drive.

3.3.   Software Driver Installation Under DOS

1. After installing the ALS120 sound card, insert the "ALS120 DOS/Windows 3.1/Windows 95 Drivers and Utilities" installation diskette into your floppy disk drive A or B.
2. If Windows® 3.1 is currently running, exit the application.
3. At the **C:\>** prompt, type A or B and press the ENTER key. At the **A:\Win31_95\>** prompt, type DOSINST.EXE and press the ENTER key.
4. The Avance Sound Chip Installation Program screen will be displayed showing the following defaults.

   > Avance software copy to: **C:\A3SOUND**
   > System bootup drive: **C:**

   - To make changes to the defaults, select the parameter with the UP/DOWN Arrow keys and press the ENTER key. Then change the parameter and press the ENTER key again to accept the change.
   - When satisfied with the new parameters or to accept the defaults, select "Accept the above" with the UP/DOWN Arrow keys and press the ENTER key.
5. The installation of the Avance Logic software drivers will now begin.
6. When all of the files are copied to the fixed disk, the installation program will automatically update the AUTOEXEC.BAT file, saving copies of the original files with the extension "ALS", and the A3CONFIG.EXE utility will automatically start. Use the instructions given in the "SETUP Utility Program" on the next page to set up the ALS120 sound card.
7. When the installation and setup are complete, remove the diskette from the floppy disk drive.

3.4.   Software Driver Installation under Windows® 95

1. Start up your Microsoft® Windows® 95 operating system.
   The "New Hardware Found" dialog box will appear. Click on the OK push button to accept the default. Select "Driver from disk provided by hardware manufacturer".
2. Click on the OK push button when the "Install From Disk" dialog box appears.
3. Insert the "ALS120 DOS/Windows 3.1/Windows 95 Drivers and Utilities" diskette into your floppy disk drive A or B. Select the correct directory and click on the OK push button. Windows® 95 will automatically copy all the necessary files and configure the ALS120 sound card.
4. The sound application is included on this diskette and you have the option of installing it now. If you do not need to install the application, remove the diskette from the floppy disk drive and skip procedure 5 to 10.

5. Select the RUN item from the START menu and the Run dialog box will appear.
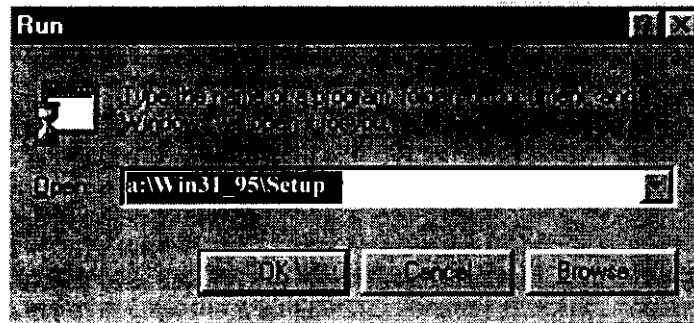
6. Type **A:\Win31_95\Setup** and click on the OK push button.
7. Click on "Next" in the Welcome dialog box.
8. A Choose Destination dialog box will appear. Click on "Next" to install the sound driver to the default directory or click on the "Browse" push button if you want to install to a different directory.
9. Windows will automatically create a folder and icon for the sound application.
10. Click on "Finish" to complete the installation.
11. Remove the diskette from your floppy disk drive.

3.5.   Software Driver Installation Under Windows® NT 3.51/4.0

1. Ensure that the ALS120 sound card is installed properly and start up your Microsoft® Windows® NT 3.51/4.0 operating system.
2. Insert the installation diskette, labeled "ALS120 Windows NT Drivers and Utilities" into your floppy disk drive A or B.
   Go to the >Control Panel >Multimedia >Device >Add and choose OK for "Avance Logic, Inc.Sound Chip".
3. While installing, the "Driver Exists" warning message will appear and ask you whether to keep the old "midimap.cfg" or <re-install>. Please select <re-install>, otherwise MIDI will not function properly.
4. Configure the proper I/Os and DMAs if necessary as they appear on screen.
5. Re-boot the system and remove the driver diskette before the driver will take effect.

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