THE COMPOSER

SPEECH SYSTEMS

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SPEECH SYSTEMS IS NOT IBM

SPEECH SYSTEMS is Richard Parry, an ordinary person who has spent hundreds of hours over nine months developing the COMPOSER. Until I developed the COMPOSER, I never realized the time and work required to develop software for the public. Unless you have, you probably did not realize it either. I assure you if you did, you would never give a copy of a program to another. I therefore ask that you be kind enough not to give copies of this software. The price is very inexpensive. Thank you in advance for your cooperation. By the way I don't mean to imply that it is ethical to pirate IBM software. Happy music!

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Disclaimer

System Features

+ Four voices.

+ A unique waveshape (tone) for each voice.

+ Seven full octave range.

+ Full documentation and examples.

+ Variable tempo to change music speed.

+ Key and Octave modification possible.

+ Both the Tempo and Key/Octave values may be changed as the music is playing.

+ Note counter to ease debugging.

+ Kaleidoscope graphics as music plays.

+ Sound Effect example provided.

+ Dotted and double dotted notes supported.

+ Normal, quarter, and eigth note triplets supported.

+ Available in cassette and disk versions.

+ User friendly menu driven software.

+ The music is saved as an independent machine language subroutine, therefore, it may be loaded and executed from other programs (e.g. BASIC).

+ The compiled machine language music is in Position Independent Code (PIC) which allows the music to be loaded anywhere in memory.

+ Graphics displayed as music is played may be turned on or off.

+ Cassette version automatically adjusts for 16K or 32K machines.

Introduction

Thank you for purchasing THE COMPOSER Version 1.2. We have made every effort to insure that this product will provide you with many hours of enjoyment. This manual has been designed to allow you to quickly start using THE COMPOSER.

The cassette version assumes at least 16K of memory is available while the disk version assumes a minimum of 32K. Both versions of the COMPOSER require EXTENDED BASIC. While the disk and cassette version are very similar in operation, the actual programs used are very different.

We certainly hope you will find this product will make your computer system more powerful and versatile. We look forward to hearing your suggestions and comments concerning this product.

Cassette Loading Problems

The cassette version has copies on both sides of the cassette. If you have trouble reading one side, try the other. If you still have trouble try a different tape recorder if possible.

In the event that your master copy gets erased, SPEECH SYSTEMS will supply a replacement copy provided the user returns the original cassette with payment of $5.

Auxiliary Music Output

The music that the COMPOSER produces from the TV speaker is also available through the CASSETTE connector on the back of the color computer. In a cassette based computer system, this signal is already connected to the AUX input of the tape recorder. Therefore, you may record any piece of music directly by merely turning the tape recorder on and recording as the music is played.

High Fidelity

You may also connect the output described above to a hi-fi system and in this way bypass the small poor quality speaker so prevalent in TV receivers. The exact connection will vary from system to system, however, most stereo systems have an input labeled "LINE IN" or "TAPE IN" which may be used. The connection should not be attempted unless you are familiar with electronic circuits.

A Quick Listen

If you are like most people, you rather play with your new toy immediately and not have to read a big thick manual. This section is dedicated to you.

Cassette Users Method 1

Type PCLEAR1.

Insert the cassette and type CLOAD "JUKEBOX".

This file is several minutes into the cassette so be patient.

Keep the tape player on in the PLAY position and type RUN.

You will hear many songs that were developed using the COMPOSER.

Now try method 2.

Cassette Users Method 2

Rewind the cassette and type CLOADM "COMPOSER".

Remove the cassette from the player and hit ENTER.

Select option 2 (COMPILE SOURCE) and wait approx. 3 minutes.

Select option 3 (PLAY MUSIC).

Now read the rest of the manual.

Disk Users Method 1

Insert the disk and type RUN "JUKEBOX".

Make a selection.

Now try method 2.

Disk Users Method 2

Insert the disk and type RUN "COMPOSER".

Select option 2 (COMPILE SOURCE) and wait approx. 3 minutes.

Select option 3 (PLAY MUSIC).

Now read the rest of the manual.

Compiling a Piece of Music

Before we can play a piece of music, a source note such as C or
C# must be translated into a number that the machine language
program can then use to create a note of the desired frequency.
This process is called compiling. All music must be compiled in
order for it to be played. The user can develop his or her own
music using the rules discussed in the "Preparing Music" section
of this manual. However, the COMPOSER comes with a selection
already in source form. You may examine the first few notes by
LISTing 3000-3120. We will now discuss how to compile the source
notes and many more aspects of the COMPOSER.

Cassette users begin by inserting the cassette and typing CLOADM
"COMPOSER". When requested, remove the master cassette and hit
enter.

Disk users should insert the disk in the drive and type RUN
"COMPOSER".

The computer will display the menu:

                    1. LOAD SOURCE (BASIC)
                    2. COMPILE SOURCE
                    3. PLAY MUSIC
                    4. MODIFY TEMPO
                    5. MODIFY KEY / OCTAVE
                    6. SAVE COMPILED MUSIC (ML)
                    7. SAVE SOURCE (BASIC)
                    8. GRAPHICS ON/OFF
                    9. END OR EDIT

                    *** WARNING ***

Both disk and cassette users should remove the original disk or
cassette. This is especially important for cassette users.
There is no longer a need for loading programs from the disk or
cassette. All subsequent programs to be saved or loaded should
be stored on other disks or cassettes.

                 1. LOAD SOURCE (BASIC)

This will typically be the first option the user will select.
However, if this is the first time you are using the COMPOSER
skip to the next option COMPILE SOURCE.

If you have created your own source, you will use this option to
call in the source BASIC program that you have developed with
your music. Remember that when the COMPOSER is first loaded, the

source that was delivered with your software will be resident in the computer. Cassette users will insert the cassette that contains their source program and then select option 1. The computer will load the program and return to BASIC with an OK prompt. Type RUN and continue.

*** CASSETTE USERS *** note that this option is nothing more that a CLOAD "filename" command. Therefore, if you experience an I/O error during loading, you should merely type CLOAD "filename". Hopefully, a second or third load will work properly.

2. COMPILE SOURCE

The next step is to select the COMPILE MUSIC option (selection 2). The computer will then begin to compile (translate) the music in its source form to machine language data and storing it in memory. It requires approximately one second for each of the notes to be compiled. Therefore this is a time consuming portion of the program. As each note is compiled, the number of the note appears on the TV to inform you of the progress of translation.

If an error occurs, the COMPOSER will display the number of the note group that caused the error as well as the specific note in the string that is in error. The user will be required to return to the BASIC program to correct the error. However, the program gives the user the opportunity to continue compilation. In this way, one can make a note of all errors and then correct them all at once after returning to BASIC. Note that a note group of CD4E4F4W will be interpreted as have multiple errors when in reality the only error is in the first note, an octave value was not given for the note C.

3. PLAY MUSIC

If all errors have been corrected, the user is now ready to listen to the music. Selection 3 is used to play the music. As the music plays, you will notice a note counter in the lower right hand portion of the screen. This counter will be very valuable in helping the user to debug certain notes.

4. MODIFY TEMPO

After listening, you may decide that you wish to modify the TEMPO (selection 4). The tempo defaults to a value of 20. Increasing the tempo value (e.g. 30) will cause the music to be played more slowly. Decreasing the tempo value (e.g. 10) will increase the speed at which the music is played. Note that there is a limit to which the user can change the tempo. The exact range will be

determined by the duration of the notes used in the particular piece of music. Before the tempo modification can be heard, the music must be recompiled. Note that the tempo need not be an integer (whole number), values of 20.42 are valid and may be used to make slight tempo changes.

Perhaps one of the most interesting features of the COMPOSER is the ability to change the tempo of the music as it is playing. This is accomplished by inserting the desired tempo in the BASIC DATA statements right along with the note groups. The correct syntax is DATA TEMPO=X where X will typically be between 1 and 100. The following example should further help explain the process.

```
3010 DATA TEMPO=44
3020 DATA D5G4D4B4Q
3030 DATA C#5G4E4B!4Q
3040 DATA C#5G4E4B!4E
3050 DATA C5G4E4A4Q —
3060 DATA C5G4E!4A4Q ~
3070 DATA C#5G4E4B!4E
3080 DATA TEMPO=22
3090 DATA A#5F4C4D3Q
3100 DATA B5F4C4D3Q
3110 DATA D5G4D4B4Q
3120 DATA D5G4D4B4E
3130 DATA TEMPO=28
3140 DATA E!5G4C#4B!4Q
3150 DATA E!5G4C#4B!4E
3160 DATA E5G4C4A4E
3170 DATA E5G4C4A4Q
3180 DATA E5G4C4A4E
3190 DATA E!5F4C4D3E
3200 DATA E!5F4C4D3Q
3210 DATA D5F4C4D3Q
3220 DATA DONE
```

In the above example, the tempo was changed three times. Note that the default tempo of 20 is never used. The moment compilation starts, the COMPOSER sees that the user has requested a tempo of 44. A few notes are compiled at this tempo and then a new tempo of 22 is used. A few notes later the tempo is again changed. It may be of interest to the user that the note counter that appears on the screen as the music is playing does not count the tempo DATA statements, only the note group DATA statements.

5. MODIFY KEY / OCTAVE

The KEY or OCTAVE (selection 5) may also be modified by the user
by inserting a non-zero number. A value of 1 moves the entire
music up one key. A value of -1 will move the entire music down
one key. Selecting a value of 12 will move the music up an
entire octave. Similarly, -12 will lower the music an octave.
Here again the music must be recompiled before the key
modification is in effect.

Just like the tempo can be changed dynamically, the key may also
be changed as the music is playing. The syntax is KEY=X where X
may take on values positive or negative in a range that is
determined by the music the user is writing. Values of -24
(lower 2 octaves) to +24 (raise 2 octaves) will probably
represent two extreme cases.

```
3010 DATA D5G4D4B4Q
3020 DATA D5G4D4B4Q
3030 DATA C#5G4E4B!4Q
3040 DATA C#5G4E4B!4E
3050 DATA C5G4E4A4Q
3060 DATA C5G4E!4A4Q
3070 DATA C#5G4E4B!4E
3080 DATA KEY=12
3090 DATA A#5F4C4D3Q
3100 DATA B5F4C4D3Q
3110 DATA D5G4D4B4Q
3120 DATA D5G4D4B4E
3130 DATA KEY=4
3140 DATA E!5G4C#4B!4Q
3150 DATA E!5G4C#4B!4E
3160 DATA E5G4C4A4E
3170 DATA E5G4C4A4Q
3180 DATA TEMPO=24
3190 DATA E!5F4C4D3E
3200 DATA E!5F4C4D3Q
3210 DATA D5F4C4D3Q
3220 DATA DONE
```

In the above example, the first few notes are compiled without
any changes. However, the music then is raised an entire octave
for all notes proceeding the KEY=12 statement. A few notes later
the music is lowered to 4 keys above the normal value of 0. In
other words, it is not lowered 4 keys from the octave that we
just raised it to, but to 4 keys above a normal starting
key/octave of 0. Tempo and key/octave changes can be intermixed
as in the above example. Neither the tempo nor the key/octave
change statements are counted by the note counter that appears in
the lower right hand corner of the screen as the music is played.

just raised it to, but to 4 keys above a normal starting key/octave of 0. Tempo and key/octave changes can be intermixed as in the above example. Neither the tempo nor the key/octave change statements are counted by the note counter that appears in the lower right hand corner of the screen as the music is played.

6. SAVE COMPILED MUSIC (ML)

Assuming the user is satisfied with the sound of the music, the machine data may be saved by selecting option 6. The cassette user should take care to assure that a blank tape is inserted in the tape recorder before selecting this option.

*** NOTE *** The file that has just been saved is a complete machine language subroutine that may later be (C)LOADMed and EXECuted. Therefore you merely type (C)LOADM "filename" followed by EXEC to listen to the music independent of the COMPOSER.

Incorporating The ML Subroutine Into Other Programs

Because the machine language program is completely independent of other software once it is compiled and saved, it may be incorporated into other programs. For example, software vendors may wish to insert music into their own programs. Or one might wish to display the words to a song as the music is played.

In incorporating the music machine language program into other programs certain considerations should be taken into account such as the size of the program and the memory size of the computer. The following information is intended to answer these important considerations.

If the piece of music was compiled on a 16K machine, the machine language subroutine will begin at &H3000. For 32K machines, the subroutine begins at &H6000. The program length may be computed by using the following formula:

program length=1538+(9 * # of notes)+(9 * # of BASIC returns)

ending address = beginning address + program length - 1

An example may further explain the above equations. Assume we have a piece of music consisting of 100 notes. In addition, assume that we exit the music 5 times while it plays by using the COMPOSER's BASIC command. The machine language music subroutine would require 1538 + 900 + 45 bytes. This adds up to 2483 bytes in decimal or &H9B3 bytes in hex. If a 32K machine were used, the beginning location of the music would be &H6000 and the ending location would be &H69B3.

The following short BASIC program will ask the user for a piece of music to play, load it, and then play it. Line 5 is inserted to give as much memory as possible to the BASIC program. Note that line 10 is used to tell the computer that memory above &H3000 is reserved; it cannot be used by BASIC. This is necessary since the music itself will use this memory. This value assumes a 16K system and that the music is not relocated. Other values might be &H6000 on a 32K system. Of course, since the music is position independent, other values may be used. In summary, remember the CLEAR command is important to insure that BASIC does not clobber the machine language music program.

```
5 PCLEAR1
10 CLEAR 30, &H3000
20 INPUT "FILENAME OF MUSIC"; FN$
30 CLOADM FN$
40 EXEC
50 GOTO 20
```

One may find the need to move the subroutine. For example, if the piece was developed on a 32K machine and one wishes to play it on a 16K machine, the piece must be moved down in memory. Fortunately, the COMPOSER's machine language program is written in Position Independent Code (PIC). However, it is only position independent in that the program may be placed anywhere on a 256 byte boundary. For example, &H6100, &H4700, or &H1100 are valid locations to place the program. The color computer allows one to specify an offset while a program is loaded. For example, if one wishes to move the subroutine up &H1000 in memory, he or she would specify:

(C)LOADM "filename", &H1000

This will cause the program that normally loads at &H3000 (16K version) to load at &H4000. If the program were developed on a 32K machine, the program would normally reside beginning at &H6000 and therefore it would load at &H7000. In order to place the program lower in memory, the (C)LOADM command must be tricked.

(C)LOADM "filename", &HFFFF-&H0FFF

This will lower the program loading address by &H1000. Therefore the program will be loaded at &H2000 (16K version) or &H5000 (32K version). Another example may further help to illustrate the process. If the music program was compiled on a 32K machine, the machine language program would reside at &H6000. To play the selection on a 16K machine, the program obviously has to be lowered in memory. The following would move the program down to &H2000 to allow it to be played on a 16K machine.

(C)LOADM "filename", &HFFFF-&H3FFF

*** Note *** that the execution address is automatically modified and therefore the user need not specify an EXECution address.

Also note that BASIC has the nasty habit of using the top of memory for miscellaneous data. If the music is placed too high in memory, it might be overwritten by BASIC. To prevent this, the CLEAR command should be used. If the music machine language subroutine starts at &H6000, the beginning statement of a BASIC program might include CLEAR 30, &H5FFF to inform BASIC that memory above &H5FFF is off bounds and is not to be used.

I wish to emphasize that the past few paragraphs will be of little concern to most users. The material is presented here for the sake of completeness and for those wishing to integrate the machine music into other programs.

7. SAVE SOURCE (BASIC)

This selection is identical to a (C)SAVE "filename" command. The BASIC program with source notes will be saved. IT SHOULD BE CLEAR THAT EACH PIECE OF MUSIC WILL EXIST IN TWO FORMS: BASIC (SOURCE NOTES) AND MACHINE LANGUAGE. Selection 6 saves the machine language data and selection 7 saves the source BASIC program. After the user is satisfied with a compiled piece of music, he or she really need not keep the BASIC source program, however it is a good idea. For example, if you ever wish to modify the tempo or the octave/key you must have the source form available so that it can be recompiled with the change.

8. GRAPHICS ON/OFF

When a piece of music is playing, a kaleidoscope pattern and note counter are displayed. This is the default condition of the program. The visual display augments the music and the counter aids the user in debugging. However, some applications may require that the music not destroy what appears on the screen. For example, one may wish to display the words to a song as the music is played. Or one may wish to display a picture as the music plays. For those cases, one will want to turn off the graphics by selecting this option. To turn off the graphics, select option 8 and answer "N" to the prompt "GRAPHICS ON/OFF (Y/N)". Answer "Y" to turn the graphics back on again. The source music notes need not be recompiled to obtain the desired results. In order for the saved machine langauge program to have the desired graphics option, this option must be selected before the piece of music is saved.

9. END OR EDIT

This option will be selected if the user wishes to cease using the COMPOSER and return to BASIC or if he or she wishes to perform some music editing. Remember that the notes are BASIC DATA statements and therefore writing music will require one to insert the notes at the end of the program in DATA statements. See the "Preparing Music" section of this manual for more details. When the user has inserted the notes, he or she will then type RUN to again return to the menu.

The REPEAT Command

Very often in music one is required to repeat a portion of the musical selection. The COMPOSER supports a repeat command of the form REPEAT,X,Y, were X and Y represents the beginning and ending notes to repeat inclusive. The repeat command must be embedded within the source notes as a DATA statment. The following example should indicate the proper use of the REPEAT command.

```
5100 DATA B5F4C4D3Q
5110 DATA D5G4D4B4Q
5120 DATA D5G4D4B4E
5130 DATA REPEAT,44,202
5140 DATA E!5G4C#4B!4Q
5150 DATA F!5G4C#4B!4E
5160 DATA E5G4C4A4E
5170 DATA E5G4C4A4Q
5180 DATA E5G4C4A4E
5190 DATA E!5F4C4D3E
```

The above source notes would be compiled as usual until line 5130 is read. At that point, the COMPOSER would make an identical copy of notes 44 through 202 inclusive. The fact that an identical copy is made is very important in several respects. First, the process is very very fast, typically a second or two. The increased speed comes from the fact that the notes are not recompiled, the data in the machine language program is merely copied. Second, because an identical copy is made, the KEY/OCTAVE and TEMPO of the original notes are used. Thus a new KEY/OCTAVE or TEMPO argument would be ignored if it occured prior to the REPEAT command and after the notes to be copied.

The BASIC Command

This command is one of the most powerful features of the COMPOSER. Without this feature, once a piece of music starts to play nothing the user does, short of hitting the reset button, can stop the music. The COMPOSER's BASIC command allows the user

to specify at specific points in a piece of music were he or she wishes control to be returned to BASIC. Executing the music again will cause the remainder of the music to be played or until another BASIC statement is found. The command must be embedded in with the source notes in the form of a DATA statement at those points were one want to return to BASIC. The following example may further help to explain the process.

```
5100 DATA B5F4C4D3Q
5110 DATA D5G4D4B4Q
5120 DATA D5G4D4B4E
5130 DATA BASIC
5140 DATA E!5G4C#4B!4Q
5150 DATA E!5G4C#4B!4E
5160 DATA E5G4C4A4E
5170 DATA E5G4C4A4Q
5180 DATA BASIC
5190 DATA E!5F4C4D3E
```

In the above example, the music would be played with two interruptions. In other words, the music has been broken into 3 sections. Next a BASIC program must be written to take advantage of this special version of the above.

```
5 PCLEAR1
10 CLEAR 30,&H6000
20 CLOADM "music file"
30 CLS
40 PRINT "HERE IS FIRST PORTION OF MUSIC"
50 PRINT "YOU'R IN FOR A TREAT"
60 EXEC
70 CLS
80 PRINT "SECOND PART"
90 EXEC
92 CLS
94 PRINT "THIRD AND LAST PART"
96 EXEC
98 END
```

The above BASIC program starts by clearing memory for the music machine language program and then loads it. The screen is cleared, a message printed and the music starts to play. At the point indicated by the first BASIC command, the music stops and control is returned to BASIC were in this program we see the screen is cleared again and another message printed. The music is played again starting at the point were we left off. The music continues until once again we hit the point were the user inserted a BASIC command. Once again control is returned to BASIC. The screen is cleared, a message printed and the program ends.

The above simple example does not do justice to the creative uses that can be made. For example, the words to music can be displayed bar by bar or line by line. Or one might draw different pictures on the screen as different portions of the music are played.

Preparing Music

No doubt you will want to develop your own music. Before you can do this however, you will need to understand certain rules.

After loading the COMPOSER, LIST the BASIC program and you will find that a piece of music in source form has already been appended to the end of the program. The piece starts at line 3010. You will first want to delete these lines by typing DEL 3010-5330. You will insert your notes in this area. Note that you are not limited to this range, this range is true merely because the supplied music contains 232 notes. The actual range you can use is determined by the version (cassette or disk) you are using. These notes are in their source form and will eventually be compiled (translated) to machine language data. It should be clear by now that all music you develop will actually exist in two forms: source and machine data. Therefore if you have 10 pieces of music, you will have 10 programs that are BASIC programs and 10 programs that are machine code programs.

You should examine one of the examples contained in this manual to aid you in understanding the note formats that must be used. The notes start at line 3010. This is the only portion of the program the user need be concerned with. Each of the lines are DATA statements that contain a note group except for the last line which is the text string DONE. It is imperative that the user insert this statement as it is the way the program knows that it has reached the end of the music. Every line in BASIC consists of a DATA statement comprised of a four note, note group. Each note group consists of a note for each of the 4 voices and a duration. Even if a simple song consisting of only one voice is to be played four notes must appear. The three silent voices are indicated as rests. A specific note may have legal values: A, B, C, D, E, F, or G. These notes may be sharp or flat by proceeding the note letter with # or ! respectively. If a sharp (#) or flat (!) character does not appear, the COMPOSER assumes the note is a natural. A rest (silence) is indicated by an R1. Following each of the notes, the octave number, 1 to 7 must appear. Lastly, the duration for the note group must be inserted.

Single Voice Example
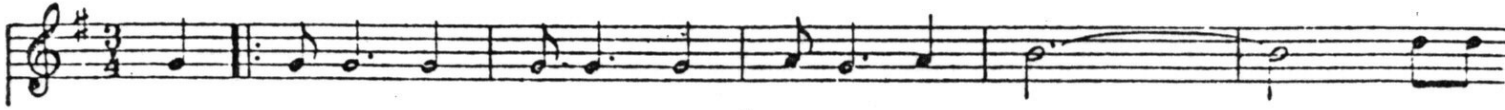

```
3010 DATA G4R1R1R1Q
3020 DATA G4R1R1R1E
3030 DATA G4R1R1R1Q.
3040 DATA G4R1R1R1Q
3050 DATA G4R1R1R1E
3060 DATA G4R1R1R1Q.
3070 DATA G4R1R1R1Q
3080 DATA A5R1R1R1E
3090 DATA G4R1R1R1Q.
3100 DATA G4R1R1R1Q.  ← ?
3110 DATA B5R1R1R1H.
3120 DATA B5R1R1R1H
3130 DATA D5R1R1R1E
3140 DATA D5R1R1R1E
3220 DATA DONE
```

Four Voice Example


```
3010 DATA D5G4D4B4Q
3020 DATA D5G4D4B4Q
3030 DATA C#5G4E4B!4Q
3040 DATA C#5G4E4B!4E
3050 DATA C5G4E4A4Q
3060 DATA C5G4E!4A4Q
3070 DATA C#5G4E4B!4E
3080 DATA A5F4C4D3E
3090 DATA A#5F4C4D3Q
3100 DATA B5F4C4D3Q
3110 DATA D5G4D4B4Q
3120 DATA D5G4D4B4E
3130 DATA E!5G4C#4B!4E
3140 DATA E!5G4C#4B!4Q
3150 DATA E!5G4C#4B!4E
3160 DATA E5G4C4A4E
3170 DATA E5G4C4A4Q
3180 DATA E5G4C4A4E
3190 DATA E!5F4C4D3E
3200 DATA E!5F4C4D3Q
3210 DATA D5F4C4D3Q
3220 DATA DONE
```

Legal durations are:

S	Sixteenth note
E	Eigth note
Q	Quater note.
H	Half note
W	Whole note
A	1/3 note (triplet)
B	1/5 note
C	1/6 note (quarter note triplet)
D	1/7 note
F	1/10 note
G	1/12 note (eigth note triplet)
I	1/14 note
J	1/20 note
K	1/24 note
L	1/32 note

The duration may be further modified using:

. = increase duration by 50% (dotted note)
; = increase duration by 75% (double dotted)

Examples are shown on the following pages to help clarify the process of preparing music. Remember that the last DATA statement must be "DONE". The COMPOSER looks for this key word to know when it is complete.

There is a limit to the number of note groups the user may insert. Users with a 16K machine are limited to 280 note groups, while 32K users may include up to 720 notes groups in a piece of music. Cassette users will find in the lower right hand corner of the display, the size of memory that the COMPOSER is set for.

Each voice has its own waveshape. The first note of each DATA statement line is assigned to the first waveshape, the second note in a line the second waveshape etc.

A scale is shown on the following page to show how the notes are assigned to a scale. For the purest, one should note that A1 (note A in the first octave) is a frequency of 27.5 Hz.

Note that the first note (the lowest note) is A1 and the highest note is G7. In other words, the notes run A through G and then change to the next octave.

It is nice to have all the line numbers of the notes in increments of 10. Fortunately, EXTENDED COLOR BASIC supports this with the renumber command. RENUM 3010,3010,10 will renumber only the notes. See the users manual that comes with the computer for more information.

```
                                        --G6--
                                         F6
                                       --E6--
                                        D6
                                     --C6--
                                      B6
                                   --A6--
                                    G5
------------------------------------F5------------------------------
                                   E5
TREBLE                           D5
                                C5
CLEFF                          B5
                              A5
------------------------------G4------------------------------------
                             F4
                            E4
                           D4
                       --C4--
                        B4                   --A5
                 --A4--                    --G4--
                  G3                        F4
               --F3--                    --E4--
                E3              |        D4
                               |      --C4--
                               |       B4
------------------------------A4------------------------------------
                             G3
------------------------------F3------------------------------------
                            E3
BASE                       D3
                          C3
CLEFF                    B3
                        A3
------------------------G2------------------------------------------
                       F2
                    --E2--
                     D2
                  --C2--
                   B2
                --A2--
```

```
                                    [--3--]      [--3--]
   |===       |---       |          |  |  |      |  |  |
   |  =       |  -       |     |     |  |  |      |--|--|
   |          |          |     |     |  |  |      |  |  |
   0          0          0     0     0   0 0 0    0  0  0
   S          E          Q     H     W      C           G
```

1/16   1/8   1/4   1/2   1
 S   E   Q   H   W

LEGAL NOTES

A ! 1   S(1/16)   .(+50%)
B # 2   E(1/8)   ;(+75%)
C   3   Q(1/4)
D   4   H(1/2)
E   5   W(1/1)
F   6   A(1/3)
G   7   B(1/5)
R   C(1/6)
          D(1/7)
          F(1/10)
          G(1/12)
          I(1/14)
          J(1/20)
          K(1/24)
          L(1/32)

```
3010 DATA R1R1R1C2Q        3510 DATA D5B!4E4C2Q       4010 DATA B5B4D4F2Q
3020 DATA C5G4E4C2Q        3520 DATA C5A4C4F2Q        4020 DATA G4B4D4F2Q
3030 DATA G4G4E4C2Q        3530 DATA C5A4C4F2Q        4030 DATA A5B4D4F2Q
3040 DATA E4G4E4C2Q        3540 DATA C5A4C4F2Q        4040 DATA C4R1R1C2Q
3050 DATA D4A4C4F2Q        3550 DATA A5A4C4F2Q        4050 DATA C4R1R1C2Q
3060 DATA E4A4C4F2Q        3560 DATA R1R1R1G2Q        4060 DATA C4R1R1C2Q
3070 DATA F4A4C4F2H        3570 DATA D5B4D4F2Q        4070 DATA E4E4G4C2Q
3080 DATA R1R1R1G2Q        3580 DATA C5B4D4F2Q        4080 DATA G4E4G4C2Q
3090 DATA B5B4D4F2Q        3590 DATA B5B4D4F2Q        4090 DATA R1R1R1C2Q
3100 DATA B5B4D4F2Q        3600 DATA C5E4G4C2W        4100 DATA E5B!4E4C2H
3110 DATA B4G4D4F2Q        3610 DATA R1R1R1C2Q        4110 DATA D5B!4E4C2Q
3120 DATA A5B4D4F2Q        3620 DATA C5G4E4C2Q        4120 DATA C5A4C4F2Q
3130 DATA C4R1R1C2Q        3630 DATA G4G4E4C2Q        4130 DATA C5A4C4F2Q
3140 DATA C4R1R1C2Q        3640 DATA E4G4E4C2Q        4140 DATA C5A4C4F2Q
3150 DATA C4R1R1C2H        3650 DATA D4A4C4F2Q        4150 DATA A5A4C4F2Q
3160 DATA R1R1R1C2Q        3660 DATA E4A4C4F2Q        4160 DATA R1R1R1G2Q
3170 DATA C5E4G4C2Q        3670 DATA F4A4C4F2H        4170 DATA D5B4D4F2Q
3180 DATA G4E4G4C2Q        3680 DATA R1R1R1G2Q        4180 DATA C5B4D4F2Q
3190 DATA E4E4G4C2Q        3690 DATA B5B4D4F2Q        4190 DATA B5B4D4F2Q
3200 DATA D4A4C4F2Q        3700 DATA B5B4D4F2Q        4200 DATA C5E4G4C2W
3210 DATA E4A4C4F2Q        3710 DATA B4G4D4F2Q        4210 DATA DONE
3220 DATA F4A4C4F2H        3720 DATA A5B4D4F2Q
3230 DATA R1R1R1G2Q        3730 DATA C4R1R1C2Q
3240 DATA G4B4D4F2Q        3740 DATA C4R1R1C2Q
3250 DATA B5B4D4F2Q        3750 DATA C4R1R1C2H
3260 DATA C5B4D4F2Q        3760 DATA R1R1R1C2Q
3270 DATA D5B4D4F2Q        3770 DATA C5E4G4C2Q
3280 DATA C5B4D4F2Q        3780 DATA G4E4G4C2Q
3290 DATA B5B4D4F2Q        3790 DATA E4E4G4C2Q
3300 DATA B5G4D4F2Q        3800 DATA D4A4C4F2Q
3310 DATA A5B4D4F2Q        3810 DATA E4A4C4F2Q
3320 DATA R1R1R1C2Q        3820 DATA F4A4C4F2H
3330 DATA C5E4G4C2Q        3830 DATA R1R1R1G2Q
3340 DATA G4E4G4C2Q        3840 DATA G4B4D4F2Q
3350 DATA E4E4G4C2Q        3850 DATA B5B4D4F2Q
3360 DATA D4A4C4F2Q        3860 DATA C5B4D4F2Q
3370 DATA E4A4C4F2Q        3870 DATA D5B4D4F2Q
3380 DATA F4A4C4F2H        3880 DATA C5B4D4F2Q
3390 DATA R1R1R1G2Q        3890 DATA B5B4D4F2Q
3400 DATA B5B4D4F2Q        3900 DATA B5G4D4F2Q
3410 DATA B5B4D4F2Q        3910 DATA A5B4D4F2Q
3420 DATA G4B4D4F2Q        3920 DATA R1R1R1C2Q
3430 DATA A5B4D4F2Q        3930 DATA C5E4G4C2Q
3440 DATA C4R1R1C2Q        3940 DATA G4E4G4C2Q
3450 DATA C4R1R1C2Q        3950 DATA E4E4G4C2Q
3460 DATA C4R1R1C2Q        3960 DATA D4A4C4F2Q
3470 DATA E4E4G4C2Q        3970 DATA E4A4C4F2Q
3480 DATA G4E4G4C2Q        3980 DATA F4A4C4F2H
3490 DATA R1R1R1C2Q        3990 DATA R1R1R1G2Q
3500 DATA E5B!4E4C2H        4000 DATA B5B4D4F2Q
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ADESTE FIDELES

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3010 DATA G4B4R1R1Q          3510 DATA A5D4F#3R1Q
3020 DATA G4D4B4G2H          3520 DATA B5D4G3G2Q
3030 DATA D4D4B4G2Q          3530 DATA C5F#3D4D2Q
3040 DATA G4D4B4G2Q          3540 DATA B5G3D4D2Q
3050 DATA A5D4F#3D2H         3550 DATA A5C4A4A3Q
3060 DATA D4A4F#3D2H         3560 DATA G4C#4A4A3Q
3070 DATA B5G3D4G2Q          3570 DATA D4F#4F#3D2Q
3080 DATA A5F#3D4G2Q         3580 DATA C4F#4F#3D2Q
3090 DATA B5G3D4G2Q          3590 DATA G4B4G3E2Q
3100 DATA C5A4D4G2Q          3600 DATA C5E4G3A3Q
3110 DATA B5D4G3G2H          3610 DATA B5D4G3D2H
3120 DATA A5D4A4F#2Q         3620 DATA A5C4F#3D2Q.
3130 DATA G4D4B4E2Q          3630 DATA G4C4G3D2E
3140 DATA G4C#4B4A3H         3640 DATA G4B4G3G2W
3150 DATA F#4C#4A4A3Q        3650 DATA R1R1R1R1Q
3160 DATA E4C#4G3A3Q         3660 DATA DONE
3170 DATA F#4F#3D4D2Q
3180 DATA G4E3D4D2Q
3190 DATA A5F#3D4D2Q
3200 DATA B5G3D4D2Q
3210 DATA F#4D4A4A3H
3220 DATA E4C#4G3A3Q.
3230 DATA D4D4G3A3E
3240 DATA D4D4F#3D2W
3250 DATA D5B4D4D2H
3260 DATA C5A4D4D2Q
3270 DATA B5G3D4D2Q
3280 DATA E3C5D4D2Q
3290 DATA F#3C5D4D2Q
3300 DATA G3B5D4D2H
3310 DATA A5F#3D4D2Q
3320 DATA B5G3D4D2Q
3330 DATA G4B4D4D2Q
3340 DATA A5C#4A4A3Q
3350 DATA F#4D4A4D2Q.
3360 DATA E4C#4G3D2E
3370 DATA D4D4F#3D2Q
3380 DATA G4D4B4R1Q
3390 DATA G4D4B4R1Q
3400 DATA F#4A4D4R1Q
3410 DATA G4B4D4R1Q
3420 DATA A5C4D4R1Q
3430 DATA G4D4B4R1H
3440 DATA D4B4G3R1Q
3450 DATA B5D4G3R1Q
3460 DATA B5D4G3R1Q
3470 DATA A5F#3D4R1Q
3480 DATA B5G3D4R1Q
3490 DATA C5A4D4R1Q
3500 DATA B5D4G3R1H
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BATTLE HYMN OF THE REPUBLIC

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3010 DATA R1R1R1D4S
3020 DATA D4B4G3D3E.
3030 DATA R1R1R1D4S
3040 DATA D4B4G3D3E.
3050 DATA R1R1R1C4S
3060 DATA R1B4G3D3E.
3070 DATA R1R1R1D4S
3080 DATA G4B4G3D3E.
3090 DATA R1R1R1A5S
3100 DATA B5D4B4G3E.
3110 DATA R1R1R1B5S
3120 DATA B5D4B4G3E.
3130 DATA R1R1R1A5S
3140 DATA G4D4B4G3E.
3150 DATA R1R1R1G4S
3160 DATA G4D4B4G3E.
3170 DATA R1R1R1F#4S
3180 DATA E4C4G3E3E.
3190 DATA R1R1R1E4S
3200 DATA E4C4G3E3E.
3210 DATA R1R1R1F#4S
3220 DATA G4C4G3E3E.
3230 DATA R1R1R1F#4S
3240 DATA G4C4G3E3E.
3250 DATA R1R1R1E4S
3260 DATA D4B4G3D3E.
3270 DATA R1R1R1E4S
3280 DATA D4B4G3D3E.
3290 DATA R1R1R1B4S
3300 DATA D4B4G3D3E.
3310 DATA R1R1R1D4S
3320 DATA D4B4G3D3E.
3330 DATA R1R1R1D4S
3340 DATA D4B4G3D3E.
3350 DATA R1R1R1D4S
3360 DATA D4B4G3D3E.
3370 DATA R1R1R1C4S
3380 DATA R1B4G3D3E.
3390 DATA R1R1R1D4S
3400 DATA G4B4G3D3E.
3410 DATA R1R1R1A5S
3420 DATA B5D4B4G3E.
3430 DATA R1R1R1B5S
3440 DATA B5D4B4G3E.
3450 DATA R1R1R1A5S
3460 DATA G4D4B4G3E.
3470 DATA R1R1R1G4S
3480 DATA G4D4B4G3E.
3490 DATA R1G4D4B4S
3500 DATA A5E4C4C3E.

3510 DATA R1A5E4C4S
3520 DATA A5E4C4C3E.
3530 DATA R1A5E4C4S
3540 DATA G4D4B4D3E.
3550 DATA R1G4D4B4S
3560 DATA F#4D4C4D2E.
3570 DATA R1F#4D4C4S
3580 DATA G4D4B4G2Q
3590 DATA G4D4B4G3Q
3600 DATA G4D4B4D3E.
3610 DATA G4D4B4C3S
3620 DATA G4D4B4B3E.
3630 DATA G4D4B4A3S
3640 DATA D4B4D3G2E.
3650 DATA R1R1D4B4S
3660 DATA D4B4D3G2E.
3670 DATA R1R1C4A4S
3680 DATA B4G3D3G2E.
3690 DATA R1R1D4B4S
3700 DATA G4B4D3G2E.
3710 DATA R1R1A5C4S
3720 DATA R1B5D4G2E.
3730 DATA R1R1B5D4S
3740 DATA R1B5D4D3E.
3750 DATA R1R1B5D4S
3760 DATA R1G4B4G3E.
3770 DATA R1G4B4F#3S
3780 DATA R1R1R1E3E.
3790 DATA R1R1R1D3S
3800 DATA E4C4G3C3E.
3810 DATA R1R1E4C4S
3820 DATA E4C4G3C3E
3830 DATA F#4D4G3C3S
3840 DATA R1R1F#4D4S
3850 DATA G4E4G3C3E.
3860 DATA R1R1F#4D4S
3870 DATA G4E4G3C3E.
3880 DATA R1R1E4C4S
3890 DATA D4B4G3G2E.
3900 DATA D4B4G3G2S
3910 DATA R1D4B4D3E.
3920 DATA R1R1D4B4S
3930 DATA R1B4G3D3E.
3940 DATA R1B4G3C3S
3950 DATA R1R1R1B3E.
3960 DATA R1R1R1A3S
3970 DATA D4B4D3G3E.
3980 DATA R1R1D4B4S
3990 DATA D4B4D3G3E
4000 DATA C4A4D3G3S

4010 DATA R1R1C4A4S
4020 DATA B4G3D3G2E.
4030 DATA R1R1D4B4S
4040 DATA G4B4D3G2E.
4050 DATA R1R1A5C4S
4060 DATA B5D4G3G2E.
4070 DATA R1R1B5D4S
4080 DATA R1D#4F#3B3E.
4090 DATA R1R1R1D4S
4100 DATA R1G4E4E3E.
4110 DATA R1R1G4E4S
4120 DATA G4E4R4D3E.
4130 DATA R1G4E4B4S
4140 DATA A5E4C4C3E.
4150 DATA R1A5E4C4S
4160 DATA A5E4C4C3E.
4170 DATA R1A5E4C4S
4180 DATA G4D4B4D3E.
4190 DATA R1G4D4B4S
4200 DATA F#4D4C4D3E.
4210 DATA R1F#4D4C4S
4220 DATA G4D4B4G3E.
4230 DATA R1G4D4B4S
4240 DATA G4D4B4D3E.
4250 DATA R1G4D4B4S
4260 DATA G4D4B4G2E.
4270 DATA R1G4D4B4S
4280 DATA R1R1R1D4E.
4290 DATA R1R1R1D4S
4300 DATA G4D4B4G3E.
4310 DATA R1G4D4B4S
4320 DATA G4D4B4D3E.
4330 DATA R1G4D4B4S
4340 DATA G4D4B4G2E
4350 DATA DONE
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BLOWIN IN THE WIND

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3010 DATA G4C4A!3R1H        3510 DATA B!5G4E!4B!4Q      4010 DATA C5A!3R1R1Q
3020 DATA A!5C4A!3R1Q       3520 DATA C5A!3R1R1Q        4020 DATA C5A!5E!4C4Q
3030 DATA G4B!4A!3R1Q       3530 DATA C5A!5E!4C4Q       4030 DATA B!5E!3R1R1Q
3040 DATA F4A!4B!3R1E       3540 DATA B!5E!3R1R1Q       4040 DATA A!5E!4C4R1Q
3050 DATA F4A!4B!4R1Q.      3550 DATA A!5E!4C4R1Q       4050 DATA B!5E!3R1R1Q
3060 DATA E!4A!4F3R1Q       3560 DATA B!5E!3R1R1Q       4060 DATA B!5G4E!4B!4Q
3070 DATA D4A!4B!3R1Q       3570 DATA B!5G4E!4B!4Q      4070 DATA B!5B!3R1R1Q
3080 DATA E!2E!4G3R1Q.      3580 DATA G4B!3R1R1Q        4080 DATA B!5G4E!4B!4Q
3090 DATA C3E!4G3R1E        3590 DATA F4B!4G3R1Q        4090 DATA B!5E!3R1R1Q
3100 DATA B!3E!4G3R1Q       3600 DATA E!4E!3R1R1Q       4100 DATA B!5G4E!4B!4Q
3110 DATA C3E!4G3R1Q        3610 DATA E!4B!4G3R1Q       4110 DATA B!5G3R1R1Q
3120 DATA E!2E!4R1R1Q       3620 DATA E!4B!3R1R1Q       4120 DATA G4E!4B!4E!3Q
3130 DATA E!4B!4G3R1Q       3630 DATA G4B!4G3R1Q        4130 DATA A!5A!3R1R1Q
3140 DATA E!4B!3R1R1Q       3640 DATA B!5E!3R1R1Q       4140 DATA A!5E!4C4R1Q
3150 DATA E!4B!4G3R1Q       3650 DATA B!5G4E!4B!4Q      4150 DATA A!5C3R1R1Q
3160 DATA B!5E!3R1R1Q       3660 DATA B!5B!3R1R1Q       4160 DATA G4E!4C4R1Q
3170 DATA B!5G4E!4B!4Q      3670 DATA G4E!4B!4E!3Q      4170 DATA F4B!3R1R1Q
3180 DATA B!5B!3R1R1Q       3680 DATA A!5A!3R1R1Q       4180 DATA F4D4B!4R1Q
3190 DATA B!5G4E!4B!4Q      3690 DATA A!5E!4C4R1Q       4190 DATA F4F3R1R1Q
3200 DATA C5A!3R1R1Q        3700 DATA A!5C3R1R1Q        4200 DATA F4D4A!4B!3Q
3210 DATA C5A!5E!4C4Q       3710 DATA G4E!4C4R1Q        4210 DATA G4E!2R1R1E
3220 DATA B!5E!3R1R1Q       3720 DATA F4B!3R1R1Q        4220 DATA G4E!2R1R1E
3230 DATA A!5E!4C4R1Q       3730 DATA F4B!3D4B!4Q       4230 DATA G4E!4B!4R1Q
3240 DATA B!5E!3R1R1Q       3740 DATA F4B!3R1R1Q        4240 DATA G4B!3R1R1Q
3250 DATA B!5G4E!4B!4Q      3750 DATA F4B!3D4B!4E       4250 DATA F4D4G3R1Q
3260 DATA G4B!3R1R1Q        3760 DATA F4C3D4B!4E        4260 DATA E!4E!2R1R1Q
3270 DATA F4B!4G3R1Q        3770 DATA F4B!3R1R1Q        4270 DATA E!4B!4G3R1Q
3280 DATA E!4E!3R1R1Q       3780 DATA F4D4B!4A!3Q       4280 DATA E!4G2R1R1Q
3290 DATA E!4B!4G3R1Q       3790 DATA G4G2R1R1Q         4290 DATA G4E!4G3B!3Q
3300 DATA E!4B!3R1R1Q       3800 DATA G4D4B!4F2Q        4300 DATA A!5A!3R1R1Q
3310 DATA G4B!4G3R1Q        3810 DATA B!5E!2R1R1Q       4310 DATA A!5E!4C4R1Q
3320 DATA B!5E!3R1R1Q       3820 DATA B!5G4E!4B!4Q      4320 DATA A!5C3R1R1Q
3330 DATA B!5G4E!4B!4Q      3830 DATA B!5B!3R1R1Q       4330 DATA G4E!4C4R1Q
3340 DATA B!5B!3R1R1Q       3840 DATA B!5G4E!4B!4Q      4340 DATA F4B!3R1R1E
3350 DATA B!5G4E!4B!4Q      3850 DATA C5A!3R1R1Q        4350 DATA F4B!3R1R1E
3360 DATA C5A!3R1R1Q        3860 DATA C5A!5E!4C4Q       4360 DATA F4D4A!4R1Q
3370 DATA C5A!5E!4C4Q       3870 DATA B!5E!3R1R1Q       4370 DATA E!4F3R1R1Q
3380 DATA D!5E!3R1R1Q       3880 DATA A!5E!4C4R1Q       4380 DATA D4A!4B!3R1Q
3390 DATA A!5E!4C4R1Q       3890 DATA B!5E!3R1R1Q       4390 DATA E!4E!2R1R1Q
3400 DATA B!5E!3R1R1Q       3900 DATA B!5G4E!4B!4Q      4400 DATA E!4E!2B!4G3E
3410 DATA B!5G4E!4B!4Q      3910 DATA G4B!3R1R1Q        4410 DATA E!4B!4G3C3E
3420 DATA B!5B!3R1R1Q       3920 DATA F4B!4G3R1Q        4420 DATA E!4B!3R1R1Q
3430 DATA B!5G4E!4B!4Q      3930 DATA E!4E!3R1R1Q       4430 DATA E!4B!4G3C3Q
3440 DATA B!5F3R1R1Q        3940 DATA E!4B!4G3R1Q       4440 DATA E!4E!2R1R1Q
3450 DATA B!5A!5D4B!4Q      3950 DATA E!4B!3R1R1Q       4450 DATA E!4B!4G3R1Q
3460 DATA G4B!3R1R1Q        3960 DATA G4B!4G3R1Q        4460 DATA E!4B!3R1R1Q
3470 DATA A!5D4B!4R1Q       3970 DATA B!5E!3R1R1Q       4470 DATA E!4B!4G3R1Q
3480 DATA B!5E!3R1R1Q       3980 DATA B!5G4E!4B!4Q      4480 DATA E!4E!2R1R1Q
3490 DATA B!5G4E!4B!4Q      3990 DATA B!5B!3R1R1Q       4490 DATA E!4E!2B!4G3E
3500 DATA B!5B!3R1R1Q       4000 DATA B!5G4E!4B!4Q      4500 DATA E!4B!4G3C3E
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4510 DATA R1R1R1A!5Q
4520 DATA B!5G4G3E!2E.
4530 DATA B!5G4G3E!2S
4540 DATA B!5G4E!4B!4E.
4550 DATA E!5G4E!4B!4S
4560 DATA D5A!5D4B!4E.
4570 DATA F5A!5D4B!4S
4580 DATA E!5G4G3E!2Q
4590 DATA E!5G4E!4B!4E
4600 DATA G4E!4B!4G3E
4610 DATA G4E!4B!4G3E.
4620 DATA A!5F4B!4G3S
4630 DATA B!5G4G3E!2E.
4640 DATA B!5G4G3E!2S
4650 DATA B!5G4E!4B!4E.
4660 DATA E!5G4E!4B!4S
4670 DATA D5A!5D4B!4E.
4680 DATA F5A!5D4B!4S
4690 DATA E!5G4G3E!2Q.
4700 DATA E!5E!4C4G3E
4710 DATA D5E!4B!4B!3E
4720 DATA D!5E!4B!4B!3E
4730 DATA C5A!5A!4A!3Q
4740 DATA A!5E!4C4A!4Q
4750 DATA B!5E!4C4A!4Q
4760 DATA C5A!5A!4A!3Q.
4770 DATA C5A!5E!4C4E
4780 DATA D5B!5E!4C4E
4790 DATA C5A!5E!4C4E
4800 DATA B!5G4G3E!2Q
4810 DATA G4E!4C4G3Q
4820 DATA A!5F4E!4B!4Q
4830 DATA B!5G4G3B!3Q.
4840 DATA B!5E!4B!4G3E
4850 DATA C5E!4B!4G3E
4860 DATA B!5E!4B!4G3E
4870 DATA A!5F4A!4F2Q
4880 DATA F4D4B!4A!4Q
4890 DATA G4E!4D4B!4Q
4900 DATA A!5F4A!4B!3Q.
4910 DATA F4D4C4A!4E
4920 DATA G4D4B!4A!4E
4930 DATA A!5D4B!4A!4E
4940 DATA R1B!5B!4B!3E
4950 DATA R1C5C4B!3E
4960 DATA R1R1B!5B!4E
4970 DATA R1R1A!5A!4E
4980 DATA R1R1G4G3E
4990 DATA R1R1F4F3E
5000 DATA R1E!4E!3E!2E
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5010 DATA R1R1R1R1E
5020 DATA R1F5F3F2Q
5030 DATA R1E5E3F2Q
5040 DATA B!5B!3D4F3E
5050 DATA R1R1R1F5E
5060 DATA R1R1R1E5E
5070 DATA R1R1R1F5E
5080 DATA R1R1D5D4E
5090 DATA R1R1C#5C#4E
5100 DATA R1R1D5B!4E
5110 DATA R1R1B!5B!4E
5120 DATA R1R1A5A4E
5130 DATA R1R1B!5B!4E
5140 DATA R1R1F4F3E
5150 DATA R1R1E4E3E
5160 DATA R1R1F4F3Q
5170 DATA R1R1R1R1E
5180 DATA F5E!5A5F2Q
5190 DATA R1R1R1R1E
5200 DATA B!6F5D5B!3E
5210 DATA DONE
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3010 DATA C4R1R1R1Q
3020 DATA C4C3C1R1Q
3030 DATA C4E3C1R1E
3040 DATA E4G3C1R1E
3050 DATA G4E4B!4C1Q
3060 DATA G4E4C3C1E
3070 DATA B!5E4C3C1E
3080 DATA A5F4F3F1Q
3090 DATA A5F4F3C1Q
3100 DATA A5F4F3F1Q
3110 DATA R1R1R1R1Q
3120 DATA A5R1R1R1E
3130 DATA B!5D4F3F1Q
3140 DATA A5C4F3F1Q
3150 DATA G4B!4F3F1Q
3160 DATA F4A4F3F1Q
3170 DATA D4B!4F3B!2Q
3180 DATA D4B!4F3B!2Q
3190 DATA B!5C4F3B!2Q
3200 DATA B!5B!4F3B!2E
3210 DATA C4B!4F3B!2E
3220 DATA F4A4F3F1Q
3230 DATA F4C4F3F1Q
3240 DATA F4A4F3F1Q
3250 DATA F4A4F3F1Q
3260 DATA E4G3E3C2E
3270 DATA E4G3E3C2E
3280 DATA F4A4E3C2Q
3290 DATA G4B!4E3C2Q
3300 DATA A5R1R1R1Q
3310 DATA B!5D4F3F1Q
3320 DATA B!5C4F3F1E
3330 DATA A5C4F3F1E
3340 DATA G4B!4F3F1E
3350 DATA G4B!4F3F1E
3360 DATA F4A4F3F1Q
3370 DATA D4A4F3D2Q
3380 DATA D4B!4F3D2Q
3390 DATA B!5D4F3G1Q
3400 DATA C4A4F3G1Q
3410 DATA C4G3E3C2Q
3420 DATA C4A4E3C2E
3430 DATA E4A4E3C2E
3440 DATA G4B!4E3C2Q
3450 DATA G4C4E3C2E
3460 DATA B!5C4E3C2E
3470 DATA A5C4F3F1Q
3480 DATA F4A4F3F1Q
3490 DATA F4A4F3F1H
3500 DATA C4A4F3F1E
3510 DATA C4A4F3F1E
3520 DATA F4A4F3R1Q
3530 DATA F4A4F3C2Q
3540 DATA F4A4F3R1E
3550 DATA F4A4F3R1E
3560 DATA E4C4G3G1Q
3570 DATA G4C4G3R1Q
3580 DATA G4C4E3C2Q
3590 DATA G4B4E3R1Q
3600 DATA C4G3E3G1E
3610 DATA C4G3E3G1E
3620 DATA G4C3E3R1Q
3630 DATA G4C3E3C2Q
3640 DATA G4B!3E3R1E
3650 DATA F3B3E3R1E
3660 DATA F4A4F3F1Q
3670 DATA A5C4F3R1Q
3680 DATA A5D4F3C2Q
3690 DATA A5C4F3R1Q
3700 DATA F4A4F3F1E
3710 DATA F4A4F3F1E
3720 DATA A5C4F3R1Q
3730 DATA A5D4F3C2Q
3740 DATA A5C4E3R1E
3750 DATA A5C4E3R1E
3760 DATA B!5B!4D3B!2Q
3770 DATA D5B!4F3R1Q
3780 DATA D5B!4F3C2Q
3790 DATA D5B!4F3R1E
3800 DATA D5B!4F3R1E
3810 DATA C5A5F3C2Q
3820 DATA C5A5F3R1Q
3830 DATA B!5C4E3C2Q
3840 DATA E4B!4G3R1Q
3850 DATA F4A4F3F1H.
3860 DATA DONE
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MEXICAN HAT DANCE

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3010 DATA R1R1R1F5E        3510 DATA B!5B!3D4F3E       4010 DATA R1R1R1F4E
3020 DATA R1R1R1E!5E       3520 DATA R1R1R1B!5E        4020 DATA R1F4F2F3E
3030 DATA F5D4F3B!3E       3530 DATA R1R1R1B!5E        4030 DATA R1F5F2F3E
3040 DATA R1R1R1D5E        3540 DATA B!5B!3D4F3E       4040 DATA R1E5F2F3E
3050 DATA R1R1R1C#5E       3550 DATA R1R1R1C5E         4050 DATA F5B!3D4F3E
3060 DATA D5F2D4B!4E       3560 DATA R1R1R1C5E         4060 DATA R1R1R1D5E
3070 DATA R1R1R1B!5E       3570 DATA R1C5B!4C2E        4070 DATA R1R1R1C#5E
3080 DATA R1R1R1A5E        3580 DATA R1G4B!4C2E        4080 DATA D5F2D4B!4E
3090 DATA B!5B!3D4F3E      3590 DATA R1G4B!4C2E        4090 DATA R1R1R1B!5E
3100 DATA R1R1R1F4E        3600 DATA G4E!4B!4C2E       4100 DATA R1R1R1A5E
3110 DATA R1R1R1F4E        3610 DATA B!5E!4B!4C2E      4110 DATA B!5B!3D4F3E
3120 DATA F4F2D4B!4E       3620 DATA B!5E!4B!4C2E      4120 DATA R1R1R1F4E
3130 DATA R1R1R1D4E        3630 DATA R1B!5A4F2E        4130 DATA R1R1R1F4E
3140 DATA R1R1R1E!4E       3640 DATA R1A5A4F2E         4140 DATA F4F2D4B!4E
3150 DATA F4B!3D4F3E       3650 DATA R1A5A4F2E         4150 DATA R1R1R1D4E
3160 DATA R1R1R1G4E        3660 DATA A5F2C4A4E         4160 DATA R1R1R1E!4E
3170 DATA R1R1R1A5E        3670 DATA C5F2C4A4E         4170 DATA F4B!3D4F3E
3180 DATA B!5F2D4B!4E      3680 DATA C5F2C4A4E         4180 DATA R1R1R1G4E
3190 DATA R1R1R1C5E        3690 DATA R1C5B!4C2E        4190 DATA R1R1R1A5E
3200 DATA R1R1R1D5E        3700 DATA R1G4B!4C2E        4200 DATA B!5F2D4B!4E
3210 DATA E!5F2E!4A4E      3710 DATA R1G4B!4C2E        4210 DATA R1R1R1C5E
3220 DATA R1R1R1C5E        3720 DATA G4C2E4B!4E        4220 DATA R1R1R1D5E
3230 DATA R1R1R1C5E        3730 DATA B!5C2E!4B!4E      4230 DATA E!5F2E!4A4E
3240 DATA C5C2E!4A4E       3740 DATA B!5C2E!4B!4E      4240 DATA R1R1R1C5E
3250 DATA R1R1R1E!5E       3750 DATA R1B!5F2A4E        4250 DATA R1R1R1C5E
3260 DATA R1R1R1D5E        3760 DATA R1A5F2A4E         4260 DATA C5F2E!4A4E
3270 DATA E!5F2E!4A4E      3770 DATA R1A5F2A4E         4270 DATA R1R1R1E!5E
3280 DATA R1R1R1C5E        3780 DATA A5F2C4A4E         4280 DATA R1R1R1D5E
3290 DATA R1R1R1B5E        3790 DATA C5F2C4A4E         4290 DATA E!5F2E!4A4E
3300 DATA C5F2E!4A4E       3800 DATA C5F2C4A4E         4300 DATA R1R1R1C5E
3310 DATA R1R1R1A5E        3810 DATA R1C5C2B!4E        4310 DATA R1R1R1B5E
3320 DATA R1R1R1G#4E       3820 DATA R1G4C2B!4E        4320 DATA C5F2E!4A4E
3330 DATA A5F2E!4A4E       3830 DATA R1G4C2B!4E        4330 DATA R1R1R1A5E
3340 DATA R1R1R1F4E        3840 DATA G4C2E4B!4E        4340 DATA R1R1R1G4E
3350 DATA R1R1R1F4E        3850 DATA B!5C2E4B!4E       4350 DATA A5F2E!4A4E
3360 DATA F4C2E!4A4E       3860 DATA B!5C2E4B!4E       4360 DATA R1R1R1F4E
3370 DATA R1R1R1F5E        3870 DATA R1B!5F2A4E        4370 DATA R1R1R1F4E
3380 DATA R1R1R1E5E        3880 DATA R1A5F2A4E         4380 DATA F4F2E!4A4E
3390 DATA F5F2E!4A4E       3890 DATA R1A5F2A4E         4390 DATA R1R1R1F5E
3400 DATA R1R1R1G5E        3900 DATA A5F2C4A4E         4400 DATA R1R1R1E!5E
3410 DATA R1R1R1F5E        3910 DATA C5F2C4A4E         4410 DATA F5F2E!4A4E
3420 DATA E!5F2E!4A4E      3920 DATA C5F2C4A4E         4420 DATA R1R1R1G5E
3430 DATA R1R1R1D5E        3930 DATA C5C2E!4B!4E       4430 DATA R1R1R1F5E
3440 DATA R1R1R1C5E        3940 DATA R1R1R1D5E         4440 DATA R1R1R1E!5E
3450 DATA B!5B!3D4F3E      3950 DATA R1R1R1C5E         4450 DATA R1R1R1D5E
3460 DATA R1R1R1B!5E       3960 DATA B!5C2E!4B!4E      4460 DATA R1R1R1C5E
3470 DATA R1R1R1B!5E       3970 DATA R1R1R1A5E         4470 DATA B!5B!3D4F3E
3480 DATA B!5B!3D4F3E      3980 DATA R1R1R1G4E         4480 DATA B!5B!3D4F3S
3490 DATA R1R1R1F5E        3990 DATA F4F2C4A4E         4490 DATA G4B!3D4F3S
3500 DATA R1R1R1E5E        4000 DATA R1R1R1F4E         4500 DATA R1R1R1G4Q
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4510 DATA E!4B!3R1R1Q
4520 DATA E!4B!4G3C3Q
4530 DATA E!4E!2R1R1Q
4540 DATA E!4B!4G3R1Q
4550 DATA E!4B!3R1R1Q
4560 DATA G4E!4G3R1Q
4570 DATA A!5A!3R1R1Q
4580 DATA A!5E!4C4R1Q
4590 DATA A!5C3R1R1Q
4600 DATA G4E!4C4R1Q
4610 DATA F4B!3R1R1Q
4620 DATA F4D4A!4B!3Q
4630 DATA F4D4G3B!3Q
4640 DATA F4D4A!4B!3Q
4650 DATA F4D4B!4B!3Q
4660 DATA F4D4A!4B!3Q
4670 DATA E!4C4A!4B!3Q
4680 DATA D4B!4A!4B!3Q
4690 DATA R1E!4G3E!2Q
4700 DATA B!3E!4G3E!2Q
4710 DATA C3E!4G3E!2Q
4720 DATA B!3E!4G3E!2Q
4730 DATA E!4G3E!2B!3W
4740 DATA DONE
```