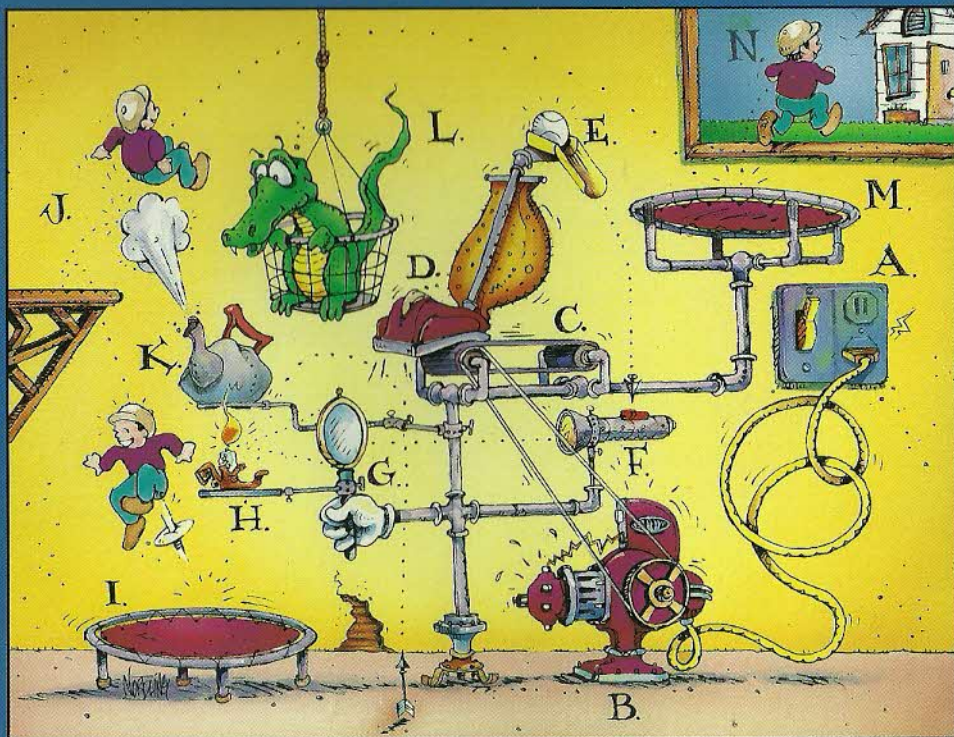




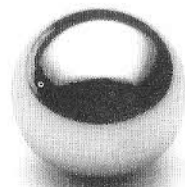
THE INCREDIBLE MACHINE 2™





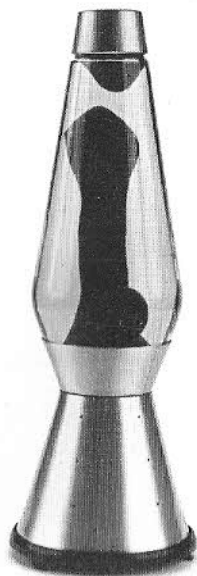
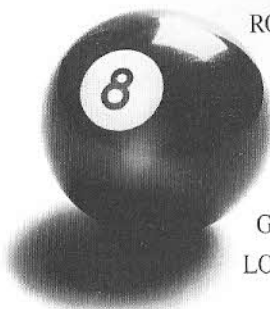
INCRECIBLE MACHINE 2

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Salutations

Professor Tim here. Welcome to my subterranean machine-making lab. We've got gazillions of gadgets lying around this place. And you won't *believe* all the things you can do with them!

The first thing you want to do is *Sign In*. Once you've written your name in my Inventor's Registry, I'll be able to keep track of which puzzles you've solved. And anybody else who wants to play can sign in under a different name. That way I can keep everyone's progress separate.



Now...

can I make a little suggestion? If this is your first time here, you might want to start off on my *Guided Tour*. It's a quick and fun way to get the hang of playing puzzles. It shows you how all kinds of things work—picture buttons, menus, and all kinds of machine parts. And the whole thing is automated! No kidding. Check it out.



Okay.

So let's say you know a little bit about *The Incredible Machine 2*, and you decide to launch right into *Puzzle Play*. You've got 150-plus puzzles waiting for your solutions.

And guess what. They're all built out of stuff I had lying around the lab! So don't be surprised if some of the puzzles are a little weird. And if any of the parts confuse you, don't sweat it. Just go to the *Tutorial Puzzles*, and look up the puzzle that names the part in question. You'll get a good example of how the part works, and a simple puzzle that teaches you how to use it.

But hold the phone!

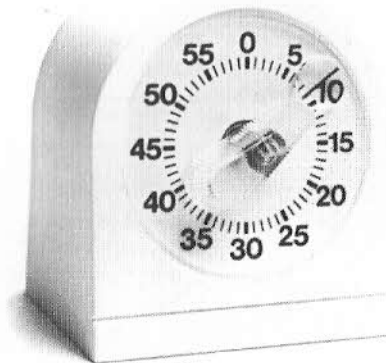
There's more! You can also *build your own Incredible Machine 2* creations!

Just take a trip over to *Professor Tim's Workshop*, and you'll have full run of the place. Every single part in the game is at your disposal. You can build puzzles just like the ones in the game. Then you can try them out

on your friends. Give them away as birthday presents. Send them out over bulletin boards. You name it!

Oh Yeah!

And one more thing. The best way to get the hang of building your own puzzles is to follow me on a crash course *Walk-Through*. I'll take you through all the steps in the puzzle making process. We'll build a machine, add music, put in hints, create a solution, write a goal, save it, and—*voila!*—you've got a puzzle!



Enough chit-chat! Let's go play *The Incredible Machine 2*!



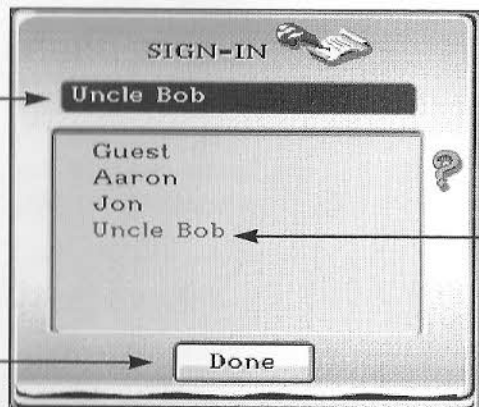
SIGN-IN WINDOW

The Sign-In Window comes up before you enter the game. It lets you register your name, so the game can keep track of which puzzles you've solved and your selected preferences. It also allows your friends to sign in separately, so there's no confusion as to which puzzles you've solved, and which ones were solved by another player. Choose "Guest" as the sign-in name when you don't want to keep a record of the player's progress. This will help save on your hard drive's space.

To register, type your name in the blue box at the top of the Sign-In Window, then click on "Done". A little window will pop up asking you if you're a new user. Choose "Yes". From now on your name will appear in the window anytime you choose Sign-In.

This is the name of the "selected player". To add a new player, click on this window and type in the player's name.

Choose "Done" when you're finished. This will take you to the Main Menu.



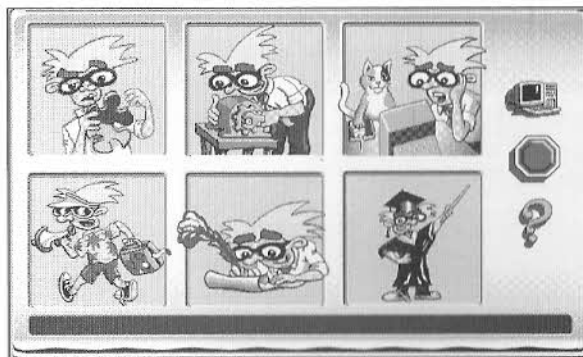
Click on the green "Help" question mark picture button to get more info about using the Sign-In Window.

Here's a registry of all the players who have signed in so far. Uncle Bob is printed in red. He is the "selected player". Click on any name to activate that player's personal game records.

Later on, when you want to let a friend play your game, or if you want to sign yourself in under a different name, just click on "Sign-In" from the Main Menu and repeat the registration process.



MAIN MENU



The Main Menu offers a variety of ways of playing and building, and lets you personalize your game play by signing in. Check out the options described below. You can come back to this menu from any place in the game by clicking on the Game Options picture button located just above the Parts Bin.

Tim Tip! CONFUSED? PERPLEXED? BEFUDDLED?

If you need help figuring things out, just choose the Guided Tour from the Main Menu and join Professor Tim on a journey through the game's parts, tools, and functions.



PUZZLE PLAY

Solve puzzles built by Professor Tim.



PROFESSOR TIM'S WORKSHOP

Change or build new puzzles.



HEAD-TO-HEAD

Take on a friend in a puzzle-solving contest.



GUIDED TOUR

Learn how to use parts, run the game, and build machines.



SIGN-IN

Each user registers his or her name here so the game can keep track of which puzzles each player has solved.



TUTORIAL

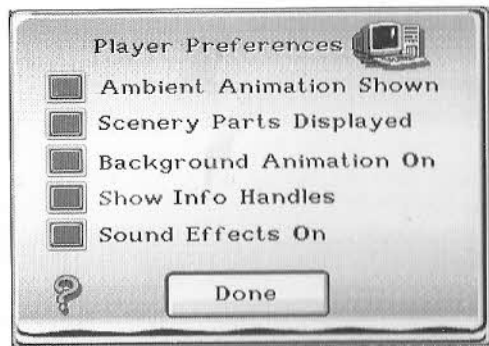
Professor Tim walks you through the process of building your own puzzle.



PLAYER PREFERENCES See the next page for a full explanation of this.



PLAYER PREFERENCES



The Player Preferences Menu is a handy little gadget for helping your computer run a little faster when you play the game. (The "Techies" here at Tim Labs especially recommend these options for players using 386 computers). How does it work? By "turning off" some of the game's just-for-fun touches, more of your computer's memory will be freed up to run the more important moving parts at a higher speed.

To bring up the Player Preferences Menu click on the picture of the computer located on the right side of the Main Menu. All the preferences are "on" when you start the game. Turn off the ones you don't want by clicking on the buttons. Here's what each button does:

AMBIENT ANIMATION SHOWN - Use this button to turn the ambient animation on or off. When the red button is lit, the ambient animation is on. (Ambient animation is all the little wiggling and twinkling that parts do while they're just sitting there. Shutting it off won't affect the way parts work).

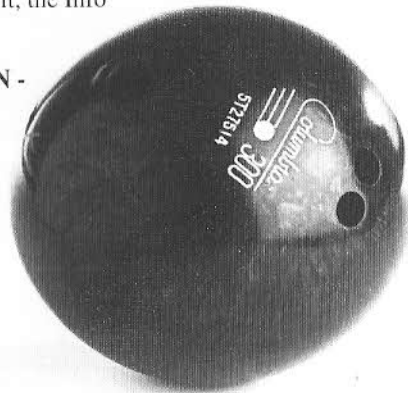
SCENERY DISPLAYED - Click on this button to hide or show the scenery. When the red button is lit, the scenery will be shown. Turning this off will also turn off the backgrounds. Note: Some puzzles use a lot of scenery, and will look a little empty if you turn it off.

BACKGROUND ON - Use this button to turn off large background extras like wallpaper, tiles, and blocks of color. When the red button is lit, the backgrounds are in the puzzles.

HIDE INFO HANDLES - Use this button to hide or show the Info Handles. An Info Handle is the little magnifying glass

that appears when you put the cursor over a part. You can click on this handle to get information about how the part works. Hiding Info Handles can be really handy if you're working with a lot of small parts all crammed together, and you keep clicking on the little magnifying glass by mistake. When the red button is lit, the Info Handles are shown.

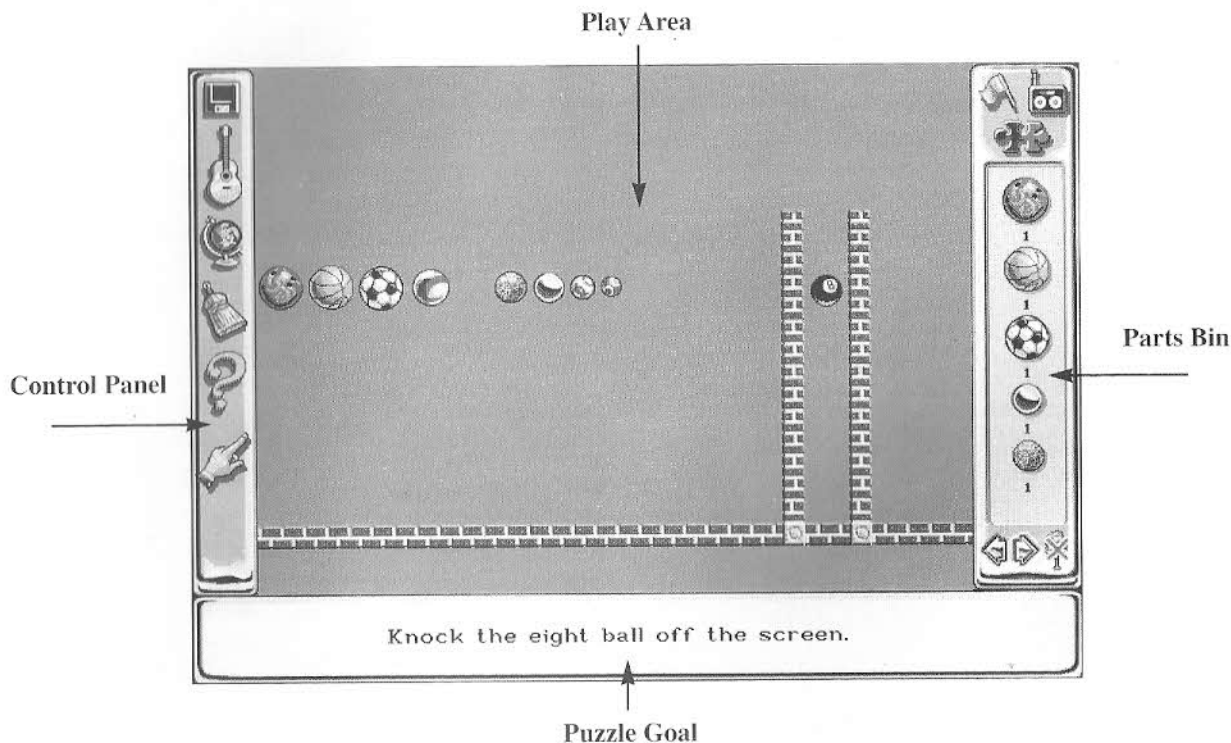
SOUND EFFECTS ON - Turning the sounds off will speed up some of the parts, but the game won't sound as cool.





PUZZLE PLAY

When you're ready to take on any of the 150-plus puzzles created by Professor Tim, click on *Puzzle Play* from the Main Menu. You'll find all kinds of brain-teasers that vary in difficulty from *Tutorial Puzzles* (which teach you how to use various parts) to *Really Hard* puzzles—which can be mind-numbingly nasty! When the play screen comes up, you'll get the nifty control panel that you see on the next page. Check out what each of the picture buttons does.



PUZZLE PLAY CONTROL PANEL



- ← Load a puzzle (see page 20 for the Load Menu).
- ← Music options (see page 18 for the Music Menu).
- ← Look at gravity, pressure, and adjust background color (see page 19 for a full explanation of this Menu).
- ← Remove Unlocked Parts - Click on the broom to sweep all the parts you placed on the screen back into the Parts Bin. This will return the puzzle to its original state.
- ← Help - Choose this, then click on any part or picture button for which you need information.
- ← Hints - Click on this to turn on/off hints (see page 10 for details).

PLACING PARTS ON THE PLAYFIELD

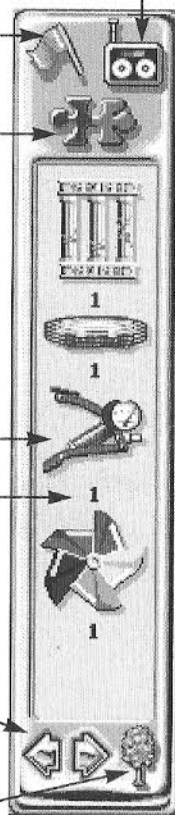
Click on any part in the Parts Bin and and move it onto the playfield. Click again to set the part down. If a red "X" appears over the part, you have set it too close to another part.

PARTS BIN

Shows or hides the Control Panel on the left.

Run the puzzle.

This brings up Main Menu and shows you that you're in Puzzle Play.



Part.

Number of this part available.

Scroll through the parts in the Parts Bin.

Brings up and puts away the scenery.

HOW TO SOLVE PUZZLE NUMBER ONE

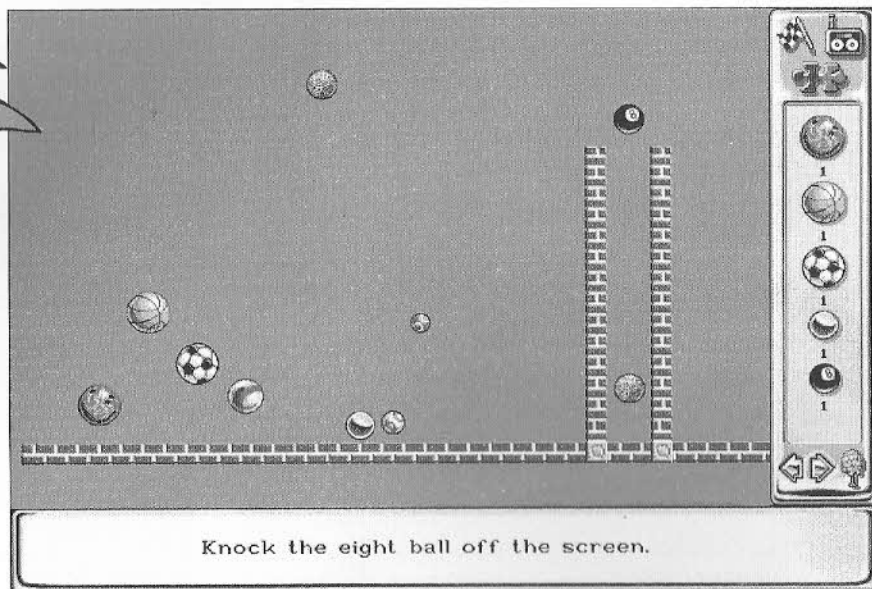


Ready to play?

Here's how you solve puzzle number one!

All you have to do is put the superball under the eight ball.

Click on the *green flag* in the right-hand corner of the screen to start the machine. The flag turns to a waving checkered flag when the puzzle is running.



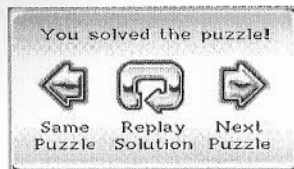
INSTANT REPLAY? OR GO FORWARD...

After you have solved a puzzle, this menu pops up and allows you to go back to the same puzzle, replay the solution, or go on to the next puzzle.

Clicking on the Same Puzzle option takes you back to look for another solution. (When the play screen reappears, you must clear it with the broom in the Control Panel to start over.)



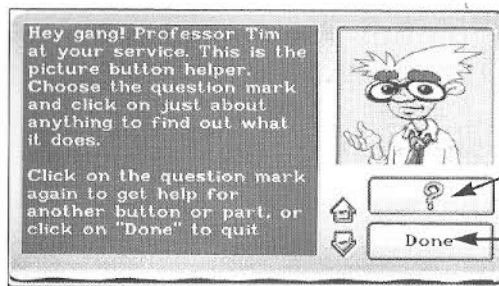
Click on the lightbulb in the bottom left corner of the Control panel to see Professor Tim's solution.





HELP

Choose Help any time you need information about anything in the game. When the Help window comes up, choose the question mark, then click on any picture button to find out what it does. Click on the question mark again each time you want to continue getting Help. Hit "Done" to quit Help.



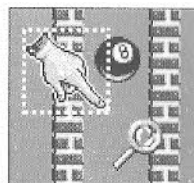
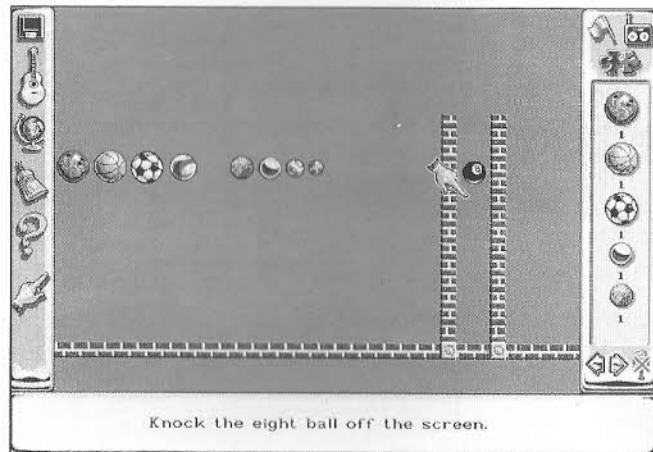
Click here, then choose any picture button you need info about.

Click here when you're done getting help.

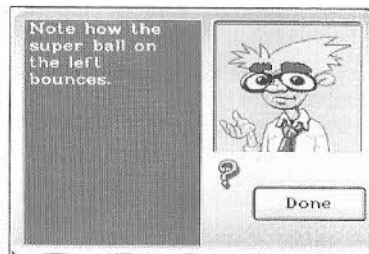


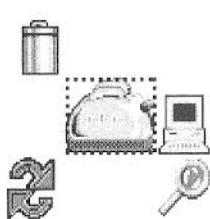
HINTS

If you're completely stumped by a puzzle, you can always check to see if the puzzle has any hints. Just choose the pointing finger picture button from the Control Panel. As soon as you hit the picture button, a copy of it will appear on the playfield for each Hint built into the puzzle. Click on each pointing finger to get a clue. But remember . . . this is the **easy way out!** So only look up Hints when you absolutely have to!



Click on a pointing finger or the magnifying glass to open Professor Tim's Hint Window.





HANDY HANDLES

Every part in the game comes with two or more "Handles". These handy little pictures are your key to controlling the part and the role it plays within the puzzle. To check out the Handles for any part, just pull it out of the Parts Bin and drop it on the playfield. Then set your cursor over the part. There's a complete list of Handles below, including a few that you'll only see when you're building puzzles in Professor Tim's Workshop:



RECYCLE HANDLE

Click on the *trash can* to put the part back in the Parts Bin.



FLIP HANDLE

These *curved arrows* allow you to flip the part. Some parts can be flipped several different ways.



SIZE HANDLE

This *double arrow* means the part can be stretched or shrunk when you click on the arrow and drag the cursor. Click the cursor a second time when the part has been stretched to the designated length.



PROGRAMMING HANDLE

This little *computer handle* means the part is programmable. There are twelve programmable parts in the game. Click on the computer handle to bring up a window that will let you set the quantity, appearance, behavior, or state of the selected part. (See the Programmable Parts section on page 12 for details.)



INFO HANDLE

This *magnifying glass* handle gives you information about any part, including how the part works and ways of using it.



TWO HANDLES FOUND ONLY IN PROFESSOR TIM'S WORKSHOP

The *checkered flag* handle lets you program a solution to any part. (See the Solution Parts section on page 30 for details.)



The *padlock handle* lets you lock down parts. (See the Lock Parts section on page 29 for details.)



THOSE AMAZING PROGRAMMABLE PARTS

Professor Tim has put together a dozen programmable parts to give your puzzle-building a whole new dimension. By clicking on the *computer* handle beside any of these parts, you can bring up a special menu that allows you to change the part's look or behavior. Go ahead... see how tricky you can make your puzzles by programming these parts into strange and surprising solutions!



CAPTAIN Z SUPER PHAZER - Program the number of blasts this toy phazer will fire.



FIREWORKS - Program these fireworks to display explosions in three different colors.



POOL BALL - You can program a different number onto each pool ball you put on the screen, and put together your own pool set.



TOASTER - Use this toaster as a timer by programming it to make light, medium, or burnt toast.



EGG TIMER - Program this egg timer to go off after the desired delay. Time starts when the top button is pushed in. When the time is up, an arm pops out, bumping anything in its way.



BALLOON - Choose between four zany looks for this programmable balloon. All four designs behave the same.



MEL'S HOUSE - Mel Schlemming's suburban house can also be programmed to be a log cabin.



MEL SCHLEMMING - Program Mel to walk, run, or stand still until he's bumped.



BOXES - This box is really five boxes in one. Program it to be glass, wooden, wicker, metal, or cardboard. Use it to catch falling objects. Each box is a different size.



MESSAGE COMPUTER - Program this computer to display any letter in the alphabet, numbers 0-9, and a bunch of cool symbols. Line up a whole bunch of them side by side to spell out a message.



LASER PLUG - It can be programmed to be activated by laser beams of any color.



COLOR BLOCK - This is the only programmable scenery part. Choose between 44 vibrant colors for creating your backgrounds.

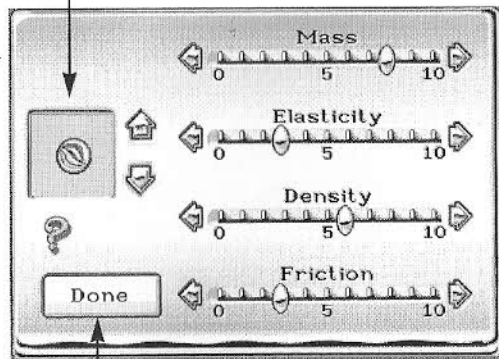


PROGRAMMABLE BALL

Here's a nifty little toy! You can program this ball to change mass, elasticity, density, friction, and appearance.

Click on the computer handle and use the programming menu to see how each change affects the ball! See what kinds of weird things you can make it do by changing its "physical state." Then use your discoveries to create unpredictable puzzle solutions!

This is the selected appearance of the ball. Use the arrows to the right to scroll through the appearance options.



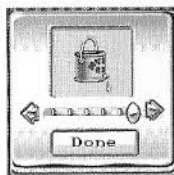
Click here when you're happy with all your selections.

Use the **MASS** slider to increase or decrease the ball's mass. The greater the mass, the more force it will have when it hits another object.

The **ELASTICITY** slider allows you to raise and lower the ball's elasticity. The more "elastic" the ball becomes, the more bouncy it will be. At zero elasticity, it won't bounce at all.

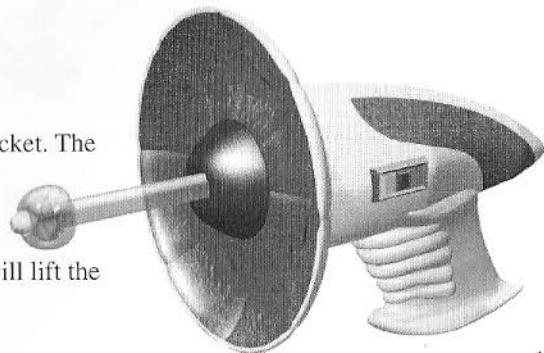
Use the **DENSITY** slider to change the ball's density. The more dense it becomes, the more it will be affected by gravity. At zero density, it will float into the air.

Use the **FRICITION** slider to change the ball's level of friction. The higher the friction, the less the ball will roll or slide across surfaces.



LEAKY BUCKET

Program the rate at which the water leaks out of this bucket. The faster the leak, the heavier the bucket is when you start the puzzle. As it leaks, it grows lighter. This will allow you to use it as a timer when you add a rope and hitch it over a pulley to another bucket. The heavier bucket will lift the lighter one.



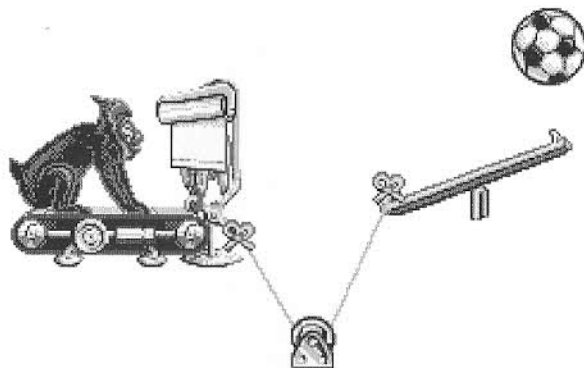


ROPES, PULLEYS & STEEL CABLES

Use this rope to tie objects together, hang things in the air, or hoist things off the ground with the help of a pulley. You can cut the rope using hedge trimmers or tin snips.

Here's how you would use rope to hitch the teeter-totter to the Mandrill Motor in the machine shown below:

- 1) Click on the rope in the Parts Bin and move it onto the screen. The rope will go wherever you move the cursor.
- 2) Click on the low end of the the teeter-totter. This will tie down one end of the rope. As you move the cursor away from the teeter-totter, you'll notice a red line.
- 3) Move the cursor over the pulley. When the red line turns green, you can click again to hitch the rope through the pulley.
- 4) Now move the cursor up to the Mandrill Motor. When the line turns green, click again. You have now tied the teeter-totter to the Mandrill Motor!



ROPES ATTACH TO:

Teeter-Totter	Leaky Bucket	Lava Lamp	Pulley
Boat Cleat	Phazer	Mandrill Motor	Trans-Roto-Matic
Laundry Basket	Balloon	Tipsy Trailer	Roto-Trans-Converter
Bucket	Hot Air Balloon	Match on a Spring	Remote Control Bomb



STEEL CABLE

This steel cable works just like rope, except it's much stronger. It can only be cut with tin snips.

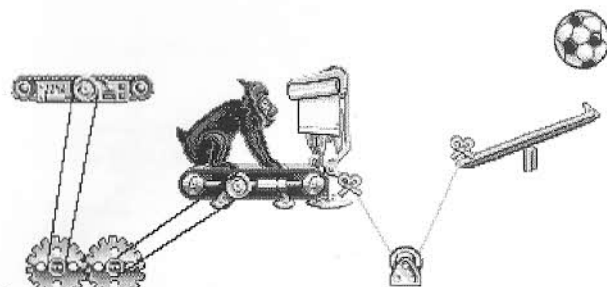
BELTS

Use belts to hitch any two “rotating parts” together. (NOTE: Belts can only be stretched a limited distance. Make sure the parts you’re trying to connect are close to each other!)

Here’s how you would use belts to make the Mandrill Motor turn the conveyor belt in the machine shown below:

- 1) Click on the belt in the Parts Bin and move it onto the screen. The belt will go wherever you move the cursor.
- 2) Click on the Mandrill Motor to attach the belt. As you move the cursor away, you’ll notice a red line.
- 3) Move the cursor over the gear closest to the Mandrill Motor. When the red line turns green, you can click again to attach the belt to the gear.

- 4) Use a second belt to attach the other gear to the conveyor belt. Now, when Pavlov Mandrill starts to walk, the pulley hitched to his treadmill will turn the right gear, which will turn the left gear, which will make the conveyor belt rotate!



BELTS ATTACH TO:

Large Gears
Small Gears
Pinwheel
Conveyor Belt
Mouse Motor
Generator

Electric Motor
Trans-Roto-Matic
Roto-Trans-Converter
Jack-in-the-Box
Mandrill Motor

Tim Tip!
Can't seem to get that belt to attach? Try moving one of the rotating parts closer. Belts stretch only a short way.



POWER SUPPLIES

Some parts, such as the electric mixer, require power. Place a power supply, such as an electric outlet, on the playfield. Place the electric mixer next to the electrical outlet. If the mixer has been plugged in, a plug will appear over one of the outlets attached to the switch. If a part has not been plugged in properly, the outlets will be empty and the part will not work when the machine is run.

POWER SUPPLY SOURCES



Generator - This generator comes with its own outlet. Use it to supply electricity to power parts by connecting the generator's wheel to a rotational motor (like the Mandrill Motor, the Mouse Motor, or the Electric Motor) by adding a belt.



Electric Switch & Outlet - Plug any of the electric parts (such as the toaster, can opener, or fan) into this electric outlet, then drop something on the switch to turn on the power. Or bump up on the switch if it's upside-down.



Electrical Outlet - This electric outlet has juice running to it at all times. Plug in any electric part and it will work.



Solar Panel - This solar panel comes with its own electrical outlet. Shine a light on the panel, then plug in any electric part you want to operate.



Laser-Activated Plug - When a laser beam of the right color strikes this plug, it will provide electric power to any part plugged into the outlet. It can be programmed to accept laser beams of any color. But if the plug is blue, for instance, it will only accept a blue laser beam.

Tim Tip!

When you want to plug an electric part into an outlet, remember these two rules: **1.** You must put the outlet down on the screen first, then connect the electric part. (The other way around won't work.) **2.** Look for the little black plug to appear in the socket. If it doesn't show up, the part is not plugged in.



Not plugged in.



Plugged in.



LASERS & ACCESSORIES

How to Make Crazy-Laser Cookie Dough!

See that contraption on the right? That's Professor Tim's special laser-powered gadget for making cookie dough. Here's how it works: The red and blue lasers are powered by an electric outlet. They shoot beams into the laser-mixer, which spits out a single purple beam, which bounces off both angled mirrors into the laser-activated plug (which has been programmed to accept only purple laser beams). When the beam hits the plug, it provides energy to the outlet, which starts up the cookie mixer!



Lasers - Lasers come in three colors - red, green and blue. When a laser is plugged into an outlet (and the switch is on) it will fire a beam. Laser beams can also be used to pop balloons, ignite fuses, and light the candle and Aladdin's lamp.



Laser Mixer - This laser mixer will blend together the colors of any laser beams passing through it. For instance, a red beam and a blue beam will become purple. The purple beam can then be used to provide energy to a purple laser-activated plug.



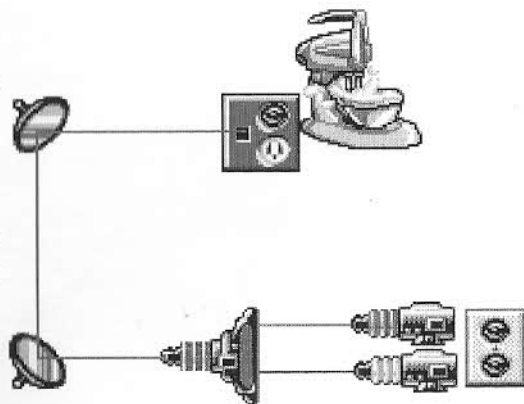
Angled Mirror - This angled mirror can be used to deflect and change the direction of laser beams. It can be positioned in four different angles.



Laser Detector - This laser detector can receive laser beams of any color. When a beam strikes the black eye, the green light turns on. If the beam is broken, the red light flashes.



Laser-Activated Plug - This is a laser-activated plug. When a laser beam of the right color strikes this plug, it will provide electric power to any part plugged into the outlet. It can be programmed to accept laser beams of any color. But if the plug is blue, for instance, it will only accept a blue laser beam.

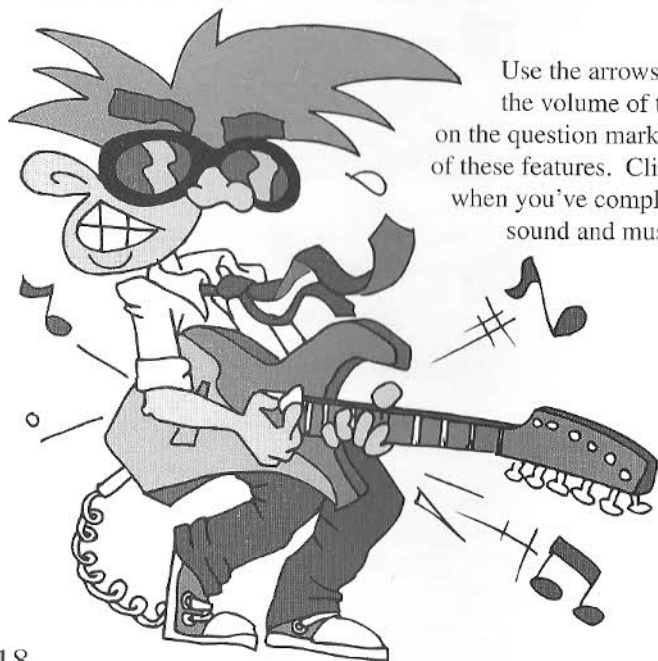




MUSIC & SOUND EFFECTS

You can change the music for any puzzle using this feature. Scroll up and down through the list of music selections using the arrows on the right. Click on the musical note to start a song over at the beginning. If you want to turn the music off, click on the switch. →

Just for fun, you can check out the sounds of various gadgets in the game using this window. Nothing you do here will change anything in your puzzle. Push the "POW" button to start the sound. →



Use the arrows to raise or lower the volume of the music. Click on the question mark for help with any of these features. Click on "Done" when you've completed all your sound and music selections. →



Tim Tip! CLEAR THE BACKGROUND

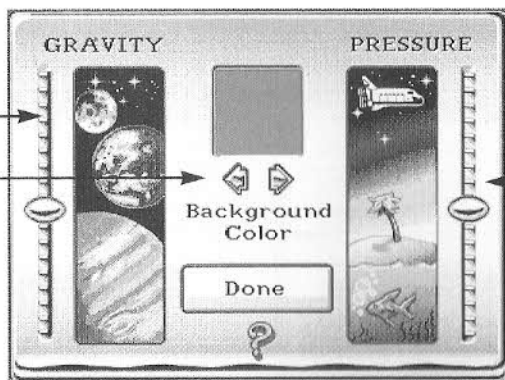
All that scenery in the background really gives a puzzle a lot of pizzazz! But sometimes you might want a clearer view of the puzzle without any scenery. Whenever you're in Puzzle Play, you can just click on the little green tree button at the bottom of the Parts Bin to make all the scenery disappear.



GRAVITY, PRESSURE & BACKGROUND COLOR

Check out the gravity settings for the puzzle you're working on. You can only adjust the Gravity in Professor Tim's Workshop.

Use these arrows to scroll through your choices for background color. The color shown in the window will be selected when you click on "Done".



Take a look at the Atmospheric Pressure of the puzzle you're working on. You can only make an adjustment in Professor Tim's Workshop.

To learn more about the way gravity and atmospheric pressure affect puzzles, see page 28 in the Workshop section.

Tim Tip!

There are three ways to get information for any part in the game! You can use "Help" (the question mark button); you can look the part up in the back of this manual; or you can click on the Info Handle (the little magnifying glass that shows up when you place the cursor over the part). Info Handles are available for all parts in the Workshop, but only for unlocked parts in Puzzle Play.





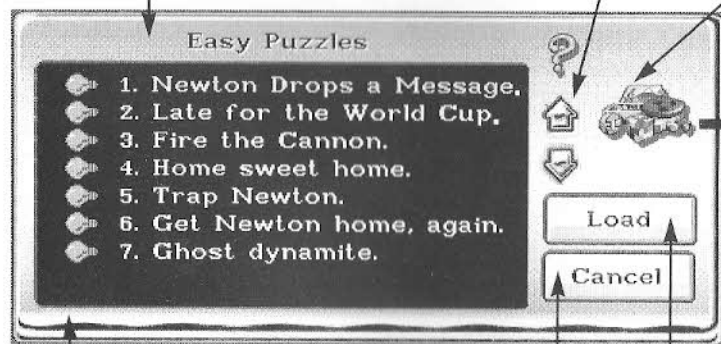
LOADING PUZZLES

You don't have to play Professor Tim's puzzles in order if you don't want to. The Load Menu lets you pick out any puzzle in the game. Choose puzzles from any of the seven categories in the Load Selection Window (see next page). If you're just starting out, you might want to check out the Tutorial Puzzles (click on the picture of Professor Tim at the chalkboard)—they'll teach you how various parts work and help you get used to the game. Then, as you become more and more of a techno-wiz, you'll be able to handle harder and harder puzzles. You can also load in any puzzles you built yourself by clicking on the picture of Professor Tim in his chef's hat.

This is the list of puzzles for the chosen skill level. The name highlighted in yellow is the selected puzzle.

Use these arrows to scroll up and down through the list of puzzles.

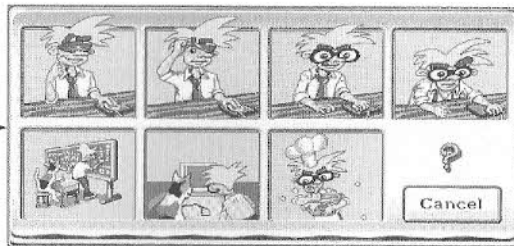
Click on the "More Puzzles" button to open the Load Selection Window.



Lightbulbs are off if the puzzle has not been solved. Lightbulbs glow when a puzzle has been solved.

Choose "Cancel" to leave this menu without making a selection.

Click here to load the selected puzzle.



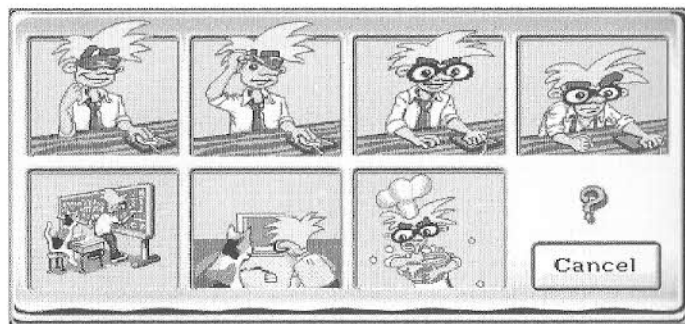
TIM TIP! QUICK PUZZLE LOAD

You can also double-click on a puzzle title to load it!

LOAD SELECTION MENU

You can load puzzles from any of these seven categories. Choose puzzles to suit your level of skill and experience, from Easy to Really Hard. Check out the Tutorial Puzzles if you want to learn how things work. Pick Head-to-Head Puzzles to hold puzzle-solving contests with a pal. Or load puzzles you've built yourself from Homemade Puzzles.

Select a skill level from these seven picture buttons.



TIM TIP!

If you skip a puzzle as you make your way through Puzzle Play, you will be kicked back to that puzzle before going on to the next set of puzzles. Try using hints to get through the puzzle.



EASY PUZZLES



MEDIUM PUZZLES



HARD PUZZLES



REALLY HARD PUZZLES



TUTORIAL PUZZLES



HEAD TO HEAD PUZZLES

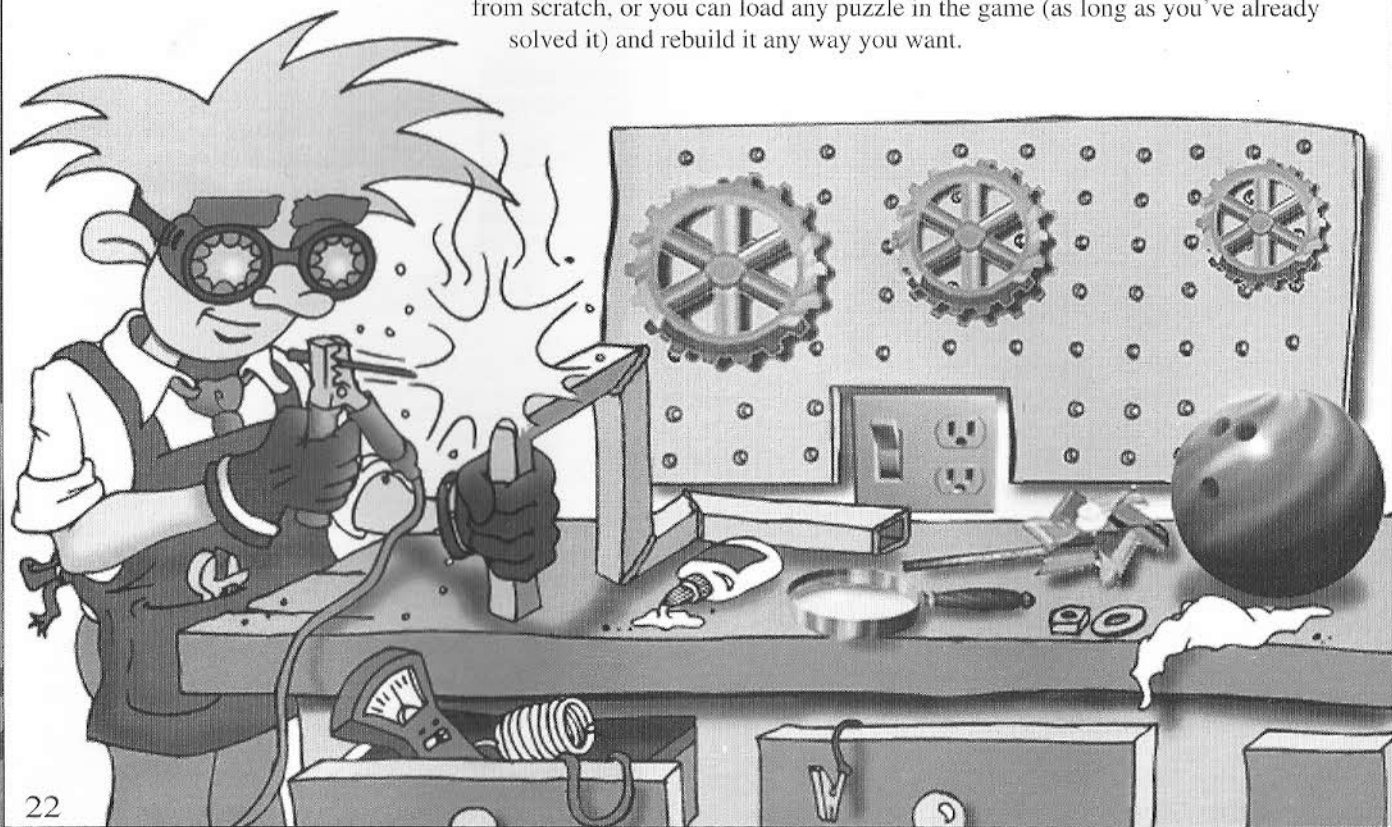


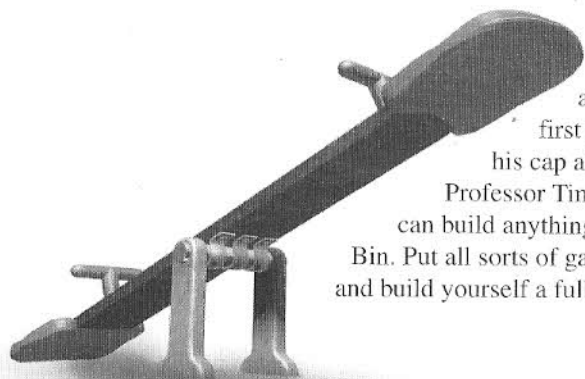
HOMEMADE PUZZLES



BUILDING PUZZLES IN PROFESSOR TIM'S WORKSHOP

If you get a kick out of solving Professor Tim's contraption-packed puzzles, you're going to love building machines of your own! In Professor Tim's Workshop, you can build your own puzzles from scratch, or you can load any puzzle in the game (as long as you've already solved it) and rebuild it any way you want.



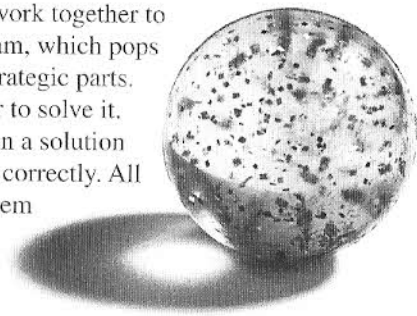


If you're just starting out

as a puzzle-builder, you might want to check out the Walk-Through first (go to the Main Menu and click on the picture of Professor Tim in his cap and gown). Then once you get the hang of it, you can go straight into Professor Tim's Workshop to do all your puzzle-making. In the Workshop, you can build anything you want—and you'll have access to all of the parts in the Parts Bin. Put all sorts of gadgets together just to see what you can make them do. Or go ahead and build yourself a full-blown puzzle.

But what's a puzzle, you ask?

Well, here at Tim Labs, we consider a "machine" to be any series of reactions that work together to cause some kind of final outcome—for instance, making a blimp turn on a laser beam, which pops a balloon. Then you can turn your machine into a "puzzle" by removing a couple strategic parts. Anyone who plays your puzzle has to figure out where the missing parts go in order to solve it. You can also program hints into your puzzle (see page 29). You can even program in a solution (see page 30) so that the game will recognize when a player has solved your puzzle correctly. All the puzzles you build will be stored in Homemade Puzzles. You'll be able to load them anytime you want (see the bottom of page 34 for details). Build tough puzzles! Build crazy puzzles! Try them out on your pals!

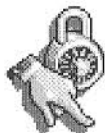


MORE POWER IN PROFESSOR TIM'S WORKSHOP!



ADJUST GRAVITY AND ATMOSPHERIC PRESSURE

This button lets you adjust the gravity and atmospheric pressure and change the background color of the puzzle you're creating. The greater the gravity, the faster most things will fall. The greater the pressure, the slower most things will move through the atmosphere. (See page 28 for more info.)



LOCK DOWN PARTS AND PUT IN HINTS

You can lock parts down or add hints to your puzzles when you are in Professor Tim's Workshop. (See page 29 for more info.)



TEST DRIVE YOUR PUZZLE

This stick shift will let you test drive your Homemade Puzzle exactly as it would be played by someone loading it from Puzzle Play. All unlocked parts will go into the Parts Bin, and all hints and solution recognition will be activated. Click on the stick shift button to go into Test Drive. Click on it again to go back to the Workshop and make changes.



PUT IN SCENERY

In Professor Tim's Workshop you can design your own backgrounds with all kinds of scenery parts, from trees to cosmic debris! (See page 27 for more info.)



PROGRAM SOLUTIONS

You can program parts so that the game will recognize its final location or physical state as the puzzle's solution. (See page 30 for more info.)

Tim Tip! NEED HELP

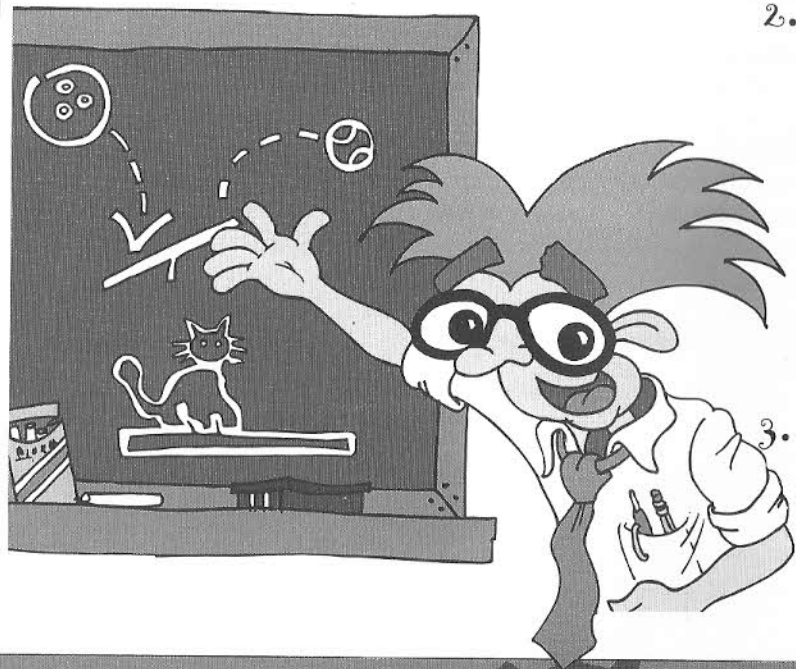
BUILDING A PUZZLE?

If you need help figuring things out, just choose the "Walk-Through" picture button from the Main Menu and join Professor Tim on a step by step puzzle-building excursion. (You can also follow the Ten-Step guide on page 25.)

TEN-STEP PUZZLE-BUILDING IN PROFESSOR TIM'S WORKSHOP

Feel like building a puzzle? Check out the ten speedy steps that I've listed below to create your own puzzles in Professor Tim's Workshop. Or, if you prefer, you can choose Walk-Through from the Main Menu and I'll be your personal guide through the whole puzzle-building process.

1. Go to Professor Tim's Workshop. From the Main Menu, choose the picture of Professor Tim wrenching away on the green Electrowizzet.



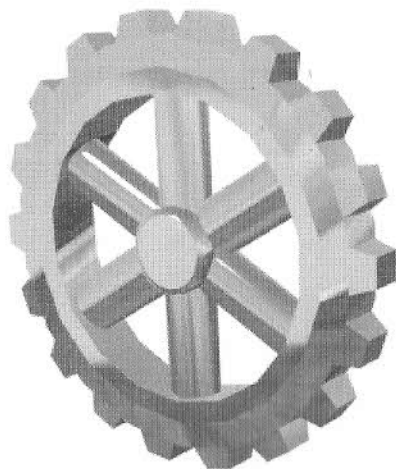
Tim Tip!

Deceive 'em with Decoys!

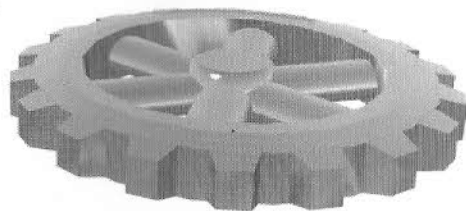
If you're building puzzles in Professor Tim's Workshop, and you want to make things a little tougher for anyone who tries to solve your creations, why not add a couple decoy parts? Decoy parts are gadgets that you put into the Parts Bin just to confuse players. Test your puzzle carefully to make sure these parts can't be used to solve it!

2. Build a puzzle. Take parts out of the Parts Bin on the right side of the screen and put them together to create a machine. Here at Tim Labs, we consider a machine to be any series of reactions that cause some kind of final outcome—for instance, making Newton Mouse go into his mouse hole. Then you can turn your machine into a puzzle by removing a couple of strategic parts. Anyone who plays your puzzle has to figure out where the missing parts go in order to solve the puzzle. (Note: You must have at least five parts on the screen for the game to recognize your puzzle.)

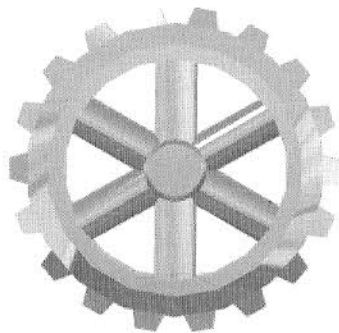
3. Write a "Goal Description" for your puzzle. Click on the long white window at the bottom of the screen. Then type in a goal that tells the player what needs to be done to solve the puzzle (for example: "Pop the balloon").



- 4. Lock down all parts.** Choose the padlock/pointing finger picture button on the Control Panel on the left side of the screen. When the window comes up, click on the closed padlock. This will lock all the parts onto the screen.
- 5. Unlock some of the parts.** Pick a few key parts that the player will use to solve your puzzle and click on the padlock handle of each part to unlock it. All unlocked parts will show up in the Parts Bin when your puzzle is played.
- 6. Select some music to go with your puzzle.** Choose the guitar button from the Control Panel. When the Music Menu appears, you can scroll through the music selections using the top pair of arrows. Adjust the volume using the bottom arrows. Click on "Done" when you're happy with your selection.
- 7. Set gravity and atmospheric pressure (optional).** If you want to change the way things move in your puzzle, you can change the settings on the Gravity, Pressure & Background Selector. Choose the globe button from the Control Panel, then adjust your settings. The higher you set the gravity, the more quickly things tend to fall. The higher you set the atmospheric pressure, the more slowly most things will move through the atmosphere.
- 8. Put some hints in your puzzle (optional).** If you think players might need some help trying to solve your puzzle, you can drop in a couple hints. Choose the padlock/pointing finger button from the Control Panel, and when the window comes up, click on the picture of Secret Agent Tim. Use the "help" button if you have any trouble following the Hint menus.



- 9. Program a solution for your puzzle.** Click on the checkered flag handle on any part that you want to use as a "solution part." You can program each of these parts so that the game will recognize its final location or physical state as the puzzle's solution (or part of the puzzle's solution). Solution Parts come in two categories: moving parts (those which can roll, fly, or fall across the screen), and non-moving parts (those which are fixed on the screen when the puzzle is run). Use the "Help" button inside the Solution Menu if you need assistance programming your solution.



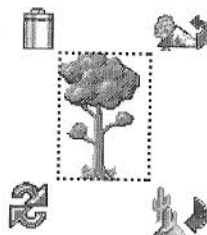
- 10. Save your puzzle.** Choose the blue floppy disk button at the top of the Control Panel. When the Load/Save window appears, choose Save (the picture with the red arrow). A Save Menu will appear. Type in a title for your puzzle. The computer will automatically choose a file name for your puzzle. All of the puzzles you build will be saved into Homemade Puzzles, which can be opened anytime you choose "Load".



SCENERY

If you want to jazz up the look of your homemade puzzles, you might want to check out all the wild stuff in the Scenery Bin. There are all kinds of trees, clouds, critters, buildings, landscapes, space stuff, and other parts that will brighten up your play screen. None of these parts affect the puzzle. They're just for kicks.

To switch over to the Scenery Bin, click on the *green tree* picture button. Grab all the parts you want and arrange them on the screen. Scenery Parts have handles much like puzzle parts, which let you flip, stretch, program and delete them. They also have two new handles which allow you to move the scenery part either to the back or to the front of another scenery part. (See the picture on the right.) Click on the *tree* again to switch back to the regular Parts Bin to continue working on your puzzle. If you click on the *tree* once more, you will "hide" all the scenery. Click again to bring the scenery back and to bring up the Scenery Bin again. Do this anytime you want to move, delete, or add a piece of scenery.





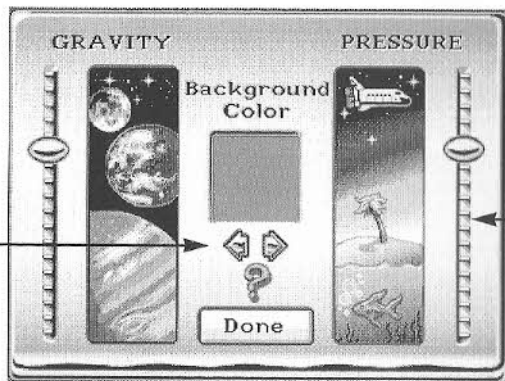
GRAVITY, PRESSURE & BACKGROUND COLOR

Did you ever try bouncing a basketball in outer space? Or underwater? Well, you can adjust the gravity and pressure in your homemade puzzles to simulate those conditions! Experiment with the controls and find out how they affect different objects. Try building a puzzle with zero gravity...or with super-high atmospheric pressure! You can also use this menu to change the background color of your playfield. (NOTE: Gravity and pressure can be adjusted only in the Workshop; background color can be changed anywhere.)

Move the control up to decrease gravity (things will fall very slowly); or move it down to increase gravity (things will fall very fast).

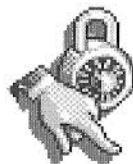


This window shows the selected background color for the playfield. Use the arrows to scroll through the background colors.



Click on "Done" when you're satisfied with your selections for gravity, atmospheric pressure, and background color.

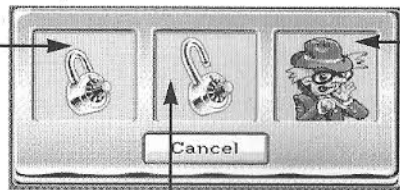
Move the slider up to increase the atmospheric pressure. Move it down to decrease pressure. The higher the pressure, the more "dense" the atmosphere becomes. When the atmosphere becomes more dense than the objects it surrounds, those objects will start to float. For example, a balloon is filled with air which has very low density—so it takes only low atmospheric pressure to make it rise into the air. But a bowling ball is extremely dense, so the atmospheric pressure has to be very high before it will float.



LOCK PARTS/ HINTS WINDOW

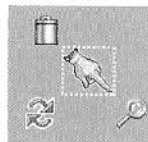
When you're building puzzles in Professor Tim's Workshop, you can decide which parts you want locked down on the screen and which parts you want unlocked (so they'll show up in the Parts Bin). You can also put hints in your homemade puzzles to help players who get stuck trying to solve them.

Choose the locked padlock to lock down all the parts on the screen. Then you'll have to unlock any parts you want to show up in the parts bin when the puzzle is played.



Select the picture of Secret Agent Tim if you want to create some hints for your puzzle. Then follow the instructions in the hint windows.

Click on the unlocked padlock to unlock all the parts on the screen. This will allow you to make changes more easily if you have a lot of editing to do.



HINTS

If you want to make a puzzle that's easier to solve for beginners, you might want to add a couple of hints. This gives the player a way of getting some help before he or she gets too frustrated. Hints are also a good idea for those totally brain-boggling, super-tough puzzles that you build to baffle your pals!

FIVE STEP HINT MAKING

Here's how to add hints to a puzzle you've just built:

1. Choose the picture button of the padlock/pointing finger from the Control Panel.
2. When the Padlock/Hints window appears, click on the picture of Secret Agent Tim.
3. Click on the "New" to create a new hint. When the window disappears, a pointing finger will be attached to the cursor. Move it to the place you want identified by your hint, then click on the mouse to set it down.
4. As soon as you set down the pointing finger, an empty window will appear. Type your hint into this window.
5. If you are finished making hints, choose "Hide". If you want to add another hint, click on "New". and repeat the process. If you want to move or delete a hint, choose "Show". then use your cursor to drag the finger to a new location, or click on the trash can to delete it.

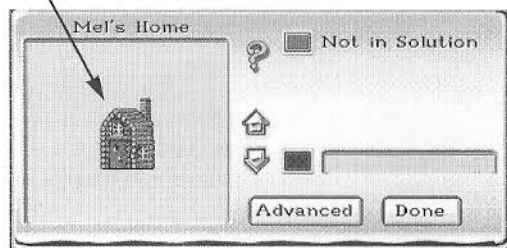
A SOLUTION PARTS

The checkered flag handle on any part means that object can be used as a "solution part". You can program parts so that the game will recognize its final location or physical state as the puzzle's solution (or part of the puzzle's solution). Solution Parts come in two categories: moving parts (those which can roll, fly, or fall across the screen), and non-moving parts (those which are fixed on the screen when the puzzle is running).

PROGRAMMING SOLUTIONS FOR NON-MOVING PARTS

Mel Schlemming's House is a good example of a non-moving solution part. Let's say you've just created a puzzle with the goal: "Help Mel get back to his house." If you want the game to recognize when this puzzle has been solved, you must click on the checkered flag icon for Mel's House. The programming menu you see below will appear. Click on the up and down scroll arrows to change the "state" of the house from "Vacant" to "Occupied".

This is the selected Solution Part.



NOT IN SOLUTION - When this button is lit up, the selected part is not used to recognize the puzzle's solution. You can also click on this button to erase your choices if you want to reprogram the part.

SMALL SCREEN - Click the arrow buttons to the left of this small window to change the solution of the house to either vacant or occupied.

ADVANCED - Click on this to see more options for programming this solution part. The sub-menu shown on the page 32 will appear.

Choose "Done" when you've finished programming this solution part.

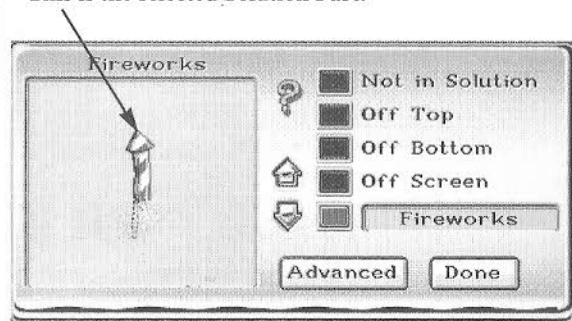
PROGRAMMING SOLUTIONS FOR MOVING PARTS

Moving parts are those which can roll, fly, or fall across the screen. To program these objects as Solution Parts, you will usually select the location where you want them to end up or exit the screen when the puzzle is solved. Several moving parts can also be programmed to solve puzzles by a change in "physical state". These include: Mel Schlemming, all blimps and balloons, the coffee pot, Aladdin's lamp, Curie Cat, Newton Mouse, candles, rockets, missiles, dynamite, and nitroglycerine.

PROGRAMMING A SOLUTION PART BY LOCATION

To program a Solution Part by location, first click on the checkered flag handle above the part. Then from the Solution Menu, choose the location where the part will exit the screen: Off Top, Off Bottom, or Off Screen (which covers all four sides of the screen). If you want the part to end up in (or exit through) a specific location, choose "Advanced" on the bottom of the Solution Menu. When the submenu comes up, click on the "Position" button. Then, when the play screen reappears, move the cursor to the top left corner of the location you want to designate. Click and drag, holding down on the mouse button until you've created a rectangle that covers the whole area where you want the part to end up or pass through.

This is the selected Solution Part.



ADVANCED - Click here to see more options for programming this solution part. The submenu shown on the next page will appear.

Choose "Done" when you've finished programming this solution part.

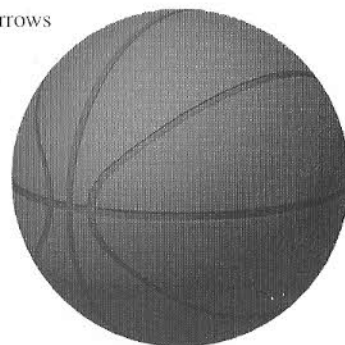
NOT IN SOLUTION - When this button is lit up, the selected part is not used to recognize the puzzle's solution. You can also click on this button to erase your choices if you want to reprogram the part.

OFF TOP - When this button is lit, the part must exit off the top of the screen for the puzzle to be solved.

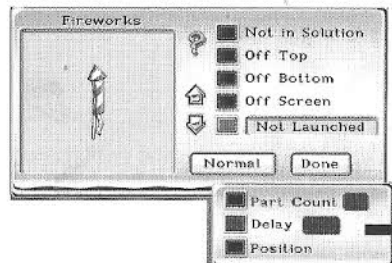
OFF BOTTOM - The selected part must exit the bottom of the screen for the puzzle to be solved when this button is lit.

OFF SCREEN - If this button is selected, the puzzle will be solved if the selected part exits any side of the screen.

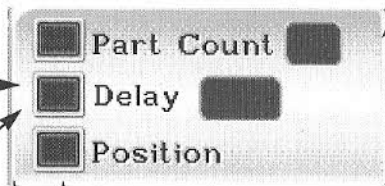
SCROLL ARROWS - Click on the arrows to scroll through the "states" of the selected part. The chosen "state" will appear in the small window on the right. The puzzle can't be solved until the selected part reaches this chosen "state". For example, the fireworks must be set off for the puzzle to be solved.



SOLUTION PART ADVANCED MENU

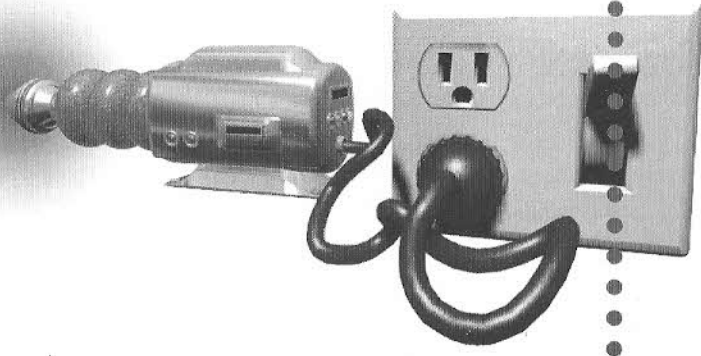


Click on this button to set the “delay time” allowed for this puzzle. After you choose “Delay”, the puzzle will start to run automatically. When the solution part is exactly in the state or location you desire, click on the left mouse button. This will set the amount of time the game will wait before checking to see whether the selected solution part is in its final state or location every time the puzzle is played.



Choose this button to designate the specific position you want the part to be located (or to exit the screen) when the puzzle has been solved correctly.

Whether you have one or a half dozen copies of the selected part placed on the playfield, you can use this button to set the quantity to be recognized in the solution. Each part must be in the designated state or position when the puzzle is solved. For instance, if your puzzle goal said, “Pop 4 of the 5 balloons,” you would type 4 in the “part count” box. (NOTE: All copies of the selected part must be exactly the same in state and appearance for this to work.)





SAVING PUZZLES

As soon as you've built a puzzle you want to keep, just follow the steps below to save it. Once saved, it will appear in the Homemade Puzzles file anytime you want to load it again. You'll be able to load it from Professor Tim's Workshop anytime you want to make changes. But make sure you save each time after you do this.

HOW TO SAVE YOUR HOMEMADE PUZZLES:

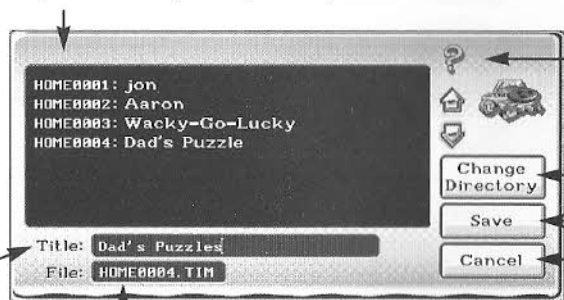
1. Click on the little blue disk button in the Control Panel.
2. Click on the "Save" disk with the red arrow pointing to it.
3. When the Save Menu appears, click on "Title" and type in a name for your puzzle.
4. If you want to write your own file name, click on "File" and type in a name of 8 letters or less. (You need to write a different file name for every puzzle you save.) You can skip this step to let the game create a file name for you.

5. Choose "Save" when you're satisfied with your title and file name.

IMPORTANT: If you type in your own file names, make sure each name is different! If you save your puzzle under the file name of a puzzle you built earlier, you will replace that puzzle with the one you're saving!

This window shows the list of file names and puzzle names for the puzzles in the open directory. The title highlighted in yellow is the puzzle presently selected to be loaded.

Use the arrows on the right to scroll up and down through the list of puzzles in the directory.



Click here and type in a name for your puzzle.

A unique file name will automatically be assigned by the computer. If you wish to use a different file name, then click here and give your puzzle a file name of 8 letters or less.

Choose the question mark to get information about anything in this menu.

Click on "Change Directory" to bring up the Create Directory window. See the next page for more info.

Click on "Save" to save your puzzle.

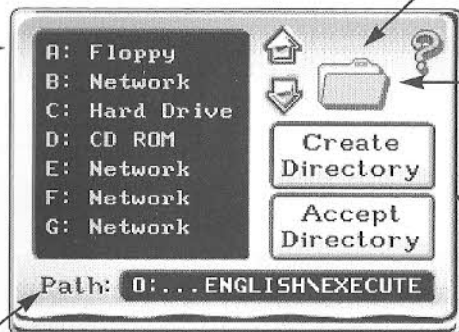
Choose "Cancel" to leave this menu without saving or changing anything.

SAVE MENU ADVANCED FEATURES

Use this menu to change drives or directories, or to create new directories

This is the list of available drives or directories into which you may save your puzzle. When the red disk is showing, it's a list of directories. When the manila folder is showing, it's a list of drives. Click on the picture button to switch modes. Click on the name of the drive or directory where you want to save your puzzle (if you want to save it someplace other than the drive and directory listed after "Path:").

This is the DOS "Path" which shows the current drive and directory where your puzzle will be saved.

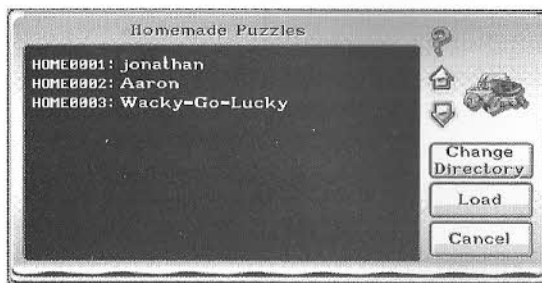


When this picture button is a manila folder, the large window shows a list of directories.

When this picture button is a red disk, the large window shows the list of available drives.

Use the arrows to scroll through the list of drives or directories.

If you want to save your puzzle into a new directory, you can create one by choosing this button. When the small window comes up, type in a name (8 letters or less) for your new directory, then click on "Done". When the Directory Menu reappears, your new directory will be included in the "Path."



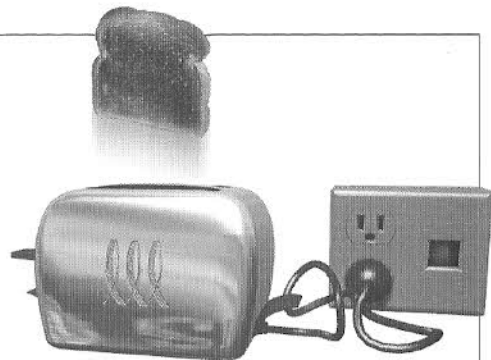
LOADING PUZZLES IN PROF. TIM'S WORKSHOP

When you load a puzzle in Professor Tim's Workshop, you can do more than just play it...you can change it, take it apart, or make it bigger and better! That's right—any puzzle in the game (as long as you've already solved it in Puzzle Play)! Then, when you're finished tinkering, you can save your new version as a Homemade Puzzle. See page 20 for a full description of how to use the Load Menu.



HEAD-TO-HEAD PLAY

When you're ready for some fast-paced, puzzle-solving competition with a friend, choose Head-to-Head from the Main Menu. You and a friend take turns trying to solve each puzzle. See who can rack up the most wins! Each move, you get to take one part from the parts bin and move one part that's already on the screen. Head-to-Head puzzles are designed so that they can be solved a whole bunch of different ways. So you'll be battling it out to see who can come up with the quickest solution. This means you'll need to work out strategies to confuse, outwit, mislead, and bamboozle your opponent! You might try things like moving some of your opponents parts to mess him/her up. Or you could put parts on the screen that will block his progress. If you realize that your own solution is REAL close, but not quite right, move one of the crucial parts out of the way to make it harder for him to take advantage of your last move!



HEAD-TO-HEAD CHOOSER

Here's where you set the options for a Head-to-Head match. To bring up this window, just click on the Head-to-Head icon in the Main Menu. Then set the options to suit your competition, or you can go along with the default settings.

Each player can click on one of the green windows and type in his or her name. ([Ctrl]+[Backspace] clears the window.)



Scroll up or down to choose the number of head-to-head games you wish to play in this match.

Scroll up or down to set the number of seconds allowed for each player's turn. Either timer can be set to create a handicap for more experienced players.

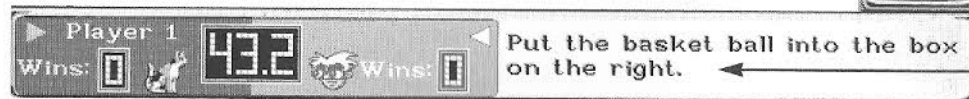
Click "OK" when you're happy with all the head-to-head settings.

Choose "Cancel" to exit back to the Main Menu.

HEAD-TO-HEAD SCOREBOARD



Click on this if you finish your turn before the timer runs down to zero.



This is the puzzle goal you are both trying to solve.

When the left side of this box is red, it's Player 1's turn. When the right side turns blue, it's Player 2's turn.

The timer shows how many seconds are remaining in the current player's turn.

This scoreboard keeps track of how many wins each player has scored. (Before you start playing, you must set the number of games you wish to play in the Head-to-Head Chooser.)

HEAD-TO-HEAD RULES OF ENGAGEMENT

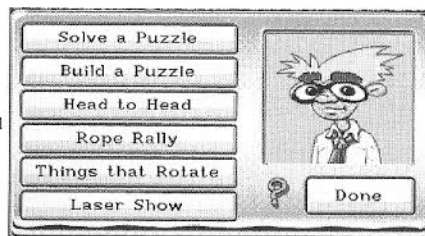
- 1) Set your preferences on the Head-to-Head chooser before starting. You can play up to 9 games per match. The timer can be set to allow up to 90 seconds or a minimum of 10 seconds for each player's turn.
- 2) A little gold window will pop up on screen to tell you who gets the first turn. (You can also tell whose turn it is by the color of the background: red is Player 1, blue is Player 2.)
- 3) Whoever gets the first move may take one part from the Parts Bin and place it anywhere on the screen. For each turn thereafter, players can take one part from the Bin, and move any one part that's already been placed on the screen. Once you take a part from the parts Bin and put it on the screen, you can't put it back! And once you've moved a part that's already on the screen, you can't move another!
- 4) A player's turn is over when the timer runs out, or whenever he or she clicks on the "End Turn" button. You can click on the *green flag* to run the machine and to check your solution before your turn runs out. If your solution is correct, you win the game—even if the timer runs out while the puzzle is running!
- 5) Look for ways to block your opponent's moves. Be careful not to make a move that might set the other player up. This can happen if you place a final part in ALMOST the right place...and then the timer runs out! All your opponent has to do is move the part a tiny bit to win.

THE OTHER BUTTONS ON THE MAIN MENU



GUIDED TOUR

Here's a great place to begin your adventures in The Incredible Machine—take a Guided Tour through the game! Professor Tim has put together a whole bunch of automated exhibits that will show you how to solve and build puzzles. You'll learn how all sorts of parts and controls work. And all you have to do is sit back and watch!



SIGN-IN SCREEN

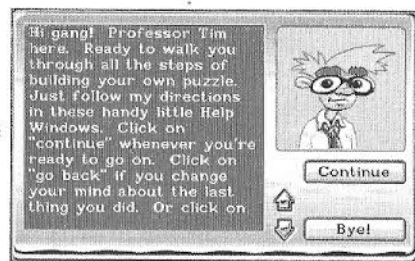
Before you can start solving puzzles, you'll want to register your name here on the Sign-In Screen. This will let the game recognize your name every time you play, so it can keep track of which puzzles you've completed. If you want to let someone else play the game—but you don't want them to be solving puzzles you haven't solved yet—you can choose Sign-In from the Main Menu and have them sign in under their own name. This way they'll be able to start solving puzzles from the beginning. See page 4 for more information about the Sign-In window.



PUZZLE-BUILDING WALK-THROUGH

When you're ready to set off on your very first puzzle-building adventure, you might want to join Professor Tim for a handy little Walk-Through. You'll get to build a puzzle just like you would in The Workshop, except the Professor will be there to help you through all the stages, just to get you used to the process. The Walk-Through is also a handy place to go if you get stuck, or if you aren't sure you've completed all the necessary steps in building your puzzle. You'll go through each of the following steps:

1. Create a puzzle.
2. Add music.
3. Give the puzzle a goal and title.
4. Program a solution.
5. Create hints.
6. Lock parts.
7. Unlock parts you want placed in the Parts Bin.
8. Save the puzzle.



PARTS BIN HOT KEYS

B = BALLS

W = WALLS

P = PIPES

I = INCLINES

A = ARCHES

O = POOL STUFF

G = GEARS & BELTS

R = ROPES

F = FLAMES

E = ELECTRICAL

L = LASERS

M = MOUSE CAGE

C = CRITTERS

(Note: You can only use Hot Keys when you're in the Workshop.)

Tim Tip!

SPEED CYCLING
Whenever you're cycling through the TIM2 parts, you can speed things up big time by clicking on the appropriate arrow, then holding down on the left mouse button.

CLONE A PART

If you want to copy one of the parts on the stage, just put the cursor on it and click the right mouse button. A duplicate copy will go wherever you move it. Set it down by clicking the left mouse button. In Professor Tim's Workshop, parts can be duplicated as many times as you want. However, in Puzzle Play you have a limited number of copies available for each part—this number is written under the part in the Parts Bin.

TAKE A SCREEN SHOT

To take a screen shot, all you have to do is hold down the ALT key and press the S key. You will have a .LBM file saved into your TIM2 Directory that you can open in some paint programs. The cursor will turn into a nifty clock icon while the screen shot is in progress.

PARTS DESCRIPTIONS



Bowling Ball - This bowling ball is real heavy and doesn't bounce much.



Basketball - This basketball is medium weight and very bouncy.



Soccer Ball - This soccer ball is medium in both weight and bounciness.



Pinball - This pinball is very hard and heavy and doesn't bounce much.



Super Ball - This super ball gains height with every bounce.



Pool Ball - This pool ball won't move until it's hit. The harder it's hit, the further it will roll. It's not affected by gravity. You can program it to show any number on its surface.



Programmable Ball - This ball can be programmed to vary in appearance, mass, elasticity, density, and friction.



Baseball - This baseball is pretty light and not very bouncy.



Tennis Ball - This tennis ball is very light and bouncy.



Brick Wall - This brick wall or floor can be stretched vertically or horizontally to any length you need. It's not as slippery as a caution wall. Explosives will blow it up.



Yellow Brick Wall - This is a yellow brick wall or floor. Stretch it vertically or horizontally to any length you need. Its surface is pretty slippery. Explosions will blow holes through it.



Cinder Block Wall - This is a cinder block wall or floor. Stretch it vertically or horizontally to any length you need. Its surface isn't very slippery. Explosions will blow holes through it.



Greco-Roman Wall - This is a Greco-Roman wall or floor. Stretch it vertically or horizontally to any length you need. It has a pretty slippery surface. Explosions won't affect it.



Wooden Wall - This is a wooden wall or floor. Stretch it vertically or horizontally to any length you need. Its surface isn't very slippery. Explosions will blow holes through it.



Log Wall - This is a log wall or floor. Stretch it vertically or horizontally to any length you need. Its surface isn't very slippery. Explosions will blow holes through it.



Caution Wall - This is a caution wall or floor. Stretch it vertically or horizontally to any length you need. It's very slippery, and isn't affected by explosives.



Grass Floor - This is a grass floor or vine wall. Stretch it vertically or horizontally to any length you need. It's not very slippery. Explosions will blast holes through it.



Sand Wall - This is a sand wall or floor. Stretch it vertically or horizontally to any length you need. Its surface isn't slippery. Explosions won't affect it.



Pipe wall - This is a pipe wall or floor. Stretch it vertically or horizontally to any length you need. It has a slippery surface. Explosions won't affect it.



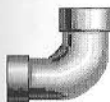
Curved Pipe Wall - This curved pipe section can be connected to a pipe wall or floor. Flip it to curve in the direction needed.



Large Pipes - Connect sections of this large pipe together and drop balls or other things inside. Attach sections of curved pipe and T-connectors to control the direction that objects go. You can also attach an accelerator tube to speed up or reverse the direction of objects moving through the pipes.



T-Connector - Use this T-Connector to hitch sections of large or curved pipe together. Drop balls and other objects into the openings. Attach an accelerator tube to speed up or reverse the direction of objects moving through the pipes.



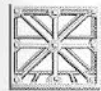
Large Curved Pipe - Force balls and other objects into this large curved pipe to make them come out the other end. It can be attached to straight sections of large pipe and T-connectors. You can also attach an accelerator tube to speed up or reverse the direction of objects moving through the pipes.



Accelerator Tube - This accelerator tube can be connected to any type of large pipe. It will speed up or change the direction of any object passing through it.



Lattice Archway - This large lattice archway can be used to fill spaces so objects can't pass through. You can set things on top of it, or bounce things off it. But you can't blow it up.



Scaffold Barrier - This chunk of metal scaffolding can be used to fill spaces so objects can't pass through. You can set things on top of it, or bounce things off it. But you can't blow it up.



Wooden Barrier - This large wooden barrier can be used to fill spaces so objects can't pass through. You can set things on top of it, or bounce things off it. But you can't blow it up.



Archway - This big marble archway can be used to fill spaces so objects can't pass through. You can set things on top of it, or bounce things off it. But you can't blow it up.



Brick Incline - Roll balls and other parts up or down this brick incline. It can be stretched or shrunk, which changes the angle. Use it to control the direction of balloons and other objects. It's not affected by explosives.



Yellow Brick Incline - Roll balls and other parts up or down this yellow brick incline. Use it to control the direction of balloons and other objects. It can be stretched or shrunk, which changes the angle. It's not affected by explosives.



Granite Incline - Roll balls and other parts up or down this granite incline. Use it to control the direction of balloons and other objects. It can be stretched or shrunk, which changes the angle. It's not affected by explosives.



Wood Incline - You can roll things up or down this wood incline, or use it to direct balloons. It can be stretched or shrunk, which changes the angle. Explosives won't hurt it.



Log Incline - Roll balls and other parts up or down this log incline. Use it to control the direction of balloons and other objects. It can be stretched or shrunk, which changes the angle. It's not affected by explosives.



Grass Incline - Roll balls and other parts up or down this grass incline. Use it to control the direction of balloons and other objects. It can be stretched or shrunk, which changes the angle. It's not affected by explosives.



Pool Table Wall - You can build your own virtual pool table with these felt-covered walls. Balls will bounce off them. Add pockets wherever you want them. Flip these if necessary.



Pool Table Pocket - These pool table pockets can be rotated to eight different angles. Use them with sections of pool table wall to build your own billiards game.



Pool Cue - This pool cue is spring-loaded and ready to shoot anytime something bumps the button on the back end. It can be rotated to shoot from eight different angles. Use it to hit pool balls and other things.



Trap Door - This trap door drops open when heavy objects land on top of it.



Thumb Tack - This thumb tack is handy for popping blimps and balloons. It can be flipped so that the point is facing up, down, or to either side.



Balloon - This balloon can be programmed to have four different appearances, which all act exactly the same. It will float up into the air unless it's tied down with a rope or held back by another object. Use it to lift the low end of the teeter-totter, shoot the phazer, trigger the boxing glove, push the bellows, or bump various objects. Balloons will pop if they touch moving gears, hedge trimmers, tin snips, any flame, laser beams or tacks.



Hot Air Balloon - Light the candle to create hot air, which will make this balloon rise into the air. Tie a rope to the eye hook on the bottom and use it to lift things, pull triggers, and so on.



Blimp - This blimp will fly in a straight line until it bumps into something and reverses direction. It will pop if it bumps into a moving gear, tack, or other sharp objects. And it will blow up if it touches a flame or explosion.



Teeter-Totter - Drop something heavy on the high end of this teeter-totter to catapult an object off the low end. Tie a rope to either end and use it to hoist and lower objects, pull the phazer's trigger, or cause other reactions.



Tipsy Trailer - This little trailer acts as a teeter-totter. Drop something heavy on the high end to catapult an object off the low end. Tie a rope or steel cable to either end and use it to hoist and lower objects, pull the trigger of the phazer, or cause other reactions.



Rope - Use this rope to tie objects together, hang things in the air, or hoist things off the ground with the help of a pulley. Attaches to teeter-totters, boat cleats, laundry baskets, buckets, phazers, balloons, the Mandrill Motor, and several other parts. To use rope: pull it out of the parts bin onto the screen. Click on the first object you want tied, then drag the cursor over the second object. When the line turns from red to green the rope is in position. Click again to attach it. You can cut the rope using hedge trimmers or tin snips. (For more info about ropes, see page 14.)



Steel Cable - This steel cable works just like rope, except it's much stronger. It can only be cut with tin snips. To use the steel cable: pull it out of the Parts Bin onto the screen. Click on the first object you want tied, then drag the cursor over the second object. When the line turns from red to green the cable is in position. Click again to attach it. (For more info about steel cables see page 14.)



Pulley - You can place this pulley between any two parts that may be connected by rope or cable. For example: tie one end of a rope to an object (a laundry basket for instance), then run the rope over as many pulleys as necessary (click on each pulley), and tie the other end of the rope to another part, such as the phazer. When you run the puzzle, the laundry basket will fall, pulling the rope, which will pull the trigger and fire the phazer.



Boat Cleat - Any object that can be tied with a rope or steel cable may be hitched to this boat cleat. Use it to hang things from the air, or to keep balloons from floating away.



Tin Snips - You can use these tin snips to cut through rope or steel cable. To make them cut, just bump either handle with an object. You can also use them to pop blimps and balloons.



Hedge Trimmers - To cut ropes with these hedge trimmers, just drop something on the handle. Blimps and balloons pop if they bump against the tips.



Captain Z Super Phazer - This spiffy toy phazer shoots pulses of energy. Tie one end of a rope to the trigger and run it through a pulley (placed behind the phazer), then tie the other end to a balloon or something heavy. You can program the number of energy pulses you want to fire. Use it to bump things, pop balloons and blimps, and blow up explosives.



Bucket - You can drop things inside this bucket. Tie a rope to it, and tie the other end to a second object. Then drop something heavy into the bucket to lift the other object. You can also lift teeter-totters, pull triggers, and affect other parts that may be attached to a rope.



Leaky Bucket - There's a hole in the bottom of this bucket. You can program how fast the paint leaks out. The faster the drip, the heavier the bucket is when you start the puzzle. As the contents drip out, the bucket gets lighter. Tie a rope to the top and use pulleys to connect it to another object.



Laundry Basket - This is a laundry basket. You can tie a rope to it and drop it on Curie Cat like a cage, or run the rope over the pulleys and attach it to another object you want to lift or lower.



Flashlight - Drop something on the button of this flashlight to turn it on. Use it to power solar panels. Or put a magnifying glass right in front of it and use it to light fuses and candles.



Lava Lamp - This groovy lava lamp isn't just a cool piece of retro-decor taken from Professor Tim's attic. It's also an excellent light source. Tie a rope to the chain and give it a tug to turn on the lamp. Use it to power up the solar panel, or shine it through a magnifying glass to light fuses and candles.



Magnifying Glass - Place this magnifying glass in front of any light source to ignite fuses or candles. Make sure it's close enough to both the light source and the fuse you're trying to light. Flip it if necessary.



Candle - This candle can be lit with a laser beam, another flaming part, or a magnifying glass and light source. Use it to light fuses, make the coffee pot percolate, or pop blimps and balloons.



Aladdin's Lamp - Use flint rocks, a laser, a rocket, a match-on-a-spring, lasers, or a light source and a magnifying glass to light this oil lamp. Once it's burning, you can use it to light candles and fuses.



Flint & Starter - Bump these flint rocks to start a fire, which can be used to light fuses, pop blimps and balloons, and heat up coffee pots.



Match on a Spring - Pull the little peg with a rope to make this match pop up lit. Use it to light fuses, pop blimps and balloons, and heat up coffee pots.



Cannon - Light the fuse of this cannon with a laser, a flaming part (like a candle or a rocket), or use a magnifying glass and light source. It fires cannon balls which can be used to break and bump things. And it can be rotated to aim six different angles.



Dynamite - Light the fuse of this dynamite with a laser, rocket, a flaming part (like a candle or Aladdin's Lamp), or use a magnifying glass and light source. It will blow up all kinds of things, including some walls.



Rocket - You can light the fuse of this rocket with a flaming part, or by using a magnifying glass and light source. It will shoot straight into the air when lit. The rocket can be flipped up, left, or right.



Fireworks - This part lets you choose between three different types of fireworks displays. Program the part to get the color of your choice. Light the fuse with a laser, a candle (or other flaming part), or by using a magnifying glass and light source.



Missile - This missile is handy for blowing up all sorts of things, including most walls. Light the fuse. You can rotate it to fly straight up, right, or left.



Nitroglycerine - This tube of nitroglycerine will explode if it's bumped or dropped with enough force. It blows up all kinds of things, including most walls.



Remote Control Bomb - As soon as you set this remote control down on the screen, a second part (made up of explosives) appears. Drag the explosives to the area or object you want to blow up. Drop something on top of the remote plunger to set off the explosion.



Can Opener - Plug this can opener into an electrical outlet to make it open the can. When the sauce spills out of the can, Curie Cat will come lap it up if she's within range.



Electric Mixer - Plug this electric mixer into an outlet to make it run.



Coffee Pot - Make this coffee pot percolate by heating it with a candle, Aladdin's lamp, match-on-a-spring, or flint & starter. Then use the steam to push things.



Electric Fan - Plug this electric fan into an outlet to make it blow air. Flip it to change wind direction. Use it to blow objects away or to turn the pinwheel.



Vacuum - Plug this vacuum into an electrical outlet and use it to suck up any object that's affected by gravity.



Toaster - Plug this toaster into an electrical outlet and flick on the switch to make it work. When the toast is done, it pops into the air. Use it to bump other objects. You can also program it to work as a timer. The darker the toast you choose, the longer the amount of time it takes to pop up.



Egg Timer - Program this egg timer to a desired amount of time. Then drop something on the top knob to start the timer running. When the time is up, an arm pops out, bumping anything in its way.



Electric Motor - Plug this electric motor into an outlet and flick on the switch. Then use a belt to attach it to gears, conveyor belts, and other rotating parts.



Generator - This generator comes with its own outlet. Use it to supply electricity to power parts by connecting the generator's wheel to a rotational motor (like the Mandrill Motor, the Mouse Motor, or the Electric Motor) by adding a belt.



Electric Switch & Outlet - Plug any of the electrical parts (such as the toaster, can opener, or fan) into this electric outlet, then drop something on the switch to turn on the power. Or bump up on the switch if it's upside-down.



Electrical Outlet - This electrical outlet has juice running to it at all times. Plug in any electrical part and it will work. (See page 16 for more info about power supplies.)



Solar Panel - This solar panel comes with its own electrical outlet. Shine a light on the panel, then plug in any electric part you want to operate.



Laser-Activated Plug - When a laser beam of the right color strikes this laser-activated plug, it will provide electrical power to any part plugged into the outlet. It can be programmed to be activated by laser beams of any color. But if the plug is blue, for instance, it will only accept a blue laser beam.



Red Laser - This is a red laser gun. When it's plugged into an outlet (and the switch is on) it will fire a red laser beam. When the beam strikes a red laser-activated plug, it will generate energy that can be used to power anything hooked up to that outlet. Laser beams can be bounced and directed by using angled mirrors. They may also be fired into Laser Mixers, which will blend the colors of the beams. If an object passes through a laser beam, it will temporarily cut off the energy flow. Lasers can light fuses and candles. Laser beams can also be used to pop balloons. (See page 17 for more info about lasers.)



Green Laser - This green laser gun works just like the red laser. When it's plugged into an outlet (and the switch is on) it will fire a green laser beam. When the beam strikes a green Laser-Activated Plug, it will generate energy that can be used to power anything hooked up to that outlet.



Blue Laser - This blue laser gun works just like the red laser. When it's plugged into an outlet (and the switch is on) it will fire a blue laser beam. When the beam strikes a blue Laser-Activated Plug, it will generate energy that can be used to power anything hooked up to that outlet.



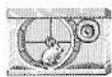
Laser Mixer - This Laser Mixer will blend together the colors of any laser beams passing through it. For instance, a red beam and a blue beam will become purple. The purple beam could then be used to provide energy to a purple Laser-Activated Plug.



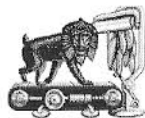
Angled Mirror - This angled mirror can be used to deflect and change the direction of laser beams. It can be positioned in four different angles.



Laser Detector - This laser detector can receive laser beams of any color. When a beam strikes the black eye, the green light turns on. If the beam is broken, the red light flashes. If the beams returns, both lights will flash.



Mouse Motor - This little cage is actually a Mouse Motor. Bump the cage to make the mouse run around in his wheel. Add a belt and hitch it up to things like the conveyor belt or the Jack-in-the-box to make them turn. You can flip the Mouse Motor to change direction of the belt attached to it.



Mandrill Motor - To start up this Mandrill Motor, tie a rope to the shade and give it a tug. When Pavlov Mandrill sees the banana he runs like crazy. Attach a belt to the treadmill and power anything that is driven with a belt.



Conveyor Belt - Hitch this conveyor belt to a motor by adding a belt, then use it to move objects. Add a gear to make it change directions.



Belt - Use this belt to hitch any two rotating parts together. Click on the first part you wish to connect (the Mandrill Motor, for instance), then stretch the belt over to the second part (such as the pinwheel). When the line turns from red to green the belt is in position. Click again to attach it. Belts can only be stretched a limited distance, and will disappear if stretched too far. (See page 15 for more info about belts.)



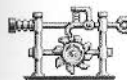
Gear - Use a belt to connect this gear to rotating power parts which will make it turn. Place gears side by side or above/below each other to reach the distance necessary or to change the direction of rotation.



Tiny Gear - This tiny gear rotates at twice the speed of a big gear when it's placed next to one. These gears must be placed directly beside or above/below other gears.



Pinwheel - You can make this pinwheel spin by blowing air on it (from parts such as the fan or the bike pump). Attach a belt and use it to turn other rotating parts.



Trans-Roto-Matic - This handy gadget turns translational motion (back and forth) into rotational energy (around in circles). Tie a rope to the eye hook, then tug it with another object to make the gear turn. Hitch a belt to the gear and use it to rotate windmills, conveyors, and other rotating parts.



Roto-Trans Converter - This nifty contraption turns rotational energy (circular) into translational motion (back and forth movement). Hitch the little wheel to a rotational motor with a belt, then tie a rope to the eye hook and hitch it to something you want to lift or pull (such as a teeter-totter, phazer trigger, or laundry basket).



Bike Pump - Drop something on the top handle of this bike pump to make it blow air. It can be used to push away balloons and other objects, make the pinwheel turn, and blow out candles.



Anti-Gravity Pad - This anti-gravity pad reverses the gravity field for anything on top of it. Without gravity, most things will float up into the air. But balloons will drop.



Springboard - Anything you drop on this springboard will go higher with bounce.



Pinball Bumper - This pinball bumper can be placed so that moving objects will bounce off in any direction.



Pinball Flipper - This pinball flipper will flick any object that drops on top of it. It can be flipped left or right.



Jack-in-the-box - You can hitch this Jack-in-the-box to any rotating part by adding a belt. When the wheel turns it will pop open. And when Jack pops out, anything on top of his box will be shot into the air.



Boxing Glove - Bump the button on the back of this boxing glove to make it punch things.



Mel's House - Here's Mel Schlemming's cozy suburban duplex. If he sees it, he'll head home. It can also be programmed to be a cabin.



Mouse Hole - Newton Mouse likes to hide in this mouse hole when he's chased by Curie Cat. Or you can lure him inside by placing some cheese on the far side of the hole.



Cheese - Newton Mouse will come after this cheese whenever he's close enough, and on the same level of flooring.



Newton Mouse - This is Newton Mouse. He'll go after any cheese he can see. He'll also run away if Curie Cat comes after him. He'll run inside a mouse hole if you place a hunk of cheese on the other side of it, or if Curie chases him toward one.



Curie Cat - Curie Cat will head toward Newton Mouse or Bill the Goldfish whenever she can see them. She'll turn around if she's bumped or runs into something. She also likes the goo that comes out of the can when it falls from the can opener.



Fish Tank - Bill G. lives in this fish tank. Curie Cat will come after him whenever she's close enough, and they're on the same level of flooring. If the tank breaks, she'll be attracted from a greater distance. Drop just about anything on the fish tank to break it.



Alligator - Here's Edison the Alligator. He'll chow down Mel Schlemming or Newton Mouse if they get too close. He also flips things into the air with his nose.



Mel Schlemming - Meet Mel Schlemming. Mel walks or runs mindlessly forward until he bumps into something. Then he turns around and walks mindlessly in the other direction. You can program him to walk, run, or stand still until he's bumped. If he falls too far, he goes to sleep. He also has to watch out for alligators.



Boxes - This box is really five boxes in one. Program it to be glass, wooden, wicker, metal, or cardboard which are all different sizes. Drop things inside it. Use it to catch falling objects.



Message Computer - This little computer is a handy way of relaying messages (one letter at a time). A letter will appear on the monitor if something bumps the keyboard. The computer may be programmed to display any letter in the alphabet, numbers 0-9, and several symbols. Line them up side by side to spell out a whole message.



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Original design for *Really Hard* puzzle titled "Puzzle Winner" was made by the father and son team of William and Richard Smith. They are the winners of The *Even More Incredible Machine* puzzle contest.



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If you are unable to resolve a problem with your game using this manual or through the Automated Support line, contact our Technical Support representatives directly. You may call, write, or fax us with your questions, or contact us via BBS e-mail.

If you choose to write, fax, or e-mail us with your request, please provide detailed information on your computer system and the nature of your problem. In addition, please include your address and telephone number should we need to call back or send you further information.

U.S.

Sierra On-Line
Technical Support
P.O. Box 85006
Bellevue WA 98015-8505

Call (206) 644-4343
Fax (206) 644-7697
8:15 a.m. - 4:45 p.m. PST
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America Online: Keyword Sierra (Private Email DynamixTS)

PATCH DISKS

If you have spoken to a Sierra Technical Support Representative or have read about an available patch (repair) disk in our magazine *InterAction*, please send in your request to the address below, or contact us via BBS. Let us know the game, version number (VER# on the front of your game disk(s)), and the disk type you have.

Sierra On-Line

Patch Disks
Dept. 10
P.O. Box 485
Coarsegold, CA 93614-0485

Sierra on CompuServe

Sierra offers technical support and patch files via its CompuServe forum, as well as product demos, hints, and reviews. Members of CompuServe can type GO GAMEPUB and leave a message at (CIS ID 76004,2143). If you are not currently a member of CompuServe, call toll-free (800) 848-8199 and ask for Representative 461 for your FREE introductory membership and usage credit.

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SETTING PREFERENCES

The install program will make the best possible choices in determining the type of computer equipment you have, but you may wish to try other configurations. To modify the install program preferences, follow these steps:

1. Go to the TIM2 directory on your hard drive by typing C: [Enter], then CD\SIERRA\TIM2 [Enter].

(Note: this assumes you have installed *The Incredible Machine 2* to the default location on the C: drive. Please substitute the appropriate drive letter and directory name if you have changed these.)

2. Type INSTALL [Enter].
3. From the Installation Choices menu, you may select any option you wish to change.
4. Follow the on-screen instructions.

MAKING AN "EASY START" BOOTABLE FLOPPY DISK

In an effort to hide many of the complicated functions of your computer's operating system, we have included a disk labeled *The Incredible Machine 2* "Easy Start". For your convenience, this 3 1/2" disk has been pre-labeled, and is ready to be prepared by the Install program to "boot" (start) your system. However, if your system has a 5 1/4" drive as the boot disk, you will need to supply the 5 1/4" disk yourself.

If the Easy Start disk is created successfully by the install program, you will be able to place it in your A: drive and launch directly into the game when you turn on your computer. Starting your computer system with the Easy Start disk in the A: drive before you play a Sierra game will keep any unneeded TSR (Terminate and Stay Resident) programs from being loaded into memory. The Easy Start can be particularly effective in resolving problems related to insufficient memory, as well as conflicts with memory-resident programs.

When you are ready to create an Easy Start disk, please have the disk labeled "Easy Start" or your own blank high-density floppy disk prepared to insert in your A: drive. Run the install procedure from either your game sub-directory or from your Startup/Disk 1 program disk and select the Make Easy Start Disk option. The install program will prompt you through the process, format the floppy disk, and write all the necessary files.

IMPORTANT!! After you have created a Easy Start disk, you must reboot your computer. Place the Easy Start disk in drive A: then press [Ctrl]-[Alt]-[Del] (you must press all three keys at the same time). Your computer will now reboot, with A: as the default drive.

Due to the variety and complexity of hardware and software configurations, the install program may not be able to create an Easy Start disk for all systems. If this is the case, you can create a boot disk manually. Please refer to the following instructions to manually create a boot disk.

CREATING A BOOT DISK MANUALLY

Please Note: Use the format command with care to avoid erasing all stored information on your hard disk. Follow the instructions below exactly.

Formatting from a Hard Disk

1. Insert a blank disk into your floppy disk drive.
2. At the C: prompt type: **FORMAT A:/S [Enter]** (Note: This assumes your floppy drive is A:)
 - If your drive is a 3.5" high density drive and you are using a low density disk, type: **FORMAT A:/S/T:80/N:9 [Enter]**
 - If your drive is a 5.25" high density drive and you are using a low density disk, type: **FORMAT A:/S/T:40/N:9 [Enter]**
3. Follow the MS-DOS prompts.

MOUSE DRIVERS

You will need a mouse to play *The Incredible Machine 2*. You must copy your mouse driver onto your boot disk. There are two types of mouse drivers available: MOUSE.SYS and MOUSE.COM. The following are step-by-step instructions to locate and load the mouse driver in either the CONFIG.SYS or AUTOEXEC.BAT files.

1. Locating the Mouse Drivers

If you do not know where the MOUSE.SYS or MOUSE.COM files are located, the command below will assist you in locating these files. For users of MS-DOS 5.0 or above, type the following at the C:\> prompt: **DIR \MOUSE /S [Enter]**.

This command will allow you to search all sub-directories for a file called mouse. If the system locates a file called mouse, it will display the path where the file(s) are located.

Example: If the MOUSE.SYS file is located in a C:\MOUSE directory, the system will display a message like the following:

Directory of C:\MOUSE

MOUSE SYS 55160 03-10-92 3:10a

MOUSE COM 56408 03-10-93 6:00a

If the system does not locate a mouse, your mouse driver may have a different name or may not be currently installed on the system. Some other common names for mouse drivers are IMOUSE, GMOUSE, and HPMOUSE. The mouse driver files may also be copied directly from the floppy disk packaged with your mouse. For information on the proper name of your mouse driver, check the owners manual which came with your mouse.

2. Copying the Mouse Driver

Once you have located the mouse driver, you will need to copy it to the boot disk. In the following example, we are assuming that the mouse drivers were located in the C:\MOUSE directory (as shown in the example above).

Example: To copy the MOUSE.SYS file to the boot disk, type the following at the C:\ prompt: **COPY C:\MOUSE\MOUSE.* A: [Enter]**. Please substitute the appropriate path and file name for your mouse driver in the command line above. You should then see a message indicating that one or more files were copied.

3. Mouse Statements for the CONFIG.SYS & AUTOEXEC.BAT

The following are examples of statements that must be added to either the CONFIG.SYS or the AUTOEXEC.BAT for the automatic loading of the mouse driver. NOTE: Do not place a mouse statement in both the CONFIG.SYS and AUTOEXEC.BAT; only **one** option is required.

Examples: THE CONFIG.SYS FILE: (If MOUSE.SYS was copied to the boot disk) Type: **DEVICEHIGH=MOUSE.SYS**

THE AUTOEXEC.BAT FILE: (If MOUSE.COM was copied to the boot disk) Type: **LH MOUSE**

Refer to your mouse manual for further information on how to install your mouse driver. You may also call or fax Sierra Technical Support for assistance.

U.S. Tel: (206) 644-4343

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U.K. Tel: (44)734 303171

Fax: (44)734 303201

CREATING A CONFIG.SYS FILE

For 386 or 486 Computers (MS-DOS 5.0 and above)

1. Insert a formatted blank disk into Drive A:
2. Type: A: [Enter]
3. Type: COPY CON CONFIG.SYS [Enter]
4. Type: DEVICE=C:\DOS\HIMEM.SYS [Enter]
5. Type: DEVICE=C:\DOS\EMM386.EXE RAM 1024 [Enter]
6. Type: DOS=HIGH,UMB [Enter]
7. Type: FILES=30 [Enter]
8. Type: BUFFERS=20 [Enter]
9. If you are using the MOUSE.SYS file to load your mouse, add the following line to the CONFIG.SYS: DEVICEHIGH=MOUSE.SYS [Enter]
10. **IMPORTANT NOTE:** If you are using MS-DOS 6.0 with Doublespace disk compression, please add the command below to the CONFIG.SYS. (If you are not currently using Doublespace, skip the command below and continue with step 11). DEVICEHIGH=C:\DOS\DBLSPACE.SYS [Enter]
11. Press the [F6] key (a "^Z" should appear), then press [Enter]. You should see the message: 1 File(s) copied. Next create an AUTOEXEC.BAT file for your boot disk.

CREATING AN AUTOEXEC.BAT FILE

For 386 or 486 Computers (For MS-DOS 5.0 and above)

1. Type: A: [Enter]
2. Type: COPY CON AUTOEXEC.BAT [Enter]
3. Type: PROMPT \$PSG [Enter]
4. Type: PATH=C:\DOS [Enter]
5. Type: SET COMSPEC=C:\COMMAND.COM [Enter]
6. If you are using the MOUSE.COM file to load your mouse, add the following line to the AUTOEXEC.BAT: LH MOUSE [Enter]
7. Press the [F6] key (a "^Z" should appear), then press [Enter]. You should see the message: 1 File(s) copied.

IMPORTANT! After you have created a boot disk, you must REBOOT your computer. Place the boot disk in drive A: and press [Ctrl]-[Alt]-[Del] at the same time. Your computer will now reboot, with A: as the default drive. To run the game, follow the instructions in the section "Running *The Incredible Machine 2*," and have a great time! Boot disk instructions for other DOS formats are available for downloading from the Sierra BBS (U.S. 206-644-0112 or U.K. (44) 734 304227). The file below contains instructions for a variety of systems. After downloading this file, select the set of instructions that will match your system best. BBS file name: BDALL.EXE

TROUBLESHOOTING

Problem: I have installed *The Incredible Machine 2* on a compressed drive, and it doesn't run.

Possible Solution: The most common problem encountered when installing *The Incredible Machine 2* on compressed drives is lack of disk space. The amount of space that MS-DOS reports to you as being available is based on an expected compression ratio. Since many of the *The Incredible Machine 2* files will be compressed very little, if at all, you will need more disk space to install *The Incredible Machine 2* properly, even though MS-DOS says you have enough space free. Since *The Incredible Machine 2* requires 5 1/2 MB of free hard drive space to install, you should have at least 10 MB of free hard drive space when using disk compression. Note that the 10 MB drive space figure is based on a typical compression ratio of 2:1. If your compression ratio is set to a higher rate, you will need to free up an appropriate amount of disk space. Example of Disk Compression utilities include Stacker®, SuperStor, MS-DOS Double Space, and Disk Doubler.

Problem: After upgrading to MS-DOS 6.0, I can no longer run *The Incredible Machine 2*. I keep getting an "Out of Memory" error.

Possible Solution: If you have installed MS-DOS 6.0 and run the MemMaker utility, it may have configured your computer's memory so that there is no longer sufficient conventional memory to run *The Incredible Machine 2*. See the section on Freeing Conventional Memory in Chapter 6 of your MS-DOS 6.0 Upgrade manual or use the Easy Start disk Creator option in the *The Incredible Machine 2* INSTALL program.

Problem: My computer has at least 2 megabytes of memory, but I receive a message saying that I don't have enough conventional or expanded memory to run *The Incredible Machine 2*.

Possible Solution: *The Incredible Machine 2* requires a computer with 2MB of RAM. You must have (560K) 573,000 bytes of free conventional memory and (256K) 262,144 bytes of free expanded memory (EMS). Some of your computer's conventional memory may be used for device drivers, LAN drivers, and/or for TSR programs. Furthermore, your computer may not be configured to provide enough expanded memory. Some of your computer's memory will need to be freed up, either by altering your start-up files or by creating an Easy Start disk with the install program. To determine how much free memory you have, use the MS-DOS command: MEM [Enter].

Problem: My computer has at least 2 megabytes of memory, but even after creating an Easy Start disk, I still receive a message saying that I don't have enough memory to run *The Incredible Machine 2*.

Possible Solution: Your computer may be configured to use the upper memory area for system hardware or Shadow RAM and not for expanded memory. If this is the case, you may need to alter your computer's CMOS setup. Consult your computer system manual for information on how to do this or refer to your computer system manufacturer for assistance.

Problem: When trying to load the program or after running the program, the computer hangs or I am returned to the MS-DOS prompt.

Possible Solution: Although your computer may satisfy all of the hardware and software requirements, there may be a configuration or software conflict in your computer while running *The Incredible Machine 2*. Try loading the program after booting from the Easy Start disk.

Problem: My program hesitates or locks up during game play. I am using a SoundBlaster or compatible sound card.

Possible Solution: Run the install procedure from the game sub-directory and select "PC Internal Speaker" for the sound option. If the program operates properly, there may be a configuration problem with your sound card. Call Technical Support at Sierra On-Line or your sound card manufacturer for assistance in configuring your sound card for proper operation.

Problem: My mouse is not responding.

Possible Solution: Your mouse driver may not be loaded for MS-DOS programs. You will need to edit the autoexec.bat or config.sys files on the boot disk to include the command to load your mouse driver.

ERROR MESSAGES

If you receive an error message when playing or installing a Sierra game, refer to the following explanations and solutions.

CRC ERROR This means you have a bad disk. It stands for Cyclic Redundancy Check, a way to check for disk errors. (See Replacement Diskettes, page 57.)

DATA ERROR READING DRIVE A or B This means you have a bad disk. (See Replacement Diskettes, page 57.)

GENERAL FAILURE READING DRIVE A or B This could indicate you are trying to read high density disks with an incompatible low density drive or that the disk is not installed.

YOU DO NOT HAVE ENOUGH MEMORY TO RUN THIS PROGRAM. YOU CURRENTLY HAVE "___" FREE BYTES OF CONVENTIONAL MEMORY, AND "___" BYTES OF EMS MEMORY. YOU NEED AT LEAST (560K) 573,000 FREE BYTES OF CONVENTIONAL MEMORY, AND (256K) 262,144 FREE BYTES OF EMS MEMORY. There is not enough free memory to successfully run the program. You may need to boot your system with a boot disk. (For instructions, see Creating a Boot Disk Manually, page 57.)

SECTOR NOT FOUND READING DRIVE A This means you have a bad disk. (See Replacement Diskettes, page 57.)



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