

SOFTWARE DEVELOPMENT
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TO: Distribution
SUBJECT: AQUARIUS MUSIC DEVELOPMENT SOFTWARE

Attached is the information necessary to use TUNES, a software development tool for the Aquarius computer.

TUNES allows the user to enter musical sequences in textual form and then hear them played through the Aquarius single-bit sound port. It consists of a program on the VAX and a program in the Aquarius. The program in the Aquarius is compact enough to be used in the final game code, thus allowing the programmer to use, without modification, the musical sequences created by TUNES.

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TUNES

TUNES takes musical sequences in textual form and converts them into a form playable by mono3.hex, an Aquarius music subroutine.

Musical sequences are entered in textual form by specifying the notes' duration, name and octave. Rests are also valid. TUNES accepts input from the terminal or, preferably, from a file. To input a file to TUNES, use the following form:

```
tunes < filename
```

To enter text from the terminal, run 'tunes' without a file name.

When TUNES is finished downloading the processed note data, it will connect your terminal to the MICE. To play your sequence, use the command :

```
G 3900
```

This command may be executed as often as desired.

To reconnect your terminal to the VAX, you must reset your terminal.

Input to TUNES takes the following form:

```
<duration> <note name> <octave>
```

For rests:

```
<duration> 0 0
```

To terminate input:

```
0 0 0
```

While not sounding like anything you would want to hear, the following sequence illustrates all valid forms of the syntax. Enclosed in parentheses is the meaning of each line.

```
4 A 1      (quarter note A in the first (lowest) octave)
8 Bb 2     (eighth note B flat in the second octave)
1 c# 3     (whole note C sharp in the third octave)
1 a- 4     (whole note A flat in the fourth octave)
1 G+ 2     (whole note G sharp in the second octave)
1 0 0     (whole rest (4 beats))
1 G+ 2     (whole note G sharp in the second octave)
0 0 0     ('end of input' marker)
```

TUNES

Valid Note field characters are the notes A through G in upper or lower case. Notes may be followed immediately by a #, b, + or - symbol. The symbols # and + represent a sharped note and the symbols b and - a flatted note. Valid duration field characters are 1, 2, 4, 8, 16, 32, 64 and 128. Currently valid octaves are 1 through 4 and a portion of 5. Octave 5 contains the notes C through E inclusive.

Prior to using TUNES, you must have loaded mono3.hex. As long as mono3.hex is not corrupted, you need not download it again. It resides on page \$39. To download mono3.hex use the command :

```
mice mono3.hex
```

After mono3.hex has downloaded to the MICE, you must reset your terminal to run TUNES.