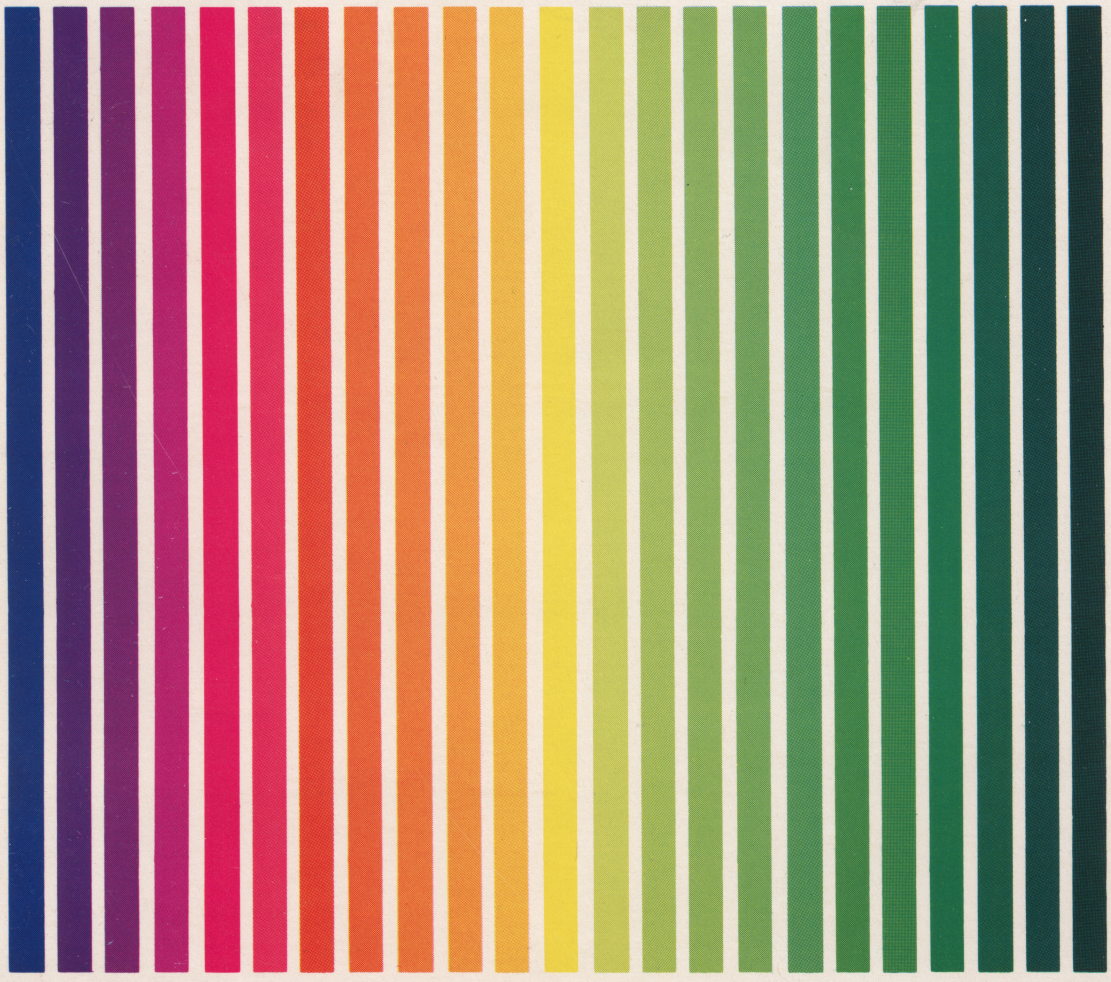
APX ATARI® PROGRAM EXCHANGE



Minnesota Educational Computing Consortium

MUSIC II - RHYTHM & PITCH

Six drills and practices in rhythm and pitch

Diskette: 16K (APX-20172)

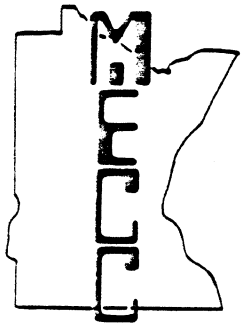
User-Written Software for ATARI Home Computers

Minnesota Educational Computing Consortium

MUSIC II - RHYTHM & PITCH

Six drills and practices in rhythm and pitch

Diskette: 16K (APX-20172)



MINNESOTA
EDUCATIONAL
COMPUTING
CONSORTIUM

MUSIC II

RHYTHM & PITCH

Developed for the ATARI® Computer

Distributed By

The ATARI Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

To request an APX Product Catalog, write to the address above, or call toll-free:

800/538-1862 (outside California)
800/672-1850 (within California)

Or call our Sales number, 408/727-5603

Trademarks of Atari

The following are trademarks of Atari, Inc.

ATARI®
ATARI 400™ Home Computer
ATARI 800™ Home Computer
ATARI 410™ Program Recorder
ATARI 810™ Disk Drive
ATARI 820™ 40-Column Printer
ATARI 822™ Thermal Printer
ATARI 825™ 80-Column Printer
ATARI 830™ Acoustic Modem
ATARI 850™ Interface Module

Printed in U.S.A.

MUSIC II: RHYTHM & PITCH

MECC shall have no liability or responsibility to purchaser or any other person or entity with respect to any liability, loss or damage caused or alleged to be caused directly or indirectly by this software, including but not limited to any interruption of service, loss of business or anticipatory profits or consequential damages resulting from the use or operation of this software.

© Minnesota Educational Computing Consortium
2520 Broadway Drive
St. Paul, Minnesota 55113

July 15, 1982

ATARI ® is a registered trademark of ATARI, Inc.

INTRODUCTION

Music II: Rhythm and Pitch is the second in a series of three modules to be developed for music theory drill and practice. The diskettes of programs make use of the capabilities of the ATARI Computer to generate tone and produce high-resolution graphics. Each program is designed to allow students to choose the difficulty of the problems to be presented and to select exercises of increasing difficulty as skills improve.

Music theory is a skill-oriented discipline that requires much practice. Typically this practice is not a solitary activity. A teacher must evaluate the students' efforts and, in the case of ear training, also present the music to be heard. This is a tedious and time-consuming task. The ATARI Computer presents both visual and aural stimuli and provides instant feedback to student responses. In addition, it can randomly produce many given types of problems, relieving the teacher of tedious drill work while providing students with individualized activities.

Handout pages in this booklet are numbered sequentially in the upper right-hand corner and may be duplicated for use with students.

TABLE OF CONTENTS

Introduction 1

Index to Programs on Diskette 2

General Description 4

Programs

INTRODUCTION 8
- Background Information 9
- Sample Runs 10

COUNTING 11
- Background Information 12
- Use in an Instructional Setting 12
- Handout 1 - Recording Sheet 13
- Sample Runs 14

AURAL INTERVALS 17
- Background Information 18
- Use in an Instructional Setting 19
- Handout 2 - Recording Sheet 20
- Sample Runs 21

VISUAL INTERVALS 24
- Background Information 25
- Use in an Instructional Setting 26
- Handout 3 - Recording Sheet 27
- Sample Runs 28

WRONG NOTE 30
- Background Information 31
- Use in an Instructional Setting 31
- Handout 4 - Recording Sheet 32
- Sample Runs 33

MISSING NOTE 36
- Background Information 37
- Use in an Instructional Setting 37
- Handout 5 - Recording Sheet 38
- Sample Runs 39

RHYTHM 42
- Background Information 43
- Use in an Instructional Setting 43
- Chart of Stored Patterns 44
- Handout 6 - Recording Sheet 45
- Sample Runs 46

RHYTHM PLAY **48**
Background Information 49
Use in an Instructional Setting 49
Handout 7 - Recording Sheet 50
Sample Runs 51

Appendices 53
A. Getting to Know Your ATARI Computer 54
B. Using a MECC Diskette 56
C. Definitions of Terms 58
D. Technical Information 59
E. Credits 60
F. MECC Instructional Services Activities 61
G. Evaluation Sheet 62

INDEX TO PROGRAMS ON DISKETTE

INTRODUCTION

acquaints students with the ATARI computer and demonstrates the capabilities of the computer that are used on some of the programs on the three music theory diskettes.

The following music theory programs are listed in order of suggested use (see General Description).

COUNTING

provides drill on time signatures, note and rest types, and counting. The computer displays a measure which could be completed by adding one note or rest. The student determines the type of note or rest which should be added and chooses the time signature to be used.

AURAL INTERVALS

provides drill in recognizing intervals by ear. The computer plays two pitches and the student must identify the interval between them. The student selects the intervals to be drilled and decides whether the notes are to be played low note to high note or high note to low note.

VISUAL INTERVALS

presents drill in recognizing intervals by sight. The computer displays two notes and the student must determine the interval between them. The student specifies the maximum number of sharps or flats in the key signature and selects the intervals to be drilled.

WRONG NOTE

provides practice in comparing written and performed pitch patterns. The computer displays and then plays a pattern of five notes. When played, one of the notes will be either a whole or half step off. The student must decide which note was wrong. The student specifies the maximum number of sharps or flats in the key signature and the maximum size of the intervals in the patterns.

MISSING NOTE

provides drill in elementary melodic dictation. The computer displays a pattern of four notes and a space. The space represents a missing note and may occur anywhere in the pattern. The pattern is played, and based on hearing it, the student must identify the name of the missing note. The student specifies the maximum number of sharps or flats in the key signature and the maximum size of the intervals in the patterns.

RHYTHM

provides drill in comparing written and performed rhythm patterns. The computer displays a rhythm pattern and then plays three different patterns. The student must decide which of the three patterns heard matches the pattern displayed on the screen. The student may work at any of three levels of problem difficulty.

RHYTHM PLAY

provides drill in performing rhythm patterns. A pattern is displayed on the screen and the student "plays" the pattern using any key on the keyboard. The student may select problems from any of three levels of difficulty.

GENERAL DESCRIPTION...

The three diskettes of music programs for the ATARI Computer can be used singly or in a combination to drill students at successive levels of difficulty.

Below is one possible sequence of instruction for using the five programs on Music I: Terms and Notations; the seven programs on Music II: Rhythm and Pitch; and the five programs on Music III: Scales and Chords. Each diskette has a menu of programs with an END option. The END option provides for ending work on the current diskette and inserting another. Instruction on the three diskettes is divided into nine levels. The student does Level One first and, when all parts of Level One are successfully completed, moves on to Level Two, etc. While a student is using a program, the computer keeps track of which problems have been answered correctly and selects subsequent problems from ones the student has not tried or has answered incorrectly.

Sequence of Instruction			MUSIC Diskette
Level One	-	NOTE TYPES (all sets)	I
	-	NAME THE NOTE (all sets)	I
	-	ENHARMONICS (all sets)	I
Level Two	-	TERMS (set 1)	I
	-	KEY SIGNATURES (major only)	I
	-	COUNTING (all time signatures)	II
	-	AURAL INTERVALS (major and minor 2nds)	II
	-	VISUAL INTERVALS (2nds)	II
	-	WHOLE HALF	III
Level Three	-	WRONG NOTE (2nds)	II
	-	MISSING NOTE (2nds)	II
	-	RHYTHM (set 1)	II
	-	RHYTHM PLAY (set 1)	II
	-	AURAL INTERVALS (3rds, and a mixture of 2nds and 3rds)	II
	-	VISUAL INTERVALS (3rds, maximum of 1 sharp or flat)	II
Level Four	-	WRONG NOTE (3rds, maximum 1 sharp or flat)	II
	-	MISSING NOTE (3rds, maximum 1 sharp or flat)	II
	-	RHYTHM (set 2)	II
	-	RHYTHM PLAY (set 2)	II
	-	AURAL INTERVALS (4ths and 5ths)	II
	-	VISUAL INTERVALS (4ths, maximum of 1 sharp or flat)	II

Sequence of Instruction			MUSIC Diskette
Level Five	-	WRONG NOTE (4ths, maximum 1 sharp or flat)	II
	-	MISSING NOTE (4ths, maximum 1 sharp or flat)	II
	-	RHYTHM (set 3)	II
	-	RHYTHM PLAY (set 3)	II
	-	FIND THE HALF (3 notes)	III
	-	TERMS (set 2)	I
	-	VISUAL INTERVALS (5ths, maximum 1 sharp or flat)	II
Level Six	-	WRONG NOTE (5ths, maximum 2 sharps or flats)	II
	-	MISSING NOTE (5ths, maximum 2 sharps or flats)	II
	-	FIND THE HALF (4 notes)	III
	-	VISUAL INTERVALS (6ths, maximum 3 flats or sharps)	II
	-	AURAL INTERVALS (sixths)	II
	-	TRIADS (major and minor only, both fixed and random root)	III
Level Seven	-	WRONG NOTE (6ths, maximum 3 sharps or flats)	II
	-	MISSING NOTE (6ths, maximum 3 sharps or flats)	II
	-	FIND THE HALF (5 notes)	III
	-	VISUAL INTERVALS (7ths, and mixture of 6ths and 7ths)	II
	-	AURAL INTERVALS (7ths, and mixture of 6ths and 7ths)	II
	-	TRIADS (all types, both fixed and random root)	III
Level Eight	-	WRONG NOTE (7ths, maximum 4 sharps or flats)	II
	-	MISSING NOTE (7ths, maximum 4 sharps or flats)	II
	-	SCALES (major and minor)	III
	-	SEVENTHS (major, minor, dominant, both fixed and random root)	III
	-	AURAL INTERVALS (all intervals)	II
	-	KEY SIGNATURES (set 2)	I
	-	TERMS (set 3)	I
Level Nine	-	SCALES (major, minor, and modal)	III
	-	SEVENTHS (major, minor, dominant, half diminished, full diminished, both fixed and random root)	III

Sequence of Instruction			MUSIC Diskette
Level Nine (continued)	-	KEY SIGNATURES (set 3)	I
	-	VISUAL INTERVALS (7ths, maximum 6 flats or sharps)	II
	-	WRONG NOTE (7ths, maximum 6 flats or sharps)	II
	-	MISSING NOTE (7ths, maximum 6 flats or sharps)	II

Recording Sheets

A student Recording Sheet is provided for each music theory program so that teachers have a record of student progress and students are given direction and can see progress.

The preceding Sequence of Instruction is one example of a plan for moving students through nine levels using the three diskettes of the music theory programs. To use the programs effectively, students will need direction. While teachers know that students should be familiar with the sounds of fourths and fifths in order to use these intervals in a program like WRONG NOTE (see Music III: Scales and Chords), students may not know this. A plan should be devised for each student individually or for the class as a whole.

After the decision has been made on which programs to use and in what order, a Recording Sheet should be prepared for each program each student is to use.

Here is how a Recording Sheet might be filled out for a hypothetical student named Sue Collins who has advanced through the beginning levels of the music theory programs. Sue is now ready to work with AURAL INTERVALS on the Music II: Rhythm and Pitch diskette.

Sue has some background in intervals and can usually identify major and minor 2nds. She can identify a 3rd, but has trouble distinguishing between major and minor 3rds. Sue is very weak on most other intervals. One plan for Sue could be the following:

1. Give her a few drills to discriminate between major and minor 2nds (both low to high and high to low). This will give her familiarity with the equipment and build her confidence.

2. Give drill on a mixture of major and minor 2nds and minor 3rds (Lh and hL).

3. Give drill on major and minor 3rds (Lh and hL).

4. Give drill on major 3rds, minor 3rds and perfect 4ths (hL and Lh).

5. Drill on perfect 4ths and 5ths (hL and Lh).

6. Drill on all intervals, minor 2nd through perfect 5th, excluding the tritone (Lh and hL).

7. Drill perfect 4ths, perfect 5ths, minor 6ths (Lh and hL).

8. Drill minor 6ths, major 6ths (Lh and hL).

9. Drill perfect 4th, perfect 5th, major 6th, minor 6th, minor 7th (Lh and hL).

10. Drill minor 7th and major 7th (Lh and hL).

11. Drill major 6th, minor 6th, major 7th, minor 7th, tritone (hL and Lh).

12. Drill all intervals (Lh and hL).

Structure and sequence are provided through the student recording sheets. The instructor fills in:

the student's name

the number of problems to do each session

the total needed for mastery

the sequence of instruction

At each computer session students use the Recording Sheet for the directions the instructor has filled in at the top. After work is finished on each program, students enter their scores and mark NO if mastery is not achieved and repeat the session. If mastery is achieved, they mark YES and move on to the program that is next in the sequence by returning to the menu and

1. pressing the number of the new program, or

2. selecting the END option on the menu and inserting a different diskette.

MUSIC VIA COMPUTER

Specific Topic: ATARI capabilities on Music Volume I, II and III

Type: Demonstration

Reading Level: 7-8 (Dale-Chall)

DESCRIPTION...

INTRODUCTION acquaints the student with the ATARI computer in a non-threatening setting. It also demonstrates the capabilities that will be used in the other programs.

OBJECTIVES...

1. to become familiar with the operation of the ATARI Computer
2. to learn how to use the ATARI keyboard

INTRODUCTION

BACKGROUND INFORMATION...

Microcomputer capabilities make music theory a fruitful area for computer-enhanced curriculum. Visual and listening skills are combined in the drill and practice routines presented for mastery of music fundamentals. This program demonstrates the use of high resolution graphics and tone and does not require prior work with computers.

SAMPLE RUNS

THE COMPUTER
CAN
DISPLAY TEXT RAPIDLY

However, you will still be able to read at your own pace and learn to recognize musical terms like these...
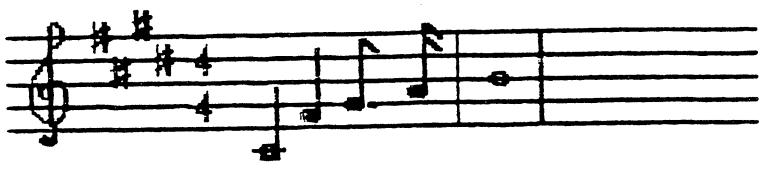
Allegro	Al Segno
Adagio	Cantabile
Dolore	Crescendo
Piano	Forte

Press RETURN to continue.

After a brief introduction to the music theory diskettes, students see an example of the text.

EXAMPLES OF SCREEN OUTPUT

THE COMPUTER
CAN
DISPLAY MUSIC NOTATION



In some of the programs you will see notes, key signatures, and other music symbols.

Press RETURN to continue.

Students hear tones generated by the microcomputer and see music symbols displayed on the screen.

C O U N T I N G

RHYTHM

Specific Topic: Time Signatures, Note and Rest Types, Counting

Type: Drill and Practice

Reading Level: 5-6 (Dale Chall)

DESCRIPTION...

COUNTING provides drill on time signatures, note and rest types, and counting. The computer displays a measure which could be completed by adding one note or rest. The student must determine the type of note or rest which should be added. The time signatures to be used are the choice of the student.

OBJECTIVES...

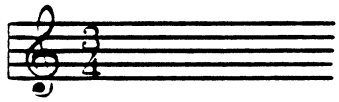
1. to interpret the meaning of time signatures
2. to determine the number of beats a given note should be held in a specific time signature

BACKGROUND INFORMATION...

Requisite to working with this program is the ability to recognize the various note types and to determine their value in a time signature where a quarter note gets one beat (see NOTE TYPES).

The number of beats a particular note or rest is held depends on two factors: the note type and the time signature.

The time signature is the pair of numbers placed next to the clef at the beginning of a composition. The top number tells the number of beats in the measure, and the bottom number indicates which type of note receives one beat. In the example below:



the 3 indicates that there are 3 beats in a measure and the 4 indicates that a quarter note gets one beat. Had the time signature been 3/8, an eighth note would receive one beat.

Some of the time signatures seen in music are:

4/4 3/4 2/4 5/4 6/4 7/4 3/2 6/8 3/8 9/8

The time signatures 6/8, 9/8, and 12/8 usually indicate a **compound** rather than simple meter. In a compound meter, the composer uses the **dotted quarter note** as the type of note which receives one beat. Conceptually, the time signature 9/8 could be written as 3/♩., where there are three beats per measure and a dotted quarter note receives one beat. Since a dotted quarter note is equivalent to three eighth notes, the compound time signatures 6/8, 9/8, and 12/8 have 2, 3, and 4 beats per measure, respectively.

USE IN AN INSTRUCTIONAL SETTING...

Instructors should fill in the top of Handout 1, the recording sheet for COUNTING, before students are sent to the computer. Space is provided for recording results for six sessions on COUNTING. COUNTING is at Level Two of the suggested sequence of instruction outlined in the General Description for the music theory programs.

1

COUNTING RECORDING SHEET

Name _____

Time Signatures to Use:

A. ___2/4 C. ___4/4 E. ___6/4 G. ___6/8 L. ___12/8
B. ___3/4 D. ___5/4 F. ___3/8 H. ___9/8 J. ___All

Number of problems to do _____ (maximum 10 per time signature)

Total correct needed for mastery _____

Session _____

Number Tried _____

Number Correct _____

Date _____

Session _____

Number Tried _____

Number Correct _____

Date _____

Session _____

Number Tried _____

Number Correct _____

Date _____

Session _____

Number Tried _____

Number Correct _____

Date _____

Session _____

Number Tried _____

Number Correct _____

Date _____

Session _____

Number Tried _____

Number Correct _____

Date _____

MECC

SAMPLE RUNS

```
Enter the letter of each time
signature you want (one per line)
and Press RETURN after each entry.

When you are finished, press RETURN
to go on.

A.   2/4
B.   3/4
C.   4/4
D.   5/4
E.   6/4
F.   3/8
G.   6/8
H.   9/8
I.   12/8
J.   All of the above

Which time signature would you like?
```

Students select the time signatures to be used for the exercises. Any combination of those listed may be used.

EXAMPLES OF SCREEN OUTPUT

```
In each exercise, decide which note
would complete the measure.  Enter
your answers using the codes below.

Code      Note type

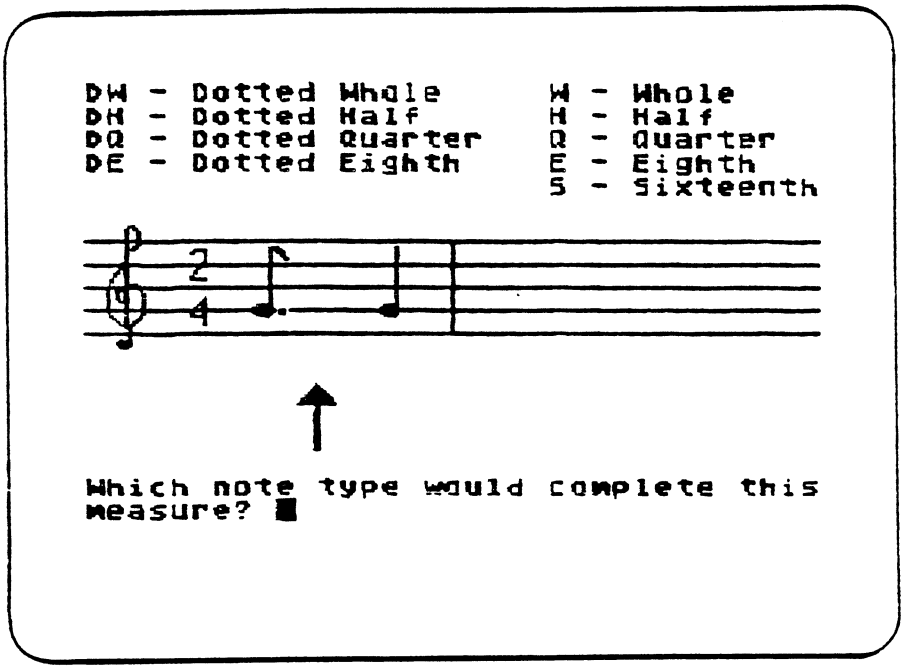
 DW       Dotted whole
 W        Whole
 DH       Dotted half
 H        Half
 DQ       Dotted quarter
 Q        Quarter
 DE       Dotted eighth
 E        Eighth
 S        Sixteenth

The abbreviations are displayed on the
screen while you answer the questions.

      Press RETURN to continue.
```

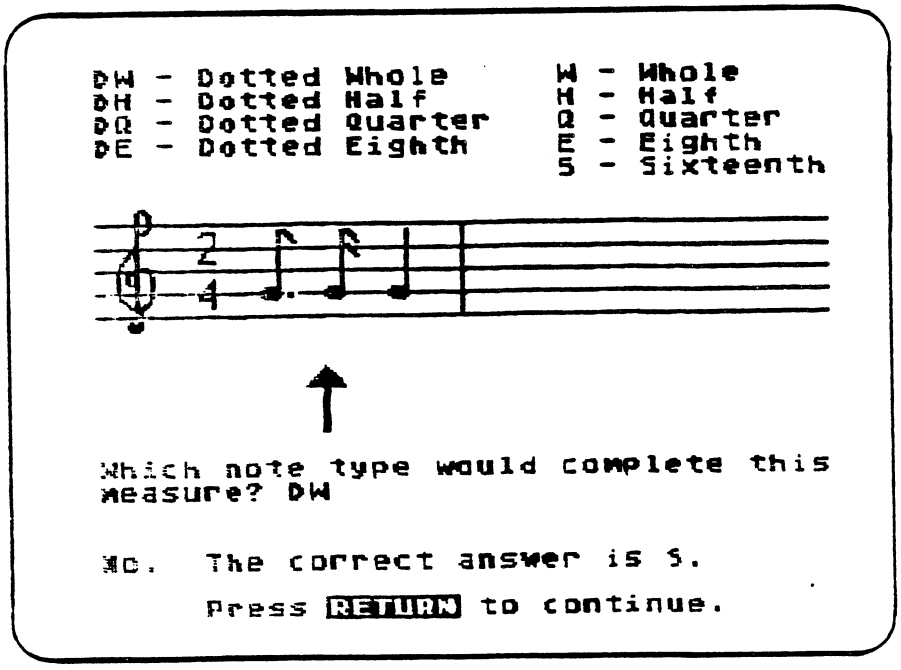
The abbreviations are shown for answering questions.

SAMPLE RUNS

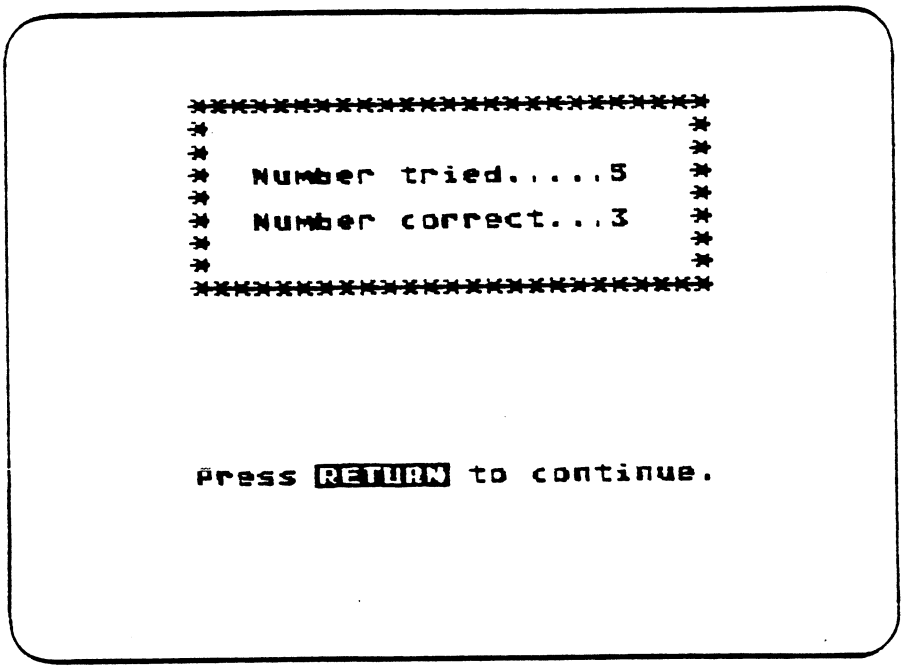


In each exercise, the computer displays a measure of music in a given time signature. Within the measure is a space with an arrow under it instead of a note. Students decide which single type of note or rest should go in the space to make the measure complete. Students get one chance to answer correctly.

EXAMPLES OF SCREEN OUTPUT



After the student answers, the correct note type appears in the measure above the arrow.



EXAMPLE OF SCREEN OUTPUT

The computer keeps track of which measures have been answered correctly. A measure is not re-presented until all measures have been answered correctly.

A U R A L I N T E R V A L S

PITCH

Specific Topic: Interval Recognition

Type: Aural Drill and Practice

Reading Level: 9-10 (Dale Chall)

DESCRIPTION...

AURAL INTERVALS provides drill in recognizing intervals by ear. The computer plays two pitches and the student must identify the interval between them. The student selects the intervals to be drilled and decides whether the notes are to be played low note to high note or high note to low note.

OBJECTIVES...

1. to identify by ear any interval from a minor 2nd to an octave
2. to identify by ear any interval from an octave to a minor 2nd

A U R A L I N T E R V A L S

BACKGROUND INFORMATION...

To work with this program students should be familiar with the concept of an interval and be able to identify one or two intervals by ear. The ability to identify intervals by ear is an essential skill for the music theory student. Melodic dictation (writing a melody after hearing it) depends almost totally on the ability to identify intervals. There are 12 intervals to be studied. These are:

Interval	Number of half steps between the notes	Played together, the two notes sound
minor 2nd	1	dissonant
major 2nd	2	dissonant
minor 3rd	3	harmonious
major 3rd	4	harmonious
perfect 4th	5	neither dissonant nor harmonious
augmented 4th/ diminished 5th	6	dissonant
perfect 5th	7	neither dissonant nor harmonious
minor 6th	8	harmonious
major 6th	9	harmonious
minor 7th	10	dissonant
major 7th	11	dissonant
octave	12	neither dissonant nor harmonious

USE IN AN INSTRUCTIONAL SETTING...

Instructors should fill in the top of Handout 2, the recording sheet for AURAL INTERVALS, before students are sent to the computer. Space is provided for recording results at six sessions for students using the suggested sequence of instruction.

If more than one session is needed to achieve the expected total needed for mastery, an additional Recording Sheet should be prepared for students.

2

AURAL INTERVALS RECORDING SHEET

Name _____

Intervals to Use:

1.	___Seconds	3.	___Fourths	5.	___Sixths	7.	___Octaves
2.	___Thirds	4.	___Fifths	6.	___Sevenths	8.	___All

Number of problems to do: 1. Low note to high note _____ (12 maximum)

2. High note to low note _____ (12 maximum)

3. A mixture of both _____ (12 maximum)

Total correct needed for mastery _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

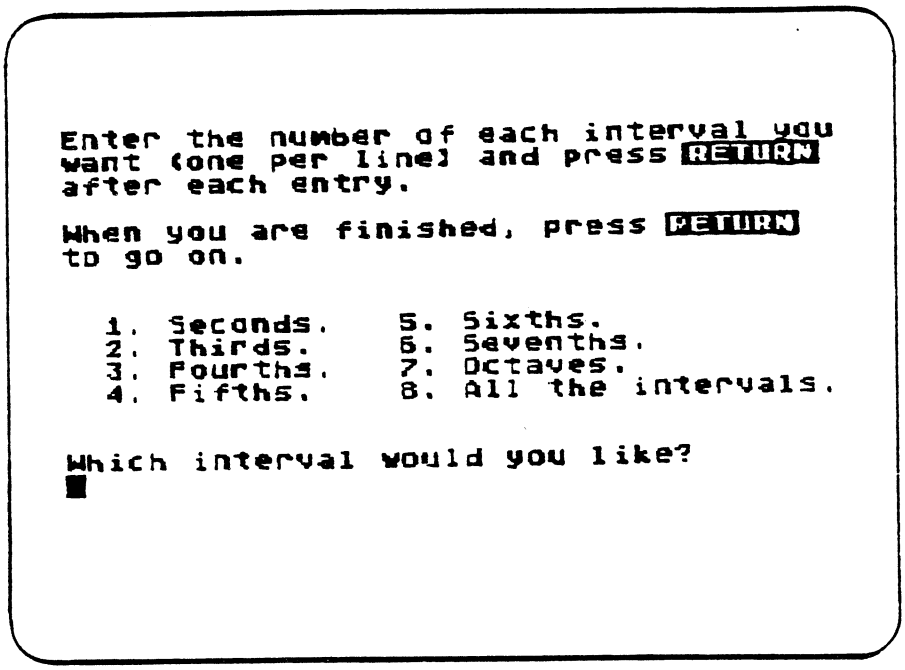
Number Tried _____
Number Correct _____
Date _____

Number Tried _____
Number Correct _____
Date _____

Number Tried _____
Number Correct _____
Date _____

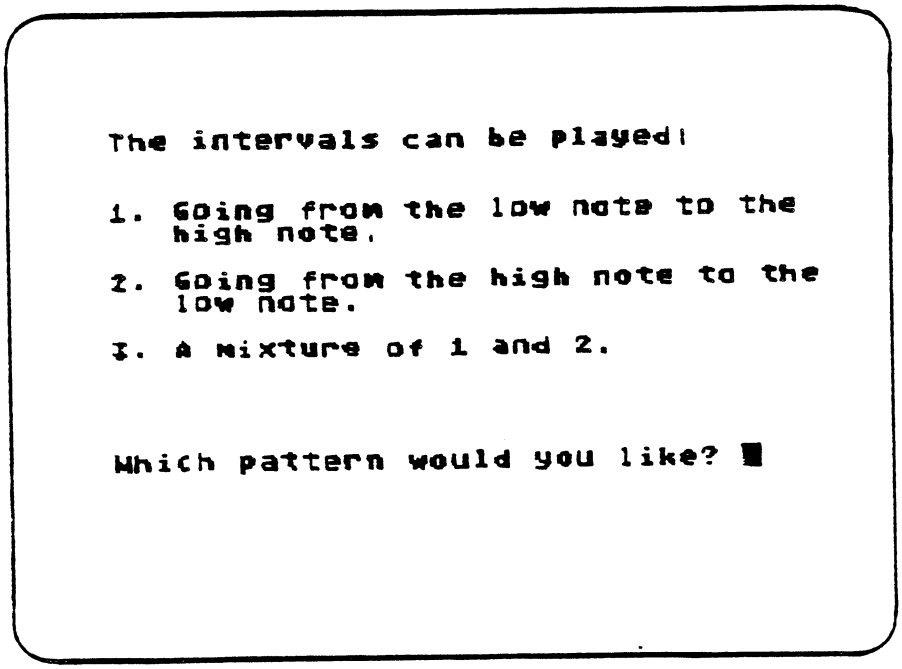
Number Tried _____
Number Correct _____
Date _____

SAMPLE RUNS



Students may practice any combination of intervals. A student who is learning to discriminate between major and minor 3rds can request just major and minor 3rds. A student who has mastered most intervals may want a mixture of all intervals.

EXAMPLES OF SCREEN OUTPUT



All exercises can be presented going from low note to high note, high note to low note or a mixture of both. Students also specify the number of exercises to be attempted.

SAMPLE RUNS

```
Press 'P' to hear
the interval played.
```

In each exercise, the computer plays an interval to be identified.

EXAMPLES OF SCREEN OUTPUT

```
Answer choices:  MIN2, MAJ2.

Press 'P' to play the interval again.

What is the interval? ■
```

Students can request to hear the interval as many times as they wish.

SAMPLE RUNS

```
Answer choices:  MIN2, MAJ2.



What is the interval? MAJ2
No. The correct answer is MIN2.


Press 'P' to play the interval again,
                or
     Press RETURN to continue.
```

Students get one chance to answer each question. If the response is wrong, the correct answer is displayed.

EXAMPLES OF SCREEN OUTPUT

```
**************************
*                        *
*                        *
*  Number tried.....4    *
*                        *
*  Number correct...2    *
*                        *
*                        *
**************************


Press RETURN to continue.
```

The computer records the number of problems tried and the number correctly answered.

V I S U A L I N T E R V A L S

PITCH

Specific Topic: Visual Interval Recognition

Type: Drill and Practice

Reading Level: 7-8 (Dale Chall)

DESCRIPTION...

VISUAL INTERVALS presents drill in recognizing intervals by sight. The computer displays two notes and the student determines the interval between them. The student specifies the maximum number of sharps or flats in the key signature and selects the intervals to be drilled.

OBJECTIVES...

1. to identify by sight any written interval
2. to identify the type of interval

V I S U A L I N T E R V A L S

BACKGROUND INFORMATION...

Working with this program requires familiarity with note names and key signatures. (Two programs, NAME THE NOTE and KEY SIGNATURES on Music diskette I, provide practice with these concepts.)

Although most interval identification is eventually done by rote recognition, students can be helped to learn intervals by using the following system.

There are two parts to the name of an interval. The first part is a word like major, minor, perfect, augmented, or diminished, and the second part is related to a number such as 2nd, 3rd, 4th, etc.

The second part of the name is easy because it can be determined by sight. If an interval looks like a 2nd, it is a 2nd. For example:

Interval		
G	to	A
G	to	A^b
G^b	to	A^b
G#	to	A
G#	to	A#

These are all 2nds. These intervals do not all sound alike, but since they move from a G to an A, they are, nevertheless, 2nds.

It is more difficult to identify the type of 2nd. The type of interval is determined by the number of half steps between the two notes. Below is a chart showing the number of half steps and the most common interval names.

Number of half steps	Interval
1	minor 2nd
2	major 2nd
3	minor 3rd
4	major 3rd
5	perfect 4th
6	augmented 4th/diminished 5th
7	perfect 5th
8	minor 6th
9	major 6th
10	minor 7th
11	major 7th

BACKGROUND INFORMATION (continued)

To determine the interval, look at the notes and count the half steps.

It is also interesting to investigate intervals and their inversions. The inversion of an interval is formed by reversing or inverting the order of the notes. For example:

> the interval formed by going from D up to G is a perfect 4th
> the interval going from G up to D is a perfect 5th

A perfect 5th, then, is the inversion of a perfect 4th, and a perfect 4th is the inversion of a perfect 5th.

Similarly,

> the interval formed by going from C up to E is a major 3rd, and the interval going from E up to C is the inversion of a major 3rd, namely a minor 6th.

Below is a list of intervals and their inversions:

Interval	Inversion
minor 2nd	major 7th
major 2nd	minor 7th
minor 3rd	major 6th
major 3rd	minor 6th
perfect 4th	perfect 5th
augmented 4th	diminished 5th
diminished 5th	augmented 4th
perfect 5th	perfect 4th
minor 6th	major 3rd
major 6th	minor 3rd
minor 7th	major 2nd
major 7th	minor 2nd

USE IN AN INSTRUCTIONAL SETTING...

Instructors should fill in the top of Handout 3, the recording sheet for VISUAL INTERVALS, before students are sent to the computer. Space is provided for recording results at six levels for students using the suggested sequence of instruction outlined in the General Description for the music theory programs.

3

VISUAL INTERVALS RECORDING SHEET

Name_____

Maximum Number of Flats or Sharps ____

Intervals to Use:

1. ____ Seconds
2. ____ Thirds
3. ____ Fourths
4. ____ Fifths
5. ____ Sixths
6. ____ Sevenths
7. ____ All (10 problems per interval set)

Total correct needed for mastery _____

Session ____
Number Tried ____
Number Correct ____
Date ____

Session ____
Number Tried ____
Number Correct ____
Date ____

Session ____
Number Tried ____
Number Correct ____
Date ____

Session ____
Number Tried ____
Number Correct ____
Date ____

Session ____
Number Tried ____
Number Correct ____
Date ____

Session ____
Number Tried ____
Number Correct ____
Date ____

Session ____
Number Tried ____
Number Correct ____
Date ____

SAMPLE RUNS

```
What is the maximum number of
sharps or flats you would like in
the key signature? ■

Enter a number between 0 and 7.
```

Students specify the maximum number of sharps or flats in the key signature.

EXAMPLES OF SCREEN OUTPUT

```
Enter the number of each interval you
want (one per line) and press RETURN
after each entry.

When you are finished, press RETURN
to go on.

     1. Seconds        5. Sixths
     2. Thirds         6. Sevenths
     3. Fourths        7. All
     4. Fifths

Which interval would you like?
■
```

Students select the intervals to be used in the exercises. Beginning students may concentrate on one type of interval such as 3rds, while more advanced students might select a mixture or all intervals.

SAMPLE RUNS

```
Two notes will be displayed on the
screen.  You are to determine the
interval between the notes.  When
answering, use the following
abbreviations:

        MIN2 - MINOR 2ND
        MAJ2 - MAJOR 2ND
        MIN3 - MINOR 3RD
        MAJ3 - MAJOR 3RD
        PER4 - PERFECT 4TH
        AUG4 - AUGMENTED 4TH
        DIM5 - DIMINISHED 5TH
        PER5 - PERFECT 5TH
        MIN6 - MINOR 6TH
        MAJ6 - MAJOR 6TH
        MIN7 - MINOR 7TH
        MAJ7 - MAJOR 7TH
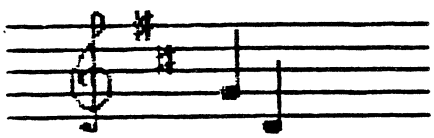
The abbreviations will be on the
screen while you are answering
the exercises.

     Press RETURN to continue.
```

Abbreviations for the intervals are shown and remain on the screen as problems are presented.

EXAMPLES OF SCREEN OUTPUT

```
MI2  -Minor 2nd          MA2  -Major 2nd
MI3  -Minor 3rd          MA3  -Major 3rd
P4   -Perfect 4th        A4   -Augmented 4th
D5   -Diminished 5th     P5   -Perfect 5th
MI6  -Minor 6th          MA6  -Major 6th
MI7  -Minor 7th          MA7  -Major 7th
```



```
What is the interval? MI3

No, the correct answer is P4.

     Press RETURN to continue.
```

In each exercise, the computer displays two notes. Students get one try to identify the interval between the notes. If the response is wrong, the correct answer is displayed.

W R O N G N O T E

PITCH

Specific Topic: Aural and Visual Pitch Patterns

Type: Drill and Practice

Reading Level: 5-6 (Dale-Chall)

DESCRIPTION...

WRONG NOTE provides practice in comparing written and performed pitch patterns.

OBJECTIVES...

1. to hear discrepancies in written pitch patterns
2. to hear discrepancies in performed pitch patterns

WRONG NOTE

BACKGROUND INFORMATION...

To work with this program, students should have some skills in interval recognition, both aural and visual. (See AURAL INTERVALS and VISUAL INTERVALS.) This program does not introduce new concepts, but rather reinforces concepts learned in other programs. The computer displays and then plays a pattern of five notes. When played, one of the notes will be either a whole or half step off. Students decide which note was "wrong." They also specify the maximum number of sharps or flats in the key signature and the maximum size of the intervals in the patterns.

USE IN AN INSTRUCTIONAL SETTING...

Instructors should fill in the top of Handout 4, the recording sheet for WRONG NOTE, before students are sent to the computer. Space is provided for recording results at seven levels for students using the suggested sequence of instruction outlined in the General Description for the music theory programs.

WRONG NOTE RECORDING SHEET

Name _____

	Largest Interval	Greatest Number of Sharps or Flats	
Number of problems to do: (10 problems maximum)	2nds	_____ sharps	_____ flats
	3rds	_____ sharps	_____ flats
	4ths	_____ sharps	_____ flats
	5ths	_____ sharps	_____ flats
	6ths	_____ sharps	_____ flats
	7ths	_____ sharps	_____ flats
	Octave	_____ sharps	_____ flats

Total correct needed for mastery _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

SAMPLE RUNS

```
What is the largest interval you want
in the phrase? ■
```

After a brief description of the program, students specify the maximum number of flats and sharps in the key signatures and the largest interval to be used in the patterns.

EXAMPLES OF SCREEN OUTPUT

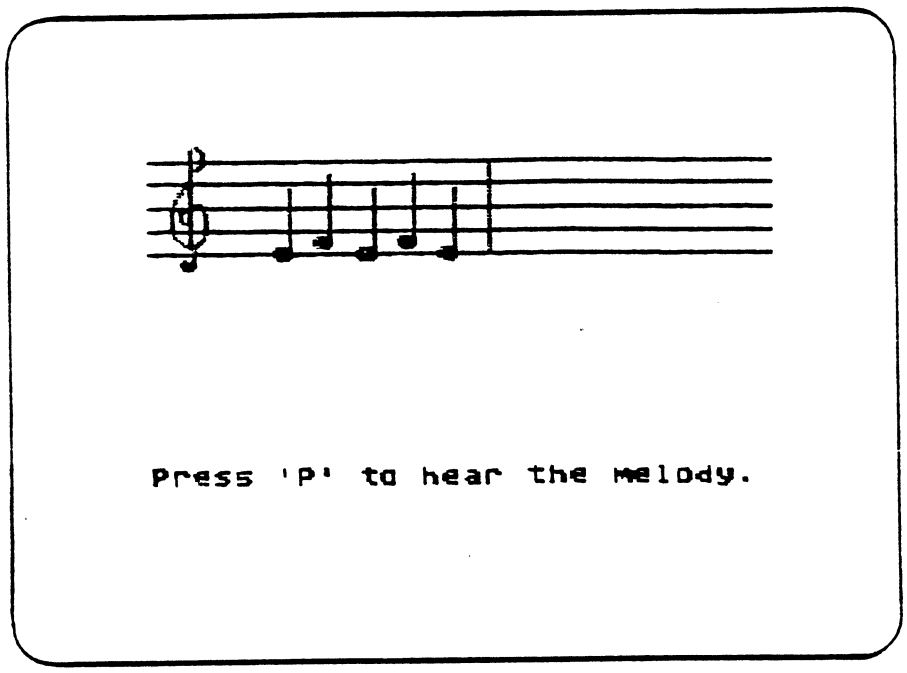
```
In the exercises that follow, you
will see a five-note phrase of music.
Study the phrase.  When you are
familiar with it, press the RETURN key
and the computer will play the phrase
with one incorrect note.  The
incorrect note will not be the first
note.  You will be asked to identify
which of the notes (2-5) is incorrect.


      Press RETURN to continue.
```

The procedure for identifying the wrong note is given. The larger the intervals, the more difficult the problems will be.

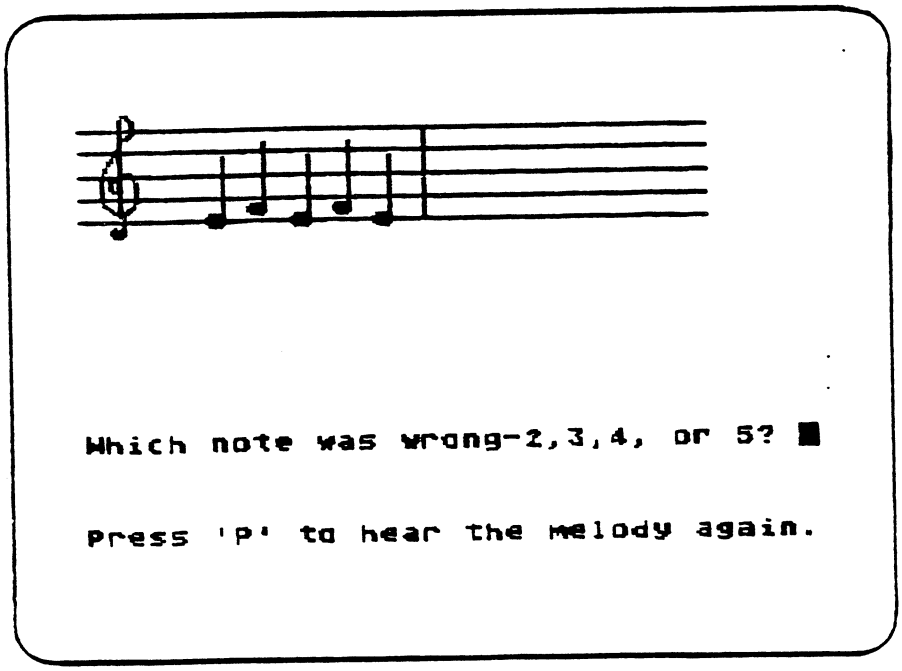
W R O N G N O T E

SAMPLE RUNS



The computer displays a five-note pattern for students to study and to hear played. When played, one of the notes will not match the written note. Students can hear the phrase played as many times as needed to identify which note is "wrong."

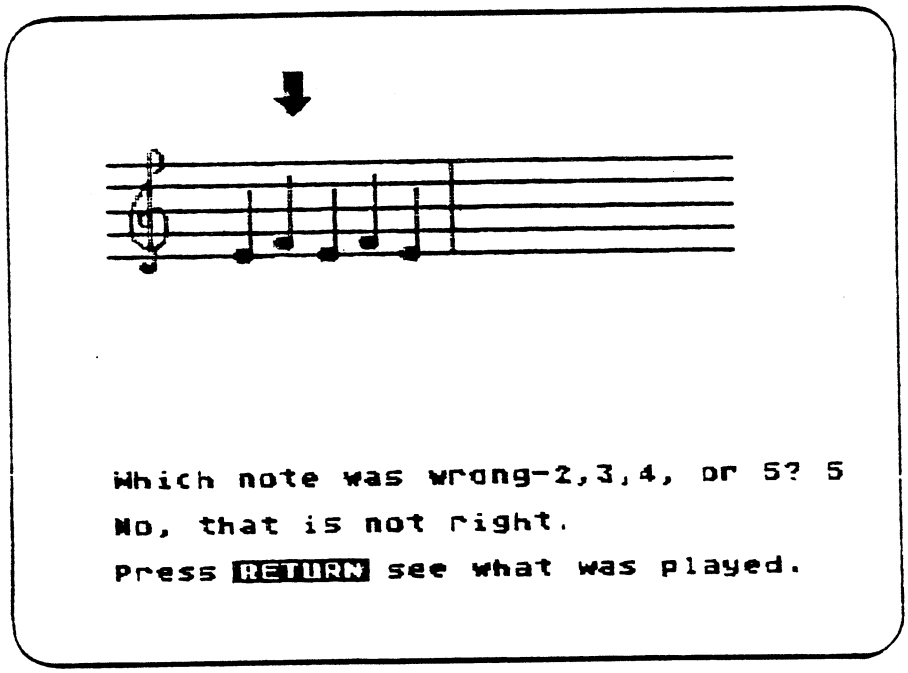
EXAMPLES OF SCREEN OUTPUT



For each problem, students get one try to identify the wrong note.

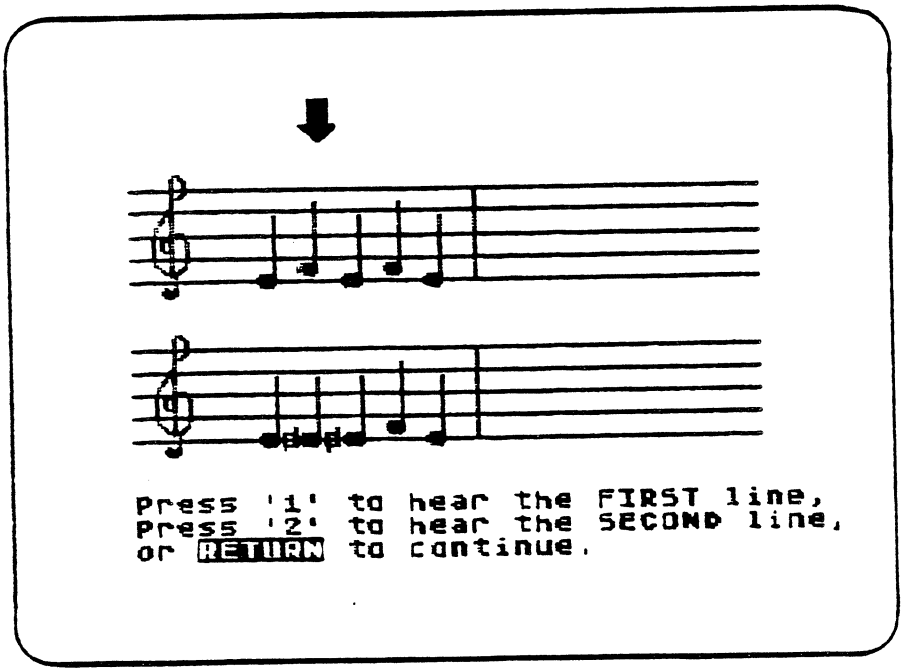
W R O N G N O T E

SAMPLE RUNS



After students answer, the computer displays the passage which was played. An arrow points to the "wrong" note.

EXAMPLES OF SCREEN OUTPUT



Students can hear either phrase repeated.

M I S S I N G N O T E

PITCH

Specific Topic: Melodic Dictation by Sight and Sound

Type: Drill and Practice

Reading Level: 7-8 (Dale Chall)

DESCRIPTION...

MISSING NOTE provides drill in elementary melodic dictation through seeing and hearing a musical pattern and identifying the missing note.

OBJECTIVES...

to determine the pitch of a missing note in a pattern that is **seen** on the screen after **hearing** all of the notes in the pattern played

M I S S I N G N O T E

BACKGROUND INFORMATION...

To work with this program students should know the names of notes (see NAME THE NOTE) and recognize some intervals by ear and sight (see AURAL INTERVALS and VISUAL INTERVALS). The program does not introduce new concepts, but reinforces those learned in other programs.

Skills learned through MISSING NOTE provide a good background for starting work on music dictation. The computer displays a pattern consisting of four notes and a space. The space represents a missing note and may occur anywhere in the pattern. The pattern is played, and based on hearing it, the student must identify the name of the missing note. The student specifies the maximum number of sharps or flats in the key signature and the maximum size of the intervals in the patterns. Students can ask to have the patterns replayed as needed.

Since all patterns are generated through the use of random numbers, MISSING NOTE has an almost endless number of possible exercises.

USE IN AN INSTRUCTIONAL SETTING...

Instructors should fill in the top of Handout 5, the recording sheet for MISSING NOTE, before students are sent to the computer. Space is provided for recording results at seven levels for students using the suggested sequence of instruction outlined in the General Description for the music theory programs.

MISSING NOTE RECORDING SHEET

Name _____

	Largest Interval	Greatest Number of Sharps or Flats	
Number of problems to do: (30 problems maximum)	2nds	_____ sharps	_____ flats
	3rds	_____ sharps	_____ flats
	4ths	_____ sharps	_____ flats
	5ths	_____ sharps	_____ flats
	6ths	_____ sharps	_____ flats
	7ths	_____ sharps	_____ flats
	Octave	_____ sharps	_____ flats

Total correct needed for mastery _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

Session _____
Number Tried _____
Number Correct _____
Date _____

SAMPLE RUNS

```
In this drill, you will see a five
note phrase of music printed on
the screen.  Four of the notes are
normal notes.  The 'missing note'
is indicated by a space.  Study the
phrase.  When you are ready, press
the return key to hear the phrase
played.  Based on hearing the phrase,
try to identify the missing note.

     Press RETURN to continue.
```

The procedure is given for identifying the missing note.
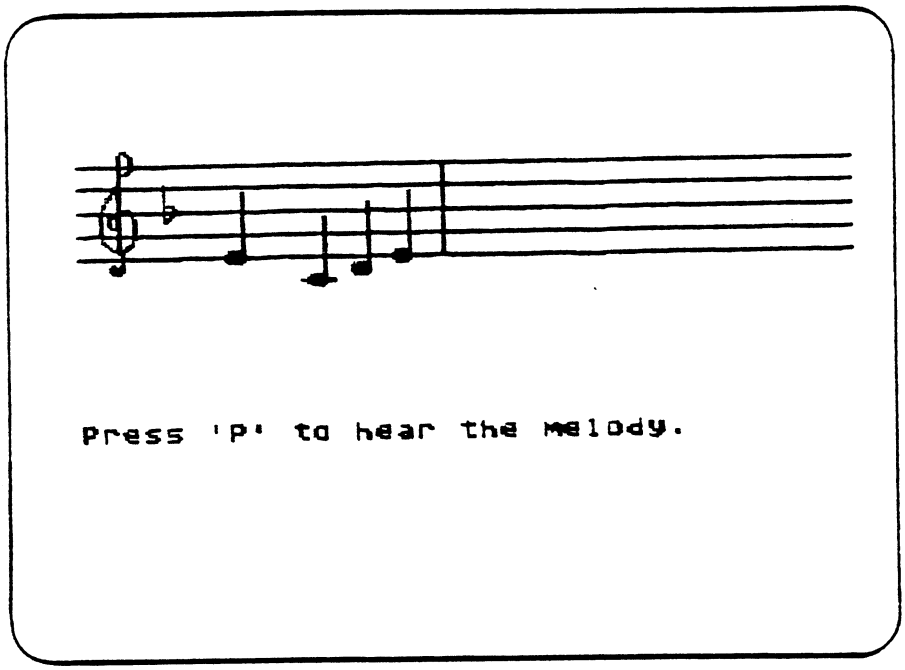
EXAMPLES OF SCREEN OUTPUT

```
What is the largest interval you want
in the phrase? 10

That interval value is not allowed.
Enter a number between 2 and 7.
```

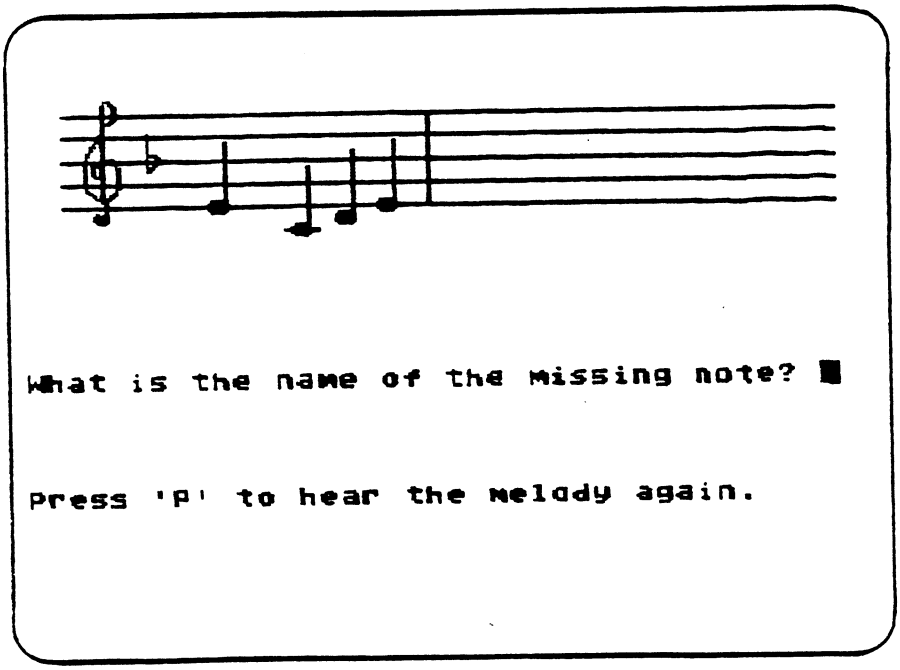
Students specify the maximum number of flats and sharps in the key signatures and the largest interval to be used in the patterns. The larger the intervals, the more difficult the problems.

SAMPLE RUNS



A pattern for five-notes is displayed. Four of the notes are shown and the fifth is a space which occurs in any position except first position.
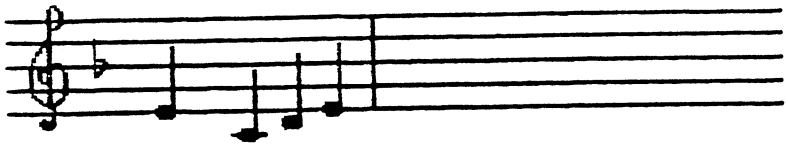
EXAMPLES OF SCREEN OUTPUT



After studying the pattern the student can hear it played as often as needed. The written pattern remains on the screen.

M I S S I N G N O T E

SAMPLE RUNS



```
What is the name of the missing note? ■
No, try again.

Press 'P' to hear the melody again.
```

The name of the missing note is entered. If the answer is wrong, the student gets a second try.

EXAMPLES OF SCREEN OUTPUT



```
What is the name of the missing note? G
No, the missing note was D.

  Press 'P' to hear the melody again,
     or press RETURN to continue.
```

After the student answers, the correct note appears in the blank space on the staff.

RHYTHM

Specific Topic: Basic Rhythm Patterns in 4/4 Time

Type: Drill and Practice

Reading Level: 7-8 (Dale-Chall)

DESCRIPTION...

RHYTHM provides drill in comparing written and performed rhythm patterns. The computer displays a rhythm pattern and then plays three rhythm patterns. The student must decide which of the three patterns heard matches the pattern on the screen. The student may work with any of three sets of exercises.

OBJECTIVES...

1. to know how a given rhythm pattern should be played
2. to be able to identify basic rhythm patterns by ear

BACKGROUND INFORMATION...

To work with this program requires familiarity with various note types and their interpretations. (See NOTE TYPES and COUNTING.)

Students select exercises from one of the three sets of exercises:

Set 1 consists of exercises that have 3 to 5 notes, and use half, quarter, dotted quarter, and eighth notes.

Set 2 consists of exercises that have 5 or 6 notes, and use quarter and eighth notes. There is some syncopation.

Set 3 consists of exercises that have 6 or 7 notes, and use quarter, eighth, dotted eighth, and sixteenth notes. There is some syncopation.

The program has a total of 60 stored patterns - 20 for each set of exercises. (See Chart of Stored Patterns on the following page.) For each exercise the computer selects one of the patterns at random and displays it. The two distractors are selected at random from the list of stored patterns. The distractors will always have the same number of notes as the pattern on the screen.
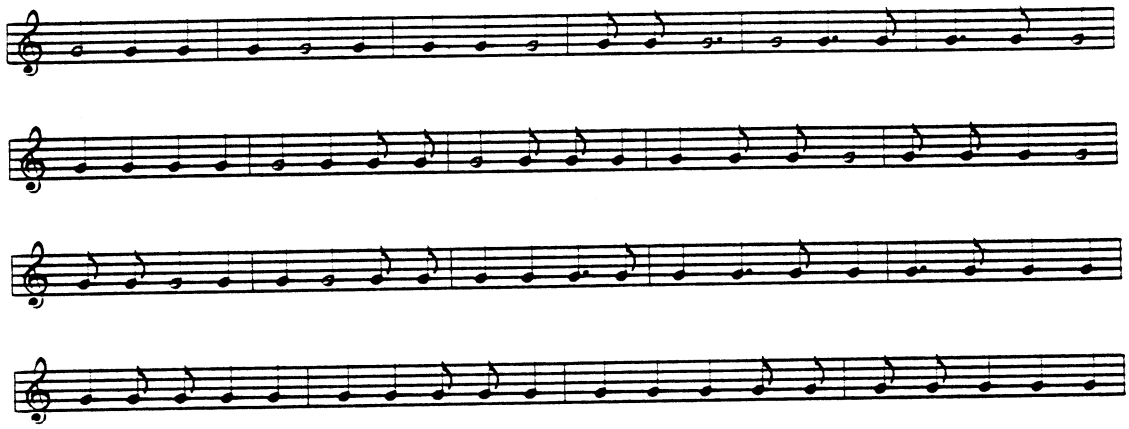
The computer keeps records of which patterns have been identified correctly. Once identified correctly, a pattern will not be presented again until <u>all</u> the other patterns have been identified correctly.

USE IN AN INSTRUCTONAL SETTING...
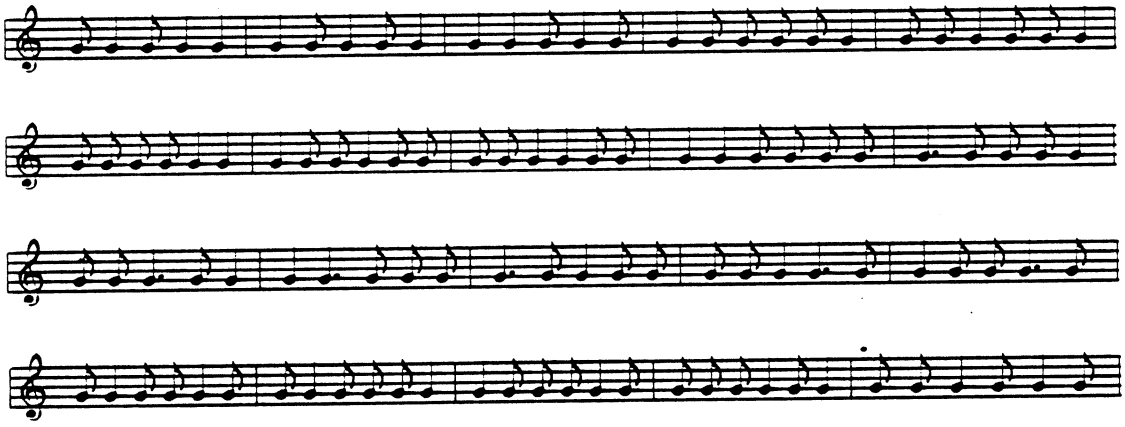
Instructors should fill in the top of Handout 6, the recording sheet for RHYTHM, before students are sent to the computer. Space is provided for recording results for two sessions on RHYTHM at levels three, four, and five of the suggested sequence of instruction outlined in the General Description for the music theory programs.

Chart of Stored Patterns

Set 1 Patterns



Set 2 Patterns



Set 3 Patterns



6

RHYTHM RECORDING SHEET

Name _____

Number of problems to do: Set 1 _____ (20 maximum)

Set 2 _____ (20 maximum)

Set 3 _____ (20 maximum)

Total correct needed for mastery _____

Session ____
Set 1: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 1: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 2: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 2: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 3: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 3: Number Tried ____
Number Correct ____
Date ____

SAMPLE RUNS

```
You may select from one of three sets
of exercises:

1.  The measures have 3 to 5 notes
    and consist of half, quarter,
    dotted quarter, and eighth notes.

2.  The measures have 5 or 6 notes,
    and use quarter and eighth notes.

3.  The measures have 6 or 7 notes
    and use quarter, eighth, dotted
    eighth, and sixteenth notes.


Which set of exercises do you want? _
```

In each exercise students see two measures of music with a rhythm pattern which varies from exercise to exercise. The student studies the pattern and chooses from three patterns the computer can play, one of which matches the pattern on the screen.
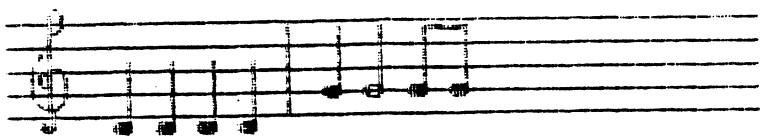
EXAMPLES OF SCREEN OUTPUT

```
You will be asked which pattern you
would like to hear.  Respond with a
1, 2, or 3.  You may listen to each
pattern as many times as you wish.
Type 'A' when you know which pattern
is correct.  Then type your answer.


      Press RETURN to continue.
```

Students can hear the patterns as many times as needed. When they know which of the patterns they heard matches the pattern they see on the screen, they type the letter "A" to indicate they know the answer.

SAMPLE RUNS
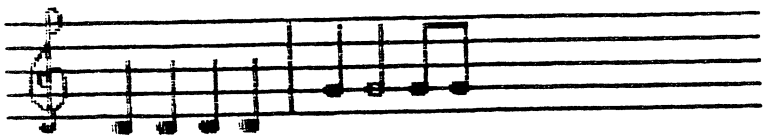


```
Which pattern is correct? 1
No, the correct answer is 2.
Press 'P' to hear the correct pattern.

      Press RETURN to continue.
```

Students enter the number of the pattern which matches the pattern on the screen and get one chance to answer each problem.

EXAMPLES OF SCREEN OUTPUT



```
Which pattern is correct? 1
Correct!!!
Press 'P' to hear the correct pattern.

      Press RETURN to continue.
```

After answering, the student can have the correct pattern re-played.

RHYTHM

Specific Topic: Rhythm Patterns in 4/4 Time

Type: Drill and Practice

Reading Level: 7-8 (Dale-Chall)

DESCRIPTION...

RHYTHM PLAY provides drill in performing rhythm patterns. A pattern is displayed on the screen and the student tries to "play" the pattern using the "N" key. The student may select problems from any of three sets of exercises.

OBJECTIVES...

1. to tap out a variety of rhythm patterns in 4/4 time with accuracy
2. to recognize an incorrect rhythm pattern

R H Y T H M P L A Y

BACKGROUND INFORMATION...

Working with this program requires a familiarity with various note types and their interpretation and an ability to identify some simple rhythm patterns by ear. (See NOTE TYPES, COUNTING, and RHYTHM.)

Students select from one of three sets of exercises:

Set 1 consists of exercises that have 3 to 5 notes and use half, quarter, dotted quarter, and eighth notes.

Set 2 consists of exercises that have 5 or 6 notes, and use quarter and eighth notes. There is some syncopation.

Set 3 consists of exercises that have 6 or 7 notes and use quarter, eighth, dotted eighth and sixteenth notes. There is some syncopation.

The program has a total of 60 stored patterns - 20 for each set of exercises. (See RHYTHM, Chart of Stored Patterns.) For each exercise, the computer selects one of these stored patterns and keeps records of which patterns have been played correctly. Once the student plays a pattern correctly, that pattern will not be presented again until <u>all</u> other patterns have been played correctly.

USE IN AN INSTRUCTIONAL SETTING...

Instructors should fill in the top of Handout 7, the recording sheet for RHYTHM PLAY before students are sent to the computer. Space is provided for recording results for two sessions at levels three, four, and five of the suggested sequence of instruction outlined in the General Description for the music theory programs.

RHYTHM PLAY RECORDING SHEET

Name _____

Number of problems to do: Set 1 _____ (20 maximum)

Set 2 _____ (20 maximum)

Set 3 _____ (20 maximum)

Total correct needed for mastery _____

Session ____
Set 1: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 2: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 3: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 1: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 2: Number Tried ____
Number Correct ____
Date ____

Session ____
Set 3: Number Tried ____
Number Correct ____
Date ____

SAMPLE RUNS

```
You may select from one of three sets
of exercises:

1.  The measures have 3 to 5 notes
    and consist of half, quarter,
    dotted quarter, and eighth notes.

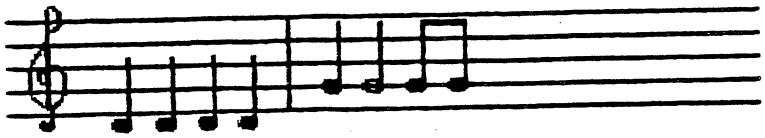
2.  The measures have 5 or 6 notes,
    and use quarter and eighth notes.

3.  The measures have 6 or 7 notes
    and use quarter, eighth, dotted
    eighth, and sixteenth notes.

Which set of exercises do you want? 
Enter 1, 2, or 3.
```

The student selects from one of three sets of exercises and specifies the number of problems to be attempted.

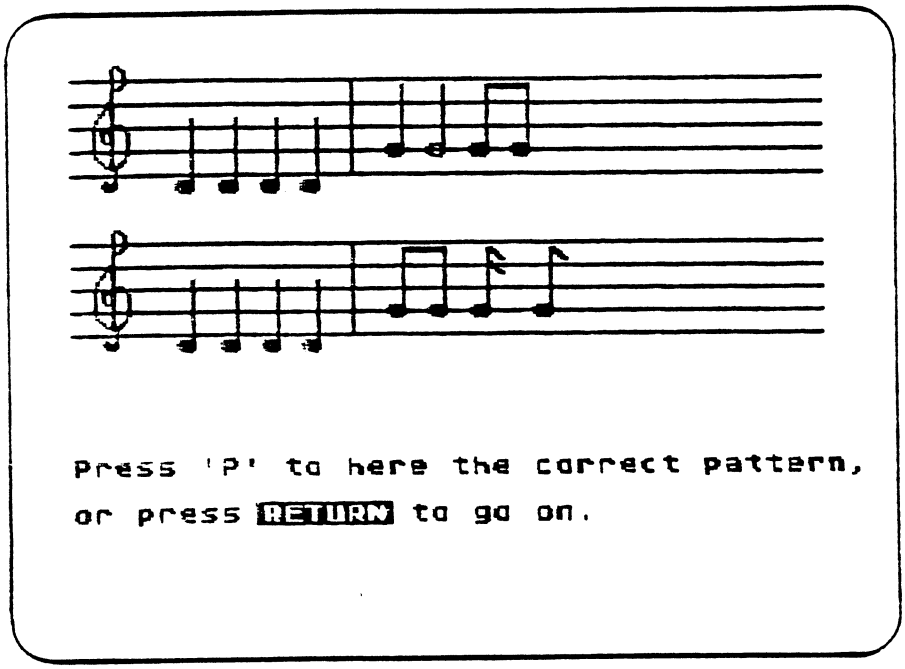
EXAMPLES OF SCREEN OUTPUT



```
Play the pattern using the 'M' key.
```

For each exercise the microcomputer displays two measures of music. The rhythm pattern varies from exercise to exercise. Students study the pattern and then try performing it by tapping it out, using the Space Bar. The first measure is used to determine the student's tempo. Students may play the patterns at any tempo.

SAMPLE RUNS



If the student plays the pattern incorrectly, the computer displays what the student played. The student can hear the pattern played correctly.

EXAMPLE OF SCREEN OUTPUT

APPENDICES

GETTING TO KNOW YOUR ATARI COMPUTER

Equipment

ATARI COMPUTER CONSOLE: The computer and keyboard.

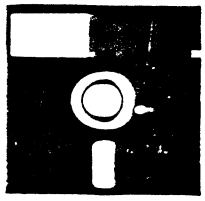
BASIC LANGUAGE CARTRIDGE: A cartridge (containing the BASIC computer language) that is inserted into the console above the keyboard.



TELEVISION: A television set used to display information.

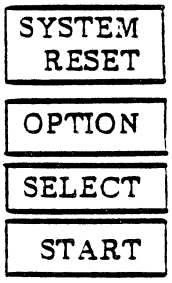
DISK DRIVE: A unit that holds and reads the diskette.

DISKETTE: A 5¼ inch "record" that contains a series of computer programs.



ATARI Computer Keyboard





The ATARI Computer keyboard looks much like the keyboard of a typewriter. Some special keys are noted below:



RETURN Key—When you are finished typing either a response to a question or a line in a program, you send the information to the computer by pressing the **RETURN** key.



BACK S (Backspace) Key—Each time you press the **BACK S** key, the cursor backs up one space and erases each letter it passes over. This feature allows you to correct typographical errors easily.



BREAK Key—Press this key to stop the execution of a program. The program will remain in the computer memory and may be run again. If **BREAK** doesn't work to stop the program, try the **RESET** key.

SYSTEM RESET

RESET Key—Like the **BREAK** key, the **RESET** key stops program execution. It also clears the screen. To restart, type RUN"D:HELLO".



ESC (Escape) Key—While you are using MECC diskettes, press the **ESCAPE** key in response to a question to stop program execution. The computer will ask whether you wish to run the program again. If you do not, the computer will display the diskette menu, and you may choose another program.



SHIFT Key—Use the computer SHIFT key like that of a typewriter. If a key displays two characters, you may hold down the **SHIFT** key while typing to print the upper character. For example, holding down the **SHIFT** key and typing  will print !.



CAPS/LOWR (Capitals/Lower case) Key—When you press this key, the computer begins typing in lower-case letters. To capitalize individual letters, you must hold down the **SHIFT** key as with a typewriter. To switch back to all capitals, hold down the **SHIFT** key, and press the **CAPS/LOWR** key again.



CTRL (Control) Key—Hold down the **CONTROL** key while pressing another key if indicated by the computer instructions.

Keys That Can Cause Confusion



0 (Zero)—The zero is on the top row of keys. Do not use the letter O interchangeably with this number key.



1 (One)—The number one is on the top row of keys. Do not use it interchangeably with a lower-case L (l).

USING A MECC DISKETTE

Using the Computer

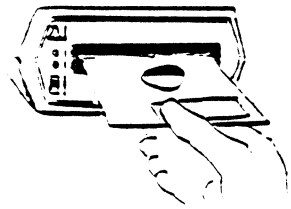
1. Make certain that the ATARI Computer, BASIC language cartridge, disk drive and television are plugged in and connected to each other properly. (See the ATARI Computer New User's Guide by MECC for detailed instructions.)

2. Turn on the television.

3. Turn on the disk drive. The PWR ON and BUSY lights will come on. After about 10 seconds the BUSY light will go off, and the whirling sound will stop.

   Turn on the disk drive before you turn on the computer.

4. Press the rectangular release button below the disk drive to open the door. Insert a diskette into the disk drive, exposed oval part first, with the diskette label up. Diskettes are sensitive to dust, heat, cold and magnetic fields, so handle them with care. (See the User's Guide for information on diskette care.)



5. Close the door on the disk drive.

6. Turn on the ATARI Computer. The power switch is located on the right side near the power cord. The disk BUSY light will turn on, and you will hear a whirling sound from the disk drive.

   If the disk BUSY light does not go off in about 10 seconds, turn the computer off, and make sure that the diskette is placed correctly in the disk drive. Then turn the computer on.

   If no display appears on your television screen at this point, and the television is set at channel 2 or 3, the computer may be set for the wrong channel. The channel select switch is on the back of the ATARI 400 Computer. Switch it to the opposite position.

7. A MECC logo will appear on the screen with the diskette name. Then a "menu" will appear. The menu gives a list of programs on the diskette. To run a program, type the number shown in front of the program name, then press the **RETURN** key. To access any available teacher options on the diskette, hold down the CTRL key and type A.

8. Follow the directions given in the program. Remember to press the **RETURN** key after each answer.

9. To return to the menu while running a program, press the **ESC** (Escape) key in response to any question.

   The screen will then ask whether the current program is to be run again or not. If not, the menu is automatically displayed.

10. To use a different diskette, select the END option from the menu, and follow the directions on the screen.

Turning Off The Computer

1. Take the diskette out of the disk drive, and store it in its protective envelope.

2. Turn off the ATARI Computer, the disk drive and the television.

DEFINITIONS OF TERMS

BACKGROUND INFORMATION—The information that explains or enriches program content or provides technical information on the program.

COURSEWARE—A collection of computer programs together with accompanying support materials.

DOCUMENTATION—The written material for the teacher to use with the computer program (also called a support booklet or support materials).

DRILL AND PRACTICE—A computer program that provides repetitive practice on a skill or a set of facts.

EDUCATIONAL GAME—A computer program that presents an instructional purpose in a game format.

GRADE LEVEL—The range of grades for which the program was designed.

HANDOUTS—The pages of the support booklet that may be duplicated for student or teacher use.

MODULE—The package containing the computer program(s) and the support booklet.

OBJECTIVES—The results to be achieved by using the program and support materials.

PROBLEM SOLVING—A computer program that processes data for a problem defined by the student.

PROGRAM—The routines and operations that instruct the computer.

READING LEVEL—The readability of the text that appears on the computer screen.

SAMPLE RUNS—The pages of the support booklet that show examples of computer screen output and accompanying explanations to outline the program flow.

SELO—Some Essential Learner Outcomes prepared by the Minnesota State Department of Education. When applicable these are included with the objectives in MECC support booklets.

SIMULATION—A computer program that approximates a real-world environment for examination.

SUPPORT BOOKLET—The written material (also called documentation) that provides the information a teacher may need to use the program in a classroom.

TEACHER AID—A computer program designed to assist a teacher with classroom management tasks.

TUTORIAL—A computer program that provides new information to teach a concept and may include drill and practice.

MUSIC II - RHYTHM AND PITCH

TECHNICAL INFORMATION

INTRODUCTION
- Main Program: INTRO
- Binary Files: FFS.BIN
  MUSIC2.FNT

COUNTING
- Main Program: COUNT
- Overlay Files: COUNTOL.LST
  COUNTDEL.LST
- Binary Files: FFS.BIN
  MUSICB.FNT

AURAL INTERVALS
- Main Program: AURINT

VISUAL INTERVALS
- Main Program: VISINT
- Chains To: WNMAIN
- Binary Files: FFS.BIN
  MUSIC.FNT

WRONG NOTE
- Main Program: WRONGNT
- Chains To: VISINT2
- Binary Files: FFS.BIN
  MUSICC.FNT

MISSING NOTE
- Main Program: MISSNT
- Chains To: MNMAIN
- Binary Files: FFS.BIN
  MUSICC.FNT

RHYTHM
- Main Program: RHYTHM
- Chains To: RHYTHM2
- Binary Files: FFS.BIN
  MUSIC.FNT

RHYTHM PLAY
- Main Program: RPLAY
- Chains To: RPLAY2
- Binary Files: FFS.BIN
  MUSIC.FNT

CREDITS

MUSIC II: RHYTHM AND PITCH

Music II: Rhythm and Pitch for the ATARI Computer was converted from a series of programs developed by Linda Borry Hausmann, formerly of the MECC staff.

Testing and evaluation of the original programs with students was greatly aided by Elwood Johnson of Minneapolis Roosevelt High School.

Ona Pinsonnault, an instructor of music theory at Normandale Community College, Minneapolis, served as consultant and principal reviewer for the project.

The diskette for the ATARI Computer was programmed by Cynthia Schroeder and Lee Jensen of the MECC staff.

The support booklet was compiled by Shirley Keran of the MECC staff.

This module is a production of the MECC Instructional Services Division.

MECC INSTRUCTIONAL SERVICES ACTIVITIES

PURPOSE: The primary purpose of the Minnesota Educational Computing Consortium (MECC) is to assist users and educational member systems in coordinating and using computing resources through cooperative planning and decision making. MECC also provides current computing methods and materials.

SERVICES: All MECC activities in instructional computing are the responsibility of the Deputy Executive Director (Telephone: **612/638-0610**). Direct any questions related to MECC policy, procedures, or regulations to this office. The MECC Instructional Services Division is organized as follows:

Instructional Systems Development—This group is responsible for the production, coordination, and refinement of MECC instructional computing courseware products, computer programs, and their related user support material. Direct any questions on operations within this area to the Manager, Instructional Systems Development (Telephone: **612/638-0613**).

Technical Services—This group is responsible for operation and operating systems maintenance of the MECC Timeshare System (MTS), a 400+ port, all-purpose, multiple language computer, which serves all Minnesota public higher education institutions and 300 school districts. Technical Services also establishes and maintains the MTS telecommunications network. Direct any questions on operations within this area to the Manager, Technical Services (Telephone: **612/638-0636**).

User Services—This group is responsible for timeshare and microcomputer user communications and training and the distribution of computing equipment and MECC courseware products. A staff of instructional computing coordinators is located throughout Minnesota to promote and facilitate computer usage. Direct all questions on operations in this area to the Manager, User Services (Telephone: **612/638-0612**).

GENERAL INFORMATION: MECC provides the above information to assist individuals who wish to contact the MECC office with specific questions. Direct all written requests for information to the appropriate office at MECC, 2520 Broadway Drive, St. Paul, MN 55113. The following two items address many routine questions:

MECC Publications and Programs Price List
MECC distributes this free list upon request and suggests that you obtain it quarterly. Contact the MECC Publications Office (Telephone: **612/638-0627**).

MECC USERS Newsletter
MECC distributes this free newsletter regularly during the school year to individuals on the mailing list. Contact the User Services Office (Telephone: **612/638-0608**).

All requests for visits to MECC must be scheduled in advance by calling **612/638-0606.**

Limited Warranty on Media and Hardware Accessories. We, Atari, Inc., guarantee to you, the original retail purchaser, that the medium on which the APX program is recorded and any hardware accessories sold by APX are free from defects for thirty days from the date of purchase. Any applicable implied warranties, including warranties of merchantability and fitness for a particular purpose, are also limited to thirty days from the date of purchase. Some states don't allow limitations on a warranty's period, so this limitation might not apply to you. If you discover such a defect within the thirty-day period, call APX for a Return Authorization Number, and then return the product along with proof of purchase date to APX. We will repair or replace the product at our option.

You void this warranty if the APX product: (1) has been misused or shows signs of excessive wear; (2) has been damaged by use with non-ATARI Home Computer products; or (3) has been serviced or modified by anyone other than an Authorized ATARI Computer Service Center. Incidental and consequential damages are not covered by this warranty or by any implied warranty. Some states don't allow exclusion of incidental or consequential damages, so this exclusion might not apply to you.

Disclaimer of Warranty and Liability on Computer Programs. Most APX programs have been written by people not employed by Atari, Inc. The programs we select for APX offer something of value that we want to make available to ATARI Home Computer owners. To offer these programs to the widest number of people economically, we don't put APX products through rigorous testing. Therefore, APX products are sold "as is," and we do not guarantee them in any way. In particular, we make no warranty, express or implied, including warranties of merchantability and fitness for a particular purpose. We are not liable for any losses or damages of any kind that result from use of an APX product.

For the complete list of current APX programs, ask your ATARI retailer for the APX Product Catalog

EVALUATION SHEET

Please comment on this manual and the accompanying diskette. MECC will carefully consider user suggestions and incorporate them into future documentation whenever practical.

COMMENTS ON COMPUTER PROGRAM

Diskette Name _____ Vol. No. _____ Version _____
Program Name _____

_____

_____

_____

_____

_____

_____

COMMENTS ON MANUAL

Title of Manual _____
Program Name _____
Page No. _____

_____

_____

_____

_____

_____

_____

From: Name _____
Institution _____
Address _____
_____ ZIP

Please detach and mail to MECC.

STAPLE

STAPLE

FOLD

FOLD

First Class
Postage
Necessary

Minnesota Educational Computing Consortium
Manager, Instructional Systems Development
2520 Broadway Drive
St. Paul, Minnesota 55113

FOLD

FOLD

APX ATARI® PROGRAM EXCHANGE
P.O. Box 3705
Santa Clara, CA 95055

Review Form

We're interested in your experiences with APX programs and documentation, both favorable and unfavorable. Many of our authors are eager to improve their programs if they know what you want. And, of course, we want to know about any bugs that slipped by us, so that the author can fix them. We also want to know whether our instructions are meeting your needs. You are our best source for suggesting improvements! Please help us by taking a moment to fill in this review sheet. Fold the sheet in thirds and seal it so that the address on the bottom of the back becomes the envelope front. Thank you for helping us!

1. Name and APX number of program.

2. If you have problems using the program, please describe them here.

3. What do you especially like about this program?

4. What do you think the program's weaknesses are?

5. How can the catalog description be more accurate or comprehensive?

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program:

_____ Easy to use
_____ User-oriented (e.g., menus, prompts, clear language)
_____ Enjoyable
_____ Self-instructive
_____ Useful (non-game programs)
_____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

8. What did you especially like about the user instructions?

9. What revisions or additions would improve these instructions?

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

11. Other comments about the program or user instructions:

From

STAMP

ATARI Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

[seal here]