



Installation Guide

Professional Wavetable Upgrade Kit



MEDIA VISION



MEDIA VISION

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Media Vision, Inc.

47300 Bayside Parkway
Fremont, CA 94538

Media Vision (MVIS: NASDAQ) views the multimedia phenomenon as a series of "evolutionary," rather than revolutionary, stages of market and product development. The company is committed to offering multimedia solutions one step at a time—in affordable pieces.

Media Vision's products include audio and video add-in cards for personal computers, multimedia upgrade kits, and multimedia chips for adding sound and video to next generation personal computers. Future products will include more chips, boards, and subsystems, at affordable prices and in compliance with accepted industry standards as they evolve.

Media Vision's technology strength is key to executing this strategy successfully. The company has entered into an agreement with Stanford University's Center of Computer Research in Music and Acoustics to develop new audio technology products. Moreover, Media Vision is among an elite group of companies that are sponsors of MIT's Media Laboratory

Since its founding in early 1990 and first product availability in April 1991, Media Vision has shipped more than 275,000 multimedia products for personal computers. The speed of product development is a result, in part, of the fact that the management team had worked together in the past. The company's president, Paul Jain, and several other Media Vision founders were previously with Video Seven, Inc., which was responsible for popularizing color graphics on personal computers by introducing the first low cost graphics boards.

PROFILE

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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. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation. These limits are designed to provide reasonable protection against harmful interference in residential installations. 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 interference to radio or television equipment reception, perform one or more of the following measures:

- ❖ Reorient or relocate the receiving antenna
- ❖ Move the equipment away from the receiver
- ❖ Plug the equipment into an outlet and circuit different from that which powers the receiver
- ❖ If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

⚠ Caution

Only equipment certified to comply with Class B (computer input/output devices, terminals, printers, etc.) should be attached to this equipment, and must have shielded interface cables.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer bound void the user's authority to operate such equipment.

⚠ Caution

This product may utilize a laser: Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. Do not open covers and do not repair yourself. Refer servicing to qualified personnel. Product complies with DHHS Rules 21 CFR Subchapter J.

◆ Class I Laser Product Wavelength: 780 nm

To assure continued FCC compliance, the user must use only provided shielded interface cable with ferrite cores when connecting this device to a host computer. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate this device.

Limited Warranty

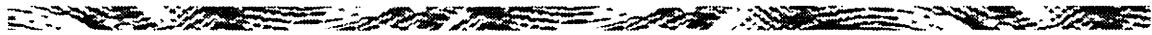
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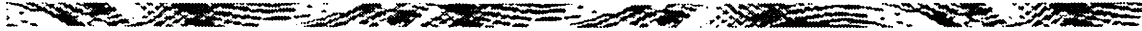
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Professional Wavetable Upgrade

Better Tunes Through Technology

 **Note**

The Professional Wavetable Upgrade does not require a separate software installation program. It simply attaches to your existing sound card.

You can think of a Professional Wavetable Upgrade not as an itty-bitty, teeny weeny sound card, but as a miniature Smithsonian Library for musical instruments. Instead of having actual instruments enclosed in glass cases gathering dust, the instruments are electronic bits encased in silicon chips. Wavetable synthesis provides the most realistic synthesis available. The average listener cannot tell good wavetable synthesis from the real thing. Wavetable synthesis is totally dependent upon sound that can be recorded in the real world and its main goal in life is to recreate the shape of a sound's waveform. Is the Professional Wavetable Upgrade difficult to install? If you know how to snap together Lego™ blocks or Lincoln Logs™ and can use a screwdriver, you can install a Professional Wavetable Upgrade. If you are familiar with wavetable synthesis you can skip this introduction and get your hands dirty installing the actual Professional Wavetable Upgrade daughtercard (see Installing the Professional Wavetable Upgrade on page 3).

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- *Better Tunes Through Technology on page 1*
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Professional Wavetable Upgrade



Note

Smaller, snap-on cards are sometimes referred to as "Daughtercards" because when motherboards were first produced a name had to be given to the cards attached to the motherboard. Sonboards just didn't sound as good. Eventually, expansion slots were invented and the term peripheral cards appeared.

What is a Professional Wavetable Upgrade?

The Professional Wavetable Upgrade is a true 32-voice wavetable synthesizer which provides true professional sample playback capabilities (including reverb and chorus effects) that attaches to a Media Vision 3-D Sound Card. Now say that five times quickly. Best of all there are no cables to connect. The Professional Wavetable Upgrade uses digitized recordings of real instruments to play sounds. Technically this is not synthesis since the sound is a recording of real instrument, but the phrase "Wavetable Synthesis" is a common misnomer. A typical wave sampler may have four different waveforms of single instrument.

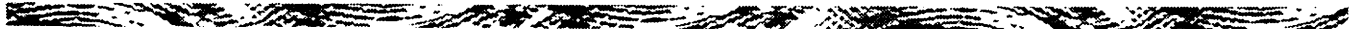
Polly Want a What?

The number of notes a wavetable synthesizer can play at once is referred to as its Polyphony. A wavetable synthesizer uses a voice to play each note. The Professional Wavetable Upgrade uses 16 part multitimbral, which in plain English means it can play a total of 16 instruments at once (just think of the word multitimbral as meaning multi-talented). The "Instruments and

Voices" work together to create the varying melodies that we can recognize as music. Without this synergistic relationship, the sound may appear flat. It is the reverb and chorus effects capability that separates the Professional Wavetable Upgrade from its competitors. Reverb and Chorus are two manipulations that can be applied as easily as you adjust the treble and bass enhancements on your stereo (these effects are used extensively by sound engineers). These two sound effects are used extensively in almost all music and sound recordings that you hear. Let's take a closer look at these two flavors of sound:

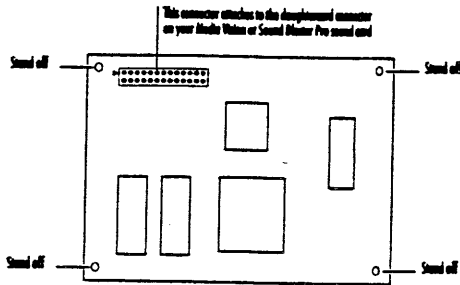
- ❖ Chorus: this effect adds a choir-like fullness to a person's voice. This effect is quite good at making one instrument sound like many.
- ❖ Reverb: this effect adds the ambiance of a large orchestra pit or can even reproduce the acoustic environment of a recording studio.

Generic wavetable synthesis cards and FM synthesizers can generate music that sounds tinny and unrealistic. The sound from these inexpensive cards simply cannot fill the requirements needed in the fields of audio engineering, soundtrack development and multimedia, but the Media Vision Professional Wavetable Upgrade can fill these needs. The Professional Wavetable Upgrade uses studio quality samples of





real instruments and the same Korg synthesizer as used in professional recording studios. A full 4MB of ROM space is used to store these samples.



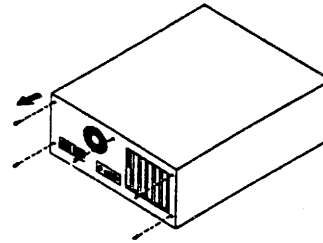
Installing the Professional Wavetable Upgrade

The inside of a computer is often jumbled with cables and hardware projections making it difficult to see clearly, so exercise care when installing the Professional Wavetable Upgrade.

⚠ Caution

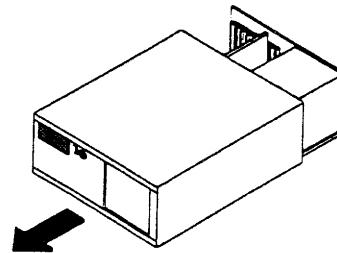
There may be sharp edges inside the computer. Also, disconnect the power plug before removing the PC's cover.

1. Open your computer



Remove the screws from the back of your computer cover. If your computer doesn't use screws, refer to your PC's owner's manual for more information. Put the screws inside a container so you don't lose them in the shag carpet or inside the computer.

Slide the cover off carefully. Most computer covers slide towards the front of the computer. Put the cover aside.





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2. Remove the Professional Wavetable Upgrade from its anti-static bag.



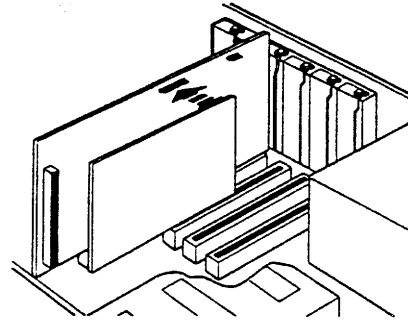
Touch a metal portion of the case to dissipate any static electricity.



Note

Make sure that you have a free expansion slot to the right of your sound card. The Professional Wavetable Upgrade needs a little elbow room when correctly attached.

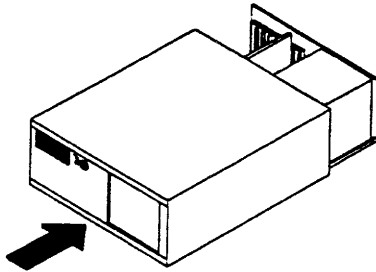
3. Press the Professional Wavetable Upgrade connector (J3) onto the Media Vision 3-D Sound Card's wavetable connector. Press firmly so the standoffs (small, plastic knobs) enter the holes on the Media Vision 3-D Sound Card.)



Place the cover back onto the PC and secure it with the screws you used earlier.

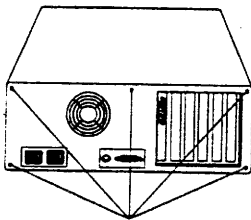


4. Close your computer



Slide the cover back onto your computer.

5. Secure the cover with the screws you removed earlier.



Telling Your Software To Use the Professional Wavetable Upgrade

After you install the Professional Wavetable Upgrade you will want to let your software know that it is attached and ready to receive information from the Media Vision 3-D Sound Card. For instance if you are going to play a game application that makes use of FM synthesis (most of the games applications do use FM synthesis), you will want to switch your drivers software to use the Media Vision 3-D Sound Card's FM synthesizer chip. If you have the Professional Wavetable Upgrade you definitely want to use it instead of the FM synthesizer chip. The steps below tell you how to select the Professional Wavetable Upgrade from the Windows' driver applet. These instructions assume you are already running Windows. You must perform these steps if you want to use the Professional Wavetable Upgrade with either Sound Impression or Recording Sessions.

1. From the Main group, double-click on the *Control Panel* icon.
2. Double-click on the *Drivers* icon.
3. Highlight the *Media Vision Mixer* item and click on the *Setup* button.



Professional Wavetable Upgrade

Click on the **Add-On Synthesizer** box in the Mixer Setup dialog box. Click on the **OK** button.

Click here if you want to use the Professional Wavetable Upgrade

Mixer Startup
 Inherit DOS Mixer settings

Mixer Exit
 Restore DOS Mixer settings
 Save Windows Mixer settings

Synthesizer
 Add-on Synthesizer card installed

4. Click on the **Close** button to exit the drivers dialog box.

The Media Vision Mixer Setup dialog box appears. The screen shown above is set to use the Professional Wavetable Upgrade. Notice how the Synthesizer box is checked.



Note

Some sound card models (e.g., Jazz sound cards) may not have the Mixer Setup option available.

5. Exit Windows.
6. Re-start Windows.

The steps below are for Media Vision software only, which includes Sound Impression. Refer to your MIDI applications documentation in order to select a MIDI device for your particular applications.

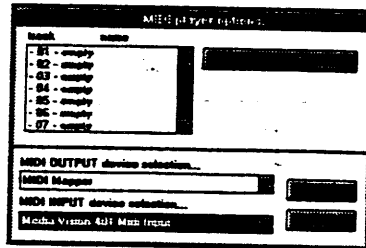
7. From the "Multimedia Tools" group click on the **Sound Impression** icon.



8. From the **Options** menu select the **Optional Add-On Synth** item. Ensure that the box has a check mark inside of it.
9. From the **Edit** menu select the **MIDI Selection**. The MIDI Selection dialog box appears.



10. Change the MIDI Output device selection to the **Media Vision MPU-401 Output**. Click on the OK button.

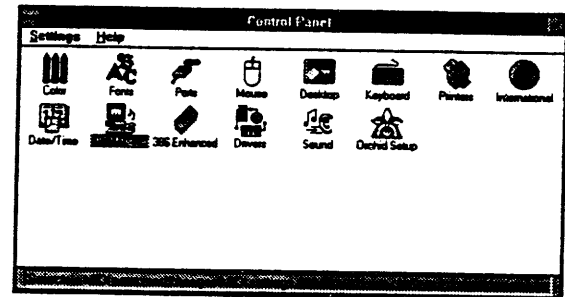


11. Click on the **OK** button to close the MIDI Player dialog box.

Editing the MIDI Map for Recording Session

Perform the steps shown below in order to use the Professional Wavetable Upgrade with Recording Session. These steps show you how to change the MIDI Mapper application from using the Sound Card's FM synthesizer chip and to use the Professional Wavetable Upgrade instead.

1. From the **Control Panel** double-click on the MIDI Mapper icon.



2. Edit the Media Vision MIDI Map.

Select the **MVI General** selection, if it is available. Otherwise, refer to the section titled "Creating a MIDI Map," on the following pages to create a new MIDI Map.

3. Close the Control Panel.

