MicroMaestro™

Lets you play songs you can see and hear.
Transforms the Chalk Board™ PowerPad™ and your
computer system into a music machine.

CHALK BOARD INC.

A touch of genius.

MicroMaestro™

User's Guide For
Atari® 400™/800™ Computers

Table of Contents

Version 3.2/831030

HOW TO SAVE A SONG

HOW TO LOAD A SONG

ADDITIONAL ACTIVITIES

INTRODUCTION

Turn your television and computer into a music machine! Using PowerPad™ and MicroMaestro, you can create new songs or play your favorites. You don't need a grand piano or symphony orchestra—just your fingers, your imagination, your PowerPad and MicroMaestro.

Please read the Chalk Board PowerPad User's Guide before beginning to play with MicroMaestro. This guide is part of the PowerPad package. Find the section of the directions that refers to your specific computer for proper installation of your PowerPad.

The Overlay

MicroMaestro comes with a plastic overlay which shows all the ways you can use PowerPad with this package. Gently guide the overlay's frame into the groove around PowerPad's work surface. Once in position, the frame snaps easily in place.

Ready–Go!

- Unplug your computer and TV before connecting PowerPad with your computer.
- Be sure your computer is turned off every time you insert or remove a cartridge.
- Insert your MicroMaestro cartridge.
- Turn on your computer and TV set. You see and hear a Chalk Board message.

Take a Look At The Overlay.

There are three sections to the overlay: a two-octave keyboard, a treble staff and command buttons.

Across the bottom of the overlay is the keyboard. To create music all your own just press the keys.

Above the keyboard on the overlay is a set of five lines. This is called a **treble staff.** Notice that you see the same five lines on your TV screen. The notes on the treble staff can be played just like those on the keyboard.

At the top of the overlay are seven command buttons. Below these buttons are five extra buttons which help you compose or play your own songs.

- When you are ready to use MicroMaestro, press the **CLEAR** button on PowerPad. The **CLEAR** button and any of the top seven buttons make a "beep" sound to let you know that the computer is carrying out your command.
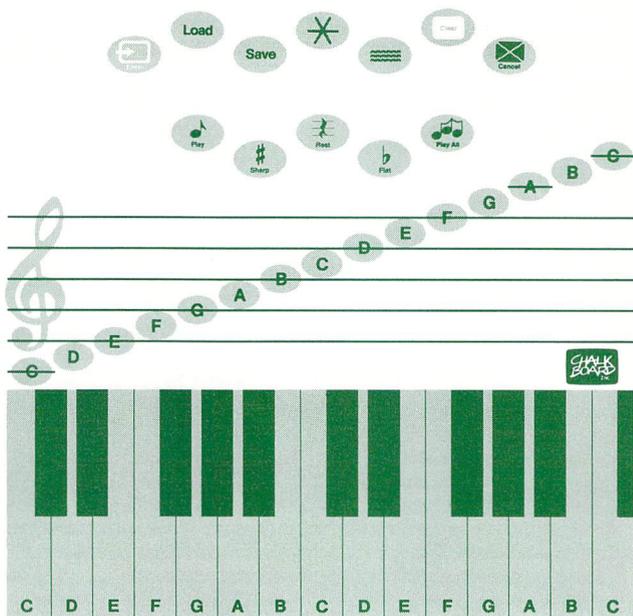
USING THE KEYBOARD AND THE STAFF

Keyboard

Begin to play your music machine by touching the keyboard on PowerPad. Each time you touch a key, you hear a sound. (If you don't hear anything, turn up the volume on your TV set.) A black note appears on the treble staff of the screen and a blue note appears on the screen keyboard to indicate which note you played. As you press more keys, the notes move across the screen from right to left.

Look at the white keys on the overlay's keyboard. Each of the white keys has a letter. The letter is the name of the key. A row of eight white keys is called an **octave.** Micromaestro has two full octaves beginning at **C.** The first **C** note that you see on the keyboard is the same as the middle **C** on your piano.

Say the name of each white key as you touch it on your PowerPad. **C D E F G A B C** are the eight notes of this octave. The letters from **A** to **G** form the musical alphabet.

Treble Staff

You may want to create music using the **treble staff** in the center of the overlay on the PowerPad. Each note on the staff is located directly above the white key from the keyboard below.

A SPECIAL NOTE:

When you play a note on a piano the sound of the note fades. The keys and notes on MicroMaestro operate like an organ rather than like a piano. This means that when the computer plays back your song, the sound of each note is held just as long as you held the note when you played it originally.

Sharp

Flat

SHARP and FLAT

The white keys on the keyboard are called **naturals**. The black keys are called **sharps** and **flats**.

When you begin MicroMaestro and press a black key on the keyboard, a sharp sign appears to the left of that note on the TV screen. A sharp is played on the key higher and to the right of its natural key. Sharps raise the tone of a note.

Most sharps are played on black keys. The next key higher than B is a white key, so **B-sharp** is played on a white key. What other sharp is played on a white key?

A flat is played on the key lower and to the left of its natural key. Flats lower the tone. If you want to change the black keys on the keyboard from sharps to flats, press the **FLAT** command button. If you press a black key now, what happens?

Like sharps, most flats are played on black keys. Which flats are played on white keys?

On the treble staff there are no black and white keys. Only notes appear. If you want to play a **C-SHARP** on the treble staff, press and hold the **SHARP** button, then the note C.

To play a flat note on the treble staff, first press and hold the **FLAT** button, then a note on the treble staff. Does the order in which you press the note or the sign make a difference in the tone you hear?

TRY THIS:

Press and hold **SHARP** and a **B** note on the treble staff on the keyboard. Try to find the key with the same sound.

USING THE COMMAND BUTTONS

HOW TO PLAY A SONG

Play

Play All

PLAY and PLAY ALL

Here's the way to play back your music. **PLAY** and **PLAY ALL** command buttons let you replay the sounds you have created.

Press the **CLEAR** button at the top of the overlay twice (**CLEAR CLEAR**). This erases all the notes you may have played already.

Now, play a song you enjoy!

While you play, the computer remembers every note you press. The first time you press the **PLAY** button, the computer plays back all the music you created since turning on PowerPad or pressing **CLEAR**.

After you listen to your first song, start playing another song. If you now press **PLAY**, the computer plays only your second song.

Press **PLAY ALL**. The computer plays both songs.

NOTE: The length of the songs that you can play back using **PLAY** and **PLAY ALL** depends upon the size of your computer's memory.

Experiment to see how long you can play before your memory is full. When memory is full some of the music you composed is not repeated at the end of **PLAY ALL**. Press **CLEAR CLEAR** to erase all notes played so far. Then begin playing again.

8

TRY THIS:

Play **A B C**
Press **PLAY**
Hear and see **A B C.**
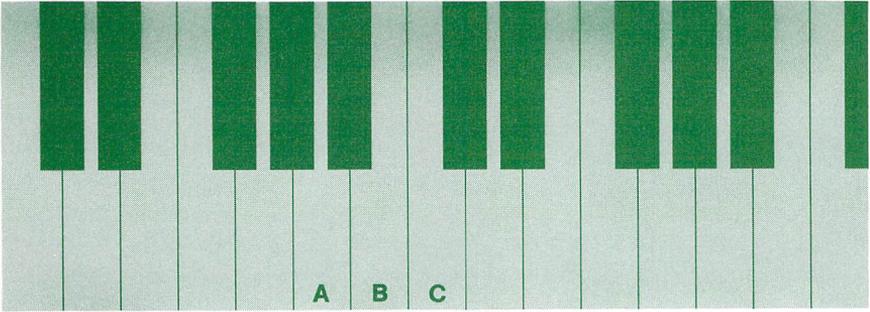
Play **D E F G**
Press **PLAY**
Hear and see **D E F G.**

Press **PLAY ALL**
Hear and see **A B C D E F G.**

NOW TRY THIS:

Play a short song, ten or fifteen notes.
Press **PLAY**.

While the song is playing, press and hold any part of the MicroMaestro overlay that is blank. You hear your song played back much more slowly than before. This "slow play" feature allows you to experiment with different tempos for your songs.
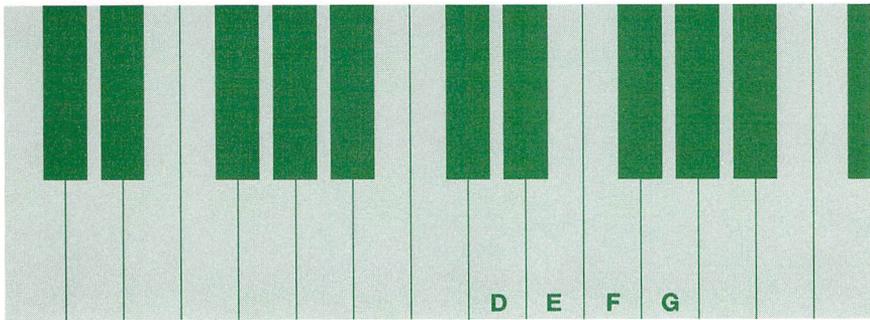
CLEAR

Suppose you played **C E A** and you really wanted to play **C E G**. To erase the notes, press the **CLEAR** button and you can start over again.

TRY THIS:

Press **CLEAR CLEAR**
Play **A B C**
Press **CLEAR**
Press **PLAY**

You hear nothing. All notes are erased. This means pressing **CLEAR** once erases your latest song.

Play **A B C**
Press **PLAY**
You hear and see **A B C**.
Then play **D E F**.
Press **CLEAR**
Press **PLAY**

The notes **D E F** are erased. You hear nothing. However, if you want to hear again the first notes you played (**A B C**), you now can press **PLAY ALL**.

Press **PLAY ALL**
You hear and see **A B C**.
Press **CLEAR CLEAR**
Notes **A B C** are erased.

10

BE CAREFUL: Any time you press **CLEAR** twice in a row (**CLEAR CLEAR**), you erase **all** the notes you have played so far.

NOW TRY THIS:
Would you like to play two songs at once? Here's how. Start by playing a song. Think of a second song. Press **PLAY**. As the first song begins, start playing the second song. How does it look and sound?

Next, press **PLAY ALL**. You hear both songs at once. Press **PLAY ALL** again. As your song plays back, you can add more notes if you wish. After you add your new notes and press **PLAY ALL**, you might decide that you want to try different notes for another song. Press **CLEAR** to erase the last notes you added.

With a little practice, you can compose songs with harmony that will delight and surprise you.

STAR PLAY and STAR PLAY ALL
As you compose, you probably stop between notes to think about what you want to play. When you press **PLAY** or **PLAY ALL** you hear these pauses between your notes. If you want to hear the notes one after the other without pauses, press the **STAR** button before you press **PLAY** or **PLAY ALL**. The music plays back without pauses between the notes.

All of your songs continue without pauses until you press the **CANCEL** button. The **CANCEL** button brings back the pauses.

REST
If you want a pause between notes as you compose, press the **REST** button. What happens when you hold down this button? The **REST** button has a timer. It waits for you until you begin to play again.

Play **A B C**.
Press and hold **REST**.
Then play **D E F**.
Press **PLAY**.

Play

Play All

Rest

You hear and see the notes **A B C**. After a pause you hear and see the notes **D E F**.

NOTE: If you use the rest key in your song, the computer remembers the length of the rest even when you press **STAR PLAY** or **STAR PLAY ALL**.

CANCEL

Suppose that after you press **PLAY**, you decide you really meant to press **PLAY ALL**. You can interrupt **PLAY** by pressing **CANCEL**. The **CANCEL** button stops the last command that you entered. The **CANCEL** button is a way to stop a **PLAY, PLAY ALL, SAVE** or **LOAD, STAR PLAY** or **STAR PLAY ALL** command.

HOW TO SAVE YOUR SONG

NOTE: If your computer memory is less than 32k, you can use only a cassette for storage.

If you are using a diskette for storage, be sure that it contains Atari DOS.

If you are using a diskette or cassette, you can save your song. Saving lets you bring your song back to the screen later. Then you can play it for others to hear. Perhaps you may want to make some changes in your song.

Saving involves naming your song, completing the PowerLog cards that come with MicroMaestro and pressing a series of keys.

Note the step-by-step approach described below.

Cancel

Naming the Song (Diskette)

Before you save a song to a diskette, you must name it. You can name a song with one to six notes in any combination. For instance, you can call a song **C** or **E B** or **D F G G G G**. Every song on your diskette must have its own name. Do not use the same name twice on a single diskette. Using the same name twice erases or overwrites the first song with that name.

NOTE: Cassette storage on Atari computers does not allow naming of files.

PowerLog Cards

Find the PowerLog cards that come with MicroMaestro. Use them to keep a record of all the songs you have saved on a single diskette or cassette.

The top of each card says **DISK/TAPE Name** _____. In this space write the name of the diskette or tape that you are using now. For example, you might name the diskette "My Masterpieces."

The second line says **SOFTWARE NAME.** This space is for the name of the CHALK BOARD product you are using. Write "MicroMaestro."

Notice that the cards are divided into three columns. The information for these columns is important to help you remember how and where you have saved your songs.

The first column is labeled "Date." Under that column, write today's date.

The second column is labeled "Name/Mode." If you are using a diskette, write the key name you have given your song in this column. For example, you can write **B B D D D D**. If you are using a cassette, advance the tape to a clear location and record the tape counter value in this column.

The third column is labeled "Description". In
this column, use a few words to describe your
song. For example, you could write **ROW
YOUR BOAT.**

PowerLog™

DISK/TAPE NAME _____

SOFTWARE NAME _____

DATE	NAME/MODE	DESCRIPTION
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Part No. 11004A

SAVE
Be sure that you have completed the PowerLog
card. Check to see that your diskette or cassette
is ready to use. You must have room on the
diskette or cassette for the notes you want
to save.

Press **SAVE** on PowerPad to begin the saving
process.

WAVES (≋) or STAR (∗)
Use the **WAVES** button (≋) or the **STAR**
button (∗) to tell the computer where to send
the song. If you are using a diskette, press
≋. If you are using a cassette, press ∗. You
only have to press the **WAVES** or **STAR** button
the first time you load or save after you turn
on your PowerPad.

Entering The Song's Name (Diskette)
If you are saving to a diskette, use either
the white keys or the notes on the treble staff
to enter the name of the song **exactly** as you
wrote it on your PowerLog card. Remember,

the name can be one note (**B**) or up to six notes
(**FAABCE**). The order or sequence of the notes
is important to saving your song properly and
finding it later.

ENTER

Your song has not been saved yet. That is
because you have not finished the **SAVE** com-
mand sequence.

Find the **ENTER** key on PowerPad. Some
command sequences need an **ENTER** before the
command can be sent to the computer. In this
way, **ENTER** is like a green traffic light. It tells
the computer that you have finished giving it
an order. You are saying that you want the
computer to carry out the order now.

To continue saving your song, press **ENTER**.

Saving to Cassette

After you press **ENTER**, the computer
prompts you to press play and record with
the sound of two beeps.

Press the **PLAY** and **RECORD** buttons on
your cassette player.

Now you must press the **RETURN** key on
the computer keyboard to let the computer
know you are ready to record.

Sequence: For cassette press **SAVE** * **ENTER**.

Saving to Diskette
(for systems with at least 32 bytes of memory)

After you press **ENTER**, the computer
automatically begins to store your song on the
diskette in your drive.

The computer takes some time to store your
song. During the time your computer is saving,
your screen is yellow. The screen returns auto-
matically to blue if the save was completed cor-
rectly. If for some reason your storage device
is not properly connected, the computer changes
the blue background color to orange until you
touch a button on the pad. Then you can take

15

whatever corrective action is necessary and try to save the song again.

Sequence: For diskette press **SAVE** ≋ **ENTER.**

REMEMBER to save your song using this prodedure:
- Complete the PowerLog card.
- Check your diskette or cassette to be sure it is ready to receive your song.
- Press **SAVE.**
- If this is the first song you are saving today, press either the **WAVES** (≋) for a disk drive system, or the **STAR** (∗) for a cassette system.
- For diskette, press the notes that make up the song's name.
- Press **ENTER.**
- For cassette, listen for the two "beeps," press **PLAY** and **RECORD** on your tape player. Press **RETURN** on your computer.

Once you have saved the song, you have a copy of it that you can bring back into the computer's memory at any time.

HOW TO LOAD A SONG

NOTE: If your computer has a memory of less than 32k, you can load only from a cassette.

Like the saving process, the loading process has several steps. Be sure that your storage device is connected and ready to send your song. Check your PowerLog card for the correct note name of your song on your diskette or for the correct tape location on a cassette. Begin the process by pressing **LOAD.**

Load

LOAD
The **LOAD** key lets you bring back into the computer's memory a song you already have saved. Before you can use this button, you should check your PowerLog cards for the correct note name of the song.

Loading from a Cassette

Sequence:

For cassette press **LOAD** * **ENTER.**

After you press **ENTER,** the computer prompts you with one beep to press play.

Press **PLAY** on your cassette player.

Press the **RETURN** key on your computer keyboard to let the computer know you are ready to load.

Loading from a Diskette

Check to see that you are using the correct diskette. Be sure that your disk drive is turned on before you start your computer.

Sequence:

For diskette press **LOAD** ≋ name **ENTER.**

The computer takes some time to load your picture. During this time your screen is yellow. The screen returns to blue if the load was completed correctly. If your storage device is not properly connected or if the song is not found, the computer changes the blue background to orange until you touch a button on the PowerPad.

When the computer is finished loading, press **PLAY ALL** to hear the song.

REMEMBER to load your song using this procedure:
- Check your diskette or cassette to be sure it is ready to send the song.
- Press **LOAD.**
- If this is the first song you are loading, press either the **WAVES** (≋) for a disk drive system or **STAR** (*) for a cassette system.
- When using a disk drive, press the notes that make up the song's name. You can use either the white keys or the treble staff notes to enter the song's name.
- Press **ENTER.**

- When using a cassette system, press **PLAY** on your cassette player. Press **RETURN** on your computer.
- Press **PLAY ALL** on the overlay to hear your music.

Unfound Songs

Here are a few reasons why the computer may not be able to load your song:

- You are using the wrong diskette or cassette.
- You told the computer you were using a cassette when you meant to tell it you were using a diskette.
- You are using the wrong song name or tape counter value.
- You did not advance your tape to the correct location on your cassette player.

With a diskette, you must enter the song's note name exactly as you saved it. For example, **B B D** is not the same as **B D B**. **G** is **not** the same as **GG**. Check the information on your PowerLog card and try again. If you are using a cassette system and the computer cannot find your song, the computer searches for twenty seconds.

Then it issues an error message by changing the screen's background color to orange. Check your PowerLog card to verify the location of your song. Then rewind the cassette tape to load your song again.

If the computer does not find your song a second time, you may not have saved the song correctly. Replay the song and save it again, carefully following the directions under HOW TO SAVE YOUR SONG.

ADDITIONAL ACTIVITIES

Activity 1: Music Maker

Let's play on the keyboard. Piano keys are either black (sharps or flats) or white (naturals). You can make music using these two sets of keys alone or together.

Using only white keys, try to play the song "On Top of Old Smoky." You can play it using the keys in one octave starting with the first C on the left.

Using only the white keys from C to G, try playing the tune from your favorite space movie.

With **only** the black keys, try to play the song "Auld Lang Syne." (That's the song we sing on New Year's Eve: "Should old acquaintance be forgot...") Here's a hint to help you: start with **C-sharp.** Then try to play the same song using only white keys (or naturals). Hint: start with **C-natural.**

The five black notes of an octave are called a **pentatonic scale.** The five black keys you used to play "Auld Lang Syne" make up a pentatonic scale. Can you make other songs using only these keys?

Finally, try mixing sharps and naturals to make your own song. Experiment some more, making the notes of songs you know already. Can you create new music?

Activity 2: Spelling A,B,C's

You can make many words using the letter names of the keys in an octave.

Start making "musical words" with three notes (letters). Try words like **ADD, ACE, EGG,** or **BAD.** Next, try words with four letters. Some possible words are **FEED, CAFE** and **FADE.**

Continue playing, trying to add more notes to make longer words. What's the longest word you can make?

If you are playing with someone, take turns trying to guess words looking only at the TV screen. As you master the scales, you might try

19

guessing words without looking at PowerPad or the TV screen. If more than two people are playing, try a contest–game: Name That Word!

With MicroMaestro you can create many games to learn the notes on the treble staff. Can you make nonsense sentences? What songs do you create as you put "words" together? How do your "word" songs change when you use sharps?

Ask a friend to take the last note you played and start a new word. Can you think of other rules for making new words? Try using the first note of the word your friend played to begin a new word. How does your word sound if you press the keys in reverse? Try it!

Activity 3: Reading The "Note" Book

MicroMaestro would like for you to try your music skills on a piano. A piano does not have the letters of the notes written on the keyboard. So, before you head for the nearest ivories, let's use MicroMaestro to test your skills in reading music.

Look at the staff on your screen. You see five lines separated by four spaces. As you move from the bottom to the top of the staff, the notes in the spaces are F A C E. These names are easy to remember since they spell a word. You might think "Your F A C E is in the space." The notes on the lines are E G B D F. To help you remember these notes think of this phrase: Every Graphic Button Defines a Function.

- Press any three notes from the treble staff.
- Using the overlay's keyboard, press the same three notes you pressed on the treble staff.
- Look at the screen. Did you find all the notes first time?
- Press any three notes again. This time mix naturals with sharps and flats.

How did you do?

Have a friend or relative press three notes from the treble staff for you. Let them check your music reading skills as you press the same notes on the keyboard. Good Luck!

Activity 4: Circus Songs

You already know that several notes played one after the other make a song. Do certain songs remind you of certain people, animals, or feelings? Do some notes make you feel happy, excited or afraid?

Imagine the sights and sounds of a circus. (If you haven't been to a circus, or if you forget, think instead of a fair or an amusement park.) Remember the graceful trapeze artist, the clowns, organ grinder and the music on the merry-go-round? What other parts of a circus can you imagine?

Try thinking of one part of the circus at a time—such as the merry-go-round. Play with PowerPad and MicroMaestro until you find the sounds that make you think of merry-go-rounds. Notes at the top of the scale have a higher sound than notes at the bottom. How high or how low a note sounds is called its **pitch.** Do your merry-go-round sounds have a high or low pitch?

Play your merry-go-round sounds again. Do you play them quickly one after another, or do you play them slowly? Do the sounds of the notes "hop" up and down the scale, or do they swing gently back and forth?

Now that you've played with this idea, create some more circus songs. Take turns guessing what part of the circus you are "playing."

Create other "worlds" or "places" with songs of your own.

Activity 5: The Chord Master

Have you touched more than one key at a time on the PowerPad? If not, try to play two or more keys at the same time. How many notes does your computer allow you to play at once?

A **chord** is a combination of two or more notes played at the same time. Try using one hand to touch two or more notes and make a chord. What does a chord look like on the TV screen? How does it sound?

Try pressing the notes **C, E** and **G.** This com-

21

bination is called a **triad** because it includes three notes which are played at the same time. Which fingers did you use to play the chord? In music theory, this chord is called the **"C major"** chord. Doesn't it start with a **C**? Now try moving from that chord to the chord **D, F-sharp** and **A**. What changes do you see on the TV screen? What do you think this chord is called?

Play more chords by touching two or more keys alone and then together. Can you move from one chord to another? Which fingers do you find easiest to use? Are you making songs as you go from one chord to another?

Finally, try playing the song "Happy Birthday" using the **C major** chord. Or maybe you want to combine chords and single notes. Can you play the chords on PowerPad and hum the single notes at the same time? How many chords did you need to play the song?

Activity 6: Music Mystery

Think of some of your favorite songs. Try to play the first line of each song. Now ask a friend or someone in your family to try to guess the names of the songs you played.

You can make a game by playing the songs and seeing which friend can correctly name the tune first.

Play several songs and see who can guess correctly the most titles from all the tunes you play. You can make the list of the songs as long as you like.

Do you have a favorite album with several songs you really like? Play the first line of as many of the songs as you can. Using two or more albums, have your friends try to guess the album from which you are playing. Then try to decide who sang the songs.

BUTTON REVIEW

CANCEL
To cancel a command, press **CANCEL**.
CANCEL stops **PLAY, PLAY ALL, SAVE, LOAD** and **STAR**.
CANCEL does not stop a **SAVE** or **LOAD** after you have pressed **ENTER**.

CLEAR
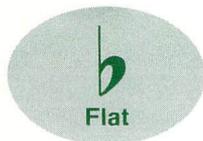To erase the sounds of your last section of played notes, press **CLEAR**.

CLEAR CLEAR
To erase all notes you have played since you first turned on PowerPad or since the last **CLEAR CLEAR**, press **CLEAR CLEAR**.

ENTER
To execute **LOAD** or **SAVE**, press **ENTER**.

FLAT
To change all the black notes on the keyboard from sharps to flats, press **FLAT** and continue to play.
To produce a flat note on the treble staff, press and hold the **FLAT** button while you play your note.

LOAD
To load a song from your diskette or cassette, press the following buttons:
Sequence:
For diskette: **LOAD** ≋ name **ENTER**
For cassette: **LOAD** * **ENTER**

PLAY
To play back the music you have created since you last pressed **PLAY**, since you turned on PowerPad, or since you last cleared the computer memory, press **PLAY**.

23

PLAY ALL

To hear all the songs and sounds you have played since you turned on the PowerPad or since the last **CLEAR CLEAR**, press **PLAY ALL**.

REST

To insert a break in your music where no sounds are needed, press **REST**.

SAVE

To save a song on your diskette or cassette, press the following commands:

Sequence:
For diskette: **SAVE ≋ name ENTER**
For cassette: **SAVE * ENTER**

SHARP

To change the black notes on the keyboard to read as sharps again press **SHARP** and continue to play.

To produce a sharp note when playing on the treble staff, press and hold the **SHARP** button while you play a note.

STAR

To save or load your songs on a cassette, press (*) **STAR** after pressing **SAVE** or **LOAD**.

When used with **PLAY** or **PLAY ALL**, **STAR** allows you to play each song without pauses between the notes.

WAVES

To save or load your songs on a diskette, press (≋) **WAVES** after pressing **SAVE** or **LOAD**.

MESSAGES FROM CHALK BOARD

Do you have any ideas that you would like to share with us about your experience with MicroMaestro? Do you want to know what other people are doing with PowerPad and Chalk Board software? If so, complete the warranty registration card that came with this package. Return it to Chalk Board (postage free in the United States). Your name will be placed on the list of users who receive our company newsletter. If you send us some of your ideas, your name might also appear in our newsletter.

Watch for coming issues, as well as new additions to Leonardo's Library™ of quality software for the home computer.

NOTE: If you accidentally damage the overlay, replacement overlays are available. Send $6.00 by check or money order to:

> Customer Support
> Chalk Board, Inc.
> Suite 140
> 3772 Pleasantdale Road
> Atlanta, Georgia 30340

This $6.00 charge includes $3.00 for the replacement overlay, and $3.00 for postage and handling.

VIEWS FROM AN EDUCATOR

The search is on for ways to use computers to design effective educational environments in homes. In my judgment, Chalk Board leads this important exploration to rediscover the home setting as a powerful force for learning. Simply stated, Chalk Board is rapidly becoming synonymous with learning through home computers. This company is committed to building responsive environments that will help more people reach their full potential.

To this end, Chalk Board has created PowerPad and Leonardo's Library. The touch-sensitive pad offers learners a new method of communication with computers. PowerPad is complemented by a library of software that is well conceptualized and carefully written. Each package addresses its unique learning objectives but also remains interrelated with other library units. In the family setting, the software, by its very design, stimulates intelligence, motivation and achievement. As I view it, this integrated system provides significant opportunities for learning not only for those people who have previously experienced academic success, but also for those whose potential has not yet been realized.

Here are four reasons why the Chalk Board PowerPad and its software library serve as an important force for learning:

- People find initial learning experiences meaningful and the desire to repeat them furnishes continuing motivation for learning.
- Learners put forth real effort and gain satisfaction from accomplishing tasks they find challenging.
- Learners discover the pleasure that comes from having acquired and used new understandings, new interests and new skills.
- When teams of people use PowerPad, they develop an interest in working with others for a common purpose.

Further, these conditions for learning take on even more significance for individuals because the PowerPad has built-in flexibility that gives learners personal power to structure the activities of the computer.

With MicroMaestro you quickly experience the excitement of computer music which before only an advanced programmer enjoyed. MicroMaestro appeals to the auditory, as well as visual, styles of learning. You simultaneously see and hear the musical notes that you play on your PowerPad keyboard. As you learn to use the command buttons of MicroMaestro, you have the opportunity to appreciate technology in a people-friendly atmosphere.

The beginning music enthusiast can learn the piano keyboard with reinforcements from the screen and dual approach overlay. The experienced musician can create and recreate compositions on the treble staff with the advantage of the capability to compose and play back musical sounds instantly. The learning activities in MicroMaestro provide a tool for exploring the fascinating world of music while enjoying the discovery of your musical capabilities.

Chalk Board, then, has created an exciting way to expand opportunities for learning. PowerPad and Leonardo's Library will provide parents, teachers and other educators with valuable assistance as we enter a period of increased use of home computers as a constructive means for quality education.

Dr. Robert L. Sinclair
Professor of Education and
Director, Center for Curriculum Studies
University of Massachusetts at Amherst

INDEX

A touch of genius.