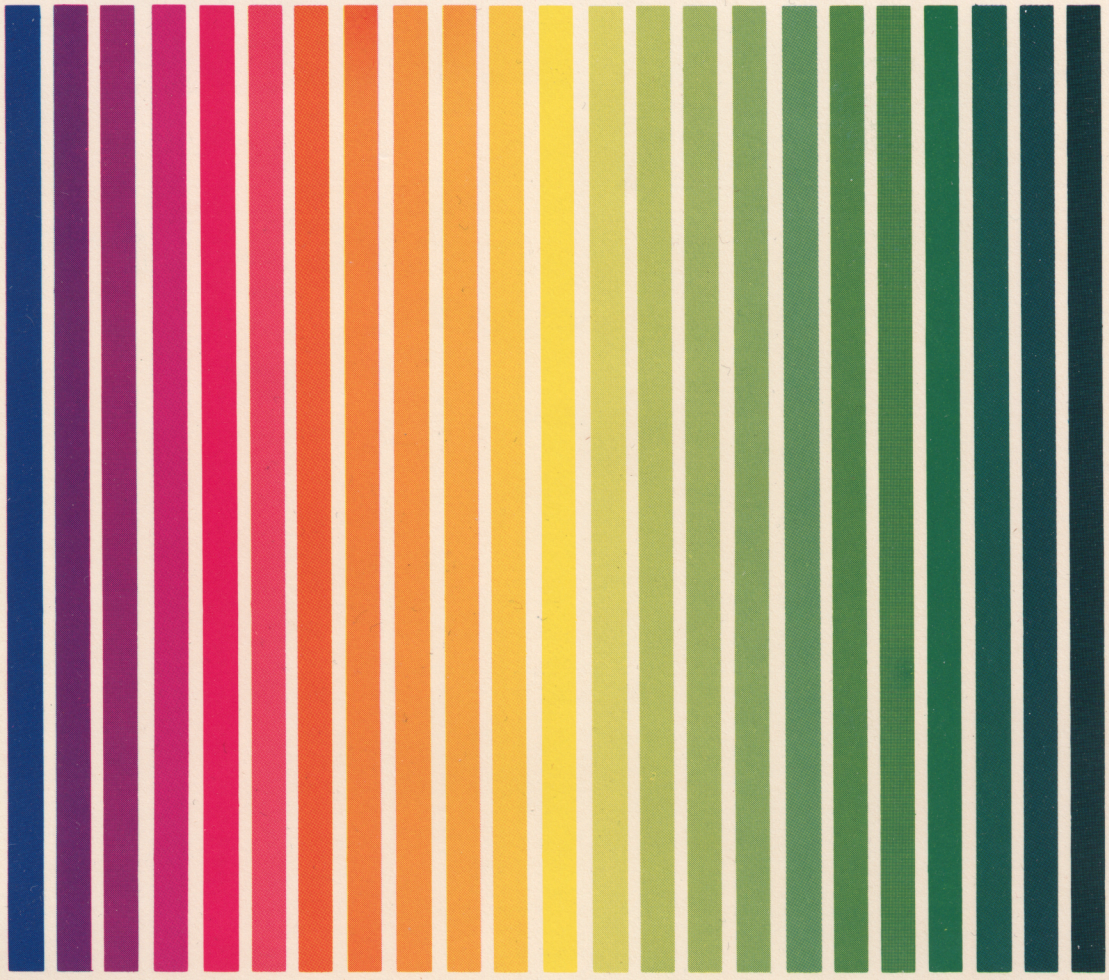
APX ATARI® PROGRAM EXCHANGE



Alan Griesemer & Stephen Bradshaw

KEYBOARD ORGAN

Simulate a simple organ with vibrato and attack

Cassette: 24K (APX-10094) Diskette: 24K (APX-20094)

User-Written Software for ATARI Home Computers

Alan Griesemer & Stephen Bradshaw

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by

Alan Griesemer and Stephen Bradshaw

Program and Manual Contents © 1982 Alan Griesemer and Stephen Bradshaw

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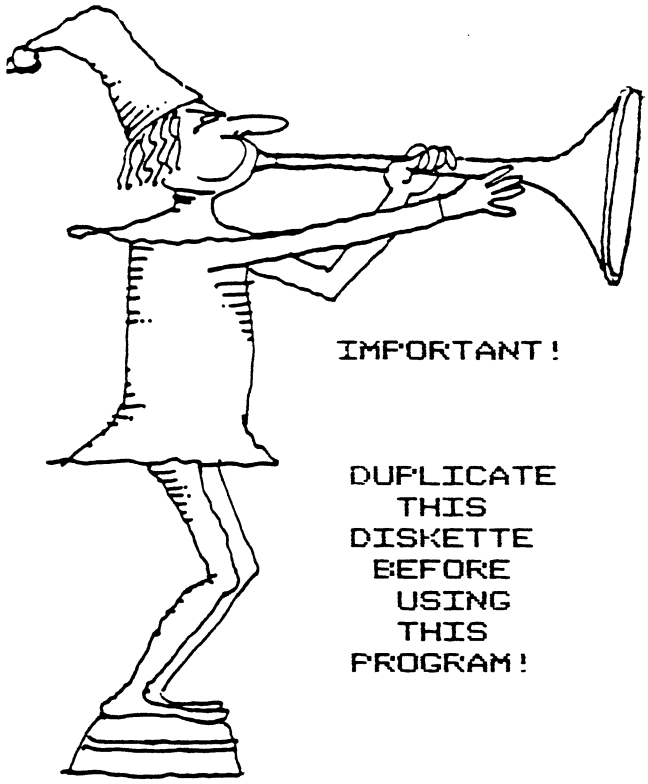


This APX diskette is unnotched to protect the software against accidental erasure. However, this protection also prevents a program from storing information on the diskette. Using KEYBOARD ORGAN involves storing information. Therefore, before you can use the program, you must duplicate the contents of the diskette onto a notched diskette that doesn't have a write-protect tab covering the notch.

To duplicate the diskette, first insert a diskette containing DOS II and call the Disk Operating System (DOS) menu. Select option J, Duplicate Disk. Then insert the APX diskette containing the KEYBOARD ORGAN files and press the RETURN key. You can use this option with a single disk drive by manually swapping source (the APX diskette) and destination (a notched diskette) until the duplication process is complete. You can also use this option with multiple disk drive systems by inserting source and destination diskettes in two separate drives and letting the duplication process proceed automatically. (Note. This option copies sector by sector. Therefore, when the duplication is complete, any files previously stored on the destination diskette will have been destroyed.)

KEYBOARD ORGAN

Introduction

KEYBOARD ORGAN allows you to play songs using the computer keyboard as if it were an organ keyboard, except that you can only play one note at a time. You can also record and playback songs and adjust the organ's sound by selecting the attack and vibrato options.

Required Accessories

24K RAM
ATARI 810 Disk Drive or ATARI 410 Program Recorder

Loading the Program

Disk Version

1. Turn off the computer.
2. Remove any ROM cartridges (eg., BASIC).
3. Turn on disk drive and insert program disk.
4. Turn on the computer; KEYBOARD ORGAN will load and run automatically.

Cassette Version

1. Turn off the computer.
2. Remove any ROM cartridges (eg., BASIC).
3. Insert cassette into program recorder, rewind it to the beginning.
4. Press the PLAY button on the program recorder.
5. Hold down the START button and turn on the computer.
6. After the console speaker beeps, release the START button and press RETURN; KEYBOARD ORGAN will load and run automatically.

Playing KEYBOARD ORGAN

When the program has loaded, it will display two rows of piano keys on the TV screen. The letter, number, or other symbol at the top of each piano key indicates the computer keyboard key which must be pressed to play the note. The letter at the bottom of the piano keys indicates the musical name of the note which the key will play.

The display keyboard is mapped onto the computer keyboard such that the white keys on the bottom of the display are played on the bottom row of the computer keyboard. The black piano keys on the lower display keyboard are played on the second row of computer keys. White keys of the upper display keyboard are played on the third row of the computer keyboard, and the upper black keys are played on the top row of the computer keyboard.

Some of the keys on the computer keyboard do not correspond to any piano key; therefore, they don't do anything when pressed.

To play a song, press the computer keys which correspond to the notes you want to play. For example, to play "Twinkle, Twinkle Little Star," press:

Z Z B B N N B V V C C X X Z

When you press a computer key, the corresponding piano key on the display will change color to show which note is being played (this does not show up well on black and white TV sets).

Controlling Optional Features

KEYBOARD ORGAN has a number of optional features which you can select. These features allow you to:

- Turn the vibrato on and off;
- Select soft or hard attack;
- Record and playback songs;
- Store recorded songs on disk or cassette.

To select the various options, press the OPTION key until the cursor (the white rectangle) is over the option status you wish to change. Then press the SELECT key to change the status of the option.

Vibrato (VIB) and Attack Options

These options change the way KEYBOARD ORGAN sounds. For example, vibrato on with soft attack sounds like an organ, while vibrato off with a soft attack sounds like a calliope. Selecting hard attack makes KEYBOARD ORGAN sound more like a plucked string instrument or piano. Experiment with the settings of vibrato and attack to find the sound you like best.

Memory (MEM) Option

KEYBOARD ORGAN has a memory which allows you to record the songs you play and then play them back. The memory option has four different modes which are selected by the SELECT key.

Record (REC) Mode. Use record mode to record a song in the computer's memory. To record a song, select record mode using the OPTION and SELECT keys, press the START key, and play the song. The memory will record up to 254 notes and/or for up to 18 minutes, depending on which limit is reached first. If you make a mistake while recording and want to start over, simply press the START key and play the song again. Pressing the START key while in record mode erases the memory and resets it to its beginning, so be careful not to press START in record mode if you want to keep a song that's already been recorded. Whenever KEYBOARD ORGAN is recording, the green record/play indicator at

the top left of the screen will move. If the recording exceedes the 18-minute or 254-note limit, the indicator will stop moving to show that KEYBOARD ORGAN is no longer recording.

Play Mode. In play mode the computer will play back a song which has been recorded in its memory. To play back a song, select play mode using the OPTION and SELECT keys. Then, simply press START and the most recently recorded song will play back. If you want to start the play back over again at any time, just press the START key again. In play mode the START key doesn't erase the memory; it just sets it back to the beginning. Therefore, you can play back a song as many times as you like. During playback, the green record/play indicator in the upper left of the display will move. If the recorded song exceeds the time or note limit or if the playback is allowed to run more than 18 minutes, the record/play indicator will stop moving to show that the playback is no longer operating.

Save Mode. You can use save mode to write a song from the computer's memory to disk or cassette. To save a recorded song, use the OPTION and SELECT keys to select save mode, and also to select the location in which the song will be saved. The location where the song will be saved is selected by the Save/Get (S/G) option at the far right of the screen. The S/G option can select one of ten (10) disk save areas ("D1" through "D10") or the cassette ("CAS").

After selecting save mode and the location where the song will be saved, press the START key. If you are saving to the disk, KEYBOARD ORGAN will copy the recorded song to the selected disk area automatically. If you are saving to the cassette, you must position the cassette tape to the spot where you want the song saved before you press the START key. Then when you press the START key, the keyboard speaker will beep twice to remind you to press the "record" and "play" keys on the program recorder. After you have pressed "record" and "play," press the RETURN key on the computer keyboard and KEYBOARD ORGAN will copy your song to the cassette.

Note: If you have the disk version of KEYBOARD ORGAN, and are trying to save songs to the disk which the program came on, you will have to punch out the disk's write-protect notch.

Get Mode. Use get mode to copy a previously saved song from the disk or cassette to the computer's memory. To get a song from the disk, select the get mode of the MEM option and the disk area in which the song was saved (D1 through D10) using the S/G option. Then press START and KEYBOARD ORGAN will copy the song from the selected disk area into memory.

To get a song from the cassette, select get mode and the CAS S/G option. Position the cassette tape to the beginning of the area where the song was saved and press the START key. The keyboard speaker will beep once to remind you to press the "play"

key on the program recorder. After you have pressed the "play" key, press the RETURN key on the computer keyboard and KEYBOARD ORGAN will copy your song from the cassette to memory.

After you get a song from the disk or cassette you can play that song simply by selecting play mode and pressing the START key. When you get a song, the previous contents of the record memory are erased. So, if you have a song in the memory that you don't want to lose, be careful that it is saved on disk or tape before you get another song.

Off Mode. In off mode the memory is disabled and the START key has no effect. Entering off mode does not erase the memory, so you can return to play mode and still playback the most recently recorded song.

Duets

You can play duets on KEYBOARD ORGAN by recording a song and playing it back while playing along on the computer keyboard. For example, record "Twinkle, Twinkle Litte Star" by entering record mode, pressing START, and pressing:

Z Z B B N N B V V C C X X Z

Now select play mode and press the START key. When the play back starts play "Twinkle, Twinkle Little Star" again (two octaves higher) on the keyboard by pressing:

R R I I O O I U U Y Y T T R

in time with the playback. Try figuring out "Row Row Row Your Boat," recording it and playing a round along with the play back. Or, experiment with harmonies to the songs presented below (one of the songs "My Bonnie" includes a harmony part).

Note: Sometimes, if the computer is playing back the same note that you are playing from the keyboard, the two notes will interfere with each other, producing an off pitch sound. The only solution to this problem is to avoid playing notes of exactly the same pitch as the computer is playing back (if possible).

Incompatibility with Atari DOS File Structure

Warning! Disks used with KEYBOARD ORGAN are not compatible with the file structure used by ATARI DOS. This is because KEYBOARD ORGAN is written in FORTH which has its own DOS with no file structure. Since there is no file structure in FORTH, KEYBOARD ORGAN saves songs to a fixed location on the disk. It does not check for the presence of ATARI DOS files in its save area, and will write over them if any are there. Also, KEYBOARD ORGAN does not mark the sectors it uses as allocated in the disk's Volume Table of Contents (VTOC) so DOS may write over your

KEYBOARD ORGAN songs if you use it to write files to your song disk.

If you purchased KEYBOARD ORGAN on a disk rather than a cassette, these cautions do not apply to the disk which the program came on. This disk contains a "pseudo file" named BOOTFILE.4TH which contains the KEYBOARD ORGAN program and the disk save area. BOOTFILE.4TH is called a pseudo file because, although it has a directory listing and its sectors are marked as allocated in the disk's VTOC, it does not have sector link pointers in its records. Therefore, it is not fully compatible with the ATARI DOS file format.

With BOOTFILE-4TH on a disk, DOS will not write files into KEYBOARD ORGAN's save area, so you can safely save both KEYBOARD ORGAN songs and DOS files other than DOS.SYS (see below) to such a disk.

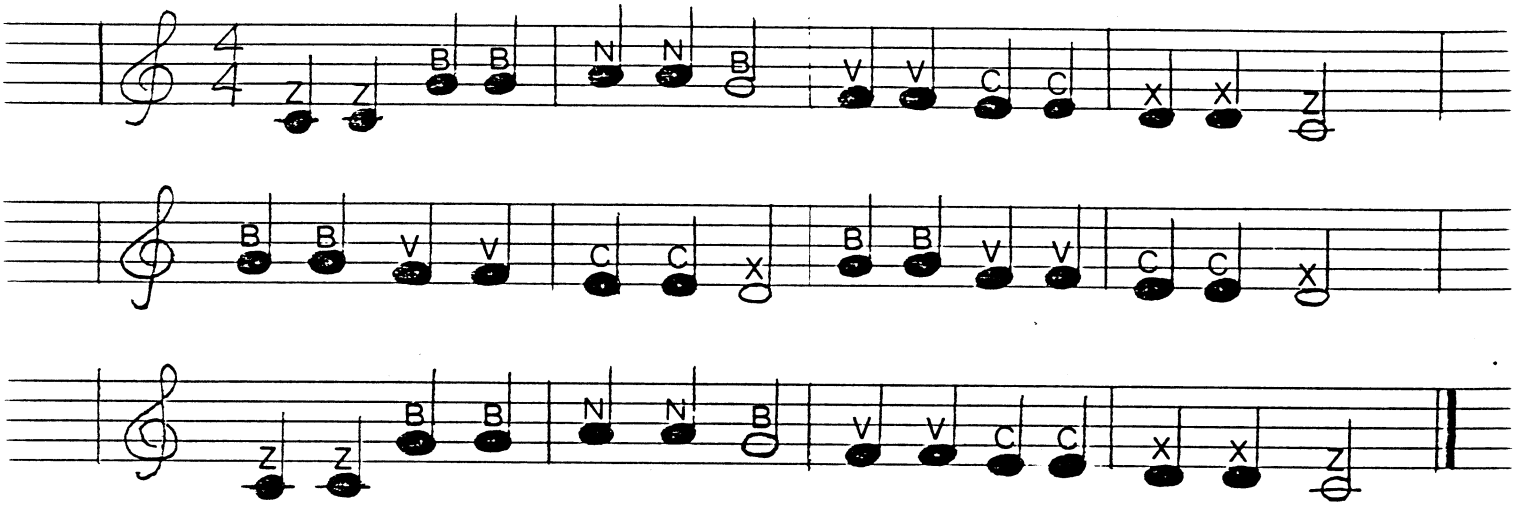
Since BOOTFILE-4TH is only a pseudo file, you can not delete it, or use the DOS copy and duplicate file commands on it. You can use the duplicate disk command to make backup copies of the program disk (for your personal use only please!) which will include BOOTFILE.4TH.

One DOS file which cannot reside on a KEYBOARD ORGAN program disk even with BOOTFILE.4TH in place is DOS.SYS. Therefore, do not use the DOS "Write DOS files" command or the rename command to put a file named DOS.SYS on your KEYBOARD ORGAN disk. If you do, KEYBOARD ORGAN will not boot.

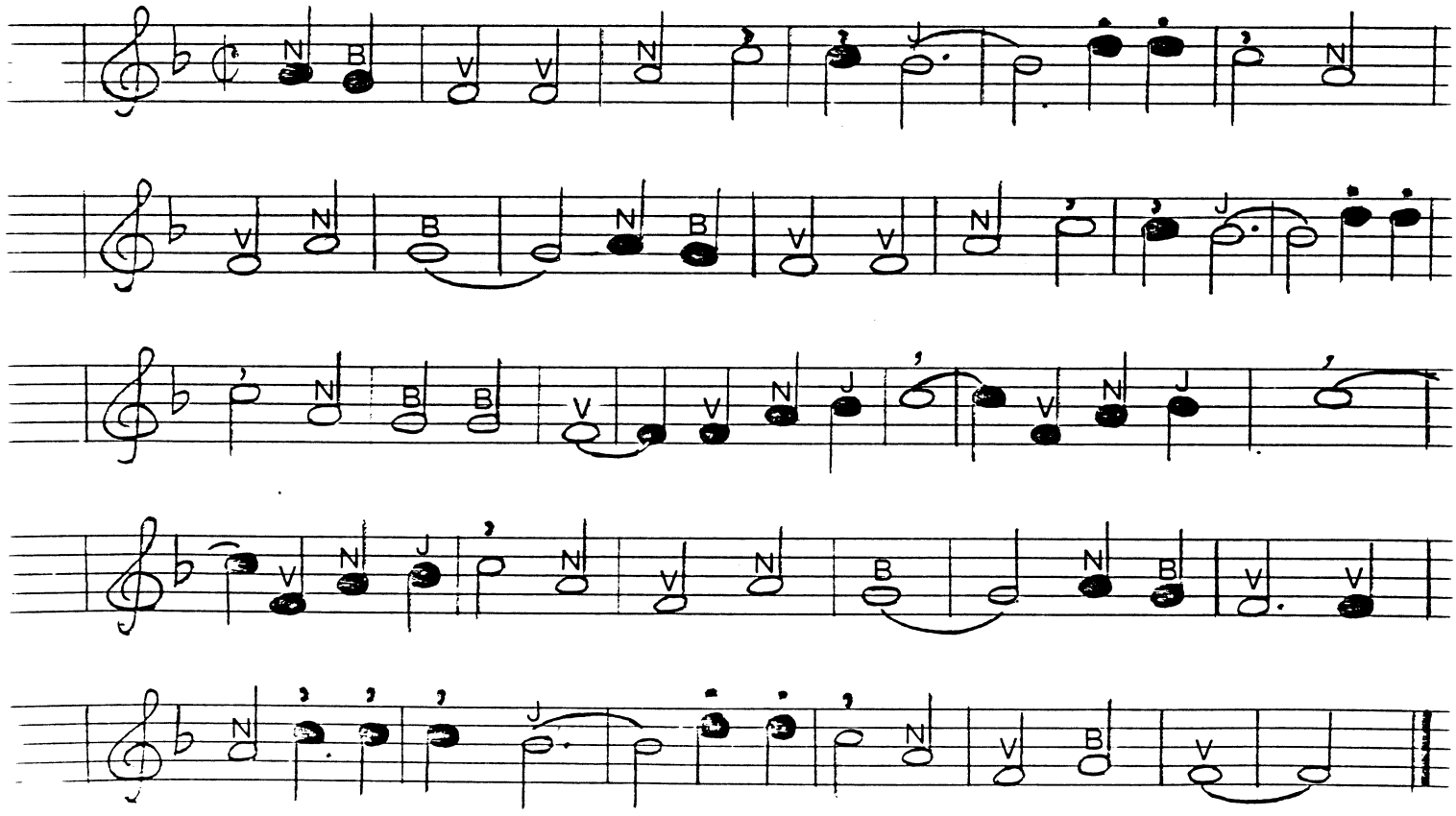
Songs

On the following pages are some songs to play on KEYBOARD ORGAN, the letters above the notes show which keys to press.

TWINKLE, TWINKLE LITTLE STAR

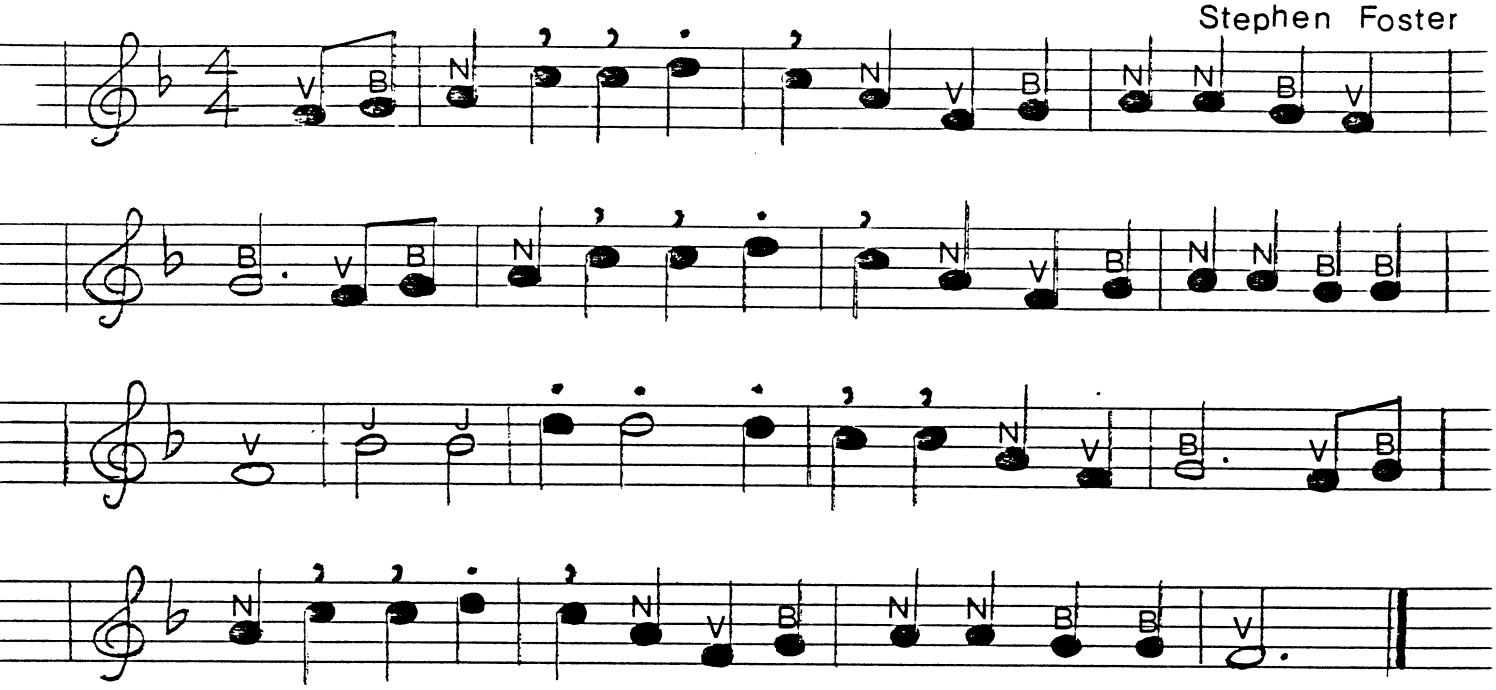


WHEN THE SAINTS GO MARCHING IN



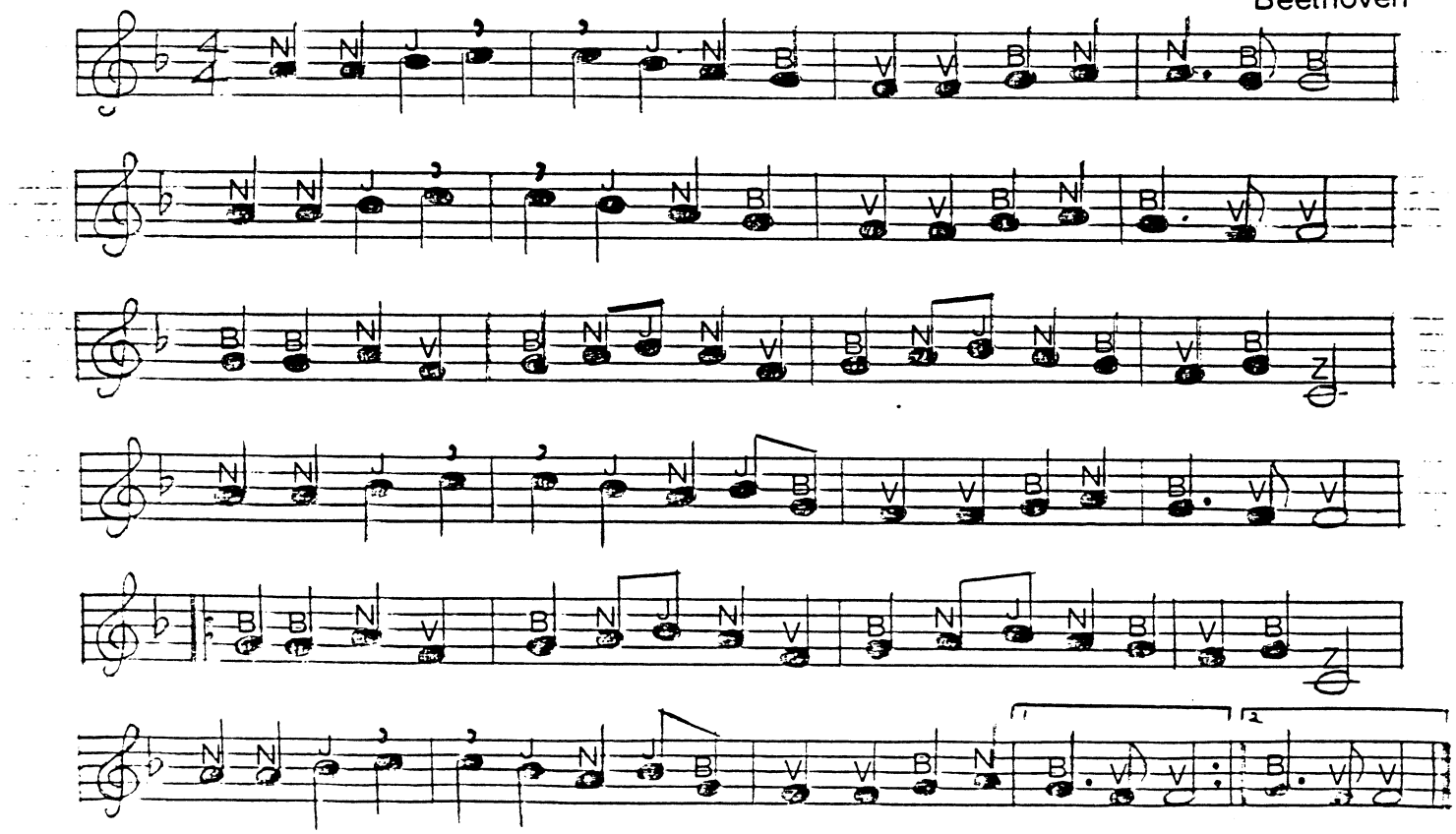
OH, SUSANNAH

Stephen Foster

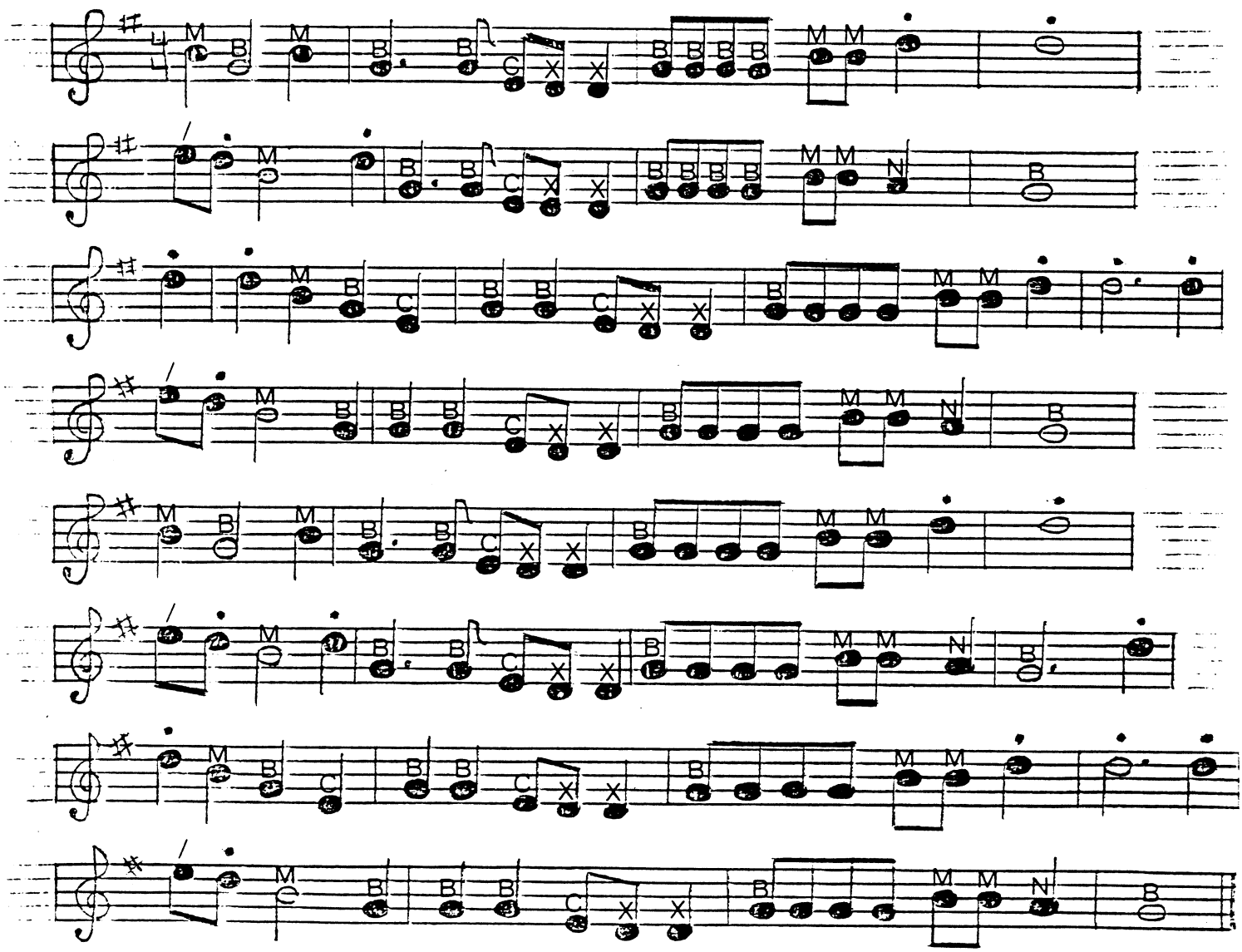


ODE TO JOY

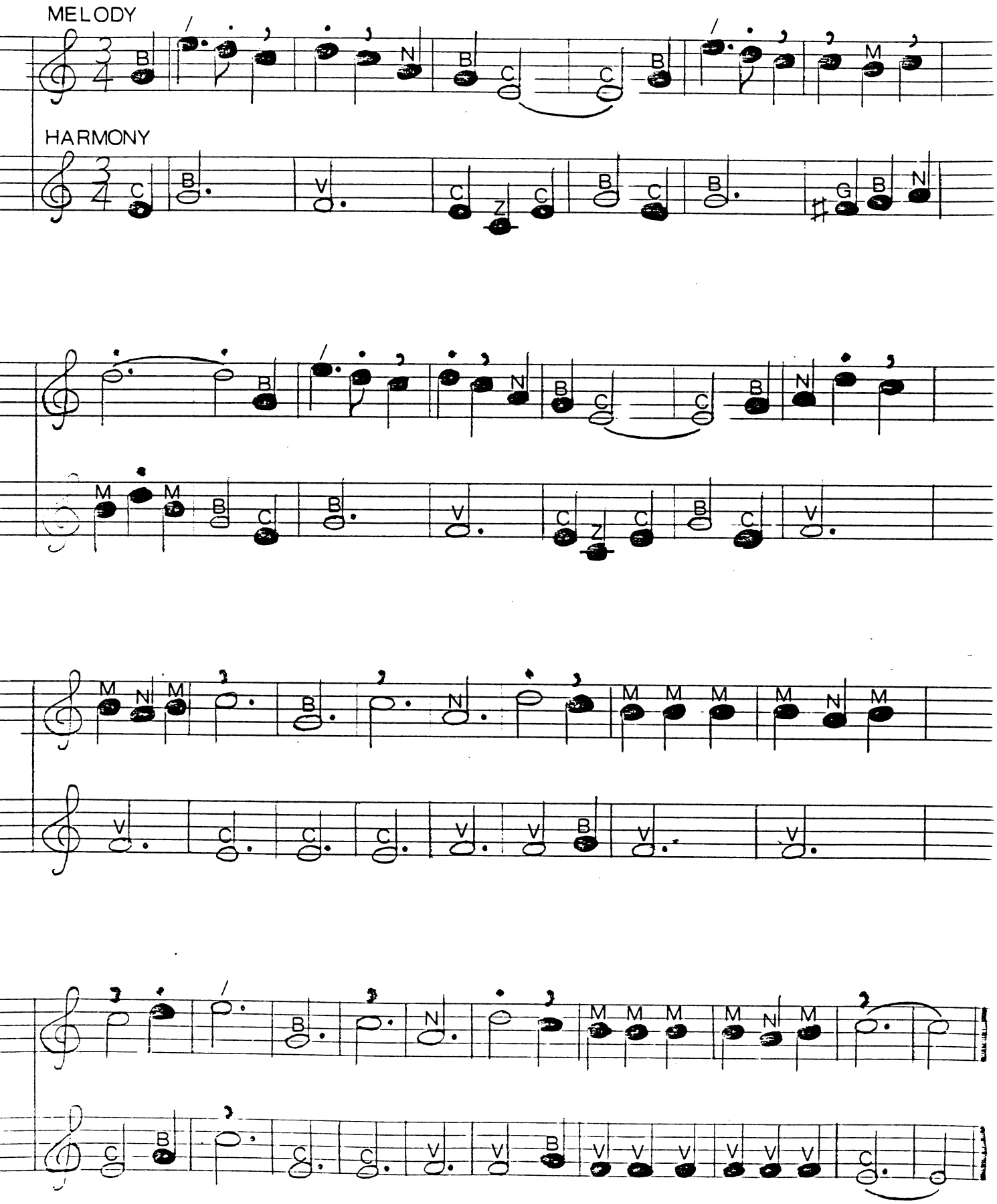
Beethoven



SWING LOW, SWEET CHARIOT



MY BONNIE



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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

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[seal here]