M U Z I K A 2.0

User's Guide

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M U Z I K A V e r 2 . 0

Abstract :

Musical software packages at the market today allow the user to perform a variety of functions that can be split into several categories:

- Musical analyzers:
  Sample analog signals and show information about them including frequency spectrum,loudness, etc.

- Sequencers:
  Allow MIDI communication with musical instruments, converting whatever is played into musical notes or some other notation.

- Note recognizers:
  Recognize bitmap files into digital representation. Bitmap files could be generated by optical scanners, thus allowing the user to convert regular note books into files that can be played by the computer.

- Score editors:
  Input musical notes, display them on the screen, edit, print and play them.

① The Muzika package

Muzika is a **SCORE EDITOR** software package .
It was created for filling a hole in this category for PC users because not many packages were written in Microsoft Windows for PC , none are free.

Muzika is a ***Musical notes editor*** – a tool used for writing musical note books, printing them and creating MIDI files for playing the music by other tools.

Muzika's environment provides tools for composing, playing, and printing melodies.

A melody can consist of several parts; any of them can have staves, in any key.

Some of the features provided by Muzika include:

❶ Easy inserting notes and other signs into the melody.

❷ Cutting, copying and pasting parts of the melody.

❸ Displaying the melody in two modes :one part or whole score.

❹ Creating MIDI files for playing the melody by other tools.

❺ Printing the melodies to any printer working under windows , to allow user-made Note books.

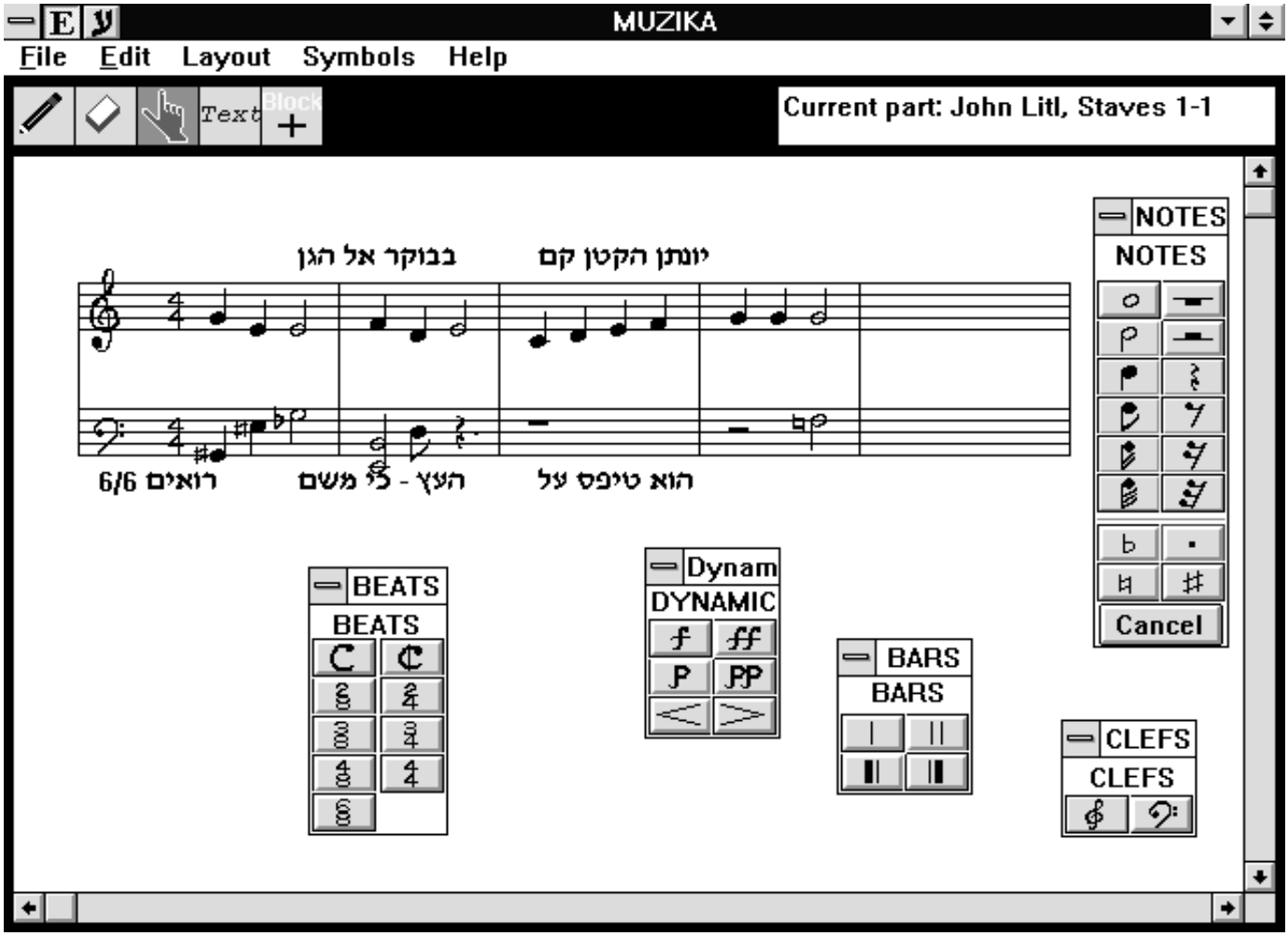
All operations are achieved easily by clicking the .

The melody is visible all the time allowing the user to see and play the melody easily while he composes it.

The user can arrange his Editing environments easily.

② **Muzika window layout** :

The following page shows ***MUZIKA 2*** screen layout :



The main window is divided to five visual sections:

❶ Tools Bar - the Edit mode symbols. (Top left)

❷ The MENU BAR. (Top line)

❸ The Status Line. (Top right)

❹ Editing area. (main area)

❺ Musical symbols "floating" menus.

2.1 The Tools Bar.

The Tools bar consist of Edit mode symbols.Edit mode symbols.
Currently There are five edit symbols :

Pencil for drawing new staves.

◎ Eraser for deletion of Objects or whole staff.

Hand for dragging objects.

◎ Text for writing Lyrics.

◎ Block for writing Lyrics.

For the usage of these see the "Using the symbols" chapter 4.

2.2 The MENU BAR.

The menu fits to the Standard Menu form in most Microsoft programs.

Here is the menu format :

```
File              Edit                    Layout      Symbols  Help
  New...            Cut    Shift+Del        Parts...            About..
  Open...           Copy   Ctrl+Ins         Page...
  Save              Paste  Shift+Ins       Reformat
  Save as...        Delete Del
  ----------
  Print
  Printer Setup
  ----------
  Create MIDI
  MIDI Setup.
  -----------
  Exit Alt+X
```

The **Symbols** menu opens a new sub-windows for each symbol category like :

Notes
Clefs
Beats
Bars
Dynamics
Key Signatures

The user moves to the visible window presenting the kind of musical symbol he wants, and click on that symbol BUTTON. Then the cursor is changing shape.

This arrangement have several advantages :

a. The Sub windows arrangement can be easily changed by the user.(Move or Close the Sub Windows) This way the user can arrange the "Notation Environment" as he likes.

b. We enabled the "Pick-and-Drag" method , by changing the cursor type on every click. So now it is much easier for the user to locate notes on the staff,etc.

See a Full description of the menu in Chapter 3.

2.3 The Status Line.

The status line displays information about the current status of the display.
Such parameters as the currently displayed part and the visible staves are shown.

2.4 The Editing area.

The editing area displays the contents of the melody workspace. In other words, the staves and the musical signs on them are shown.
The editing area can display either a single part or an entire score, with several parts shown simultaneously.
The control over the display settings is available via the Layout menu.
For further details see the "Using the menu" chapter (page 5).

2.5 The Musical symbols menus.

The Musical symbol sets are grouped into a "floating" dialogs . The Current symbols are :

Notes
Clefs
Beats
Bars
Dynamics
Key Signatures

For more details about the usage of these see the "Using the symbols" chapter.

Chapter 3 Using the menu

The main menu contains five sub-menus:

① File.

② Edit.

③ Layout.

④ Symbols.

⑤ Help.

These sub-menus are explained in detail in the following sections.

3.1 The File sub-menu :

The File sub-menu contains file oriented commands:

3.1.1 New

The New command item opens a dialog box that asks for the staff width that the user wishes to work with.
A list of three widths is supplied (all in pixel units) from which the user should select one.
These widths were chosen for comforting the editing on screens of different resolutions: 640x480, 800x600, or 1024x768 pixels.

After the width is chosen, the user is presented with a clean workspace. By default the empty melody contains one part, named UNNAMED, with a multiplicity of one.
The new melody itself is untitled until it is saved for the first time.
If the New operation is selected when there is a melody in the workspace that has been modified since the last save, the changes to the previous melody are not automatically saved. Therefore New asks the user for confirmation before destroying the previous melody.

Now you should choose the from the tool bar, and insert new staves where you like.
Then move to the Symbols menu and open some of them
NOW you can start notating some music.

3.1.2 Open

The Open command item opens a file selection box.It allows the user to choose the drive and directory from which the file is to be selected.
Then the directory contents is displayed, and double-clicking the file name from the file list loads it into the memory.

The default extension for Muzika melody files is ***.MUZ.** However, it can be changed, or even the entire filename typed manually via the keyboard.

If the Open operation is selected when there is a melody in the workspace that has been modified since the last save, the changes to the previous melody are not automatically saved.
Therefore Open asks the user for confirmation before destroying the previous melody.

3.1.3 Save

The Save command item used for saving the current melody. The saving is done to the same file from which it was loaded from.
In the case that the melody was untitled, the Save as dialog box is opened.(See below).

3.1.4 Save As

The Save as command item opens a file selection box. The directory and drive can be chosen with mouse clicks.
The new filename is to be written at the top.
Clicking the OK button saves the melody in the new filename (containing the new path). This also changes the title of the window to the new name.
As warning message is displayed if the given file already exists. The user is requested to confirm overwriting the file, or he can cancel the operation.

3.1.5 Print

The Print command will print the edited melody part after part. All dialogs are the standard microsoft dialogs.
A special care was taking care of while printing parts with multiplicity bigger than one. You won't get a page-split in a middle of a multiplicity staves.
In a A4 paper size with a PostScript printer, Muzika will print up to 8 staves.

3.1.6 Printer Setup

Again you'll get the Setup dialog according to your installed printer in WIN.INI.
you'll have all the **Printing options** and **Abort Printing** capabilities as a Standard

3.1.7 Create Midi

This command is used for playing melodies by other tools. Create MIDI saves the melody in standard MIDI *format 1* file that can be read and played by various special-purpose tools that are available on the market.
The simplest way to hear it is to use the **MediaPlayer** from MicroSoft ,by just double-click on the *.mid filename in **FileManager**.
The file is saved with the same name with `**.MID'** extension.

This file cannot be re-read into Muzika and thus regular saving (in Muzika Format) is a must for re-editing the file later with Muzika.

3.1.8 Midi Setup

With the Midi Setup dialog you can set the *Tempo* of the melody. This *Tempo* will be Load and Saved with the Muzika melody file. The default value is 120 beats per minute.

You can also assign a different *musical instrument* to each part simply by clicking on the part name and then clicking on the desired instrument.
The Instruments setting will also be kept in the Muzika melody file. The default for all parts is Grand Piano

There are 128 possible instruments to choose from, all are the **MidiMapper** standard.

3.1.9 Exit

How Can You quit this lovely program ??? Ha ?

3.2 The Edit sub-menu :

The Edit menu allows you to preform the usual Block operations.
You can preform an action out of the four block operations ,on the part being display.
The actions are: Cut, Copy, Paste, and Delete.
But first you'll have to Mark a block using the Block TOOL from the Tools-bar
For more details on these see "The block operation symbols" in chapter 4.5 .

3.3 The Layout sub-menu :

Layout is the sub-menu for driving operations that concern the layout of the display.
It is here that the user switches between single-part or score display. The specific choices are listed below.

3.3.1 Parts

Selecting the Parts command opens a parts list dialog box. In this box, the user can see and/or change the parts layout of the melody.
The buttons in the dialog box allow adding or removing parts, or changing attributes of existing parts.
The buttons of this dialog box are:

Attributes changes the selected part's attributes. You can set the Name of the part and set the multiplicity of an Empty part.
(selecting the musical instrument that is to play the part is done in *File* | *Midi SetUp* menu.)

New adds a new part. Another dialog box appears, prompting the user to enter the new part's name and staff multiplicity.
Every part must have a unique name and it's possible to have maximum of 16 parts (due to MIDI format 1 limits)
Staff multiplicity means, how many single staves are grouped together in each multiple staff. This parameter cannot be changed after the part is created.

Remove removes the selected part. If the selected part is not empty, a warning message appears with a request of confirmation. Also, a part cannot be removed if it is the currently visible one, or if it is the only one in the entire melody.

OK should be selected after the requested changes have been made.

3.3.2 Page

Selecting the Page command opens a Page dialog box. The dialog box allows to make some settings that are directly concerned with the display.
Among the settings that are made through this dialog box are:

- ***Page Style*** : The kind of the display either a score (all parts) or a single part.

- ***Displayed Part :*** If it is a single-part display, what part should be shown.

- ***Pixels per staff :*** The default staff height, in pixels. Actually, this is the default distance between adjacent staves, including signs that are outside a staff (such as a loudness symbol or a text instruction of any kind). The number entered here is only a default; after staves are created, they can be manually moved by the hand symbol. (see the "Using the symbols" chapter).

- ***object width :*** in pixels. This number can be thought of as a granularity of an invisible grid of places on which objects can be placed. In other words, for example, if the object width is 20 pixels (default), then objects cannot be put closer than 20 pixels away from one another.

As in any Windows dialog box, after concluding the page layout settings, click on the **OK** button for the changes to take effect, or **Cancel** the changes.

3.3.3 Reformat

The Reformat command item reformats the entire part. Blanks between objects are deleted and the notes are equally spaced, according to their durations.

3.4 The Symbols sub-menu :

This menu chooses the set of symbols to appear as a "floating" menu on the screen.
The menu items contain actual musical symbols, with which objects are created in the melody.
The last opens the **Key Signatures** Dialog.
For more details See below.

3.4.1 Notes

The Notes and Rests Buttons appear in this menu.
The currently supported objects are: full, half, quarter, eighth ,sixteenth and 32th - both for notes and Rests.
Each Note can be a Sharp (#) , Flat (b) or Natural.
Both Notes and Rests can increase their duration by half with the Dot button.
The **DOT** button is a toggle switch (each press changes it's state).
The **Sharp, Flat and Natural** buttons are functioning as radio-buttons actually. (only one of them can be active).
Use the **Cancel** button to de-activate them.
Sounds complicated ? Don't worry be ☺ because the cursor shape will always guide you.

3.4.2 Clefs

G (Treble Sol) or F (Bass Fa) standard Clefs.
Only One Clef can be placed on the staff, and it's position will always be at the beginning of the staff.

3.4.3 Beats

The beat object can appear anywhere on the staff, not only at staff start.
Currently supported: 2/4, 3/4, 4/4, 2/8, 3/8, 4/8 and 6/8.

3.4.4 Bars

These are some commonly-used bar signs. The signs included are: the single bar separator, the double bar separator, and the thick staff-beginning or staff-ending bar separators.

3.4.5 Dynamics

The currently supported loudness symbols are: Forte, Fortissimo, Piano, Pianissimo, Crescendo, and Diminuendo. All loudness signs are common to a multiple staff, appearing below it no matter where you insert a loudness object. Currently the Dynamic signs doesn't influence on the Midi file.

3.4.6 Key Signatures

Key Signatures can be placed near the Clef sign.
You can choose the Key type (Sharp or Flat) and the number of key-signs in the key from the dialog box.
Muzika will automatically place the correct key according to the Clef sign on that staff.
Again as Clefs only One Key-signature is allowed per staff.
Muzika Currently support all keys with 1 to 7 key signs.

3.5 The help sub-menu

Unfortunately, the current implementation of Muzika does not contain any on-line help.
Therefore the only item in this menu is:

3.5.1 About

The About menu item shows the corresponding dialog box.
The dialog box displays such information as:
the version of Muzika (currently 2.0),
the software developers, and our friend Bethoveen.

Chapter 4 Using the Symbols

This chapter concludes, finally, everything about editing except what concerns the menu.
What the user should especially note is the extreme ease of the editing process using the mouse.

4.1 The musical symbols

Object are divided into two groups:

- Point objects: notes, rests, Clefs, keys, beats.
- Continuous objects: Crescendo and Diminuendo

To insert a point object:

1. Make sure that the "floating" menu of the object is displayed – otherwise select it from The Symbols sub-menu.

2. Move the cursor to Floating symbol menu and click over the wanted object's button.

3. The cursor will change it's shape. Move the cursor to The editing area in the wanted place (use the cross-hair HotSpot) and click the mouse.

4. The new object will be added at the clicking spot. If the object was a note and the clicking was over other notes they will be merged into one accord.

To insert a continuous object:

1. Make sure that the "floating" menu of the object is displayed – otherwise select it from The Symbols sub-menu. Currently choose the Dynamics sub-menu.

2. Move the cursor to Floating symbol menu and click over the wanted object's button.

3. Move the cursor to The editing area in the wanted place for object start and click the mouse but *don't* release it.

4. Move the cursor to the wanted place for object end and release the mouse.

5. The new object will be inserted between the where you click the mouse and where you released it.

4.2 The pencil symbol

The is Used for adding new staves:

- Select this item from the Tools bar region.
- Move the cursor to the location of the new staff.
- When you click it, a new multiple staff appears. Adding multiple staves can be anywhere on the working area. A click between two staves will push the staves after the cursor one staff below and a new empty staff will appear in the hole.

4.3 The eraser symbol

Used for deleting objects:

- Select this item from the Tools bar region.
- Move the cursor to the location of the object to be deleted. When deleting a whole staff, just move the cursor anywhere on the staff.
- When clicking the mouse, the objects at the cursor position are erased.
  Clicking the mouse over a point with many objects will erase them all: clicking over an accord will remove all the notes.
  Double-clicking it will delete the entire multiple staff.

TIP : *You can always click on the mouse Right button to delete point objects - no matter what the cursor shape is.*

4.4 The hand symbol

With the you drag an object to a new place:

- Select this item from the Tools bar region.
- Move the cursor to the object you want to move.
- Click the mouse button without releasing it.
- Move the cursor to the target location.
- Release the mouse button.

In the case that the object dragged was a note the note will be merged to an accord if there were notes previously.
Again, if the click was over a point with many objects, they will all be dragged.

4.5 Text

Text instructions (e.g. Allegro) or Lyrics can be inserted anywhere in a melody, either above or below a staff.

- Select this item from the Tools bar region.
- Move the cursor to the target location and click.
- Type in your text in the text dialog box.

4.6 The block operation

Each block operation can be activated only after you mark a block with the "block" cursor.
The block can be of any length – single note, one bar and even an entire staff.
There are four block operations: Copy, Cut,Paste and Delete
The general principle is that there is always a single block in the clipboard (empty at start).
Copy and Cut will insert the Marked block into the clipboard and Paste will insert it to the melody.

Marking a block

To mark a block you should do:

- Select the Block item from the Tools bar region.
- Move the cursor to the start of the block.
- Click the mouse – without leaving it.
- Move the mouse to the end of the block.
- Release the mouse.

This marks the block: from the mouse click till the mouse release. The marked block will be displayed in reverse-video.

4.6.1 Cut

Used for moving blocks and for deleting them.
To activate just select Cut and click the mouse button anywhere in the editing area.

The last Marked block will be removed from the melody, but kept in memory until the next Cut or Copy.
It can be restored at a different place (either in the same part or melody or a different one) using Paste.
Muzika will automatically switch to the Paste mode after cut operation.

4.6.2 Copy

Used for duplicating blocks.
To activate just select Copy and click the mouse button anywhere in the editing area.

The last Marked block will be copied into the clipboard. This block will be kept in the clipboard until the next Cut or Copy. It can be added anywhere else in the same melody, or even in a different melody, using Paste.

4.6.3 Paste

Used for inserting the block in clipboard into the melody. To activate this operation:

- Select Paste from Active symbol set region.
- Move the cursor to the place you want to insert the block.
- Click the mouse.

The block in clipboard will be inserted to the melody starting at the mouse click location.

☺ ***Easy scoring !!*** ☺