

THE WERSI RHYTHMATE

INTRODUCTION

If you have tried to program the rhythm section of your DX 400/500 in real time, you will probably agree that it takes a certain amount of skill and accuracy. If you make a mistake, you must erase all beats from that instrument and start over.

While it's handy to have the programming capability accessible from the console, it would be nice to be able to see a graphic representation of the rhythm and auto-accompaniment, and be able to put each beat and each note exactly where you want them.

The WERSI RhythMate allows you to create and edit rhythms and auto-accompaniment patterns on the screen of an IBM PC: or compatible computer, and then transfer them to the organ and/or save them on disk. (This also allows you to use the program as a rhythm [librarian]) Once you have created a rhythm/auto. Accompaniment pattern you like, it is easy to modify it by substituting different percussion sounds, exchanging instruments, changing auto-accompaniment voices, and so on.

The program is very easy to learn to use. The graphic representation is also instructive, as you can examine the make-up of all the rhythm patterns programmed by WERSI's artists, and build on them.

SYSTEM REQUIREMENTS

Your computer must be an IBM PC or compatible. 256 K of RAM is more than sufficient. The operating system must be PC-DOS or MS-DOS version 2.0 or higher. A Colour/Graphics Adapter or CG A-capable video card (EGA, VGA, etc.) is required. The only video adapters that will not work are those that are capable of Monochrome Mode only. (Most PCs now being sold have CGA compatibility.)

PREPARATION

The RhythMate distribution disk contains the RhythMate program itself (RM.COM) plus a number of rhythm data files, which have extensions of .RHY.

Before going any further, you should make a backup of the disk, and put the distribution disk in a safe place. The copy will then become your 'working' disk. You may want to make the working copy bootable. If so, use the /S option when formatting the new disk. Refer to your MS-DOS manual if necessary for information on making backup copies.

OPERATION

You will find that operation of the RhythMate is straightforward and logical. Below, the individual functions will be described in detail. It is suggested that you perform each operation as it is described, so that you can see just what happens.

NOTE: Most functions may be aborted by pressing the ESCape key.

Running the Program

Run the program by typing RM < return >. After a moment, the title page will appear. Notice that near the bottom of the screen the message 'Press SPACE to begin' is displayed. This line is used to display prompts, program status, and error messages. Press the SPACE bar now.

The next page to appear has two sections. The upper section lists the rhythm files on the disk. As mentioned, these files have .R H Y extensions, but the extensions are not displayed to make room for more filenames. The bottom section of the display lists all of your organ's permanent voices. (This section will be used when you want to change voices for your auto-accompaniment.)

The message line is displaying 'Load a file (F1) or Receive a file (F 2)'. Even if you plan to create a rhythm from scratch, you must first get a data file into memory, either from disk or from the organ. Since data files were provided for you on the disk, let's load one now. Press F1.

R H Y T H M F I L E S (D :)							
BIGBAND	BIGBAND3	CONTEMP	CX320	LARRYF	LITURG	RICUSA1	STAND2
STAND3	SWING2	SYMPHONY	THEATER1	THEATER2	USA2	WESTERN	XMAS
V O I C E S							
PV-1	PV-2	PV-3	PV-4	CV-1	CV-2	CV-3	CV-4
CV-5	CV-6	CV-7	CV-8	CV-9	CV-10	CV-11	CV-12
Tuba	Horn	Tromb	Trumpt	Basoon	Sax	Clarin	Oboe
Brass1	Brass2	PanFlt	JazFlt	Harpsi	Piano	Stage	HonkyT
Guitar	SynGtr	WahGtr	Banjo	Vibes	Xyloph	Celest	Zither
PedBas	StrBas	BasGtr	Cello	Violin	Orches	Theatr	StrPia
StrHrp	String	Choir	Church	Accrdn	FrAcc	Harmon	SynDrum
DB-1	DB-2						
Load a file (F1) or Receive a file (F2)							

The first rhythm filename in the upper section of the screen is now highlighted, and you are prompted to select a file using the cursor control (arrow) keys. Try using these keys to see how a selection is made, then press the SPACE bar to load the selected (highlighted) file.

The file will now be loaded from the disk into memory, and a new prompt tells you to select a rhythm using the F 5 function key. Press F5.

Your screen now displays a representation of all the rhythm buttons on your organ, and the names of the rhythm assigned to each, both the names you'd see when the SELECTOR button is lighted and when it is off. The outline of the first button is flashing to indicate that it is currently selected. As the prompt tells you, you may again use the arrow keys, this time to select the

The Rhythm Editor

Setting/Clearing Beats

The display now shows information pertaining to the rhythm. This includes the rhythm name, time signature and tempo, and what drums are selected for each beat of the rhythm. The percussion instrument names* are listed on the left, followed by the level (volume) of each, finally followed by the actual beat information. A dot means that particular instrument will not sound on that beat, the down arrow represents a soft sound and the up arrow represents a loud sound. Note that the borders are used to indicate that the instrument sounds are grouped. There are eight groups with three instruments per group. Up to eight instruments may be triggered on a single beat, but only one instrument from within a particular group.

The dot or arrow in the upper left of the beat information is highlighted. This is Bar 1, Beat 1. You can press the right and left

* The instruments shown are those offered on the CX-320. If you have the CX-4, ignore the alternate names (preceded by a ('/'), and substitute Cymbal 2 for Medium Tom, Bongo High for Slap Conga, and Bongo Low for Low Conga.

Use arrow keys to select different beats, and the up and down arrows to select different instruments. Try it. The HOME and END keys allow you to move quickly to the first or last column, respectively of the current row. If already in the first column, the HOME key will move to the top row; if already in the last column, the END key will move to the last row.

Now press the SPACE bar. The highlighted character changes each time SPACE is pressed. Press it until an arrow (up or down) appears. Now use the up or down arrow key to select a different instrument in the same three-instrument group. Press the SPACE bar. The original arrow changes to a dot, and a down arrow appears at the new location. Remember - only one instrument is allowed per group per beat! To clear all beats for a particular instrument, select the appropriate row with the up arrow and down arrow keys, and press the DELETE key. Any arrows in that row will change to dots, and the first dot will be highlighted.

Copy/Exchange Rhythm Instruments

You may copy the active beats (arrows) from one instrument row to another, or exchange the beats between two different instruments as follows: Press BACKSPACE. An arrow will appear to the left of the rhythm data. (It is positioned halfway down the screen so that fewer presses of the up or down arrow keys are required to position it.) Use the up arrow or down arrow key to position the arrow to an instrument, then press SPACE. An 'S' appears to indicate that this instrument will be used as the Source. The arrow returns to the starting point. Move it to a different instrument, and press SPACE again. A 'D' appears to mark this instrument as the Destination. You now have three choices. If you press the ESC key, you will abort this function. If you press the 'C' key, you will copy the source to the destination. If you press the 'X' key, you will eXchange the source with the destination. (Again - remember that only one instrument in a group may be selected on a given beat, so you may see conflicting beats disappear when using this function.)

Changing Levels, Tempo, Rhythm Name and Time Signature

Pressing the '+' key increments the level of the selected instrument, while the '-' key decrements it. (The '=' key works just like the '+' key. This saves having to press the SHIFT key on some keyboards.) The lowest level is 1; the highest is 7, just like on the organ.

If you want to change the tempo, press the '/' key to increase it, the '\ key to decrease it.

To change the name of the rhythm, press '\$', enter the new name, as prompted, and press RETURN.

You can also change the time signature. Press the '%' key, and enter the two digits. (Note that the product of the numerator and denominator cannot exceed 16.) If you change from 4/4 time to 3/4, for example, bars 1 and 2 are shortened accordingly. If you go the other way, the beats added in each bar are cleared to make room for additional data.

You are now familiar with the rhythm editor. The rhythm you selected with F6 is the main rhythm. When you are finished editing it, press the RETURN key. You're back to home base! If you want to edit the Intro/Break rhythm, just use F7. Everything works the same, and the upper right corner of the screen displays 'I/B' to remind you that this is the Intro/Break rhythm.

The Auto - Accompaniment Editor

Now you're ready to edit the auto-accompaniment data. Press F8.

A U T O - A C C O M P A N I M E N T			
Name: DISC01	Time Sig: 4/4	Tempo: 142	Bar: 1 Beat: 1
S O L O (Range: F1# - C4)			
Voice: JazFlt Level: 7	Note: Octave: Sharp: Staccato: AOC:	DEFGFGABABCDCDEFG·E·C·G· 222222333333333333·3·3·2· ··········· ·!!!!!!·!·!·!·!·!·!· ···········	
C H O R D S (Range: 1 - 7)			
Voice: WahGtr Level: 6	Inversion: Staccato:	··3333·3333·····3333·3333· ··!!!!·!!!!·····!!!!·!!!!·	
B A S S (Range: C1 - D2)			
Voice: StrBas	Note: Octave: Sharp: Staccato:	CC·C·C·····G·CC·C·C·····G· 11·1·1·····1·11·1·1·····1· ··········· ···········!··········!·	

The screen is now divided into three sections, Solo, Chords, and Bass. On the left side of the screen the voices selected for each part are shown, along with the level. The auto-accompaniment data is presented in a pattern similar to that of the rhythm data.

The Solo section is initially selected, as indicated by the highlighted column of data.

To select a different section, use the up and down arrow keys. The left and right arrow keys and the HOME and END keys are used for beat selection. Notice that the top line of the screen indicates the Bar and Beat currently selected. Press the left and right arrow keys, and observe how this display changes.

Changing Levels and Voice Selection

To change the level, choose the section, then use '+' to increment the value, '-' to decrement it. These levels range from -8 (lowest) to 7 (highest), the same as the organ displays them when programming the rhythm from the organ. (The Bass level is fixed.)

To change the voice used for the Solo, Chord or Bass parts, select the part and press '\$'. You will find yourself temporarily back on the 'names' page, with the first voice name highlighted. Use the arrow keys to make a choice, then press SPACE. You're back where you were, and the instrument name has been changed!

NOTE: When in the auto-accompaniment editor, you can change the tempo and time signature as you did when editing rhythm data, but pressing '\$' allows changing the Solo, Chords or Bass instruments. To change the rhythm name, you must be in the RHYTHM editor (F6 or F7).

Changing Auto-Accompaniment Data

Now you're ready to change the auto-accompaniment data. The active keys here are the arrows, the note letter keys A through G, the octave number keys 1-4 (when in the Chords section, inversion number keys 1-7), the '!' key, which selects staccato, the '#' key to sharp a note, the '@' key, which enables the Automatic Organ Computer (AOC) on that beat, and the DELETE key, which clears the data on the selected beat. Let's take that a little at a time.

Move to the Solo section and press DELETE to clear a beat. Now enter a note. The range of valid notes is given in the SOLO title line. Until a complete, valid entry is made, the characters will blink. The characters may be entered in any order. Only naturals and sharps are allowed (for example B-flat must be entered as A#). Note that B# and E# are not valid. An octave number must also be entered. If the note is outside the valid range, it will continue to blink.

If a dot appears in the Staccato line, the note will be played legato. Press '|' to toggle between the two. Pressing '@' toggles a note character on and off. When it is on a chord will be played on that beat.

Now move into the Chords section by pressing the down arrow. There are seven different inversions of each chord, selected with the digits 1 (lowest on the keyboard) through 7. Each beat may be staccato or legato as before.

The Bass section is similar to the Solo, except for range and the lack of AOC. When done editing, press RETURN.

Sending Data to the Organ

Connect your computer to your organ with the supplied cable. If your computer has more than one serial port, use 'COM1'.

NOTE: When transferring data to or from the organ, the organ's baud rate must be set to 9600. This is accomplished by pressing 'Compute' W, Compute'.

Assume that you now have the main rhythm, Intro/Break rhythm, and auto-accompaniment the way you want them, as well as the tempo, rhythm name, etc., and are ready to save your creation to disk or send it to the organ. Press F3 to save the file or F4 to send to the organ. In either case, you will first be given the option of moving the rhythm to a different button position. The originally-selected button is still flashing, so if you don't wish to change it, press SPACE without using the arrow keys. Just follow the prompts.

If sending to the organ (F 4), you'll be instructed to ready the organ to receive the data and to press SPACE or RETURN. If you press SPACE, only the single rhythm you selected will be sent. This will take less than a second. If you press RETURN, the entire rhythm data file will be sent (all 32 rhythms), taking about 15 seconds.

Sending only the single rhythm allows you to quickly hear the rhythm and auto-accompaniment pattern you're working on. Once the organ has been readied to receive data (with 'Interface, W-E-R-S-I, Compute'), it will remain in this condition for subsequent data transfers. So you can make a change with F6-F8, press RETURN, F4, SPACE, SPACE, listen to the result of the change, and repeat the procedure over and over. Just let the rhythm continue playing on the organ while you work if you like. (Of course, the appropriate rhythm button on the organ must be selected the one corresponding to the button selected in the program.)

Hint: After each transfer, you may want to press the selected rhythm button on the organ; the organ may not respond to volume level, tempo, or some other changes you made until you do this.

Changing Drives and Exiting to DOS

Two function keys remain - F9 and F10, F9 allows you to log onto a different drive. (The currently logged drive is displayed at the top of the screen - for example A:.) If you run out of space on one disk, you can use another. (If you insert a different disk in the currently logged drive, press F9, followed by the drive letter to update the filenames at the top of the screen.)

F10 is used to exit the program. You must press 'Y' in response to the 'Are you sure?' question in order to exit to DOS; this avoids accidents)

Transferring Files to Disk

You probably own a number of data cassettes for your instrument. As you know, these contain several types of data, including rhythm and auto-accompaniment, sequences, voicing, and total presets. The RhythMate program only uses the rhythm and auto-accompaniment parts, and saves them in disk files.

If you have data cassettes containing rhythm data that is not on the distribution disk, and as you acquire new data cassettes, you will want to transfer the rhythm and auto-accompaniment data to your working disk. There are two methods for doing this. The first method involves loading the data from a cassette recorder into the organ, then transferring the data from the organ to the computer. The second method assumes that you have the WERS1 ORGANizer program for the PC, and converts the .ORG files used by that program to the .RHY files used by the RhythMate.

Method 1 - Data Cassette to Organ to Computer

NOTE: Be sure that the organ baud rate is set to 9600. Press 'Compute, W, Compute' if necessary to set this baud rate.

- 1) Connect the cable included with the RhythMate package between the RS-232 connector on your organ and the COM1 connector on your computer.
- 2) Load the desired data cassette into the organ in the usual manner. Refer to the User's Guide if necessary.
- 3) Run the RhythMate program by typing RM < RETURN >. Once the title page appears, press the SPACE bar to present the display that shows the rhythm files currently on the disk. Now press the F2 function key on your computer. The message line at the bottom of the screen will prompt you to press 'Interface, W, Compute' on the organ. Do so. The message should indicate that data is being received.

NOTE: The computer will indicate that the data has been transferred several seconds before the display on the organ indicates the same thing. This is because the rhythm and auto-accompaniment data is sent first and the program ignores the sequence, preset and voice data that follows.

- 4) Press F3. You will be asked for a filename. Enter a name up to eight characters long. Be sure you do not choose a name that already appears in the filename display unless you want to replace an existing file. After a few seconds, the file will be written to disk and will appear in the filename directory on the screen.

Method 2- ORGANizer .ORG File to RhythMate .RHY File

To convert a WERSI ORGANizer file (which is 16,412 bytes long and has a .ORG extension) to a RhythMate file (which is 9088 bytes long and has a .RHY extension), perform the following steps.

- 1) Copy the files you want to convert from your ORGANizer disk to your RhythMate working disk, changing the .ORG extension to .RHY. (For example, COPY B:NEWFILE.ORG A:NEWFILE.RHY)

- 2) Run the RhythMate program by typing RM < RETURN >. Once the title page appears, press the SPACE bar to present the display that shows the rhythm files currently on the disk.

NOTE: The files that you copied will appear in the RHYTHM FILES section of the screen and may be used as is. But if you strip the data off, leaving only the rhythm and auto-accompaniment data, the files will take up less space on disk, leaving room for more files. The following steps will accomplish this.

- 3) Press function key F1 and use the arrow keys to select one of the files you copied. Press the SPACE bar.

- 4) (Ignore the message that appears after the file is loaded.) Press F3. Enter the same name as the file you chose in the previous step and press RETURN. You will be told that the file already exists and asked if you want to overwrite it. Respond by pressing 'Y'. The (shorter) file now will be written back to disk.

5) Repeat steps 3 and 4 for each of the files you copied to the disk.

SUMMARY

I'm sure you'll enjoy using this program as much as I do. If you have any problems or suggestions for improvements in the program or this documentation, I'd enjoy hearing from you.

Terry Perdue
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RHYTHMATE MEMORY JOGGER

FUNCTION KEYS

Load disk file	F1	F2 ...	Receive rhythm data from organ
Save disk file	F3	F4 ...	Send rhythm(s) to Organ
Select rhythm	F5	F6 ...	Edit main rhythm
Edit Intro/Break	F7	F8 ...	Edit auto-accompaniment
Change logged drive	F9	F10 ...	Exit to DOS

ESCape Aborts a function

RHYTHM EDITOR (F6 or F7)

Up/Down arrows	Used to select instrument
Left/ Right arrows	Used to select the beat
HOME	Moves to first beat, then to first instrument
END	Moves to last beat, then to last instrument
DELETE	Clears all beats from selected instrument
SPACE	Sequentially selects: No beat, soft beat, loud beat
BACKSPACE	Allows copying or exchanging instrument patterns
+	Increments instrument volume level
-	Decrements instrument volume level
/	Increments tempo
\	Decrements tempo
\$	Allows rhythm name change
%	Allows time signature change
RETURN	Exits rhythm editor

AUTO-ACCOMPANIMENT EDITOR (F8)

Up/Down arrows	Used to select the part (SOLO, CHORDS, BASS)
Left/ Right arrows	Used to select the beat
HOME	Moves to first beat
END	Moves to last beat
DELETE	Clears beat in selected part
A-G	Enters note name (SOLO or BASS part)
1-4	Enters octave number (SOLO or BASS part)
#	Toggles between sharp and natural
.....	Toggles between staccato and legato
@	Toggles Automatic Organ Computer (SOLO part)
1-7	Enters chord inversion (CHORD part)
\$	Allows voice selection for selected part
%	Allows time signature change
+	Increments volume level of selected part
-	Decrements volume level of selected part
/	Increments tempo
\	Decrements tempo
RETURN	Exits auto-accompaniment editor

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