

WELCOME TO IMAX SPEED USER'S GUIDE!

We hope you enjoy the first interactive IMAX movie from Knowledge Adventure. We have designed Speed with the best possible state of the art movie technology and sound design. Turn your speakers up, hit the play button... and launch yourself into a brand new kind of interactive experience. Enjoy the ride!

The Knowledge Adventure Film Group.

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===CONTENTS=====

MEET THE FAMILY

Get acquainted with the family of software learning tools from Knowledge Adventure, Inc.

GETTING STARTED

Find out everything you need to know to install and start Speed.

USING SPEED

Learn how to play the movie and use each of the games and activities in Speed.

APPENDIX A: LEARNING GUIDE

Parents and Teachers: Read about ways to get the most educational value from Speed.

APPENDIX B: EXTENDED LEARNING MODULE

Experiment with Speed in the real world.

APPENDIX C: QUESTIONS AND ANSWERS

Find answers to questions you may have about Speed.

CREDITS

INTERNATIONAL RESOURCES

===MEET THE FAMILY=====

This section introduces the family of enjoyable software learning tools developed by Knowledge Adventure, Inc.

About the developer

Knowledge Adventure, Inc. develops disk-based and CD-ROM software products for the PC and the Macintosh that encompass a wide base of information on history, literature, nature, science, art and music within an interactive book format that encourages exploration in ways never before possible.

What are Interactive Books?

Knowledge Adventure Interactive Books and Movies such as Speed encourage exploration by igniting the innate sense of interest and curiosity that kids of all ages have about things new and different. Interactive Books tap the power of the personal computer to demonstrate how seemingly isolated facts are linked in a manner that makes them more interesting, understandable and memorable. Most important, these books empower the user with a sense of control over the entire experience, reinforcing the thrill of discovery.

The growing family

Interactive Books available to date include the original Knowledge Adventure; Isaac Asimov's Science Adventure II, Space Adventure, authored by Caltech's Tom McDonough with Astronaut Buzz Aldrin; Dinosaur Adventure; Kid's Zoo--A Baby Animal Adventure; Undersea Adventure; America Adventure; 3-D Dinosaur Adventure; 3-D Body Adventure; and Bug Adventure. Send in your registration card to be sure you're kept informed of new titles, including disk-based, CD-ROM, and Macintosh versions of these exciting products. Another Interactive Movie is The Discoverers, containing the MacGillivray Freeman IMAX/Omnimax movie and inspired by the Random House book The Discoverers by Pulitzer prize-winning writer Daniel Boorstin.

Talk to us!

The Knowledge Adventure Bulletin Board System is available to you 24 hours a day at (818) 248-0166 (N, 8, 1) 1200 to 14,400 baud. You can read commonly-asked technical questions and answers, download new drivers for your sound card, order new products, and register your products--all online. Give us a call today!

===GETTING

STARTED=====

This section covers everything you need to know to set up and start Speed on your computer.

What do I need?

To run Speed you will need the following:

- An IBM or compatible computer. A 386 processor is required, and a 486 processor is recommended.
- A color VGA or SVGA monitor.
- A CD-ROM drive that supports ISO 9660.
- A hard disk with a minimum of 3.75 megabytes of disk space free.

- Approximately 520 kilobytes of available RAM.
- A mouse is recommended; however, the software can be run using the keyboard alone.
- A sound card is recommended.
- A printer (optional) so that you can print Speed text files; any printer that can accept ASCII text directly from your computer port will work.

How do I install the program?

Follow these steps to install Speed on your system:

1. Insert the Speed compact disk into your CD-ROM drive and log onto that drive. For example, if your CD-ROM drive is F: type:

F: and press <Enter>

2. Type:

INSTALL and press <Enter>

3. Follow the messages on the screen until the installation is complete.

The Install program will ask you where you'd like to store the appropriate Speed files on your hard drive, what sound device you have, and whether or not you'd like to run Speed under Microsoft Windows. The Install program will also ask you to decide how much disk space Speed will take up on your hard drive. The more Speed files you store on your hard drive, the faster the program will run. The maximum installation requires 6 megabytes of space available on the hard drive.

NOTE: If you have difficulty installing Speed turn to "About installation."

Running under Windows

If you answered YES to the question about running under Microsoft Windows when you installed Speed, a new program group called Knowledge Adventure has been created for your system. It contains Speed, Read Me, and Speed Config icons. Double-click on the Speed icon to start the program. Double-click on the Read Me icon to see the latest information about Speed. Double-click on the Speed Config icon to edit the configuration file. See "About program defaults" for more information about the Speed configuration.

NOTE: You'll find that the following statement has been added to the [386ENH] section of your SYSTEM.INI file:

```
DMABUFFERSIZE=150
```

Your original SYSTEM.INI and WIN.INI files are saved to the files SYSTEM.BKA and WIN.BKA. (If WIN.BKA already exists, the old WIN.BKA is renamed to WIN.BKB.)

How do I begin?

To start Speed, follow these steps:

1. Change to the directory on your hard drive containing the Speed files.
For example, to switch to the C:\SPEED directory, type:

C: and press <Enter>
CD\SPEED and press <Enter>

2. Then, to start the program, type:

SPEED and press <Enter>

NOTE: If you have difficulty starting Speed, turn to "About startup."

===USING

SPEED=====

This section explains how to use each activity and explore all that Speed has to offer.

Ready to begin?

There is no "right" way to play with Speed. You decide when, where, and how you want to move around in the program and which activities you want to do.

If you have not yet installed and started Speed, see "How do I install the program?" for instructions.

SOME BASICS

What if I don't have a mouse?

If you do not have a mouse, use the arrow keys on your keyboard to move the pointer around on the screen and press <Enter> in place of clicking the mouse button. You can also press <Tab> to move the pointer to each button on the screen in turn; press <Shift-Tab> to cycle backward through the buttons. If there is a dialog box on the screen, pressing <Tab> or <Shift-Tab> will move the pointer only to those buttons in the dialog box.

Note the balloons. Many of the items on the Speed screen are labeled with note balloons that appear whenever the pointer touches that spot on the screen. If you want to know more about an item on the screen, move the pointer around that area to see if there is a note balloon to read.

Turn off the sound. If you want to turn off the sound at any time, press <Esc>.

What if I get lost?

If you're not sure how you got to a certain place and would rather be somewhere else, look for the Return to Movie button, usually in the lower right corner of the current screen, and click on it to return to the Main

movie screen.

MAIN MOVIE SCREEN

The first still screen you'll see after you start Speed is the Main movie screen. You can interrupt the opening sequence and go immediately to the Main movie screen by clicking your mouse button. The function buttons below the viewing window let you start and stop the movie and travel to related information and activities.

Function buttons

Preview the movie: Click on the Preview button to start a self-running preview of the movie. To interrupt the preview and return to the Main movie screen, click your mouse button.

Play the movie: Click on the Play button to start the movie. You can click on any of the other function buttons to interrupt the movie while it is playing. Otherwise, it will play through to the end.

Speed through the movie: Click on the Click forward button to move ahead through the movie one "key frame" at a time, or on the Click backward button to move back one "key frame" at a time.

Go on a knowledge adventure: Click anywhere to stop the movie. Simply move the pointer around within the movie screen, read the note balloons and click on them. See the section "Speed Reference," for information about using the Speed Reference.

Experiment with speed: Click on the Simulations button to see a menu of the simulations you can try. See the section "Simulations" for information about each simulation.

Play the games: Click on the Games button to see a menu of the games you can play. See the section "Games" for information about each game.

Leave Speed: Click on the Exit button or press <Alt-F4> to exit from Speed.

Key frame mouse scroll

Click on the key frame mouse scroll icon. Then move your mouse right or left or use the right and left arrow keys on your keyboard to scroll through the "key frames" of the movie. When you reach a key frame you want to explore, click your mouse to return to the Main movie screen. Then move the pointer around the key frame screen, read the note balloons and click on them to go to the Speed Reference. See the section "Speed Reference" for information about using the Speed Reference.

SPEED REFERENCE

The picture window in the right center of the screen and the text window in the lower left corner display information about a topic related to the key frame from which you left the movie. Different pictures and text will appear in these windows depending on where you click--in the picture window, on the speed line below the picture window, or in the map window above the text window. The seven control buttons along the bottom of the

screen provide additional options.

The picture window

Move the pointer: As you move the pointer across the picture window, you will see a note balloon appear. Continue clicking within the picture window to follow the knowledge adventure that is linked to the key frame from which you left the movie.

The map window

Travel to a new location: Click anywhere in the map window to visit the screen that is most closely related to that location. To rotate the globe, click on one of the arrow buttons surrounding the map window. You can also rotate the globe by placing the pointer at any spot on the earth except the very center, then pressing and holding down the mouse button. The longer the line that appears when you do this, the faster the globe will rotate. To move closer to or farther from the earth, click anywhere on the slider bar below the map window. You can also click on the slider and hold down the mouse button as you drag the slider to another part of the bar. Click on the push bar below the slider to render the globe full screen.

The speed line

Select a speed: Click anywhere on the speed line to visit the screen that is most closely related to that speed. If you want to move just one screen forward or backward on the speed line, press <+> or <-> or click once on the right or left arrowheads at either end of the speed line. You can also click on the slider and hold down the mouse button as you drag the slider to another part of the bar.

The text window

Read all about it: Click on the single up and down arrow buttons below the text window to scroll the window so you can read all the text. The text will scroll as long as you hold down the mouse button, and will stop when you release the mouse button. To scroll quickly one page at a time, click on the double arrow buttons below the text window or press <PgUp> or <PgDn>.

Look for more information: To go to the Speed Reference index, click on a word in the text window that interests you. The text window will change to display an index of words used in the Speed Reference and the screens in which they appear, with the word you chose (or a similar word) at the top of the window. From the index, you can click on the name of the screen you want to visit, or press <Esc> or click on the Retrace button to return the text window to its previous display. To move forward or backward in the index one page at a time, click on the single up and down arrow buttons below the text window. To scroll quickly to the next word in the index that has a different second letter, click on the double down arrow button below the text window. Similarly, to scroll to the previous word in the index that has a different second letter, click on the double up arrow button.

NOTE: To get to a specific word in the index as quickly as possible, just start typing the word!

Control buttons

Get help: Click on the Help button to get information about using Speed.

Go back the way you came: Click on the Retrace button, or press <Backspace>, to travel to the screen you visited last. Each time you click on it you'll travel back one more screen. You can also move forward in the "history" of your travels by holding down <Shift> and clicking on the Retrace button or by pressing <Ctrl-Backspace>.

Play the games: Click on the Games button to see a menu of the games you can play. See the section "Games" for information about each game.

Experiment with speed: Click on the Simulations button to see a menu of the simulations you can try. See the section "Simulations" for information about each simulation.

Replay the narration: Click on the Narration button to replay the narration associated with the current screen.

Print the text: Click on the Print button to send the contents of the text window to your attached printer that accepts ASCII text.

Return to the movie: Click on the Return to Movie button in the lower right corner of the current screen to return to the Main movie screen.

SIMULATIONS

From the Simulations menu, click on the name of the simulation you'd like to try or click on the Return to Movie button in the lower right corner to return to the Main movie screen. At any time during a simulation, click on the Return to Menu button in the lower right corner of the screen to return to the Simulations menu.

The Speed of Thought

Click on any of the three Start buttons to begin the race and watch the relative speeds of various mammals, machines, and human thought. Click on the screen to stop the race in order to see the relative positions of the participants. Click on the Return to Menu button in the lower right corner of the screen to return to the Simulations menu when you have finished with this activity.

Human Speed

You are an athlete about to leap over ten hurdles, clear a pole vault and complete a running broad jump! Watch the changes in the heart rate and breathing rate monitors. Click on the Return to Menu button in the lower right corner of the screen to return to the Simulations menu when you have finished with this activity.

Roller Coaster

Go on a wild roller coaster ride! Watch the monitors to see changes in the g-force, speed and gravity. Click on the Return to Menu button in the lower right corner of the screen to return to the Simulations menu when

you have finished with this activity.

EXTENDED LEARNING MODULE

Experiment with speed in the real world! Learn to build a sailboat, witness steam power from a tea kettle, clock airborne objects, and feel the effects of human speed. The complete text of the extended learning module is included in Appendix B.

GAMES

From the Games menu, click on the name of the game you want to play or click on the Return to Movie button in the lower right corner to return to the Main movie screen. At any time during a game, click on the nearest Return to Menu button or press <Alt-F4> to return to the Games menu.

Speed Matching

The object of this game is to match a given speed with an animal or machine that travels at that speed. Listen to the narration and look at the speed in miles per hour that is shown at the top of the screen. Click on the picture below of the animal that travels at that speed. The program will let you know whether you are correct. Click on the Return to Menu button in the lower right corner of the screen to return to the Games menu when you have finished with this activity.

Speed Reading

The object of this game is to read each series of facts about speed, a question, and possible answers as quickly as possible and select the right answer to the question. Use your mouse to drive down the "Hall of Speed" while a timer ticks away. As you are traveling, three speed facts will appear one at a time. Read each one as quickly as you can and then click on it to make it disappear so you can continue your journey. Likewise, a question about speed will pop up followed by three possible answers. When you have read each of these quickly and clicked your mouse to make them go away, decide on your answer (and remember it!) until you reach the end of the hall. There you will need to turn left, continue straight ahead, or turn right in order to click on the letter of your answer: A, B, or C. If you are correct, you will move up to the next level; there are 15 levels in all. If you are not correct, the program returns you to the beginning of the same round to try again. Click on the Return to Menu button in the "Room of Decision" to return to the Games menu when you have finished with this activity.

A-Mazing Speed

The object of this game is to navigate through a maze and select the faster animal or machine from each pair of pictures that appears. Use your mouse to navigate down hallways and around corners. This takes a little practice. Don't be afraid to push the mouse hard so you'll go far. Push the mouse diagonally (to the left or right) to change directions. You might prefer to use the arrow keys at times: press the left arrow key to turn left, press the right arrow key to turn right, press the up arrow key to move forward, and press the down arrow key to move backwards.

Once you are moving in the proper direction, press <+> to accelerate (move faster) and <-> to decelerate (slow down). When a pair of animals appears, turn toward the faster animal and then continue traveling. If you always choose the faster animal, you will have no trouble finding your way through the maze. If you choose the slower animal, you will run into a dead end, but you'll learn the actual speeds of the two animals as you retrace your steps and get back on track. When you have finished with this activity, look for the Return to Menu button or press <Alt-F4> to return to the Games menu. There is a Return to Menu button at the beginning of the maze, in the transition room between the two levels of the game, and at the end of the game.

===APPENDIX A: LEARNING GUIDE=====

This section is especially for parents, or for any adult who wants to help a child learn and grow as much as possible from playing with Speed.

Playing and learning

Having fun and learning are two of the most natural things in the world to a child. Your child is learning in some way when he does the things that are most fun to him. When he plays a video game in which the object is to shoot down the most aliens in the least amount of time, he enjoys himself while improving his hand-eye coordination and dexterity. In virtually every activity kids enjoy, there is at least the potential for learning. Want a simple formula for getting kids to learn? Make it fun!

But what are they learning? How do we help them to learn the really important things? How do we teach them to take initiative in learning about themselves and their world? After all, there won't always be a game to play that will teach them what they need to know.

The theory behind Knowledge Adventure Interactive Books and Movies is that the way to ignite a child's intellect is to introduce him or her to the fun of learning. If we truly achieve this, we no longer have to come up with sneaky ways to get kids to learn; once they recognize the inherent joy of learning, nothing will stop them from finding out everything they want to know!

Speed is designed to provide your child with many possible directions to explore according to her own interests. As a parent, you are the best possible assistant in this process because you know your child, her level, and her interests. Most importantly, she craves one-on-one time with you.

Enhancing your child's play

When you sit down with your child to play with Speed, or any other program, you may want to keep the following suggestions in mind.

1. Let your child take the lead.

If your child is old enough to read and follow the instructions in this manual, let him try to install and start Speed himself. If you

set up the software for him, let him take over as soon as it is ready to play with. Simply observing and making interested comments about what your child is doing is a good way to encourage his learning without imposing your own agenda. For example, say, "You're clicking on different parts of the screen to see what happens."

2. Be a learner yourself.

Aim to be a student of your child more than of the software. What can you find out about your child's learning style, interests, attention span, and thought processes? If there is something neither of you can figure out about the software, find out the answer together by looking it up in the documentation. Set an example by talking through this process: "Why don't we look up 'sound' in the manual?"

3. Ask appropriate questions.

An excellent way to assist your child's learning while following the first two guidelines is to ask questions that are appropriate for her age and interests and that challenge her to go a step further in her play: "I wonder what would happen if you clicked on those little symbols?" Go slowly and sparingly with these questions, challenging your child only as she seems ready. Rather than interrupting her play, you might wait a few minutes for her to discover something on her own. That way you'll both learn something!

4. Have fun together!

The fact that you have purchased a Knowledge Adventure product for your child and you are taking the time to read this guide says something about you as a parent. You recognize the importance of both fun and learning. Your own enjoyment of the learning process and the fun you have spending time with your child will enhance your play together more than anything specific you do or say.

For the youngest players

Even children who cannot yet read will be very interested in all the sights and sounds in Speed, and will enjoy clicking the mouse to see what will happen. This is a perfectly fine way to enjoy the software. Many adults start out this way too!

Some of the activities, such as the Speed Matching Game, are more suitable for younger children. You might be surprised, however, at which activity turns out to be your child's favorite. Be sure to check out the 3-D roller coaster simulation with your youngster!

Improving reading skills

Got an avid reader in your home? Or maybe a not-so-avid reader who enjoys games of skill? The Speed Reading Game is destined to become a favorite with your child. It is designed to build skills for reading faster at a higher rate of comprehension. Your young player will need to use his computer navigation skills as well as his new knowledge of speed and his memory to read his way through facts, questions,

and answers to achieve his fastest personal best.

In the real world

The educational value of Speed doesn't stop in the computer room. The extended learning module referred to in the program is reprinted in Appendix B. It describes experiments you can do at home with your child to take her new interest in and knowledge of speed outside of the computer environment and into the real world.

===APPENDIX B: EXTENDED LEARNING
MODULE=====

This section gives instructions for performing some speed experiments of your own at home or school.

PROJECT 1: Wind Power!

Make a model sailboat to demonstrate how the wind moves boats and ships across the oceans. Refer to the picture on the next page.

1. Find Materials:

- a. A piece of thick paper for the sail.
- b. A thick wire or wooden rod for the mast.
- c. A piece of foam or wood for the body of the boat.
- d. A piece of thick tin foil.
- e. Two tacks or pins and a piece of tape to hold the boat together.
- f. A bowl or tub of water to test the boat in.

2. Construct your boat:

- a. Cut the tin foil into a keel (approximately 2" x 3" rectangle).
- b. Cut a slit (0.5") down one end of the rectangle (toward the middle).
- c. Bend the two flaps (0.5" x 0.5" each) in opposite directions.
- d. Place the flaps on the bottom of the boat and tack them down.
- e. Place the boat in the water and blow at it.

3. Add a sail to make the boat go faster:

- a. Cut the thick paper into a sail (approx. 5" tall).
- b. Attach the sail to the mast (thick wire or wooden rod) with tape.
- c. Push the mast with the sail into the boat.
- d. Place the boat back into the water and blow at it again.

The second boat should have moved faster because it has been powered by the speed of the wind.

PROJECT 2: Steam Power

CAUTION: DO NOT TRY THIS WITHOUT THE HELP OF A PARENT OR TEACHER!

Make your own steam engine with a boiling tea kettle, a piece of tin, and a long wire.

- a. Cut the top off of a tin can or cut a 4" to 5" circular piece of thick foil.
- b. Find the center of the circle and punch a small hole in it.
- c. Divide the circle into eight equal parts and cut along each line to within 1/4" of the center.
- d. Twist each segment--now you have a wheel with eight blades.
- e. Attach a piece of wire about six inches long (you can even use a straightened paper clip).
- f. Put the wire through the pinwheel's center and glue the wire onto the wheel.
- g. With the water in the tea kettle boiling, hold the wheel in front of the steam and watch the blades turn. The steam provides enough force to keep the wheel spinning at a rapid speed.

PROJECT 3: Clocking Airborne Objects

How fast is a fast ball? Well, with this experiment you can find out how fast an airborne object travels. With a friend to time you, throw a baseball up into the air. When you release the ball, your friend must start the clock, and when the ball hits the ground, your friend stops the clock.

To compute the speed of the ball, see the chart below:

(Seconds in air)	(Miles per hour)
1	16
2	32
3	48
4	64
5	80
6	96

PROJECT 4: Feeling Speed!

CAUTION: MUST BE SUPERVISED BY A TEACHER OR PARENT!

Try an experiment with three volunteers. Have one of the volunteers run in place, another jog in place, and another turn around in a circle.

Observe the volunteers carefully and write down ways in which they react to the speed at which they are moving and the kind of motion itself.

Observations may include:

- a. Changes in heartbeat, temperature, and muscle response.
- b. Disorientation (dizziness) and lightheaded sensation.
- c. Change in vision or hearing.

===APPENDIX C: QUESTIONS AND ANSWERS=====

This appendix will answer many of your questions about Speed and help you solve problems you may have.

If you do not find the answer to your question here you can call Knowledge Adventure Technical Support at (818) 249-0212, or write down your question and fax it to us at (818) 542-4205. Before calling Knowledge Adventure, please be seated at your computer with the DOS prompt on the screen.

You can also read commonly asked technical questions and answers, among other things, on the Knowledge Adventure Bulletin Board System. The BBS is available to you 24 hours a day at (818) 248-0166 (N, 8, 1) 1200 to 14,400 baud.

If you have access to the Internet, you can send e-mail about technical questions to support@adventure.com.

ABOUT INSTALLATION

There is junk on the screen and the Install program has stopped. What should I do?

A data read error sometimes looks like a strip of horizontal lines. Try typing R (retry). If this fails, try running the Install program in the text-only mode. Follow the directions for the regular install, but instead of INSTALL type INSTALL -T at the DOS prompt from your CD-ROM root directory. If it still doesn't work, there may be programs running that are interfering with the installation, including various anti-virus programs, or the CD-ROM disk may be damaged. Please call Knowledge Adventure Technical Support for a replacement disk or other assistance.

My disk compression program indicates that I have enough disk space, but SPEED will not install completely. Why not?

Programs such as Stacker that compress your files on the hard disk may indicate that you have enough disk space to install Speed completely when you really do not. These programs report on your disk space based on how much they are usually able to compress your files. The files that Speed copies to your hard disk are already compressed and your disk compression program will not be able to compress them further to give you more space. Try to move or remove any files you don't need in order to make room for Speed, then start the Install program from the beginning.

ABOUT STARTUP

Speed won't start or it freezes on the first screen. What's wrong?

You may have the incorrect music driver installed. Use the SETUP.EXE program supplied with the software to change this configuration. First, change to the SPEED directory on your hard drive, then type SETUP and press <Enter> to run the program. Choose the correct sound device from the list offered. If the problem persists, see "About sound and sound devices."

If you have correctly installed your sound device, edit the KA.CNF file in the SPEED directory on your hard drive so that ExtraMemory is set to None. See About program defaults for more information about the KA.CNF file.

Also try unloading any TSR programs and reboot your computer from a DOS system disk.

ABOUT MICE

I can use the keyboard with Speed, but my mouse doesn't work. What should I do?

If you find that the cursor does not respond when you move the mouse, type CD\SPEED and press <Enter> at the DOS prompt from your hard drive. Then type MOUSE and press <Enter>. If this solves the problem, you can modify the mouse commands in your AUTOEXEC.BAT or CONFIG.SYS file to use the mouse driver supplied with Speed instead of the one currently being used by your system.

If you are a Windows user, try exiting Windows first (using File Exit). Then, change to the SPEED directory on your hard drive and start Speed from the DOS prompt by typing SPEED and pressing <Enter>.

If you have a Mouse Systems mouse or trackball, or a Mouse Systems compatible mouse, you may experience the hand pointer jumping to the bottom left corner of the screen. If so, you are using a version of the Mouse Systems mouse driver that is not compatible with the Microsoft mouse standard. Please try the mouse driver that we have provided by following the instructions above, and the mouse should then work perfectly.

ABOUT SOUND AND SOUND DEVICES

When I try to run Speed I don't hear any music and I get the message "Warning: Couldn't initialize music driver; Music output disabled." What's wrong?

In order for Speed to find your card, you must specify the correct I/O address in the KA.CNF file. See MusicDevParams under "About program defaults" for more information about changing the KA.CNF file. To change the address with the SETUP program, run SETUP.EXE and select the correct sound device from the list offered. After the program runs the sound and music tests, use the arrow keys to select Change Sound Settings. You will be prompted to select the I/O address, the IRQ vector, and the DMA channel that match your sound device. After selecting the DMA channel, you will be returned to the Sound Test screen, and may test those settings with the options Play Digitized Sound Test and Play

Music Test. Once you are satisfied that both music and sound are working, select Save Sound Setting and Exit; your new configuration will be saved to the KA.CNF file.

If, after selecting new settings, you are still not hearing music during the music test, and you have checked your sound card's correct address, it's likely that your sound card and another device (such as a CD-ROM drive or scanner) may be sharing the same I/O address. Such a conflict may cause either Speed or the SETUP program to halt. Write down the current configuration of all of the device cards in your computer. Try changing some of the settings (jumpers or dip switches) to various configurations until all of your programs work correctly. If you wish, you can pull the peripheral cards out of your computer and test just your sound card with Speed. Add cards one by one until you find the problem.

When I try to run Speed I don't get sound other than music and I get the message "Warning: Couldn't initialize sound driver; Sound output disabled." What's wrong?

Follow the advice given for the last question, but also check and correct the IRQ Vector and DMA Channel for your sound device. See SoundDevParams under "About program defaults."

Nothing happens when I click on parts of the screen that are supposed to play sounds. What's wrong?

The problem may be that you do not have enough RAM for certain sounds to load and play. Try unloading memory-resident programs or device drivers in your AUTOEXEC.BAT or CONFIG.SYS files to free sufficient memory to play those sounds.

If the sound is not working, make sure Speed is configured correctly for your sound card. To see the program's current configuration, type TYPE KA.CNF from the SPEED directory on your hard drive and press <Enter>. To edit the configuration file in Windows, click on the Speed Config icon. To change the configuration, run the SETUP.EXE program described under "About startup." Run the test program supplied with your sound card to make sure it is working. Make sure that your volume control dial is turned up, and that your speakers have power if they are externally powered. If it is still not working, you may need to reconfigure your sound card's jumper settings to another I/O address, or the software settings for the IRQ vector and DMA channel. If you've changed any of the settings on your sound card since installing Speed, you must let Speed know these new settings. See MusicDevParams and SoundDevParams under "About program defaults."

I purchased a sound device after installing SPEED. How do I get the software to recognize my new piece of hardware?

Type SETUP at the DOS prompt from your C:\SPEED directory on your hard drive and press <Enter>. Highlight the correct sound device and press <Enter>, and SPEED will be reconfigured to work with your new hardware.

ABOUT HARDWARE COMPATIBILITY

Can I use Speed on an EGA display?

Speed uses a special high-resolution VGA mode, and will not work on an EGA monitor.

ABOUT SOFTWARE COMPATIBILITY

I have trouble running Speed after using certain memory-resident programs. What should I do?

Speed requires approximately 520 kilobytes of RAM in order to run. Even when there is adequate total RAM to run the program, there may be conflicts with other programs occupying memory. If you experience difficulty in running Speed under these circumstances, please remove other programs from memory before starting Speed.

ABOUT PROGRAM DEFAULTS

Is there a way to change certain defaults in Speed?

Yes. You can change the default configurations by using a text editor (e.g., the DOS text editor if you are using DOS version 5 or later) to alter the KA.CNF file in your SPEED directory on your hard drive, or by clicking on the Speed Config icon if you are running Speed under Windows. The case of letters and spacing between words does not matter.

SoundDevice. Type the name of your sound device here.

AutoMovie. Type On or Off to make movies play automatically or only when you click on the Audio/Video button.

MusicVolume. Type a value from 50 to 80; the lower the number the softer the music volume while digitized sounds are playing. This setting does not change the overall music volume; music volume is altered only while digitized sounds are being played.

MouseSensitivity. Type a value from 25 to 100; the higher the number, the more sensitive and responsive your mouse is to your movements.

Music. Type On or Off to turn the musical accompaniment on or off.

DigitizedSound. Type On or Off to turn the digitized sound (narration) on or off.

ExtraMemory. Type Automatic, XMS, EMS, or None to indicate whether you want the program to detect extra memory and use it automatically or to use only extended, only expanded, or no extra memory.

MusicType. For CD-ROM users only: Type ADL if you have an Adlib-compatible sound device or RLD if you have a Roland-compatible sound device.

CDDRIVE. Indicate the drive letter of your CD-ROM drive.

HDDRIVE. Indicate the drive letter of your hard drive.

CDROOT. Indicate the path of the CD-ROM directory containing your Speed files.

HDROOT. Indicate the path of the hard drive directory containing your Speed files.

MusicDevParams. Speed will look for your sound card at the address set in the factory. You need not change these default parameters unless you have changed the factory settings (switches, jumpers) on your sound card. Type an I/O address for your audio device, e.g., A240. See the documentation that came with your MIDI audio device, e.g., A240. See the documentation that came with your audio device. This setting can also be easily changed by running the SETUP.EXE program described under "About startup" and under "About sound and sound devices."

SoundDevParams. Speed will look for your sound card at the address set in the factory. You need not change these default parameters unless you have changed the factory settings (switches, jumpers) on your sound card. Type an I/O Address, IRQ Vector, and DMA Channel for your digitized sound audio device, e.g., A220 I7 D3. See the documentation that came with your sound card. This setting can also be easily changed by running the SETUP.EXE program described under "About startup" and under "About sound and sound devices."

ShadowCD: If you installed Space Adventure on to a compressed drive, this setting should be OFF. If you are not using a compressed drive setting this option to ON will increase performance.

SETUP - ADVANCED USER OPTIONS

The program defaults can also be changed through the Advanced User Options menu. The Advanced User Options menu can be accessed by typing SETUP from the SPEED directory on your hard disk, selecting the appropriate sound device, and selecting Change Sound Settings. To change the defaults, press <Enter> on the appropriate option and enter the desired new setting. A description of Advanced User Options menu is listed below.

Sound Card I/O Port: Select the correct I/O port used by your sound device. You need not change these default parameters unless you have changed the factory settings on your sound device.

Sound Card IRQ: Select the correct IRQ setting used by your sound device. You need not change these default parameters unless you have changed the factory settings on your sound device.

Sound Card DMA: Select the correct DMA setting used by your sound device. You need not change these default parameters unless you have changed the factory settings on your sound device.

Music Card I/O Port: Select the correct Music I/O port setting used by your sound device. You need not change these default parameters unless you have changed the factory settings on your sound device.

Digitized Sound: This option can be set to either ON or OFF. Setting this option OFF can increase movie playing performance on slower machines.

Sound Volume: Controls the loudness of the digital sound (narration and sound effects.) The higher the number the louder the sound. (Note: functions only on sound cards with software volume control capability.)

Music: Setting can be ON or OFF. This will turn musical accompaniment on or off throughout the entire game. The Alt-M feature will not function when set to OFF.

Hushed Music Volume: Type a value from 1 to 100; the lower the number, the softer the music volume while digitized sounds are playing. This setting does not change the overall music volume; music volume is altered only while digitized sounds are being played.

Use XMS Memory: Select Automatic or None to indicate if you want the program to use extra memory or not.

Printer Port: Select LPT1 or LPT2 to indicate which printer port your printer is hooked up to. Printers that connect to a serial port are not supported by this option.

Printing: Select Detect to indicated whether you want the program to automatically detect if your printer is available. Select None to disable the printing feature of this program.

Mouse Sensitivity: Type a value from 1 to 100; the lower the number, the less sensitive your mouse is to your movements. Lower numbers make it easier for younger children to handle the mouse.

Sound Device Driver: States the path to the sound device driver used by your sound device. If changed, corresponding Sound Card I/O Port, IRQ, and DMA may be required.

Music Device Driver: States the path to the music device driver used by your sound device. If changed, corresponding Music Card I/O Port may be required.

ABOUT OTHER TOPICS

Can I print the graphic images?

You can use the VGACAPT program included to capture screens in the Speed Reference section by changing to the directory on your hard drive containing the Speed files and starting the program by typing SPEED -V. You can then capture a graphic by pressing <Ctrl-PrtScr> to create a bit-mapped file called SCREEN0.BMP. (Make sure you turn off any sound or music that is playing before you press Ctrl-PrtScr.) Press Ctrl-PrtScr again to create SCREEN1.BMP, and so on. These bit-mapped files can be retrieved and printed from within many graphics programs. Due to the video modes employed, the Screen Capture Program will not work within the Main movie screen, A-Mazing Speed, or Speed Reading.

NOTE: Images in this product may not be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system.

What can I do about video problems like stripes on the screen?

You may need to move some DIP switches on your video card. For example, if you see horizontal stripes on the screen while using Headland

Technology's Video-7 VRAM card to display VGA graphics, move DIP switch number 8 to the position opposite the one that it is currently in. This will enable IBM nonstandard video modes to display correctly without affecting the operation of your other software. This problem can also occur if the BIOS on your video card is not current.

I have a VGA system, but the Install program couldn't detect it. How do I install Speed?

The Install program may not be able to detect the presence of a VGA system on certain Compaq Prolinea computers. Press <Enter> to continue the installation process.

====CREDITS=====

KNOWLEDGE ADVENTURE FILM GROUP CREDITS

Executive Producers: Bill Gross, Dave Gobel
Designer/Writer/Producer: Roger Holzberg
Project Manager: Patrick Briggs
Co-Project Manager: Wes Horlacher
Project Coordinator/Researcher/Additional Text: Verna Harvey
Film Supervisor: Kirk Cameron
Sound Design: Hamilton Altstatt, Randy Hale
Animation: Dean Foster, Manny Wong
Graphics: Cody Harrington, Ben Harper, David Urban
Games: Will Drake, Donovan McLean
Programming: Fernando Echeverria, Lee Hasiuk, Jim Echmalian
Assembly: Kim Buckley, Marcie Horlacher, Peter Ruffner
Video Engineer: Albert Reinhardt
Additional Artwork: Joe Notaro, Bonnie Hammer
Special Thanks: Greg McGillivray, Janna Emmel, Bill Bennett,
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Raymond Plows, Alan Brookman, Barry Fluster

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Test Center History Office, Edwards A.F.B, CA; American Helicopter
Society; Westland Inc.; Thinking Machines Corp.; National Air & Space
Museum, Smithsonian Institution; Amateur Athletics Foundation;
Los Angeles Zoo; Lockheed Advanced Development Co.; Dr. Steve Arnold;
Prof. R.D. Middlebrook; Prof. Michael Tyszka; American Honda Motor Co.;
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Cars Inc.; Ford Motor Co.; N.A.S.A.; National Oceanic & Atmospheric
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St Petersburg Kennel Club; Miami Jai-Alai; Sea Containers Services Ltd.

SPEED CREDITS

Produced and Directed by: Greg MacGillivray
Conception and Story by: Greg MacGillivray
Written for the Screen by: Steven Henschel, James Foster
Executive Producer: Bill Bennett
Associate Producer: David Lester
Production Manager: Kristi Anderson
Production Assistant: Jody Rosenthal
Production Secretaries: Linda J. Schreiber, Georgia Shaw, Billi Haid
Production Insurance: Cohen Insurance

Casting: Barbara Claman Inc., Jeff Gerard
Location Scout: David Kahler
Edited by: Stephen Judson
Editorial Assistant: Matthew Muller
Second Editor: James Foster
Assistant Editor: Martina G. Young
Six Track Dolby Mix by: Sprocket Systems, Lucasfilm, Ltd.
Narration - Educational Version: James Burke
Stereo Sound Mixer: Michael Minkler, C.A.S.
Sound Effects Design: Soundelux, Wylie Stateman
Sound Effects Editors: Terry Lynn Allen, George H. Anderson, Bob Newlan,
Michael Wilholt, Sukey Fontelieu
Special "Sonic Boom" System: Evans Wetmore
Director of Photography: Greg MacGillivray
Additional Photography: Tim Housel, Brad Ohlund
Assistant Cameraman: Brad Ohlund
Lighting Gaffers: Pat Gilluly, Jack Tankard
Chief Grip: Rae Troutman
Art Director: Thomas Walsh
Costume Designer: Merrily Murray-Walsh
Property Master: Greg Melton
Set Construction: Paul Mitchell, Bob Behen
Scenic Artist: Steve Jezewski
Hair and Make-up Artist: Victoria Wood
Wardrobe Supervision: Nancy Hamann, Giovanna Melton
Color Supervision: William Pine, MGM Laboratories
Still Photographer: Barbara Smith
Post Production Consultant: David Keighley
Original Music Composed by: Steve Wood
Music Recording by: Lyons Recording Studio
Musicians: Frank Cotinola, Peter Seibert, Buzz Feiten, Alan Deremo,
Steve Van Gelder, Jeff Peach, Gale Peach, Greg Mirken, Margie Mirken,
David Walker, Richard Cook
Library Music Selection: Richard McCurdy
With Special Thanks to: The Benny Goodman Orchestra: Sing, Sing, Sing;
Billie Holliday: Let's Call the Whole Thing Off; Falco: On the Run;
Czech Philharmonic Orchestra: Carmina Burana; Billy Hays and His
Orchestra: I'm Wild About Horns on Automobiles; Perry Como: Moonglow

Special Effects Team

Director of Effects: Craig Newman
Co-Directory of Effects: Dorne Huebler
Motion Control System: ICON R & D, Inc.
Effects Supervisors: John Biondo, John Eng
Technical Directors: Tom Brauner, Richard Taylor
Animator-Illustrator: Frank Rocco
Illustrator: Kurt Zandler
Airbrush Artist: Andy Atkins
Support Artists: Niki Kaftan, Diane Piepol, Elissa Bello
Camera Operators: Gary Newman, Harry Alpert, Vladimir Hrycenko,
Candice Chinn
Courier: M6 Couriers

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the Air Force; The Blue Angels; Working Wildlife; Raleigh Cycle Co. of America; Firebird International Raceway; Road Atlanta; John Baker, Jaguar-Group 44 Team; Missional Community Hospital; L.A.P.D. Pipe Band; American Friends of the Hebrew University

Featured Players

Hunter: Monty Cox
Kirkpatrick MacMillan: Shane McCamey
Scottish Lady: Linda Hoy
Scottish Laddies: Omri Katz, Andy Muxlow
Bill Vukovich: Lee Brock
Ellen: Kathy Graber
Danny: Leif Green
Policeman: Frank Dent
Stunt Drivers: Brad McCabe, Kelly Brown
Doctor: Peter Reneday

Also Featuring

Stunt Pilots: Art Scholl, Charles Wentworth
Sailplane Coordinator: Bill Aronson
Jet Dragster Driver: Bill Carter
Surfer: Gerry Lopez
Speed Skier: Stella Sylvester
Kevin Hardesty, Lisa Jones, Karl Schneider, Don Smith, David Yarvi,
Jeff Imada, Shaun MacGillivray, Meghan MacGillivray, Alex MacGillivray,
Betty Gaye MacGillivray, Doug Williams

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The Developers of Speed

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===INTERNATIONAL

RESOURCES=====

Please contact the following local dealers to acquire additional Knowledge Adventure (tm) products in your geographic area.

Be sure to also inquire about the availability of international versions of your favorite Knowledge Adventure (tm) programs. We are proud to announce that our programs are being translated into German, French, and Spanish, with more languages to come later in 1994.

In Australia, contact:

Sega Ozisoft Pty. Ltd.
Lock bag 7 Rosebery NSW 2018
Phone: (02) 317 0000
Fax: (02) 317 0010
Hot Line: (008) 808 257

In the United Kingdom:

GuildSoft LTD.
The Computer Complex
City Business Park, Stoke
Plymouth PL 4BB
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===LATE-BREAKING

NEWS=====

This "README" file has some additional information and late-breaking news that could not make the manual as well as some important pieces of technical information.

MEMORY REQUIREMENTS. SPEED requires approximately 520K of RAM in order to run. Even when there is adequate total RAM to run the program, there may be conflicts with other programs occupying memory. If you experience difficulty in running SPEED under these circumstances, please remove other memory resident programs from memory. In MS-DOS versions 5.0 and above type "MEM /C | MORE" to see what programs and drivers are loaded in memory. To verify the RAM available, check the next screen for "Largest executable program size" parameter in K. In MS-DOS version 6.0 and above try running the MEMMAKER program to free more conventional RAM. For more information about conventional memory and memory management please consult your DOS manual.

RUNNING FROM WINDOWS. To avoid possible complications under the Windows environment, clicking on the SPEED icon will actually shut down Windows, run SPEED, then re-start Windows on exit from SPEED. You may get a message saying, "Application still active. Quit the application before quitting Windows." Switch to any other running DOS applications and exit them normally, then click on the SPEED icon again. If you have Windows applications already running, they will be shut down and you will be asked to save any unsaved data.

UPGRADING YOUR SOUND DEVICE. The "Set Sound Volume" selection in the Knowledge Adventure Menu System is specifically designed for your Packard Bell system. This feature may not function with other sound devices. But, you may use the software that comes with your new sound device to control volume levels.

ALT-S/ALT-M. These keys will toggle sound and music (respectively) off and on, this feature may not be functional in all areas of the program.

LAPTOP/NOTEBOOK COMPUTER DISPLAYS. SPEED requires a color VGA monitor to display its high-resolution images. It will not work on the internal plasma or LCD monitors on laptop PCs. Most laptops, however, have a connector for an external monitor, and SPEED will work fine with your laptop hooked to an external VGA monitor. SPEED will run fine on certain laptop screens, such as the Toshiba 4400SXC, COMPAQ LTE's and the PC BRAND NB 486slc which have 256 shades of grey or color screens. The only problem will be that the right edge of the screen will be slightly cut off. This is due to the fact that SPEED runs in the extra high

resolution VGA video mode of 360 x 480 pixels with 256 colors and most of the internal laptop screens can only display 320 pixels in width.

MONO, CGA, and EGA DISPLAYS. SPEED requires a VGA color monitor and therefore will not run on these monitors.

MOUSE SUPPORT. SPEED takes great advantage of your mouse if you have one, but it does not require one. There are keyboard equivalents which will allow you to enjoy the product without a mouse. Refer to "USING SPEED" for more information.

DIGITIZING TABLETS. Digitizing tablets are not supported by SPEED. If you are using a digitizing tablet and it is not functioning properly, unplug the tablet, plug in a mouse, and restart SPEED. Your tablet manufacturer may be able to provide a software solution to any problems experienced.

LOW VOLUME SOUND OR MUSIC. Sound cards that allow software volume control may have different volume levels for sound and music. If you hear a noticeable difference, you should run the volume control program that came with your sound card to equal out the settings.

WINMATE USERS. SPEED install program will not generate a Knowledge Adventure program group and icon if you run under Winmate - even if you said YES to the Windows question during install. Manually add the SPEED Icon to Winmate after installation is complete.

COMPAQ PROLINEA. During INSTALL, press ENTER if you get a message stating that you do not have a VGA system. If you receive a similar message while executing SPEED, please contact Compaq Technical Support for a patch program that will correct this problem with some early model Prolineas.

GRAVIS ULTRASOUND. The Gravis Ultrasound requires a large driver to load its more realistic "wavetable" instruments to the sound card requiring a total of 570 K. Consequently, you may have to free up additional memory in order to perform properly. If you plan to run Speed from Windows please do NOT run your ULTRAMID or ULTRASND TSR program before entering Windows. Speed will load and unload this program itself.

NOTE: The Gravis Ultrasound will not play sound/music tests during SETUP.

ROLAND SOUND CARDS. Roland sound cards have high quality music but no digital speech capability. You will not get digitized speech and sound effects without an additional sound board. If you have a second sound card, you will have to manually edit the SoundDriver and SoundDevParams section of the KA.CNF file. An example setup for a Sound Blaster card with a hardware configuration of base address 220, interrupt 5, and DMA channel 1 would be:

```
soundDevParams : a220 i5 d1
soundDriver    : D:\SPEED\drivers\SBDIG.DRV
               (where D: is your CDROM drive)
```

Other sound cards can be configured in a similar way, choose the correct driver from the following list:

ALGDIG.DRV - Ad Lib Gold

PASDIG.DRV - Pro AudioSpectrum/Studio 8/16
(DMA's 0 - 3, otherwise configure for Sound Blaster)

SBPDIG.DRV - Sound Blaster Pro

NOTE: For further information on sound cards and editing KA.CNF, please, refer to "About sound and sound devices." If your second sound card uses the default I/O Address you can use the Change Sound Settings menu.

DIGISPEECH PORTABLE. If you are using the Digispeech PortAble Sound Plus, check the date of your BMASTER.* driver files. If the files are dated earlier than August, 1993, contact Digispeech or our BBS for an update.

REVEAL SOUND FX MODEL SC600. If problems occur in Windows after returning from a DOS application, you may need to update your sound drivers for Windows. To obtain these drivers, please contact Reveal at (800) 4-REVEAL, fax (818) 340-2379, or BBS (818) 704-6321.

□