

TANDY®

Cat. No. 26-3279

PAN

The Music Maker



*Compose and Play Music
on Your Color Computer Keyboard.*

 **PAN**
The Music Maker



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Jane Burrell '85



Pan, the mythological Greek god of flocks, shepherds, forests, and wildlife is part man and part goat. Pan is said to have invented a flute with seven reeds, called the Pan-pipe.

One of the mythological tales about Pan (who had the ears, horns, tail, and hind legs of a goat) is of his musical contest with the god Apollo, and whenever you see a picture of Pan, the image includes music.

Pan was playful as well as musical and it is said that the music of his Pan-pipes was enjoyed by man and beast. The same combination of melody, harmony, rhythm, and counterpoint that made Pan's music so appealing to the gods continues to make music special today.

Using your PAN the Music Maker program, your Color Computer and the Sound/Speech Cartridge, you are able to both write music and play it. You can also save the music that you write and then recall it to play again.

PAN the Music Maker lets you control the musical tempo, the length of notes, the key, and the number of voices in which you write.

If you are not very familiar with writing music, the manual gives you some background information, and the program provides songs as well as scales and chords to help you learn to use your PAN program.



Required Equipment

Tandy® Color Computer (minimum of 64K)

Disk Drive and Cable

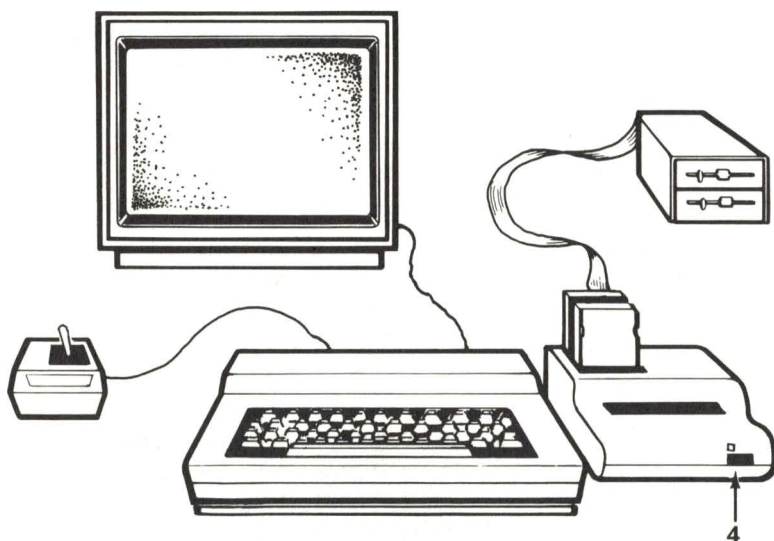
Multi-Pak Interface

Sound/Speech Cartridge

Joystick or Color Mouse

Getting Started

1. Choose channel 3 or 4 on the antenna switchbox, and choose the matching channel on the monitor.
2. Insert the Multi-Pak power module into the Color Computer keyboard slot.
3. Insert the disk power module into the Multi-Pak slot number 4, and set the Multi-Pak indicator to 4.
4. Insert the Sound/Speech Cartridge into slot 2 or slot 3 of the Multi-Pak.
5. Turn on the Multi-Pak.
6. Turn on the computer.
7. Turn on the disk drive unit.
8. Insert a joystick cable or a mouse cable into the right joystick port.



9. Determine the version number of Disk Extended BASIC from the screen display. If the version number is 1.0 see Appendix B.
10. Insert a backup of the PAN diskette (see Appendix A) into Drive 0, and type:

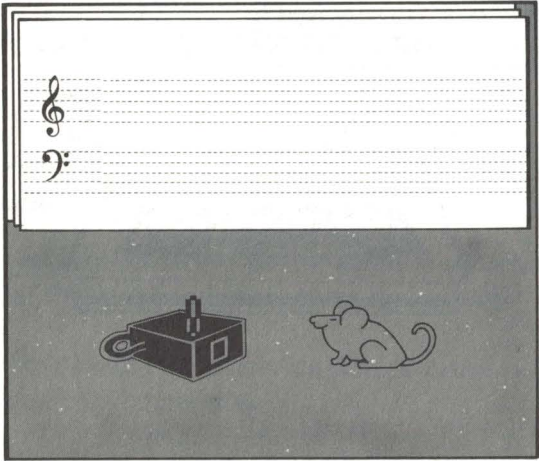
DOS .

11. The screen displays a title screen and a copyright notice. The bottom of the screen displays:

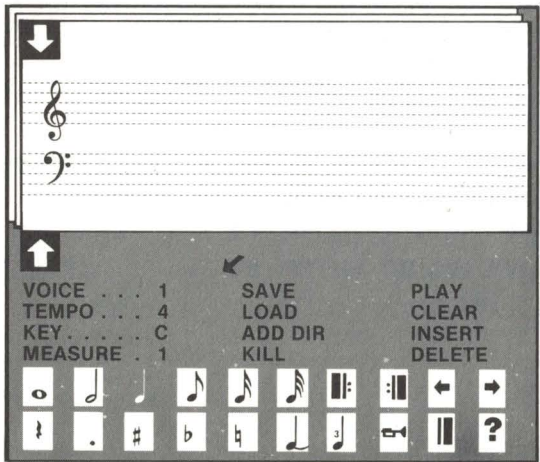
YY/MM/DD HH:MM:SS
TIME?

12. Type the date in the form indicated and press **ENTER** or simply press **ENTER**.

The screen displays the musical staves (Treble Staff and Bass Staff) up and down arrows, a joystick, and a mouse.



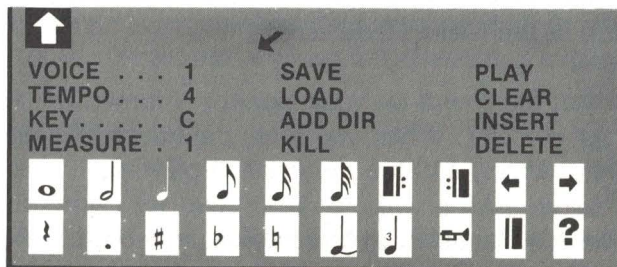
Choose the appropriate control tool by pressing the button on your mouse or joystick. The joystick or the mousetail stops wagging, and a new screen appears.








Main Menu

The bottom of the screen is composed of icons (illustrations or pictures), musical descriptions, and instruction commands.



The cursor is a black arrow. When the cursor is on , it changes color and remains visible. When the cursor is in the musical staff area (the upper half of the screen), it is usually in musical notation (either a note or a rest).

You can move the cursor from the bottom of the screen to the top of the screen where the staff is displayed by placing the cursor on  and pressing the button on your mouse or joystick. You can move from the top of the screen to the bottom of the screen by placing the cursor on  and pressing the mouse or joystick button.

Using PAN

Playing a Song Stored on Diskette

You can easily use PAN to play music without any prior experience.


Move your mouse or joystick until the cursor points to the word **LOAD**. Press the button on the mouse or joystick.

The word **LOAD** changes color and a screen appears to unroll, covering part of the bottom half of the Main Menu screen.

Point the cursor arrow at a song title. Press the button. Change of color indicates that it has been selected. The musical notes are automatically written on the musical staff in the top of the Main Menu screen.

Be sure that the sound on your monitor is turned on. Point the cursor at **PLAY**. When you press the button, the color of the word changes, and the music starts playing.


The notes are illustrated in three colors representing the 3 voices.

When the music has finished playing, the cursor is in the icon area. Place the cursor on the  in the icon display. Press the button and keep holding it depressed. You can watch the notes scrolling across the staff. They scroll slowly until you return to the beginning of the song. The last counted measure on the **MEASURE** line changes to **Measure . 1**. The 1 indicates that you are back to the beginning of the piece and if you wish, you can play the song again.

Playing Another Song

To play another song, point the cursor at **CLEAR**. Press the button. When you press **CLEAR**, a prompt is displayed:

YOU SURE?

Because the first song you played is already saved on diskette, you can respond . It is not necessary to type the entire word **YES**. If you press any other key, you cancel the clear command.

Point the cursor at **LOAD**, and press the button to see the load screen again. The name of another song saved on the diskette appears on the load screen. There is still another song saved on the diskette which does not appear here, because there is no more room on this screen. Point the cursor to the word **(NEXT)** on the bottom of the screen, and press the button. Notice the song title. You can choose to play this song, or by pointing the cursor to **(PREV)**, return to the previous screen, and choose the other song to play.

Writing a Song



You can write your own music or copy printed music. After it is written, you can save the tune and reload it at another time to play again.

Use the following example to learn about **PAN** and see how easy it is to use. The various elements of the program are explained in more detail later.



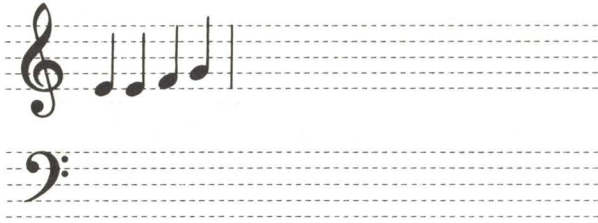
Ode to Joy



The first note of the song is a quarter note. Point the cursor arrow at the  in the icon display. Press the button. Move the cursor to , and press the button. The cursor now appears on the top half of the screen in the form of the note that you chose. Place the note on the staff in the same place that it appears in the music. Press the button. The note is now written on the staff.






Since all the notes in the first measure are quarter notes, you can continue writing music by moving the cursor on the staff. Every time you press the button a note is written. The first measure looks like this:






The bar line is drawn automatically at the end of the measure.


Continue writing the notes that make up the second and third measures.

The first note in the fourth measure is a dotted quarter note (♩.) so you must return to the icon area and select the new note value. Move the cursor to , and press the button. Move to the note icons, and add a dot to the quarter note by pointing the cursor at the dot and pressing the button. Since the quarter note is already highlighted, the dot attaches itself to the quarter note. (The note is always chosen first and is then modified by a dot, sharp, flat or natural.)

Return to the staff by moving to  and pressing the button. Now place the note in the correct position, and press the button again. The next note is an eighth note. Move down to the icon display, and choose an eighth note by pointing the cursor at the icon  and pressing the button.


Return to the staff, and place the ♪ in the correct position on the staff.

An alternate way to change the note length is to press  or  until the note you want is highlighted. Now press ; it becomes the new note. Write the note on the staff and return to the icons.

The next notation on the staff is a rest. Point the cursor to the  icon, and press the button. Carry the rest to the staff, and press the button. The rest completes the measure, and a bar line is drawn.


Continue choosing the correct notes and writing them on the staff. When you have written the entire song, save it to the diskette as described below, and then play the song.


Saving a Song to Diskette

Point the cursor at , and press the button. When the cursor returns to the lower half of the screen, point the cursor at SAVE, and press the button. The save screen scrolls down. Since there is no room on this screen to save the song, point the cursor to (NEXT), and press the button. When the next screen with a clear space on it appears, press the button again. The screen disappears, and a screen prompt is displayed:

FILENAME :

Respond with a name for your song. Type **ODETOJOY**. A name must be 1 word, beginning with a letter, contain a maximum of 8 characters, and be unique. You cannot save two songs with the same name on the same directory.

To play the song, point the cursor at PLAY, and press the button. If only a few notes are heard, it means that you forgot to scroll back to the beginning of the song. Use the  icon to return to measure 1 before playing the song again.

When you finish using PAN, press  to quit. The screen displays:

QUIT-YOU SURE?


Press  to quit. Any other keystroke cancels the command.



More About PAN

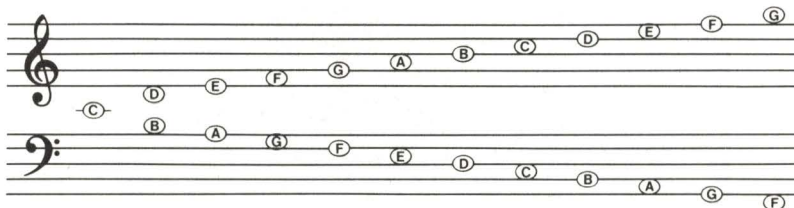
Now that you have written, played, and saved a simple song, you can learn more about how the program works.

Writing A Note On The Musical Staff


The musical staff is divided into two groups of 5 lines each. The top 5 lines are called the Treble Staff and begin with a Treble Clef  .

The lower 5 lines are the Bass Staff and begin with a Bass Clef  .



Each line and space on the staff has a letter name, representing a sound or note.




To write a note on the musical staff, place the cursor on a note icon, and press the button.

Move the cursor to  on the center left of the screen, and press the button.




Write the note on the musical staff by placing the cursor, which is now in the shape of the note, on the staff. Press the button.

Continue writing notes on the staff until you want to change the length of the note. You can change the notes with the  and  keys on the keyboard.

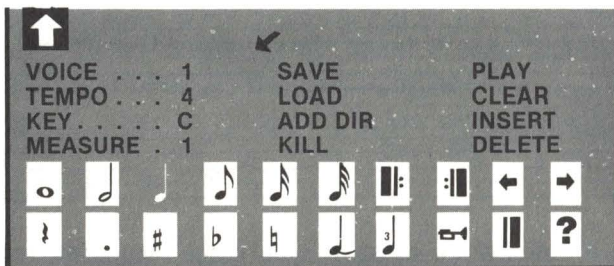
Press . Watch the lower half of the screen. As you move from note to note, the color reverses, and the note cursor on the screen changes to match the highlighted icon. When you have selected the note length you want, place it on the staff, and press the button.

If the note is too long to be included in the measure, you hear a beep and see the following error message:

"Illegal length"

There is an audible message as well as the message written on the screen. Use the  and  arrows to choose a shorter note, or place the cursor on  to go to the icon display, and choose a note of a different length.



Using the Icons



These icons are illustrations or pictures representing notes, musical rests, sharps, flats, dots, directional arrows, repeats, voices, and the method for getting additional information.

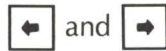
Help Icon





The  in the right bottom corner is a help icon. To use HELP, place the cursor over . Press the joystick or mouse button, and then place the cursor over the picture (icon) you want explained. Press the button again. The help screen unscrolls and offers information on that icon.

Notice that whenever you place the cursor over an icon and press the button, the icon color reverses.

Arrow Icons















Use the  and  icons to move back and forth across the staves to display all the music that is visible and currently in memory. Place the cursor on either icon, and press the button. As long as you press the button, the notes on the staff scroll (until you reach the beginning or the end of the music). When you release the button, the scrolling stops.

If you release the button during the scrolling process, the measure marker changes to indicate the number of the measure that you are viewing and the key of the last measure before your current position.

Note Icons

Note Values

	.....A whole note		.....A triplet
	.....A half-note		.....A tied note
	.....A quarter-note		.....A dot
	.....An eighth-note		.....A sharp
	.....A sixteenth-note		.....A flat
	.....A thirty-second note		.....A natural

Musical rhythm or meter is determined by the various different note values.

A comparison of the note values is shown below. These examples represent a 4 beat measure. Notice that each smaller note value is $\frac{1}{2}$ of the previous note value.

A whole note equals



2 half notes



2 half notes equal



4 quarter notes



4 quarter notes equal



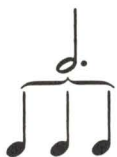
8 eighth notes, and so on.



Dotted Notes



A dot is used to increase the value of a note. A dot adds one half of the note's value to the total.



A dotted half note equals
3 quarter notes in duration.

or





A dotted quarter note
equals
3 eighth notes in duration.

Tied Notes and Triplets




A tied note — two of the same notes (connected by a curved line in regular music notation) played continuously as one note.






A triplet — 3 notes of equal value played in the time usually given to two notes. For example  equals 1 quarter note or  equals 1 half note.

Sharps and Flats




You can raise a musical note a half-tone by adding a *sharp*  to the note.


Position the cursor on a note icon, and press the button. Then place the cursor on the  key in the icon display, and press the button. Move to the upper portion of the screen by positioning the cursor over . Press the button.

Write the note, with the sharp attached, on the staff. To remove the sharp, move back down to the icon display. Place the cursor on the  icon, and press the button. The note returns to its natural form.





Another way to change a sharped note to a natural note is by using the keyboard up and down arrows to change the note length to another note and the return to the length you are using.





You can lower a musical note a half-tone by adding a *flat*  to the note.

Position the cursor on a note icon, and again press the button. Place the cursor on the  key in the icon display, and press the button.

You can now move to the upper portion of the screen and write the note, with the flat attached, on the staff.

Naturalize the note by returning to the icon display, placing the cursor on the , and pressing the button or by using  or  while in the staff area to change the note length, and thereby lose the . Return to the length you want to use and the flat is gone.



When you play in a key other than C, some notes already have a sharp or a flat. To change these notes within a piece of music that you are writing, place the cursor on the  icon, and add a natural to the note. Use  to return to the staff with the naturalized note.

Measures

Music is usually grouped into measures. Each measure has regular and recurring beats. For instance, in two-quarter time ($\frac{2}{4}$), 2 quarter note beats are contained in each measure and in three-quarter time ($\frac{3}{4}$), 3 quarter note beats are contained in each measure.

Based on the time signature you choose (see KEY) and the note length you write, a vertical line marking the end of each measure is automatically drawn on the staff. An extra red or blue line is an indication that the key signature has changed in the prior measure, or that a change in waveforms has just occurred. If more than one change occurs in a measure, multiple lines will appear.

If you try to write a note that is too long to be added to the existing notes in the measure, you hear a beep and a warning that is both audible and displayed on the screen:

ILLEGAL LENGTH

Use the keyboard  key to change the note length.



Begin the repeat from this marker.

Place the cursor on the “Repeat” icon and press the button. The cursor (in the arrow shape), automatically carries the repeat to the staff. Press the button. The repeat mark shows on the screen at the end of the previous measure. You can write several measures of music and by using the repeat sign, play the music again without actually rewriting the notes. You can write the repeat sign before writing the notes, or you can insert the marker after you write the notes.



End the repetition with this marker

After writing the music you want to repeat, place the cursor on the “End of Repetition” icon and press the button. Carry this marker to the staff, and end the repeat sequence by pressing the button. The end of repetition marker is located at the end of the previous measure bar. You cannot insert either of these markers mid-measure.



End of composition


The last marker on the staff indicates the end of the piece of music. Move this marker to the staff to indicate the completion of your composition.

Using this marker enables you to write several short songs on the staff and store them in one file (song title).

Musical Rests









Musical rests add to the rhythm and cadence of the sound by establishing a timed pause. A rest takes its length from the note lengths.

Place the cursor on a note, and press the button. Then place the cursor on , and press the button again. Return to the staff area. Write the rest vertically on any space or line of the staff by pressing the button.

The rests that are written on the screen have a specific appearance depending on their length.

Rests

	.....A whole rest		.....An eighth-rest
	.....A half-rest		.....A sixteenth-rest
	.....A quarter-rest		.....A thirty-second rest









The Sound Shaper



This icon, which is a picture of a horn, defines the way the music sounds. The sound produced in the music is determined by the note you choose, the key you write in, and how the Sound/Speech Cartridge interprets the choices you make through the envelope (shapes the sound) command.

Consult the Sound/Speech Cartridge manual for a thorough explanation of how it works.

Point the cursor at the instrument icon, and press the button. A screen displays 8 waveforms, and the question:

- 1 
- 2 
- 3 
- 4 
- 5 
- 6 
- 7 
- 8 

WHICH WAVEFORM?

Each waveform emits sound differently. Some even appear to change the level of sound.

Waveform 1 - The sound subsides, builds up, repeats

Waveform 2 - The sound occurs once and quits

Waveform 3 - The sound builds up, subsides, repeats

Waveform 4 - The sound occurs, subsides

Waveform 5 - The sound repeats, builds up

Waveform 6 - The sound plays, builds up, and stays

Waveform 7 - The sound repeats, builds up, and alternates

Waveform 8 - The sound repeats, builds up, drops down, and stays

Type a number from 1-8 or point the cursor at a waveform and press the button. The newly chosen waveform changes color. This command generates a single sound envelope which can affect one, two, or all three voices. The screen scrolls up and is replaced with a screen displaying the following:

VOICE 1
VOICE 2
VOICE 3

VOICES WITH WAVE?

Point the cursor at one of the three voice selections, and press the button. The line changes color. You can choose a second and even a third voice by pointing the cursor and pressing the button. Move the cursor so that the arrow points at a blank space on or off the screen. Press the button again. The screen scrolls away, and the Main Menu screen displays:

WAVE PERIOD?

Respond by typing a number 1-65535




Press .

Each wave period number again changes the delivery of the sound. To hear some of the differences, try the following:

Clear the Staff area by pointing the cursor at CLEAR and pressing the button. Answer the YOU SURE? prompt by typing .

Point the cursor at LOAD. Press the button. Point the cursor at one of the scales. Press the button. The scale loads onto the staff. Point the cursor at PLAY, and press the button.

Listen to the way the scale sounds when played. Complete the following steps several times to hear the different sounds you can produce with various waveforms and wave periods.

1. Use the icon  to return to the beginning of the scale.
2. Point the cursor at the  icon, and press the button.
3.
 - a. Point the cursor at waveform 1
 - b. Point the cursor at waveform 2
 - c. Point the cursor at waveform 3
 - d. Point the cursor at waveform 4
 - e. Point the cursor at waveform 5
4. Press the button
5. 3 prompts appear.
6. Point at VOICE 1, and press the button.
7. Point to a blank space and press the button again.
8. Answer the WAVE PERIOD question by typing **500** .
9. Point the cursor at PLAY, and press the button.

Now experiment by using the different waveforms in Step 3 with different voices and random wave period numbers.

Using the Musical Descriptions

The Main Menu includes a brief list of descriptive terms that apply to your piece of music.

Voice

You may use a maximum of 3 voices. When the cursor is in the top half of screen, you may change the voices with the **1**, **2**, or **3** keys. When you are in the lower half of the screen, place the cursor on the number next to the word VOICE, and press the button. Each press of the button changes the number by 1.

In order to write chords (multiple notes sounding at the same time), you must use a different voice for each of the notes in the chord. Change the number next to VOICE. Each voice is represented by a different color note on the staff.

Tempo

Tempo refers to the rate of speed at which a musical composition is played. A printed piece of music may have a term like presto or andante written on it. These musical terms adopted from the Italian, indicate the tempo of a piece.

You choose the tempo of your music by changing the number describing tempo. Point the cursor at the number, and press the button. The number disappears. Type a number from 1-9 in the space.

- | | | |
|---|---------------|-------------|
| 1 | Very Fast | (Presto) |
| 2 | Lively | (Vivace) |
| 3 | Fast | (Allegro) |
| 4 | Moderate | (Moderato) |
| 5 | Singingly | (Cantabile) |
| 6 | Walking tempo | (Andante) |
| 7 | Slowly | (Adagio) |
| 8 | Slower | (Lento) |
| 9 | Very Slowly | (Largo) |

Key

The KEY prompt in PAN lets you to change both the key and the time signature. The first option you can change is the time signature.

The time signature defines the beat of the music. The number displayed is a fraction whose numerator is 4 and whose denominator is 4. This time signature represents 4/4 time (the default time signature).

To set the time signature, place the cursor on the KEY C line, and press the button. The line KEY C changes color, and the cursor moves up to the staff. Press the button again, and a time signature ($\frac{4}{4}$) is visible on the staff. The screen displays the message:

TIME SIG-TOP

The fraction displayed is the default of 4/4 time. You can accept 4 as the numerator (and get 4 beats per measure) by pressing , or you can type a new number and press . The new number is now the numerator of the time signature fraction, and the screen displays:

TIME SIG-BOTTOM

You can accept the denominator of 4 displayed on the staff by pressing , or you can write a new number. The denominator indicates the note value that gets one beat.

The bottom signature must be a legal note length (1, 2, 4, 8, 16, etc.). If the numbers you choose are not acceptable to PAN, the message is re-displayed.

The next time that you change the KEY prompt (if you have not QUIT or CLEARED the program) the last accepted time signature appears on the staff. If you CLEAR the staff, the key is changed to 4/4 and C.

When the two parts of the time signature have been accepted, a new statement is shown on the screen:

SELECT KEY

Press to keep the key displayed or press or to select a new key. The KEY line indicates a new key, and the staff displays all the sharps (♯) or (♭) in that key.

Key refers to the tonality of a piece. Each different key has its own tonic (base) notes and set of ♯'s or ♭'s.

The PAN Load program includes scales and a few chords for the keys of C, D, E, F, G, A, B, A minor and D minor.

If you write a composition using more than 1 key, you can see the letter at the KEY prompt change after the music stops scrolling.


Press **ENTER** when the correct key appears at the prompt.

Key	Sharps or Flats	Position on Staff
C	—	
F	Bb	
Bb	Bb Eb	
Eb	Bb Eb Ab	
Ab	Bb Eb Ab Db	
Db	Bb Eb Ab Db Gb	
Gb	Bb Eb Ab Db Gb Cb	
B	F# C# G# D# A#	
E	F# C# G# D#	
A	F# C# G#	
D	F# C#	
G	F#	

When you accept a key, a beginning measure marker is written on the staff, indicating that you can begin writing music, and the cursor returns to the bottom half of the screen.

Measure

Keeps count of the measures each time a measure marker is placed on the screen. It keeps track of the total number of measures in your piece. It marks the total number of measures on the MEASURE line when you have played the piece completely through.

You can use the  in the icon display to scroll to the beginning of a song. A faster method is to place the cursor on the MEASURE line and press the button. The measure number disappears. Type **1**, and press **ENTER**. The music and staff scroll to the beginning of the song.

You can move to a specific measure in a song by entering the number of the measure and pressing **ENTER**.

Using The Instruction Commands

Save Save to Diskette

SAVE lets you save the music displayed on the staff, and stored in memory, to the diskette. Point the cursor at SAVE, and press the button. The word changes color, and the SAVE screen is displayed.

Choose a screen on which to save your song by pointing the cursor at NEXT (or a directory name or PRIOR DIR, if you have added directories) and pressing the button. When you have the correct screen, press the button again.

Answer the filename prompt with a name for your song. The title can contain a maximum of 8 characters (no spaces) and must begin with a letter. Press **ENTER**. You can save the same song title on different directories, or you can save

songs with *similar* names (CNTRYRDS and CNTRYTIS) on the same directory. If you try to save the same title twice on a single directory, you get an audible and written "Disk Error" message.

You can also save a song over an existing song by pointing at the song title and pressing the button. The screen displays:

Delete Old File?

Type if you want to save room by deleting an old file.

When you save a song, the name appears on your load screen.

Load Load from Diskette

The load screen displays the songs, chords, and scales that came with the program, the additional song titles you have saved, and directories that you have created.

Point the cursor to the word LOAD. Press the button. A load screen is displayed. There are songs and chords listed on the screen.

There is another screen to view as well. Point the cursor at (NEXT). Press the button. The second page is displayed.

You can move back and forth from one screen to the other by pointing the cursor at next (NEXT) or previous (PREV) and pushing the button.

Place the cursor on any title that you wish to load into the memory buffer, and press the button. The title changes color. The load screen scrolls up, and the notes are written on the staff and stored in the buffer.

Load adds (concatenates) to any tune in the buffer. To load a second song onto the end of one already in the buffer, recall the load screen, point to a specific selection, and press the button. You can continue to recall the load screen and add to the music in the buffer until there is no more available memory. An audible and visual message informs you of an "Out of Memory " error.

Each time you load an additional piece of music onto the end of music that has been played, the MEASURE marker returns to 1, the music is redisplayed from the start, and you are ready to play the entire musical number from the very beginning.

Add Dir. Add directory

Point the cursor at ADD DIR. Press the button. The screen displays:

DIR NAME :

Type a directory name with a maximum of 8 characters and no spaces. Directory names must start with a letter. Press **ENTER**. Choose a directory name that has a general meaning like *PATRIOT*, or *COLLEGE*, or *SCOUT*. You can then save a variety of songs under specific classifications.

When a directory name is displayed on the screen, it is preceded with a + (for example +PATRIOT, +COLLEGE, +SCOUT) so that you can easily recognize it.

When you have added a directory to your directory listing and have not quit the program, you can re-enter at that directory screen. To return to the prior directory, point at PRIOR DIR, and press the button.

If you press the button while the arrow is pointing at PRIOR DIR on the main directory screen, you see the names of the files that make up the program PAN. Point the cursor at +MUSIC, and press the button to return to the main directory screen.

Kill Kill a title or a directory

Point the cursor at KILL, and press the button. The word KILL changes color, and the screen appears. Carefully point the cursor at the song title that you want to delete, and press the button. The menu screen then disappears, and the screen displays:

YOU SURE?

Type Y. Any other key cancels the command.

When you choose to kill a directory, point the cursor at a title preceded by +, and push the button. The screen displays:

KILL DIR?

Type Y. Any other key cancels the command.

If the directory contains song titles, you move automatically to the screen on which the titles are listed, so you can delete a song title. You must delete all song titles before killing the directory name. After you press the button, the screen scrolls back up. Point at KILL, and press the button. You return to the title screen for the same directory until there are no more titles listed for that directory.



After the last song title has been deleted, point at KILL, and press the button. You return to the blank directory page. Point the cursor at PRIOR DIR, and press the button. Now you can again choose the directory title to kill.

Respond to KILL DIR? by typing **Y**.

Play. . . . Play the music that is displayed on the staff.

The music displayed on the staff is in a memory buffer. The command PLAY entertains you with the music stored in the buffer and starts from where you are currently viewing. If the buffer is empty, no notes are written on the staff, and therefore no music plays. Point the cursor at PLAY, and press the button. The word changes color. The notes scroll across the staff ending when the music ends.

When the entire song has been played, the MEASURE marker indicates the total number of measures in the song.

You can listen to the music note by note. Choose the measure in which you wish to start and point to PLAY. Press the button. Immediately press the space bar or . Each time you press the space bar or  you hear the next note. Press **ENTER** to play the song normally. Pressing any other key will end the PLAY command.

See Appendix C for special instructions for playing a song that causes an out of memory error.

Clear Remove the music that is displayed on the staff and is stored in the memory buffer.

Before using the clear command, save a song you want to play again (if it is not already saved on disk).

Place the cursor on CLEAR, and press the button. The screen displays:

YOU SURE?

Type **[Y]**. (If you have changed your mind, press any other key to cancel the command.) All the music written on the staves disappears, the key returns to C, and the time returns to 4/4 time.

Insert Insert measure

Use **[←]** and **[→]** in the icon display to scroll left and right through the staves until you reach the place you want to insert another measure.

Point the cursor at **INSERT**, and press the button. The arrow cursor moves to the staff area. Point to the location for a new measure marker. Press the button.

The new measure contains a rest marker. The cursor returns to the bottom of the screen.

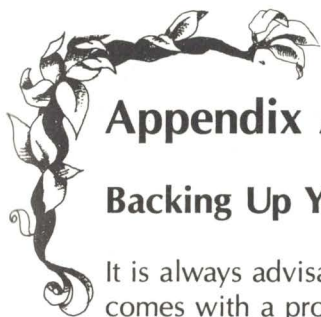
Choose the first note of the new measure. As you insert the notes, the rest marker changes to indicate the remaining note length available.

Delete Delete measure

Use **[←]** and **[→]** to scroll through the staves until you reach the measure you wish to delete.

Point the cursor at **DELETE**, and press the button. The arrow cursor moves to the staff area. Point to the measure that you want to remove. Press the button. The entire measure, including the notes, is removed from the staves, and the cursor returns to the bottom of the screen.

If you want to change notes within a measure, simply write over them with the correct note values, using the correct voice. Rests and note values are changed to be consistent with the current measure length and key.



Appendix A

Backing Up Your Diskette

It is always advisable to make a backup of the diskette that comes with a program, store the original diskette in a safe place, and use the copy. To make a backup, follow these instructions:

Formatting a Diskette

1. Turn on your color computer. Insert a blank diskette in Drive 0.
2. Type **DSKINI0** .
3. The formatting is complete when your screen displays:

OK

Making Backups

1. Remove the newly formatted diskette from Drive 0, and insert your PAN diskette into Drive 0.
2. a. **If You Have One Drive**

Type **BACKUP 0**

The PAN Diskette is your source diskette and the newly formatted diskette is your destination diskette. Follow the instructions:

INSERT DESTINATION DISKETTE AND
PRESS 'ENTER'

Remove the source diskette and replace it with the destination diskette. On the next instruction remove the destination diskette and replace it with the source diskette. Press as directed.

INSERT SOURCE DISKETTE AND
PRESS 'ENTER'

b. **If you Have Two Drives**

Insert the newly formatted diskette into Drive 1 and the PAN Diskette into Drive 0.

Type **BACKUP 0 TO 1**

3. Label your new diskette, and store the original in a safe place.



Appendix B

Starting OS-9 from BASIC

If you do not have a Color Computer with Disk Extended Color BASIC version 1.1 or later or if you do not have the OS-9 System, you can type in the following program and use it to start your PAN application.

Using a formatted diskette **other than** your PAN diskette, enter the following program from Disk Extended BASIC.

```
10 REM *****
20 REM * BOOT OS-9 FROM BASIC
30 REM *****
40 FOR I=0 TO 70
50 READ A$
60 POKE &H5000+I,VAL("&H"+A$)
70 NEXT I
80 CLS:PRINT "INSERT OS9 DISKETTE"
90 PRINT "INTO DRIVE 0 AND PRESS A KEY"
100 A$=INKEY$:IF A$=" " THEN 100
110 EXEC &H5000
120 DATA 86,22,8E,26,00,8D,0D
130 DATA FC,26,00,10,83,4F,53
140 DATA 26,03,7E,26,02,39,34
150 DATA 20,10,BE,C0,06,A7,22
160 DATA 86,02,A7,A4,6F,21,6F
170 DATA 23,6C,23,AF,24,10,BE
180 DATA C0,06,A6,23,81,13,27
190 DATA 12,AD,9F,C0,04,4D,27
200 DATA 06,6C,23,6C,24,20,E9
210 DATA 7F,FF,40,35,A0,4F,20
220 DATA F8
```

Type the following instruction at the OK prompt to save the above program:

SAVE "*"

Type the following to use this program to start the application:

RUN *

When the prompt appears, insert the PAN diskette and answer the date and time prompts. When the OS-9 prompt appears, type:

DOS



Appendix C

Playing a Long Song

When you wish to write a song that is too long to be played with the regular PLAY command or if you wish to create a medley of songs, do the following:

Write the song in parts and save the parts with different filenames (for example PART1, PART2, and PART3), using the SAVE instructions in the manual. If you want to play a medley, save each short song under its own name. Do not save these songs or song parts in a subdirectory. Use the main directory so that you can access that directory with a single command. (If you are very familiar with the OS-9 system, you will know how to use other directory paths.)

Be sure to note the correct spelling and titles (filenames), because you are going to quit the program and proceed to the next step from the OS9 prompt.

1. After you save the song parts or titles, type . Answer to the QUIT-YOU SURE? prompt.
2. At the OS9: prompt, type:

CHD /D0/MUSIC

3. At the OS9: prompt, type:

JOIN PART1 PART2 PART3 WHOLSONG

or if you are writing a medley:

JOIN SONG1 SONG2 SONG3 SONG4 MEDLEY

The JOIN command joins all of the parts into one composition stored under the filename that is last in the list, in this example WHOLSONG or MEDLEY. The new composition name is found on the MUSIC main directory in PAN. If the new composition is too long to play when you are in the program PAN, you will receive an OUT OF MEMORY message. You can hear the song by exiting PAN and using a special command at the OS9 prompt.

1. Type . Answer to the QUIT-YOU SURE? prompt.
2. At the OS9: prompt, type:

CHD /D0/MUSIC

3. At the OS9: prompt, type:

PLAY WHOLSONG or

PLAY MEDLEY

You can play any song on the MUSIC (Main) Directory with this command. You can also play a number of songs in succession by typing:

**PLAY SONG3 SONG2 SONG1 MEDLEY
WHOLSONG**

**NOTE: IMPORTANT INFORMATION FOR
EXPERIENCED OS-9 USERS**

Although it is not advised to swap diskettes after PAN has been booted, be aware that if you have developed a library of songs on several diskettes and have decided to swap diskettes, you must do so from the root directory. And you must select "prior dir" immediately after the swap, or you will get an error.

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Use **PAN The Music Maker** to write, play, and save music. Regardless of whether you program a favorite piece or test your composing skill, you can use all the elements of music — melody, harmony, rhythm, and counterpoint — to create music that would appeal even to the mythological Greek gods.

The program lets you control such musical elements as key, tempo, note length, number of voices (parts), and even the sound of the music.

Don't worry if you are not very familiar with music. The manual provides basic musical information on notes, rests, scales, and chords.

To use **PAN The Music Maker**, you need:

- Tandy Color Computer with 64K memory
- Disk drive and cable
- Multi-Pak Interface
- Sound/Speech Cartridge
- Joystick or mouse