# What is MidiWorks

The MidiWorks PA+ program is intended for editing midi and karaoke files (*.mid, *.kar) in SMF0 and SMF1 formats, dedicated to Korg PA series instruments and other models based on the GM2 standard.

MidiWorks is equipped with all the necessary tools to edit midi files, starting from basic such as transposition, editing, adding, deleting karaoke text, editing tracks, and even editing individual controllers, notes and System Exclusive events.

It is a perfectly adapted software that supports work with your instrument.
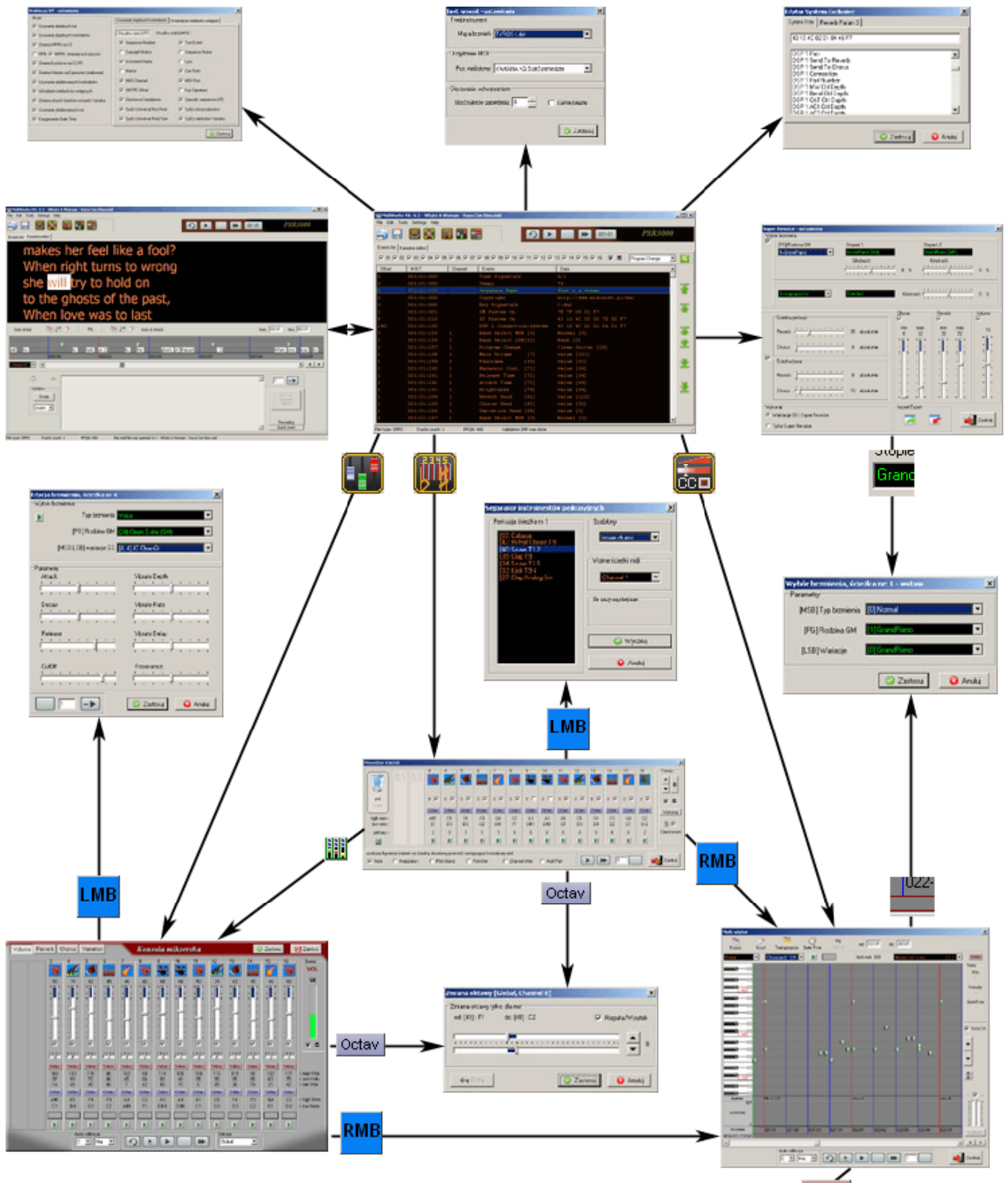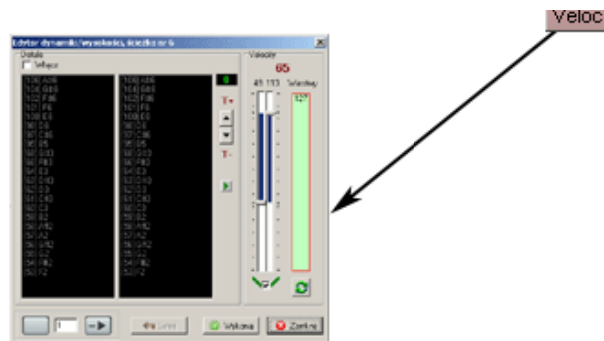
I invite you to use MidiWorks!

Thomas Szczepaniak - software author
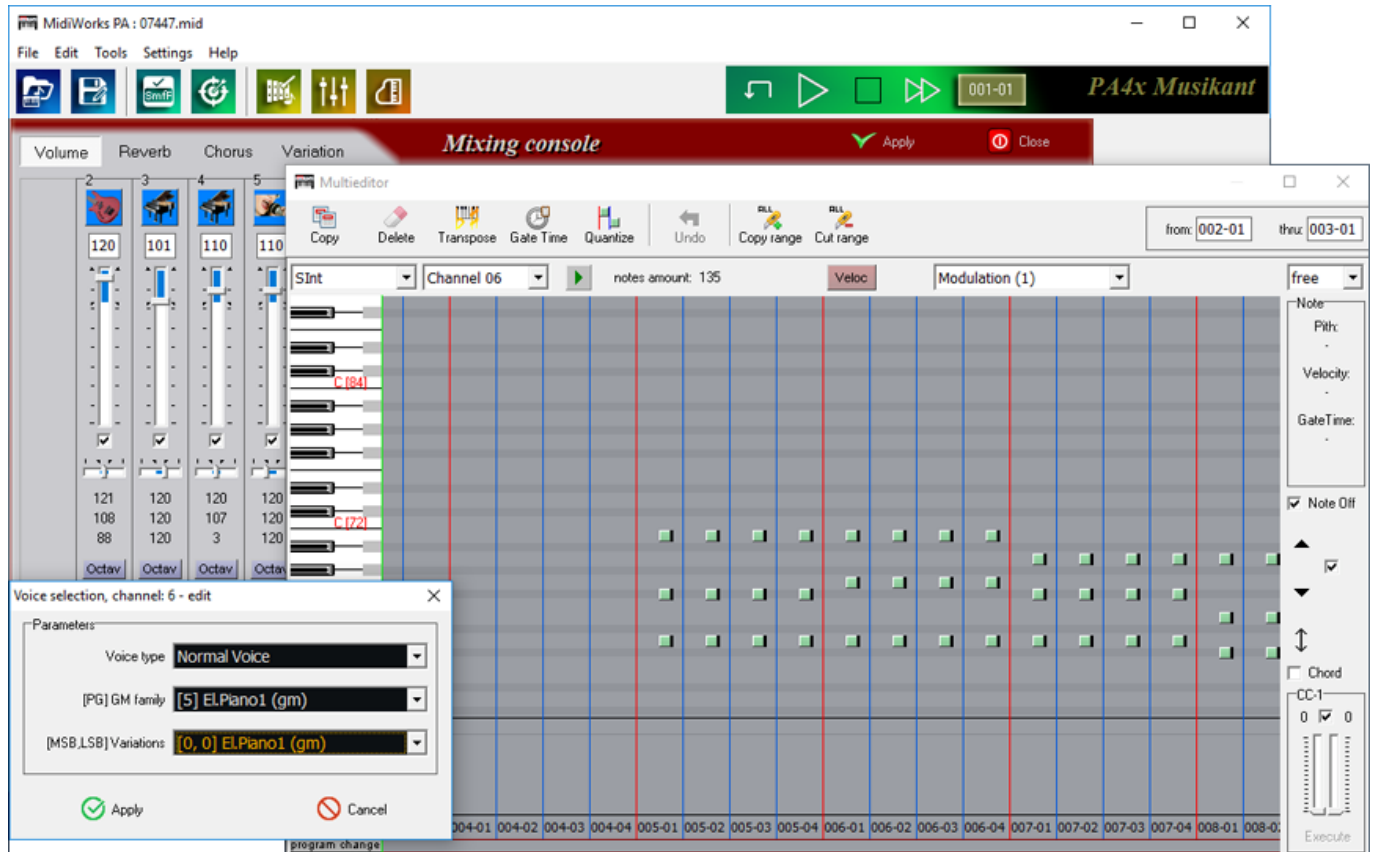
Pic.1. MidiWorks

Meet MidiWorks

LMB

RMB

LMB

Octav

RMB

Octav

LMB

Pic.1. Map of the MidiWorks (what where they find). LMB - left mouse button, RMB - right mouse button

A "Main window - Event List"

here You can:
- open and save the midi or karaoke file (SMF0, SMF1)
- play opened file
- song tempo modify
- make validation SMF GM2
- make Super Revoice
- remove duplicate notes
- make correction Gate Time
- edit midi event
  (Note On, Note Off, Program Change, Control Change, Pitch Whell, After Touch, Poli After Touch, System Exclusive, Chord name, Time Signature, itd.)
- delete midi event
- add midi event
  (Note On, Note Off, Program Change, Control Change, Pitch Whell, After Touch, Poli After Touch, System Exclusive, Chord name, Time Signature, itd.)
- make configuration of the software
- make prepare channel for the Vocoder
- show next tools according to the above diagram

B "Vaidation SMF GM2 setup"

here You can:
- make configuration of Validation SMF for midi and karaoke file

C "Player and instrument setup"

here You can:
- make configuration of play (loop bars, pause mode) and select a voice map of instrument

D "Main Window - Karaoke editor"

here You can:
- remove diacritic chars (ą, ę, ć, ź ect.)
- lyric formatting (lowercase or uppercase, carriage return, next lines)
- make conversion Text event to Lyric event
- save lyric to text file
- modify lyric event (syllables)
- make correct time display of lyric
- add lyric to midi file
- remove lyric from midi file
- copy range lyric event
- remove range lyric event
- add chord name
- modify chord name
- copy range chord name
- remove range/single chord name

- shift range/single chord name

E "Drums and notes splitter"

here You can:
- separate selected drums to the other channel (exp: bass drum, snare drum)
- separate selected notes to the other channel

F "System Exclusive editor"

here You can:
- edit system exclusive messages
- choose another sysex message from the available list

G "Channels manager"

here You can:
- remove channel
- copy channel
- move channel
- swap channels
- merge channels
- make transposition of channel or whole song
- show next tools according to the above diagram

H "Mixing console"

here You can:
- modify volume of channel and also for whole song
- modify reverb of channel and also for whole song
- modify chorus of channel and also for whole song
- modify FX4 (CC94) of channel and also for whole song
- modify balance of channel
- choose voice on the channel
- show next tools according to the above diagram

I "Window of changes octave"

here You can:
- change octave for all notes or for range notes on the channel

J "Multieditor (Piano Roll)"

here You can:
- extend the song (copy range song)
- shorten the song (cut range song)
- copy selected notes, midi events for the selected channels in selected range
- delete selected notes, midi events for the selected channels in selected range
- make transpose for selected notes, channels of selected range
- modify GateTime for selected notes, channels of selected range
- make quantization
- add, edit and delete note
- add, edit and delete controller (Program Change, Control Change, Pitch Whell)
- add, modify, remove chord name
- using markers for exp. verse, chorus
- show next tools according to the above diagram

K "Velocity/Pitch editor"

here You can:
- modify velocity of the selected note/drum on the channel for whole song

- modify pitch of the selected note/drum on the channel for whole song (exp: bassdrum B0 -> bassdrum C1)

L "Super Revoice setup"

here You can:
- complete the configuration features Super Revoice
- configure automatic volume adjustment
- configure the automatic saturation of the reverb
- configure the automatic saturation of the chprus

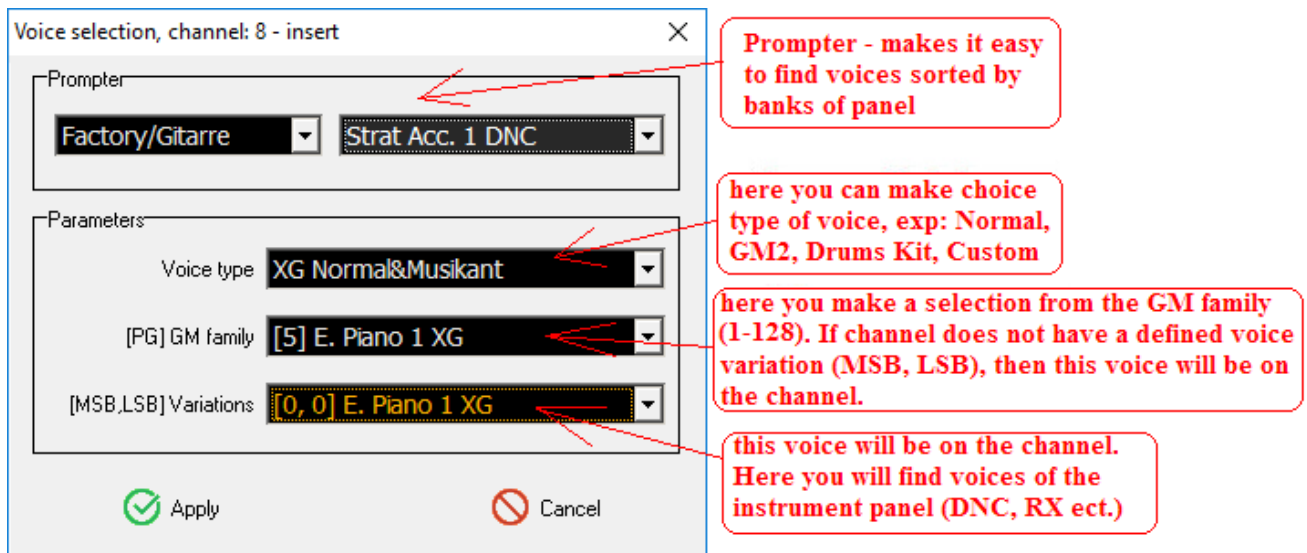**M** "Window of voice selection and voice edit"

here You can:
- choose of voice bank (MSB, LSB, PC)
- edit the voice parameters (Attack, Decay, Release, Resonanse and CutOff)
- modify velocity of the selected note/drum on the channel from begin to end
- modify pitch of the selected note/drum on the channel for whole song (exp: bassdrum B0 -> bassdrum C1)
- tuning drums for the tenth channel (attack, decay, resonanse, cutoff, pitch)

N "Window of voice selection"

here You can:
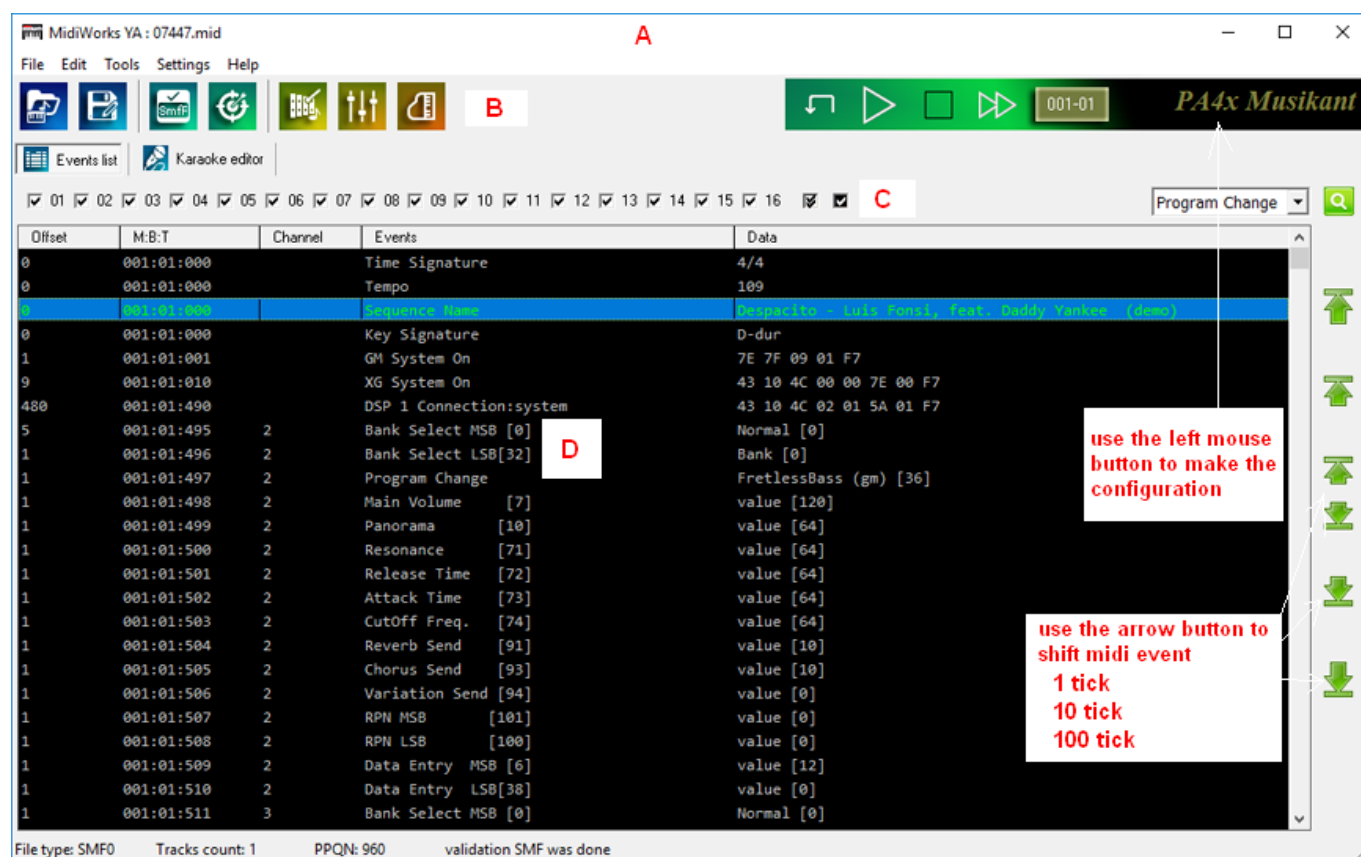- choose of voice bank (MSB, LSB, PC)

Pic.2. Window of voice selection.

Main window - Events list

The main window is a standard application window which consists of:

- menu bar - A
- toolbar - B
- filtration midi channels - C
- midi event window - D
- status bar - E

Main window - page Events list

A. The menu bar (Pic.1. A) contains the following elements:
File:

- Open (Ctrl+O)- opens midi, karaoke file. You can also open files by drag and drop on the events window (Pic.1. D).
- Save (Strl+S) - saves file (in the demo feature is not available).
- Save text - saves Lyric to text file.
- Exit - closes application.

Edit:
- Channels manager (F5),
- Event list / Karaoke editor (F6),
- Mixing console (F7),
- Multieditor (F8),
- Modify song tempo,

Tools:
- Validation SMF GM2 (F2),
- Remove diacritics chars (F3),
- Lyric formatting (Ctrl+F3),
- Super Revoice execute (F4),
- Text to Lyric converter,
- GateTime correct,
- Remove duplicate notes,
- Vocal Harmony Creator (Ctrl+F6)

Settings:
- Validation, - configuration of Validation SMF GM2.
- Instrument, - configuration of player (loop bar, midi output port) and instrument (voice map exp: Tyros 4).
- Super Revoice, - parameterization of the super revoice operation
- Background color, selection background color for the main window.
- Font color, selection font color for the main window.

Help:
- About - information about the program and license.
- Manual - owner's manual call,
- Deutsch - deutsch interface,
- English - english interface,
- Nederlands - dutch interface,
- Polski - polish interface,
- Slovensky - slovak interface.

B. Toolbar (Pic.1. B) provides direct access to some tools and features, and so from the left:

- Opens midi, karaoke file,
- Saves file (in the demo feature is not available),
- Validation SMF GM2,
- Super Revoice execute,
- Channels manager,
- Mixing console,
- Multieditor,
- Jump back
- Play
- Stop
- FFWD
- Measure
- Label (click to change settings)

C. Filtration bar midi tracks (Pic.1. C) contains eighteen switches, one for each midi channel, "select all" and "invert selection". Select appropriate checkbox in order to show the chosen channel.
Filtration is very helpful and efficient with "Browser" for searching events.

D. Midi event window (Pic.1. D) - Shows all midi events, along with the values??, location on the channel and channel number. Here you can add, delete, and edit each event.

- **Add midi event** - if you want to add an event, use the left mouse button to select a place, then click the right mouse button (or directly INSERT from the keyboard) and select [Insert] from menu (Pic.2.) next select event (Pic.3.).
  Event will inserted before selecting event, and final location You can be made using the arrow from the toolbar.
- **Delete midi event** - if you want to delete an event, use the left mouse button to select event, then click the right mouse button (or directly DELETE from the keyboard) and select [Delete] from menu (Pic.2.).
- **Edit midi event** - if you want to edit an event, use the left mouse button to select event, then click the right mouse button (or directly ENTER from the keyboard) and select [Edit] from menu (Pic.2.)
- **Offset** - tool for advanced users. If you want to edit offset, use the left mouse button to select a place, then click the right mouse button and select [Offset] from menu (Pic.2.). Be careful, becouse after modified offset of one event affects all that follow him.
- **Sending events to instrument [SPACE]** - switch to the Event List, using the left mouse button or the keys [UP / DOWN] to select the event, press short [SPACE] button - midi event will be sent to instrument. Sends all events except meta event.
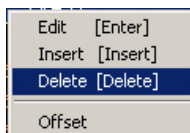
Pic.2. Popup menu.
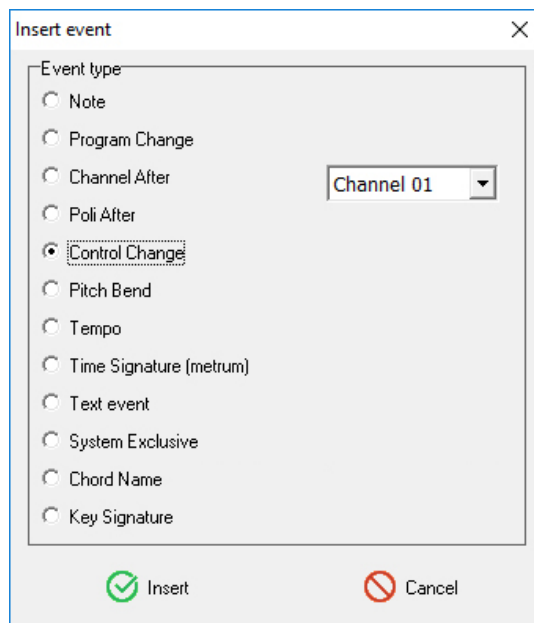
Pic.3. Selection of the new controller window.

E. Status bar (Pic.1. E) - at the bottom of main window, there is a status bar (Pic.1.). The status bar displays the results of all operations performed (done, not done, success and failure). You can view the full report, just click the left mouse button in the status bar.

Keyboard shortcuts

- Ctrl O - open midi file
- Ctrl S - save midi file
- F5 - calling Channels manager
- F6 - switch view Event list/Karaoke editor
- F7 - calling Mixing console
- F8 - calling Multieditor
- F2 - execute Validation SMF
- F3 - Remove diacritics
- F4 - execute Super Revoice
- Ctrl F3 - lyric formatting
- Ctrl F6 - calling Vocal Harmony Manager
- Ctrl R - playback jump backward
- INSERT - insert event
- DELETE - delete event
- SPACE - send event to instruments

Channels manager

Edit section:

Channels manager, when you click a window pops up:
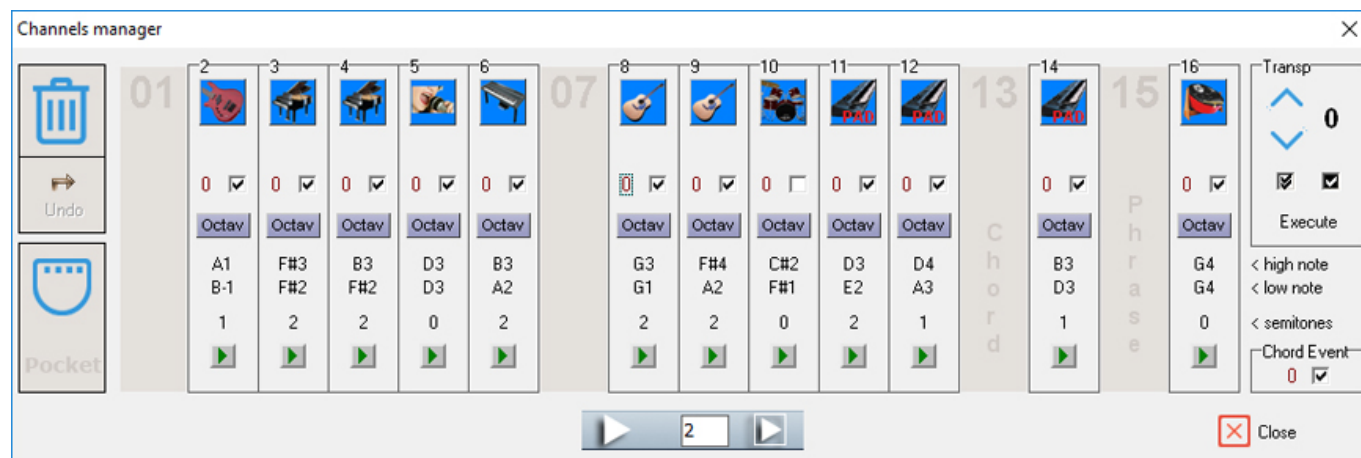

Pic.1. Channels manager window.

Transpozycja transposition is performed by default for chromatic channels, but You can also make independent choices, the channels to transpose. Transposition confirm button [Execute] before closing the window.

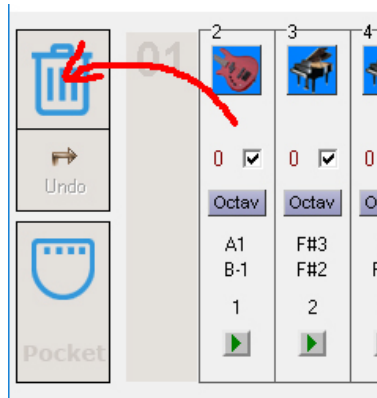**Move channel** - drag and drop the selected channel to the free place (on Pic.2. channel no. 12 is free). To the target channel are moved sysex part of Roland.
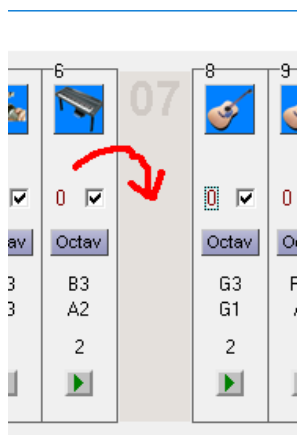
Pic.2. Move.

Copy channel - press and hold ctrl button [Ctrl] on the PC keyboard, then the same as when you move channel, drag and drop the selected channel to the free place. To the target channel are copied sysex part of Roland.
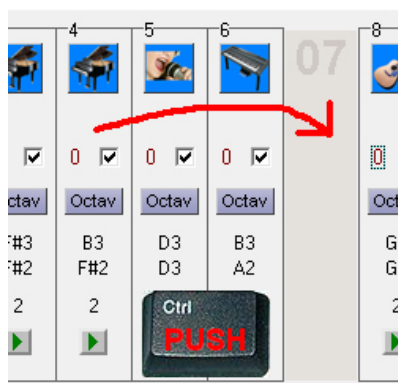

Pic.3. Copy.

Remove channel - drag and drop the selected channel in the bin. Removed also sysex part of Roland.

Pic.4. Remove.

Merge channels - drag and drop the selected channel (source) in the icon of instrument in other channel (target). To the target channel are moved only selected midi events on the panel "options merge channels", other midi events are removed from source channel.
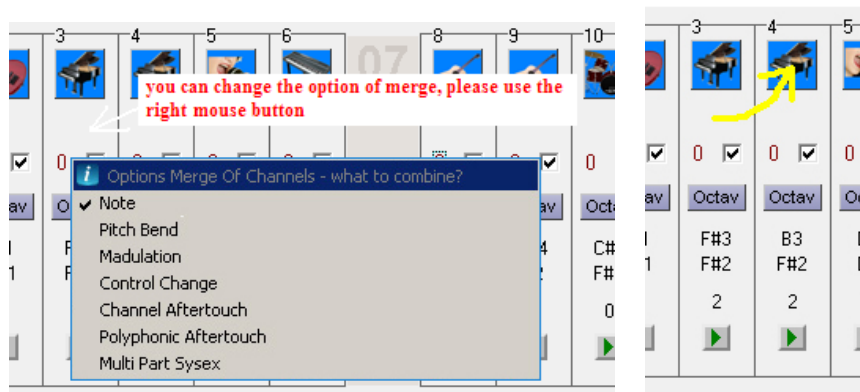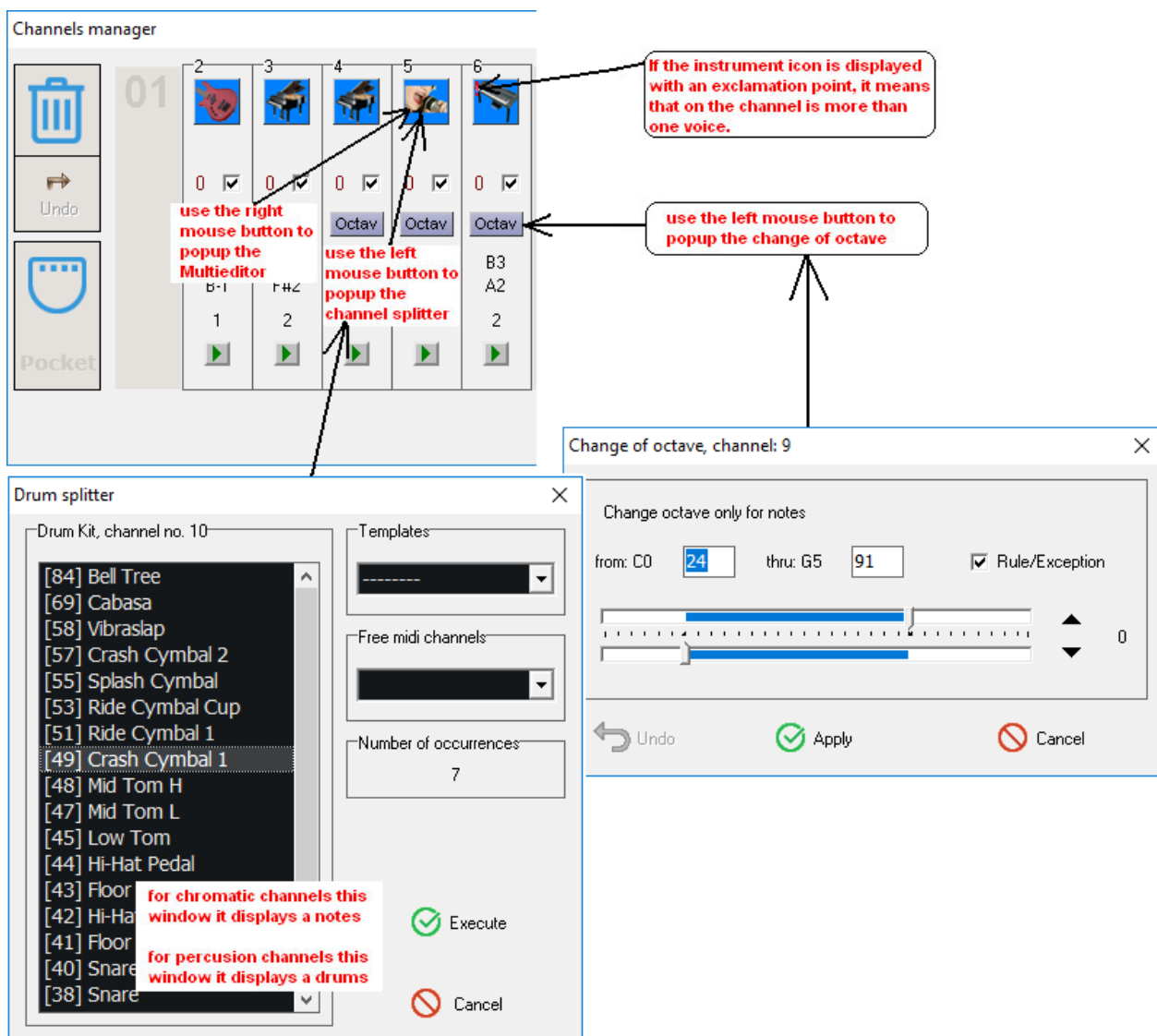

Pic.5. Merge.

Swapping channels - drag and drop the selected channel to the pocked. Next drag and drop another channel to the place empty of channel. The channels will be swapped.
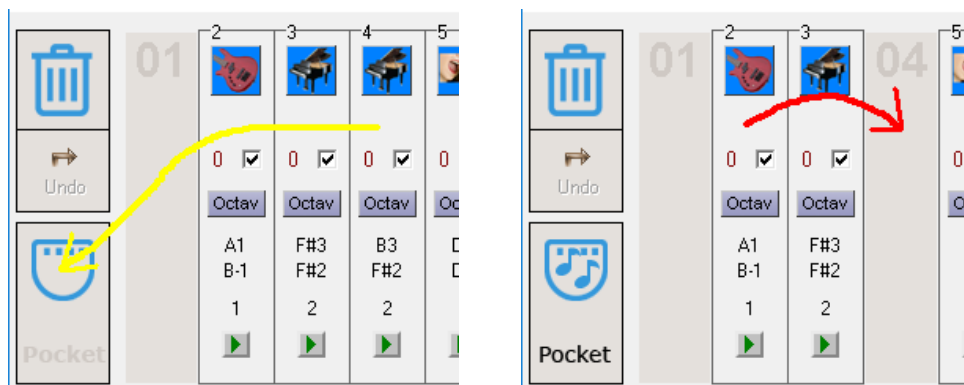
Rys.6. Swapping channels.

Additional capabilities - splitter channel, change of octave

Pic.6. Additional capabilities (splitter channel, change of octave).

About change of octave - after configuring the settings you can change octave for one note or for notes group. Choice You make by sliders and selecting and deselecting the Rule/Exception. This way you can determine the lowest note for the bass channel (exp. all the notes below E0 [28] make transpose an octave up).

About splitter channel - GM2 standard enables the use of two midi channels for drum kit in a song. This allows the use of two different drum kits in song. Drum splitter allows the transfer of individual percussion instrument or groups instruments to separate midi channel. Templates available (snare drums, cymbals, bass drums, toms, main drum) or your choice of instruments.

Keyboard shortcuts

- Esc - close Channel Manager
- F6 or Enter - close Channel manager
- F7 - calling Mixing console
- F8 - calling Multieditor
- Ctrl R - playback jump backward
- Alt S - solo mode off (all channels play)
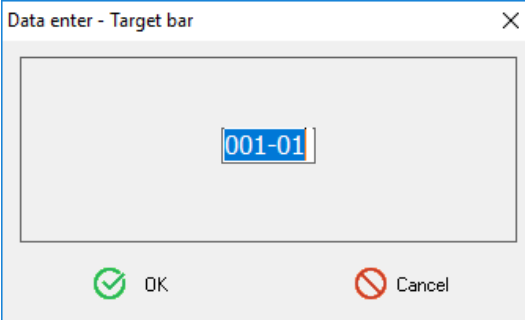
Main window - Karaoke editor

Page: **Karaoke editor**

   - this is an advanced tool allocated for edit **Lyric** events, responsible for showing the text of the song. With the use of this tool with ease You will add, change, copy, move, remove and will synchronize the text with the melodic line.
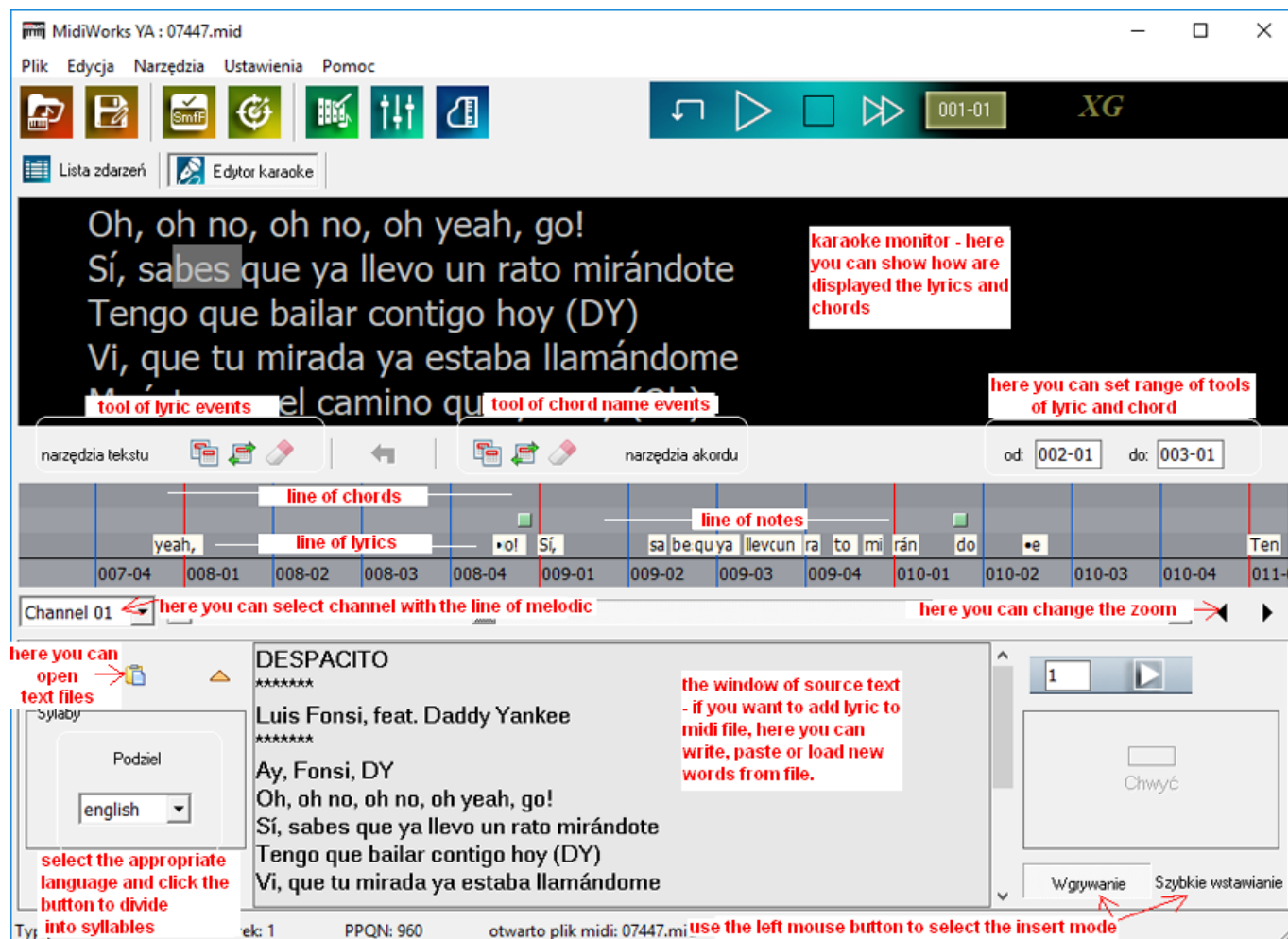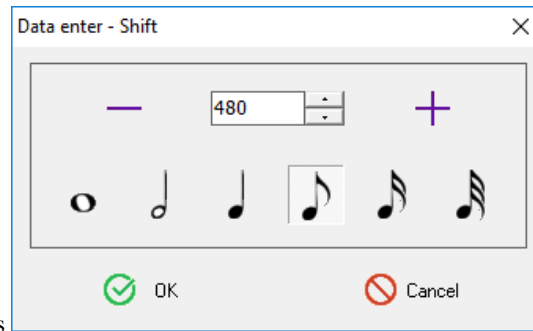

Pic.1. About editor

The **range tool of lyric**:

- **copy text** the range:

        to the target bar:

- **shift text** the range:

of the amount of clock units forward or backward.

You can use the template of units for the notes.

Most often it is used for coarse synchronization of text with music.

- **remove text** the range:

- **insert text** the range:

Skorzystaj z tej funkcji jeśli potrzebujesz wstawić do utworu tylko słowo, lub klika słów (wers). Sylaby zostaną rozłożone równomiernie między podanymi taktami.

The **range tool of chord** (chord name): The use of these functions does not require discussion, because their operation is the same as the tool of lyric.

- **copy chord**,
- **shift chord**,
- **remove chord**,

Note! You can manually add the chords event in the Karaoke editor. If you want do it automatically, please use functions Autochord in the Multieditor.

Features of the trackroll
- picture below shows the operations of syllables in the line of lyrics. You can perform the same operations for the chord events, for this purpose use the line of chords.
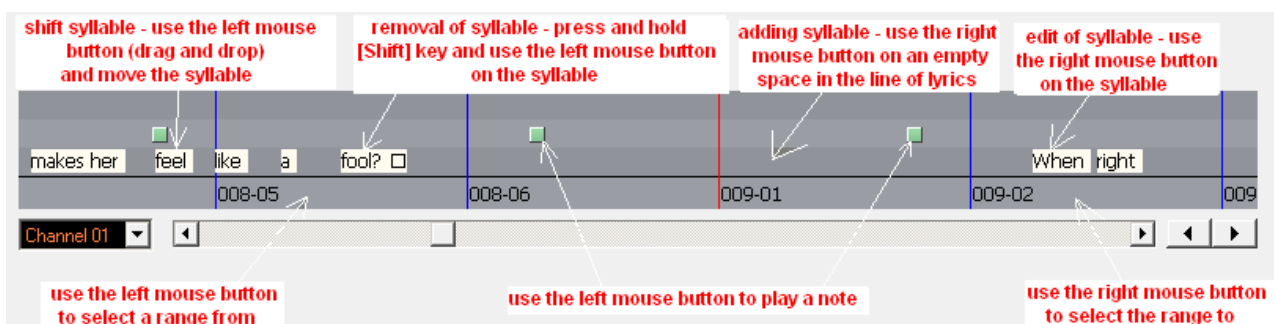
Rys.2. Trackroll

Preparing the text
- the Karaoke editor is equipped with an automatic dividing into syllables for texts in Polish and English, which greatly speeds up the text preparation.

If you would like by manualy to divide the text to syllables, please use to dividing the sign "-" and for linking prepositions, use "_" (example: excellent -> ex-cel-lent, the x -> the_x).

Note! I recommend preparing the text in small portions, eg: a few verses.

Text input
- Karaoke editor provides two methods for input text:

- **quick insert** - based on the uniform laying syllables. If you use this method, syllables will not be displayed according the melody, but

you can very quickly add text to the midi file.

• **recording** - method is to click through to the rhythm of the melody line. If you use this method, syllables will be displayed according the melody. Method has a built-in the quantization function to the sixteenth note.

Quick insert - use this option if you want really quickly add text to your midi file.

   If you want insert text to midi file, please follow the instructions below:

- place the text in the window of source and prepare to entering. Start playing,

- in the moment of singing the first syllable, please press button [From bar]. Caption the button will be changed to [To bar],

- in the moment of singing the last syllable, please press button [To bar]. Player automatically will be stopped,

- to the question "Do you insert text?" please answer Yes, the text will be inserted.

If it is not an end of the song, please insert the next phrase of the text and repeat the operation. You can start playing the song from anywhere, for example: where you left off.

Notice that each time you can see the effect of the work in a karaoke monitor.

Note! If the song has a melodic line, you can view in the Trackroll and synchronize syllables to the notes of melodic line.

Recording - to use this method, please follow the instructions below:

- place the text in the window of source and prepare to entering. Start playing,

- click the batton [Take it] in the rhythm of the melodic line (can you sing :)) and watch the lighting of syllables in the window of source text,

- when you reach the end of the prepared text, playback will stop, and the text will be entered into a midi file.

In this way, the added text very rarely requires correction.

Note! Recording you need lead to the last syllable, if you finish earlier, the text will be not added.

Tools of menu

• Remove diacritic chars (F3) - removes the diacritic (tails) exp: ą -> a, ć - > c, ect.

• Lyric formatting (Ctrl+F3) - concatenates the Cardrige Return sign with the syllable, converts all characters to uppercase or converts all characters to lowercase.

• Text to Lyric converter - converts the text event to the lyric event.

Keyboard shortcuts

- Ctrl O - open midi file
- Ctrl S - save midi/style file
- F11 - open style file
- F5 - calling Channels manager
- F6 - switch view Event list/Karaoke editor
- F7 - calling Mixing console
- F8 - calling Multieditor
- F2 - execute Validation SFF/SMF
- F3 - Remove diacritics
- F4 - execute Super Revoice
- Ctrl F3 - lyric formatting
- Ctrl F6 - calling Vocal Harmony Manager
- Ctrl R - playback jump backward
- SPACE - tap record the real time for lyric
- Ctrl A - select all (from 002-01 to 999-01)
- Ctrl PLUS - zoom in view
- Ctrl MINUS - zoom out view

Vocal Harmony Creator

The internal Vocal Processors of instruments and external other brands can operate in two modes:

- Vocoder
- Chordal

Vocoder (creating a control track) - In this mode, the processor generates a voice (voices) of the pitch corresponding to the note (notes) of control.
If the vocal processor receives successively sound notes: C, D, E, F, G, A, H, C, and to the microphone you sing: for example sound of "A", then of the output will you hear C major scale. The processor will be tune the voice, hiding the imperfections of singer.
The Vocoder can be controlled by the keyboard or midi channel (midi file). The external Vocoders receive control notes via MIDI cable connected to the keyboard (**keyboard**:midi out -> **processor**:midi in).

Which channel for the Vocoder? The most appropriate is channel, that playing the second or first voice (melodic line, or choir line). To the work with Vocoder are recommended the channels without Pitch Band Wheel events.
Once you have chosen the channel it requires preparation and so in three steps:

1. Notes GateTime to legato
2. Glue the notes (with legato) which are at the same pitch to the one note
3. Remove modulation controllers

Anyone who has tried do it, knows how time consuming it is an operation. All this you can do extremely quickly with the MidiWorks!
The **Vocal Harmony Creator** you found in the Tools of program, or run using keys **Ctrl+F6**.
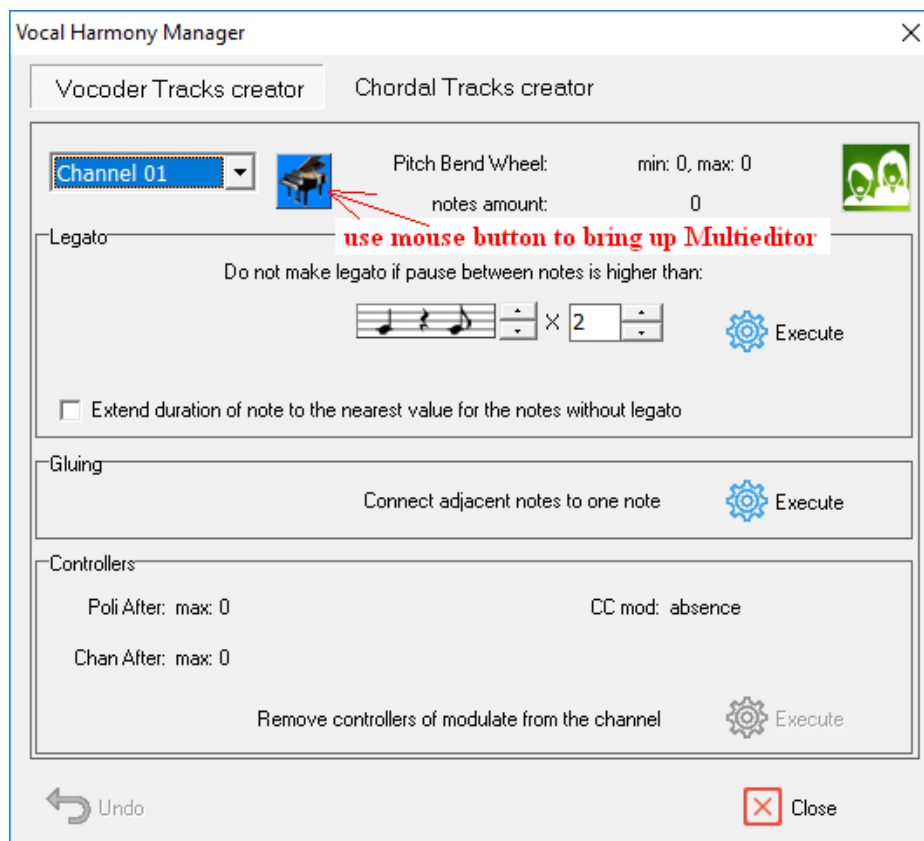
Pic.1. Vocal Harmony Creator - Vocoder track creator

Your task is only to indicate the channel and follow the steps in sequence - Legato, Gluing, Controllers. To do this, use the [Execute] button.
After each step, please using the MultiEdItor, play the song and observe the changes. Sometimes it may be happen, that the step of Legato will require parameterization.
If the results is unsatisfactory, you can undo the last operation, change the settings and perform the procedure again.

Chordal (creating a control track) - In this mode, the processor generates harmonic voices based on played chords. The mode of Chordal can be controlled by the keyboard or midi channel. Moreover vocal processors built into the instrument can be controlled by "Specific Sequencer Chord Name" events.

Chordal creator adds channel with the chords by notes to the midi file. How to do it?

1. Select the source of chords. The source can be any available of midi channel, also you can choose Auto or Chord Name. Auto - it detect the best channels for the creation of chords. Chord Name - translates the Specific Sequencer events (Yamaha/Korg) to the chords by notes.
2. Select the target channel for chords by notes. Required is empty channel, if you don't have, you can using the Channels manager to remove some channel.
3. To complete the process, click the [Execute] button.
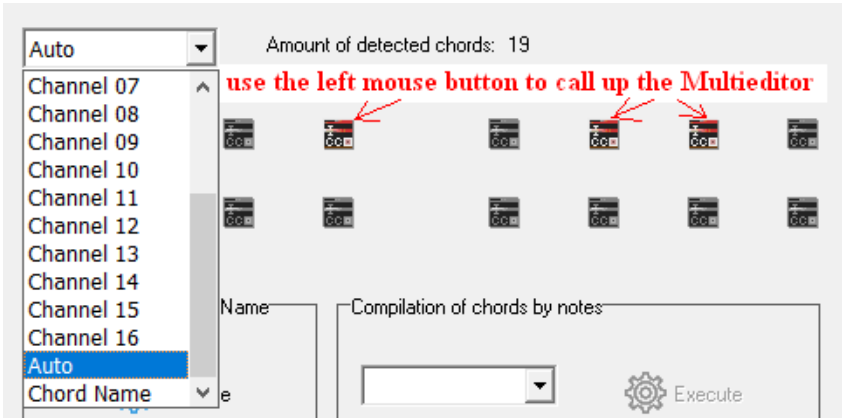
Pic.2. Vocal Harmony Creator - source of chords
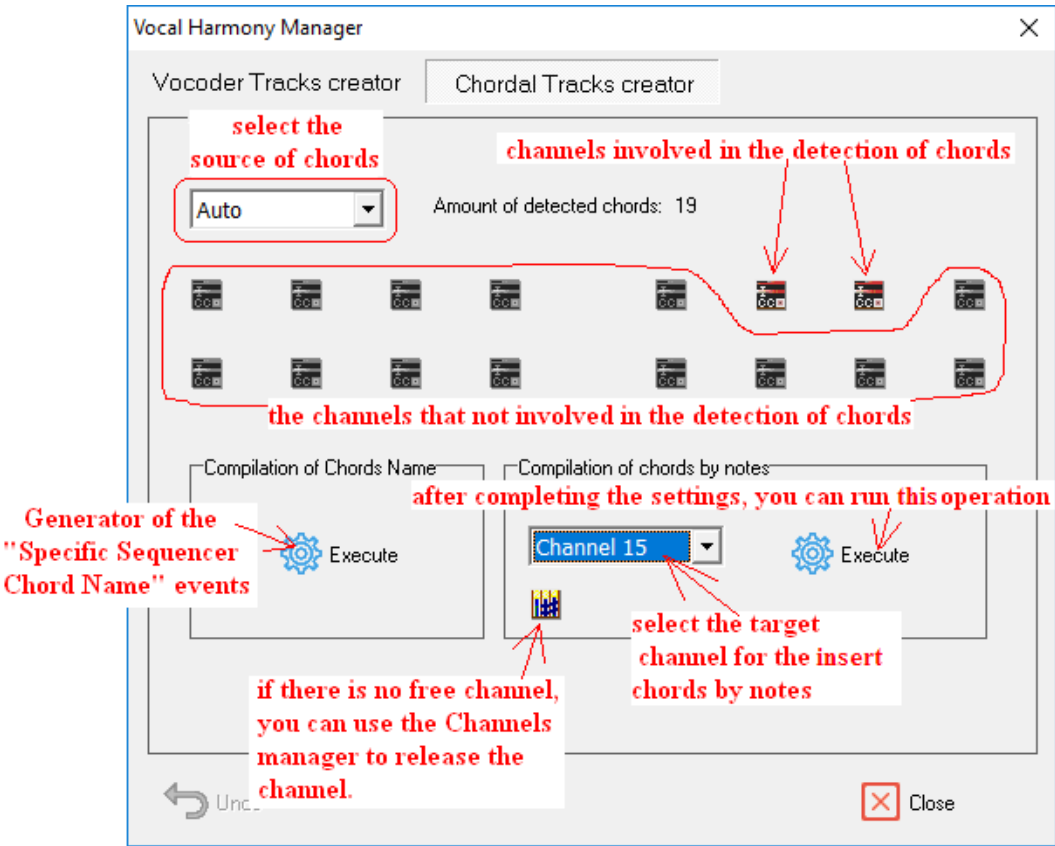
Pic.3. Vocal Harmony Creator - Chordal track creator

The new channel of chords often requires adjustments and changes the Gate Time of notes to the value of legato. All these activities you perform using Multieditor.
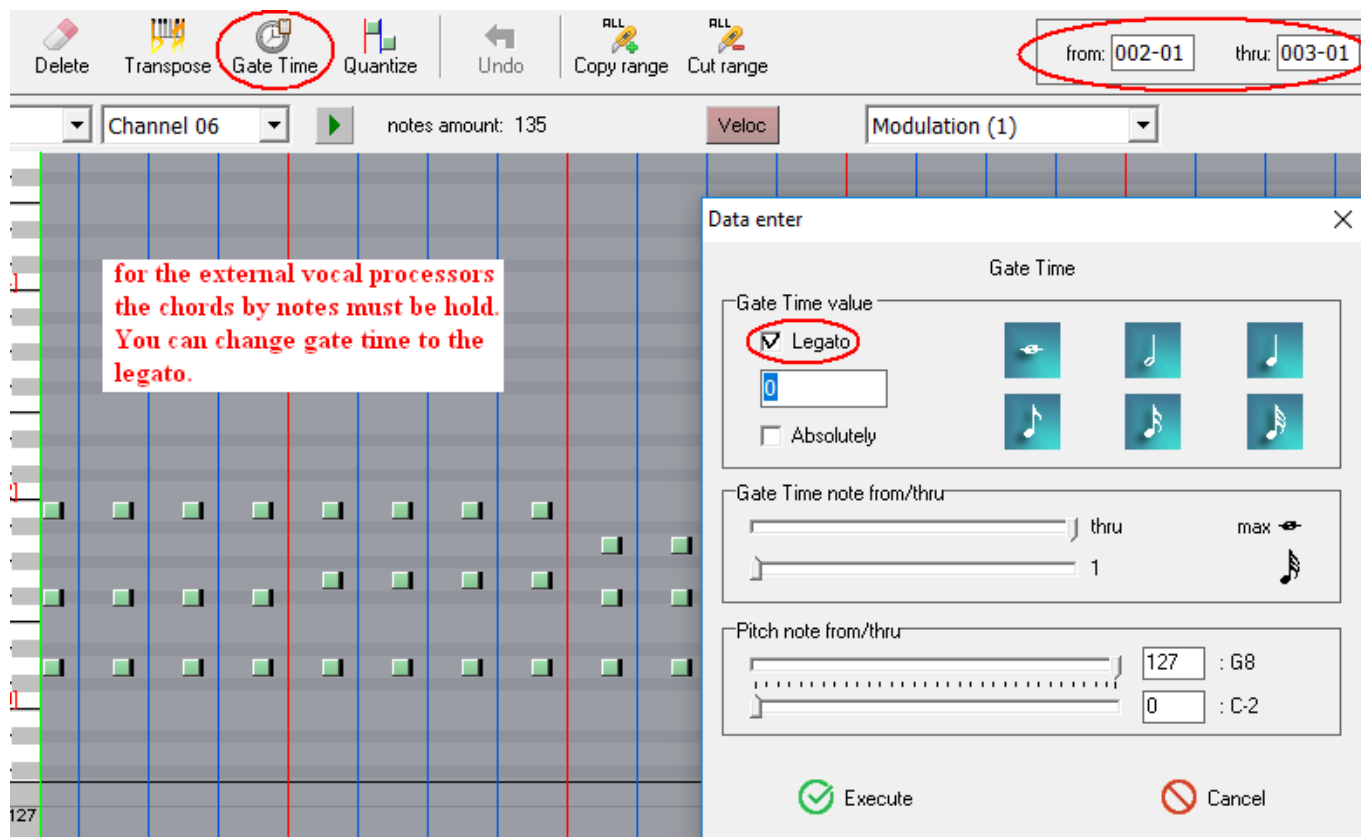
Pic.4. Vocal Harmony Creator - Chordal, Gate Time to legato

Chords displayed. If you use the internal processor, you can generate only the "Specific Sequencer Chord Name" events. It has many advantages:

- you can very easy edit (by Karaoke editor),
- displayed along with the lyrics of song,
- internal keyboard vocal processor is controlled by Chord Name.
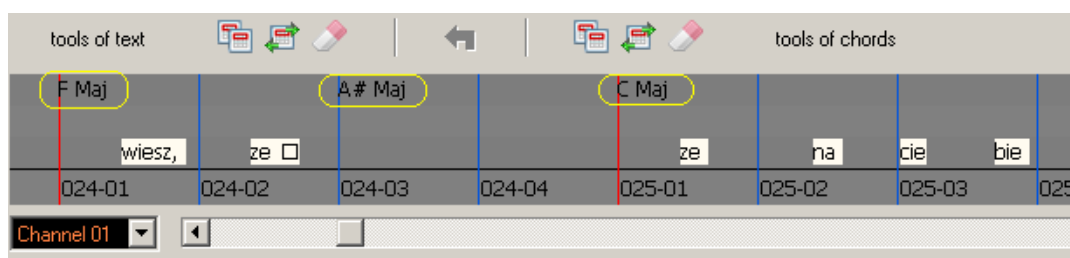
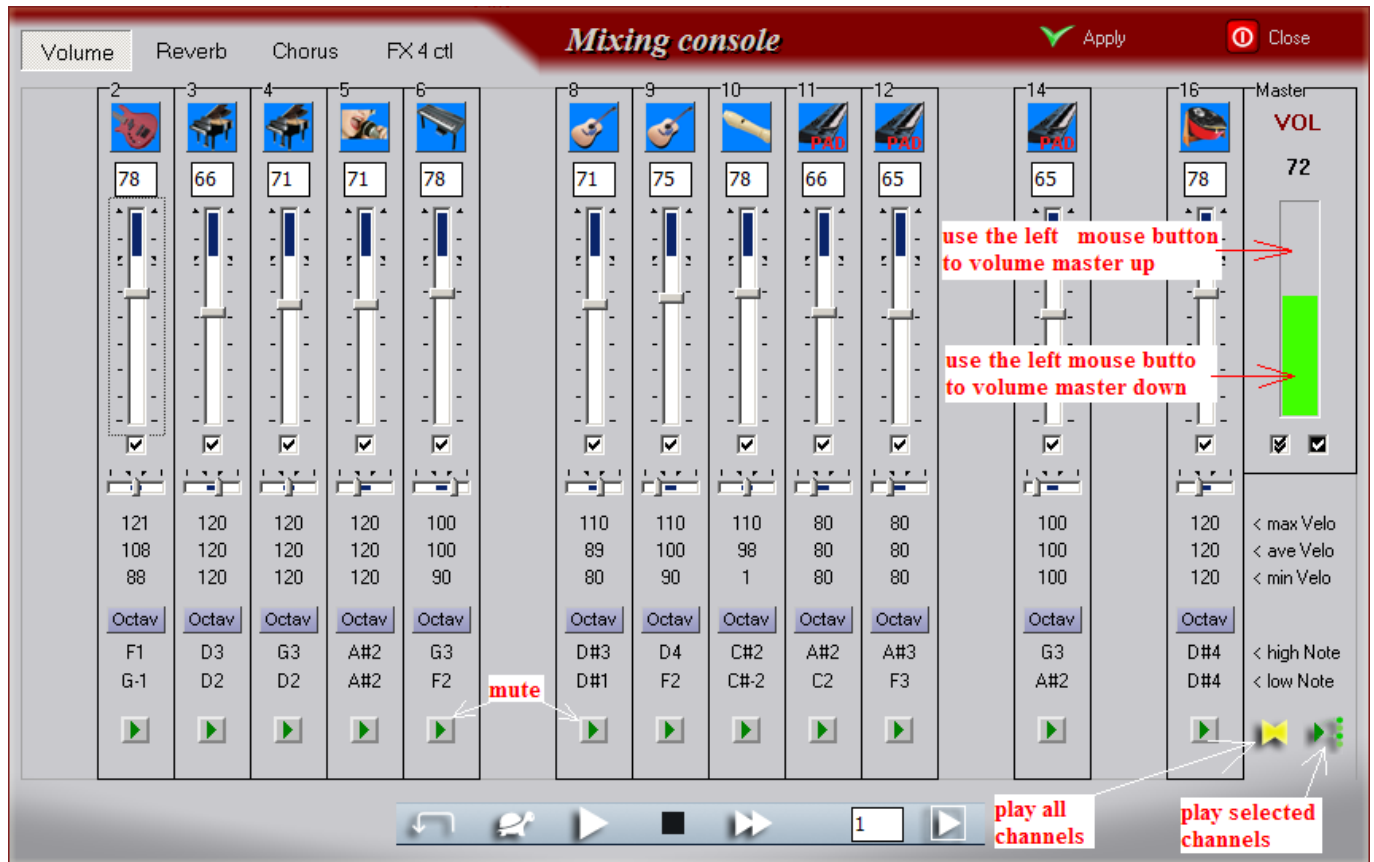Pic.5. Karaoke editor - the Chord Name event generated by Chordal creator

Keyboard shortcuts

- Esc - close Vocal Harmony Manager
- F5 - calling Channels manager
- F8 - calling Multieditor
- Ctrl R - playback jump backward

Mixing console

Edit section:

Mixing console, when you click a window pops up:

Pic.1. Mixing console - signle channel and Master modify (Volume, Reverb, Chorus, FX4 ctl).

!Note: Mixing console displays and edits the first voice on the channel. If on the channel is more than one voice (several Program Change message, the Mixing Console marks such a track with a red exclamation mark) to edit use the [Multieditor](#).

You can make change the most important parameters midi channels, **Volume**, **Reverb**, **Chorus**, **FX4 ctl**, **Balance**. All changes can be monitored in real time, using the embedded player module. **Master** field allows you to modify the selected parameter on any channel for which the box is checked under the slider.

**Other editors** available from Mixing Console:
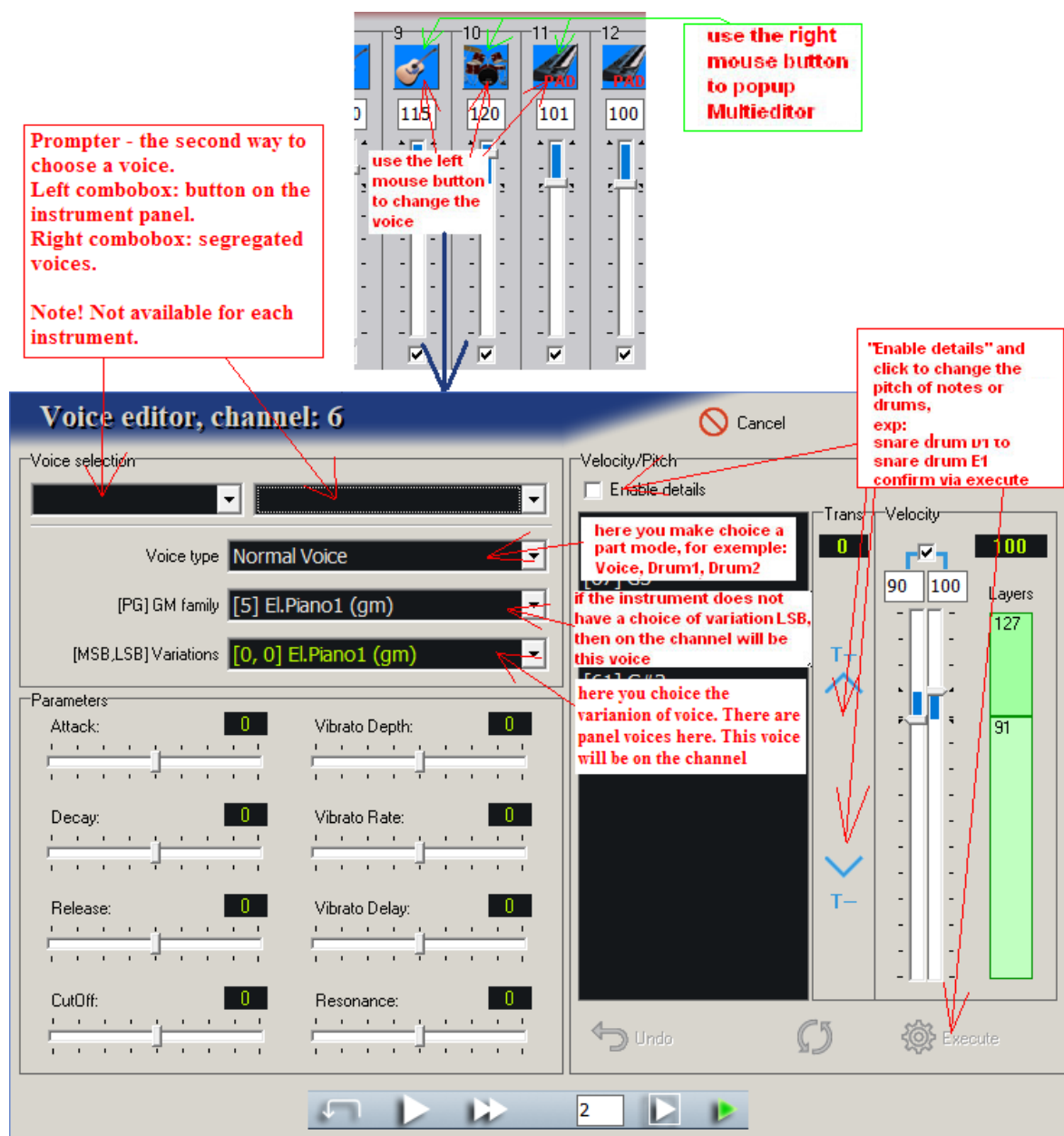
Pic.2. Voice editor - change voice, velocity and pitch notes, and other parameters.

Layers - indicator presenting the layers of voice. Thanks to the indicator of layers You can control not only velocity of notes, but also you can control the articulation of sound.
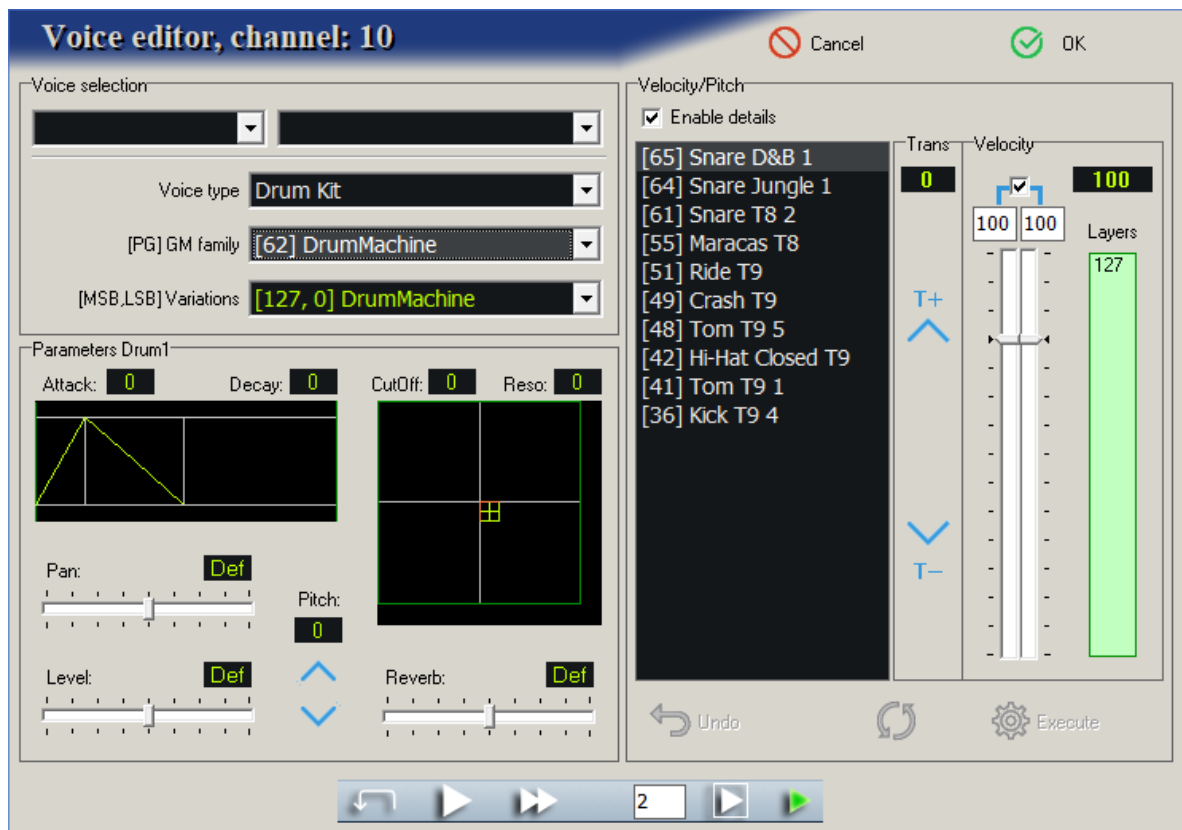
Pic.3. Voice editor - for percussion chanels.

Window **Voice editor** for percussion chanel treats every note as a separate percussion instrument, so you can edit a specific drum (Velocity, Transpose). If you want change the selected percussion instrument to another percussion instrument, use the buttons **T+** and **T-** (eg snare drum E1 to the snare drum D1).
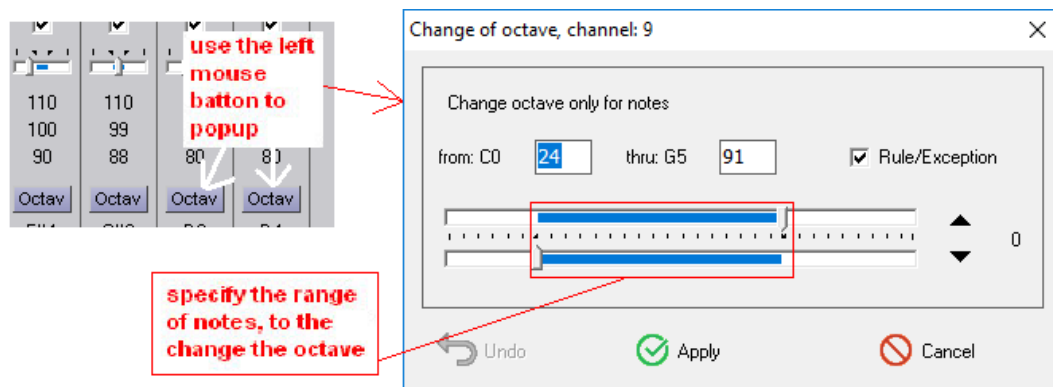

Pic.4. Change of octave.

Keyboard shortcuts

- Esc - close Mixing console without apply
- F5 - calling Channels manager
- F6 or Enter - close Mixing console with apply
- F8 - calling Multieditor
- Ctrl R - playback jump backward
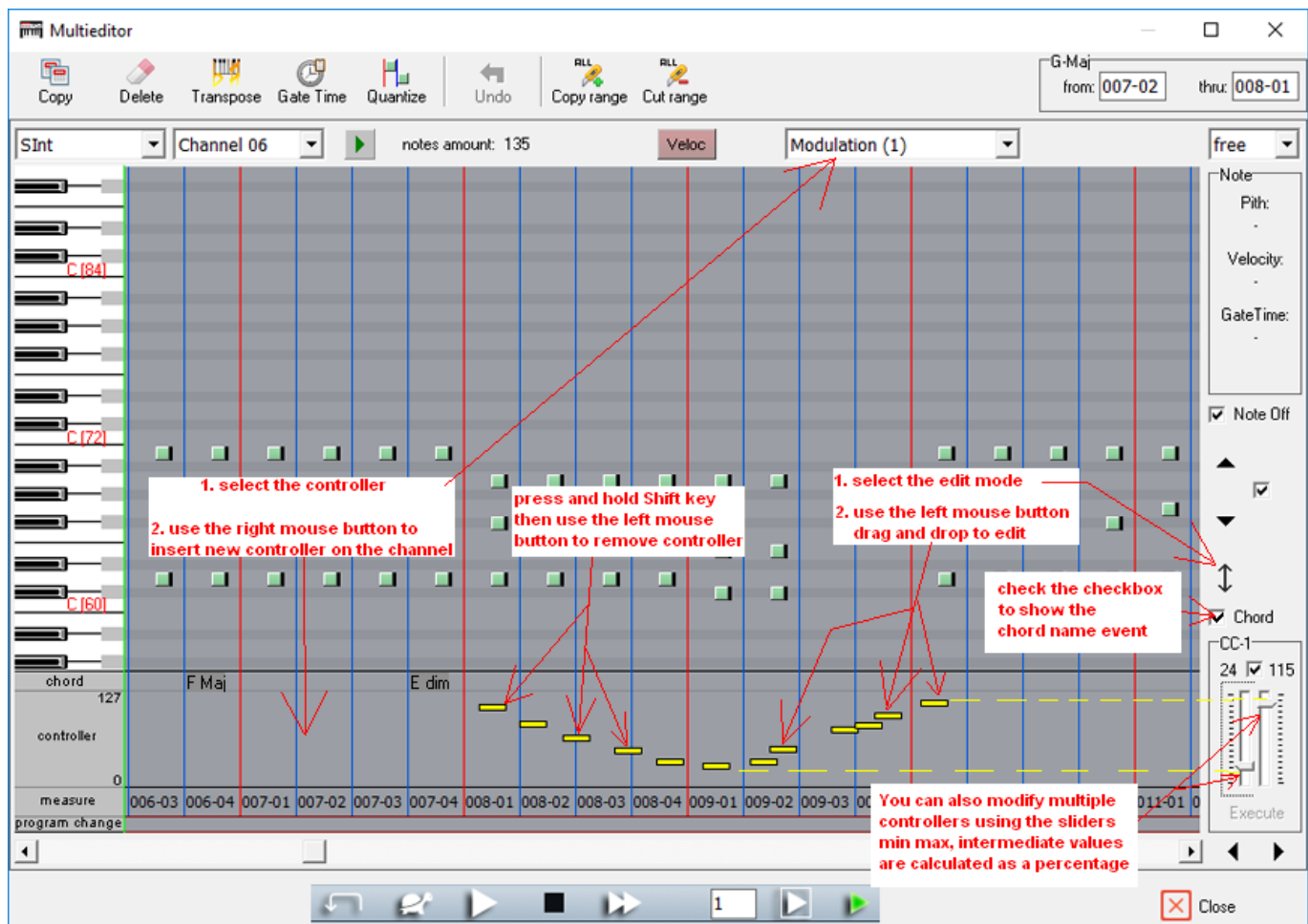- Alt S - solo mode off (all channels play)

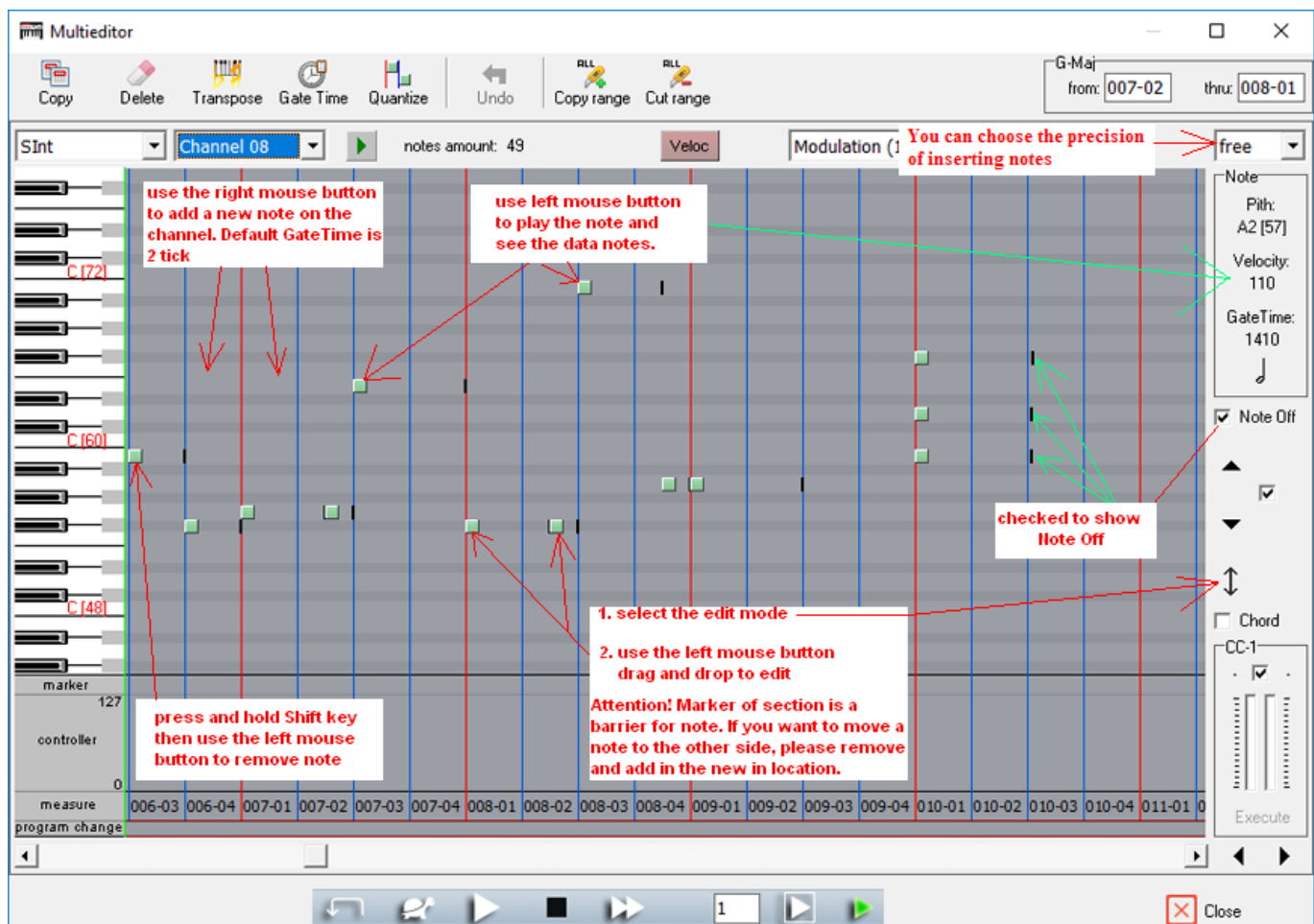# Multieditor

Edit section:

Multieditor this is powerful tool equipped with a in piano roll, recognizes over 300 chords, is equipped with the tools that affect the range or a single midi events.
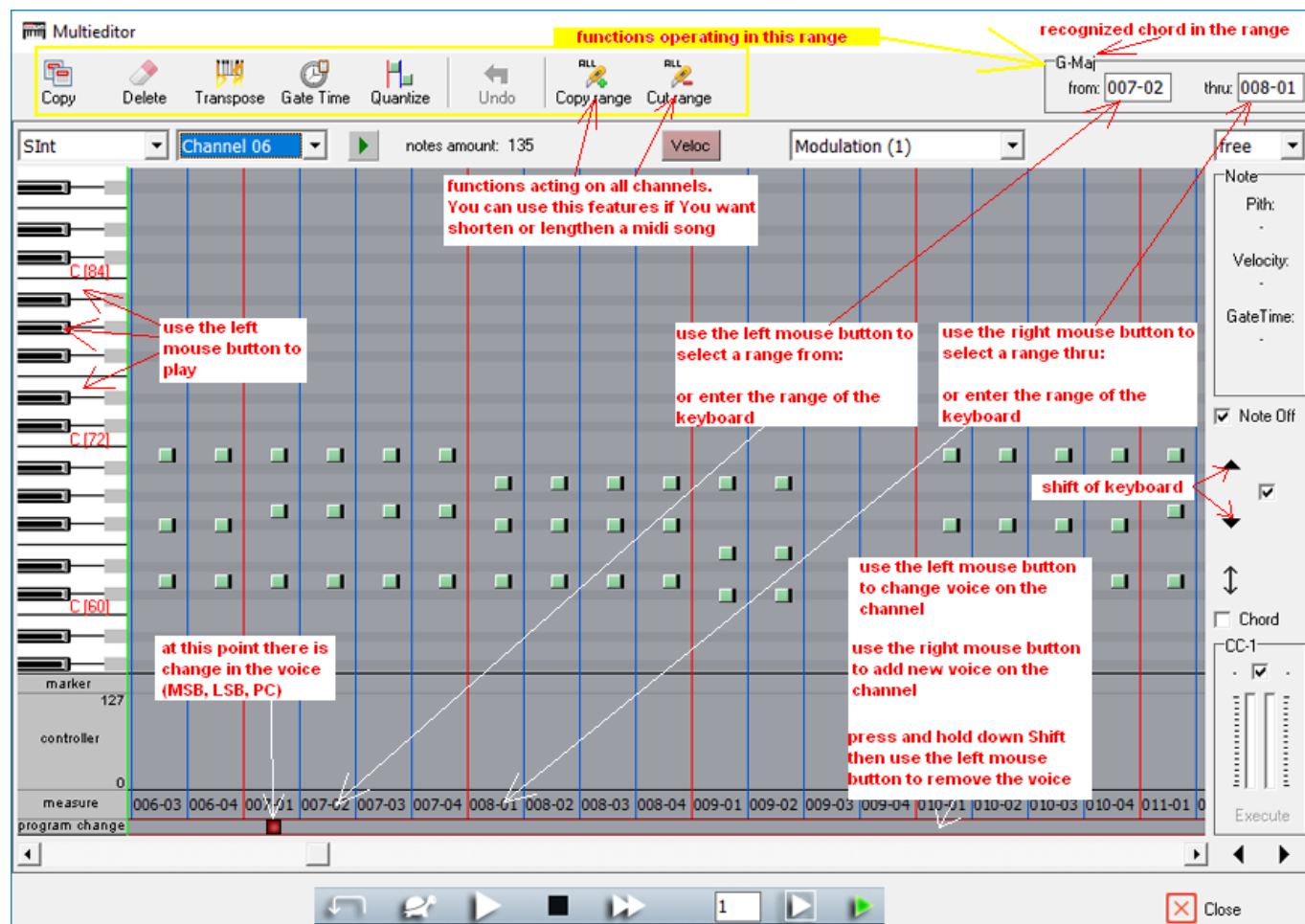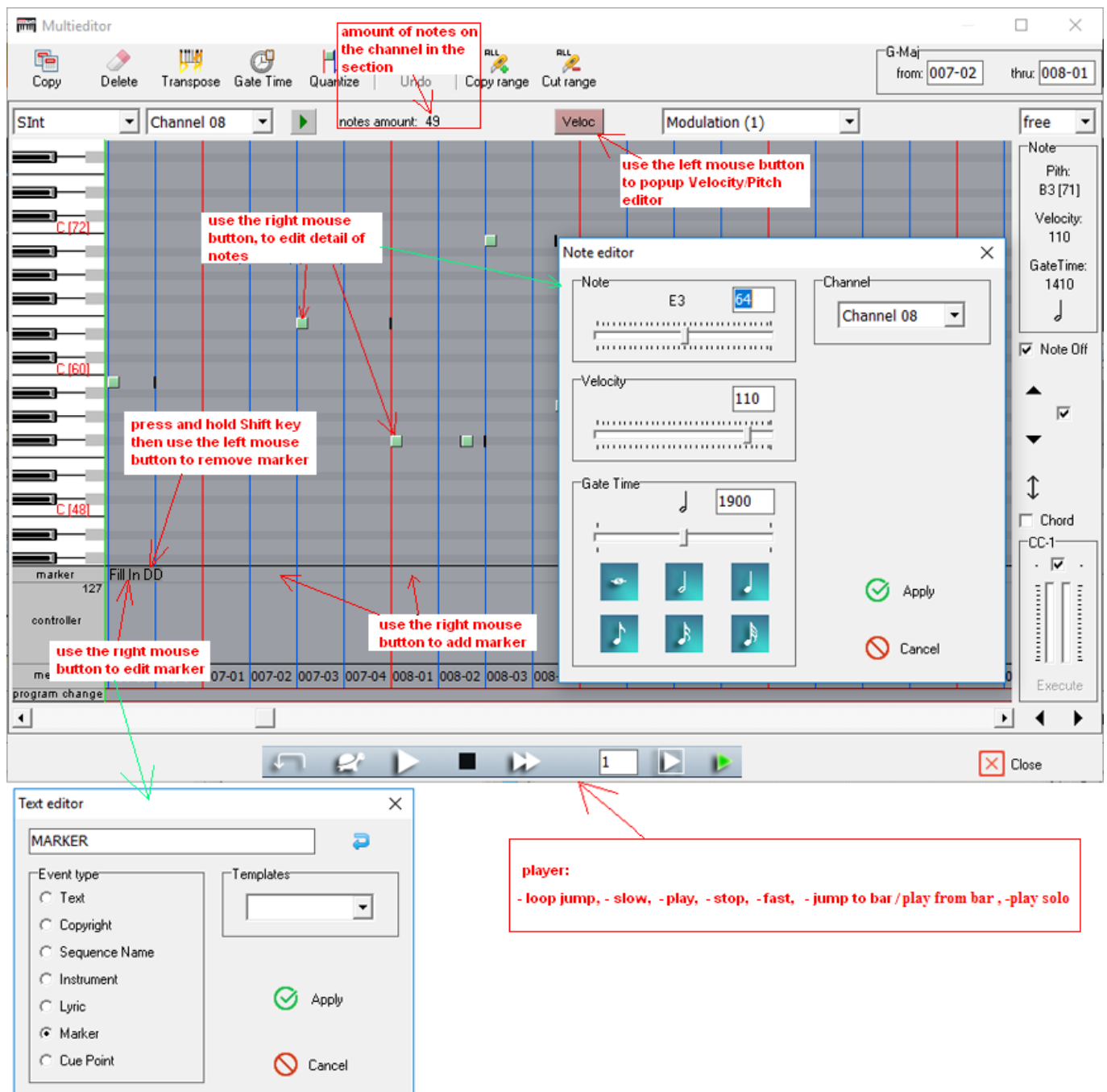

Pic.1. Tools of range, add, change and delete "full" Program Change (with MSB and LSB).

Pic.2. Modify, add and delete controllers.

Pic.3. Modify, add and delete notes.

Pic.4. Edit the details of notes, modify, add and delete markers.

Keyboard shortcuts

- Esc - close Multieditor,
- Ctrl R - loop song (jump back),
- Ctrl A - select all (eg from bar: 002-01 to bar: 999-01),
- Ctrl PLUS - zoom in view,
- Ctrl MINUS - zoom out view,
- Alt S - switch Solo/All to playing of channel,
- Ctrl UP - view keyboard up of channel,
- Ctrl DOWN - view keyboard down of channel,
- Ctrl D or DELETE - calling Delete tool,
- Ctrl C - calling Copy tool,
- Ctrl E - calling Velocity/Pitch editor,
- Ctrl G - calling GateTime tool,
- Ctrl Q - calling Quantize tool,
- Ctrl T - calling Transpose tool,
- Ctrl X - cut range (it works for all channels, you can cut a piece of song),
- Ctrl I or INSERT - copy range (it works for all channels, you can copy a piece of song),
- Ctrl Z - undo complex operations,

New tools (from 3.2.0 version)

- Ctrl Left Mouse Button - pencil, you can paint notes, or controllers,
- Shift Left Mouse Button - eraser, you can erase notes, or controllers,
- Alt Left Mouse Button - selection (cross), you can freely mark midi events,

Validation SMF GM2

Tools section:

Validation SMF GM2 - configurable tool, consists of multiple functions that You can enable or disable to more or less arrange the style or midi file. We recommend that you start and finish work with a file using this tool.

- Remove unnecessary notes - removes inaudible notes. Note is removed when the velocity value is less than 1/8 maximum velocity of note on the channel.
- Remove unnecessary controllers - removes controllers from midi channel which don't have notes. Removes sysex other manufacturers, damaged sysex and other midi events chosen by user. For this function You can make detailed configuration.
- Change NRPN to CC - provided it is possible is changing NRPN packages to appropriate controllers CC71, CC72, CC73, CC74, CC76, CC77, CC78.
- Change CC7 to CC11 - (only midi file) these events are responsible for the volume of the channel, if they are by turns and they are many then mastering is difficult. The function is replacing (except for first) all CC7 (Volume) to CC11(Expression), values are calculated that song isn't losing on volume and expression.
- Remove duplicate controllers - removes controllers, occurring one after the other on the channel, that have the same value and not give anything new - are unnecessary.
- Arrange preliminary controllers - configurable function, arms each channel midi with the necessary controllers
- Change other banks to GM2 banks - if the controllers CC0 and CC32 point to other banks, program will change them to point to the GM2 voice banks.
- Remove duplicate notes - function used to remove duplicate notes on the same channel. The function was designed so that from among two or more identical notes, removed are those that have smaller GateTime and/or Velocity values. As a result, removed are notes less audible. Function accessible also from the menu bar in tools section.
- Gate Time correct - you will not find this tool in other midi editor. This function modifies:
  - maximum GateTime of notes so that was NoteOff before will NoteOn again,
  - minimum GateTime of the notes so that GT=1 tick clock, not GT=0 tick clock,
  - removes redundant NoteOff event appearing in damaged files.
  Perform this operation often reduces the need for polyphony.
  Function accessible also from the menu bar in tools section.

Settings section:

Validation, when you click a window pops up. You can done configuration exactly according to your needs.

Pic.1. Config 1.

Pic.2. Config 2.

Super revoice

Tools section:

   Super revoice is a tool, which certainly will fascinate more than one MidiWorks end user.
With one click you will change the automatically ordinary midi file in the GM standard (General Midi) in the dedicated file for your instrument.
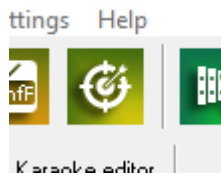
Pic.1. Super revoice trigger.

Two-level revoicing of melodic channels provides the automatic, unique swap GM voice to panel voice.
Automatic correction works also on volume, reverb and chorus.
Additionally change volume, can automatically be corrected in percentage terms depending on needs, for everyone of voice/channel.
Super revoice recognizes bass and drums channel and applying separate settings for reverb and chorus.
Super revoice is full configurable, as well as provides export and import of settings.
For the end the most important feature - incredibly straight manual.
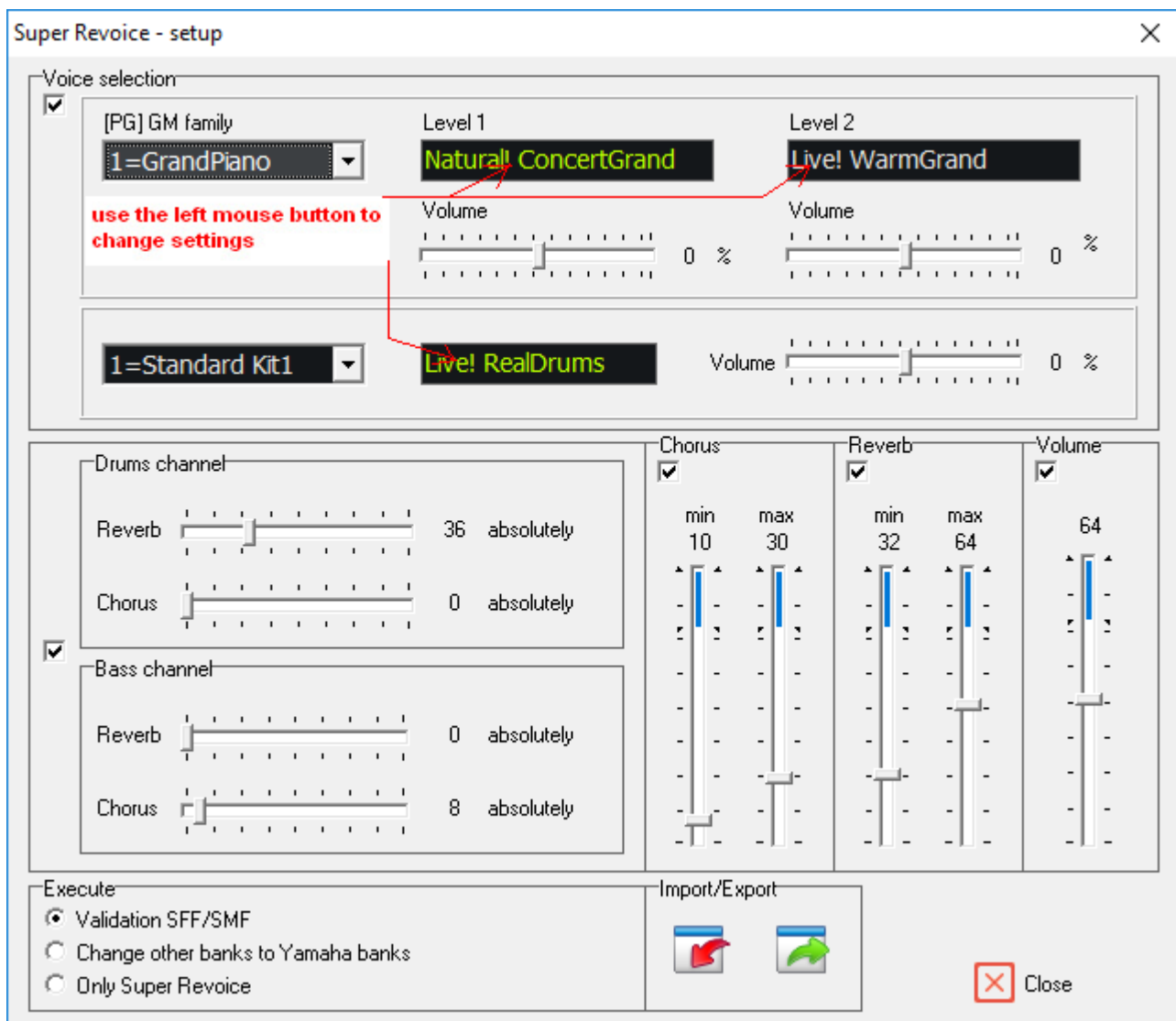
Pic.2. Super revoice window configuration.

Configuration - Super Revoice to work correctly requires proper configuration, any unspecified settings are not applied during the operation Super Revoice.

For every voice from family of General Midi (CC0 = 0, CC32 = 0) can be indicated voice, which will replace voice of GM. - you configure the Level 1.

Level 2 is an alternative voice, if there is more of the same sounds in the song, for example: 3 channel = 22 (accordion) and 6 channel = 22 (accordion). Level 2 does not need to be configured.

The setup for changing sounds for the drum track is similar. Although here there is no Level 2, only Level 1.

Example effect for settings from Pic.2. After apply Super Revoice on midi file in which there are two paths from the sound of Grand Piano will be as follows - on the channel where is notes with greater velocity will be inserted Natural! ConcertGrand voiece, on the second channel Live! WarmGrand.

If on the drum's channel voice is Standard Kit1 will be replaced by voice of Live! RealDrums. Drum's reverb will be set to 36, value chorus to 0.

On bass's channel, reverb will be set to 0, value chorus to 8.

Chorus on all channels (except drums and bass channels) will be minimum value 10 and maximum value 30.

Reverb on all channels (except drums and bass channels) will be minimum value 32 and maximum value 64.

Master volume will be 64 value.

Execute this field has no effect on the SuperRevoice function, but sometimes to prevent errors it is a good idea to check the Validation. In this way, when Super Revoice is performed, Validation is also automatically performed.

A previously validated song does not require this box to be checked and only Super Revoice can be selected.

The middle option is an intermediate state.

Edit controllers and notes

MIDI Event is called all messages that are stored in a style or midi file.
It would seem that this is black magic to the uninitiated but it is not so much, and so the most important are:

- Note On - turn on note
- Note Off - turn off note
- Program Change - voice choice
- Control Change - set of controllers that are responsible for many parameters such as:
  CC11 - expression, CC7 - volume, CC91 - reverb, CC93 - chorus, CC10 - balance
- Pitch band (whell) - deflection of the pitch knob
- After touch - after key press modulation for channel
- Poli after touch - after key press modulation for note
- Marker - used to select place in midi file
- Chord Name - contains data about the displayed chords
- System Exclusive - a very powerful controller that allows transmission of any data

In MidiWorks You can edit all these messages in the main window. double click on the selected MIDI event, or select the event and press ENTER on Your PC keyboard.

Time Signature	4/4
Tempo	109
Sequence Name	Despacito -
Key Signature	D-dur
GM System On	7E 7F 09 01
XG System On	43 10 4C 00
DSP 1 Connection:system	43 10 4C 02
Bank Select MSB [0]	Normal [0]
Bank Select LSB[32]	Bank [0]
Program Change	FretlessBass (gm) [36]

Meta Events editor - Key Signature ✕

2 ▲▼ D-Maj Maj ▼

✅ Apply   🚫 Cancel

740	003:04:000	Lyric	Yankee
			•
		[D3]	veloc [110]
		[F#3]	veloc [110]
			87
		[B3]	veloc [110]
			*******
			•
		[D3]	veloc [0]
		[F#3]	veloc [0]
		[B3]	veloc [0]
		[C#4]	veloc [110]
		[C#4]	veloc [0]
		[D4]	veloc [110]

Text editor ✕

Yankee ⏎

Event type
- ○ Text
- ○ Copyright
- ○ Sequence Name
- ○ Instrument
- ● Lyric
- ○ Marker
- ○ Cue Point

Templates
[▼]

✅ Apply

🚫 Cancel

1	001:01:616	10	Reverb Send [91]	value [20]
1	001:01:617	10		
1	001:01:618	10		
1	001:01:619	10		
1	001:01:620	10		
1	001:01:621	10		
1	001:01:622	10		
1	001:01:623	11		
1	001:01:624	11		
1	001:01:625	11		
1	001:01:626	11		
1	001:01:627	11		
1	001:01:628	11		
1	001:01:629	11		
1	001:01:630	11		
1	001:01:631	11		
1	001:01:632	11		
1	001:01:633	11		

Controller editor ✕

CutOff Freq.	[74]
Decay Time	[75]
Vibrate Rate	[76]
Vibrato Depth	[77]
Vibrate Delay	[78]
Sound Ctrl.	[79]
Super ART1	[80]
Super ART2	[81]
GenPurpose7	[82]
GenPurpose8	[83]
Portamento Ctrl	[84]
CC (unknown)	[85]
CC (unknown)	[86]
CC (unknown)	[87]
CC (unknown)	[88]
CC (unknown)	[89]
CC (unknown)	[90]
Reverb Send	[91]

Channel
[Channel 10 ▼]

Value
[20]

[90]

✅ Apply

🚫 Cancel

File type: SMF0   Tracks count: 1   PPQN: 960   validation SMF was done

---

10	Main Volume	[7]	Data Entry LSB[p]q [120]	value [0]
11	001:01:607	1		rum Kit [127]
11	001:01:608	1		nk [0]
11	001:01:609	1		ipHopKit [57]
11	001:01:610	1		alue [120]
11	001:01:611	1		alue [64]
11	001:01:612	1		alue [64]
1	001:01:613	1		alue [64]
1	001:01:614	1		alue [64]
1	001:01:615	1		alue [64]
1	001:01:616	1		alue [20]
1	001:01:617	1		alue [3]
1	001:01:618	1		alue [0]

Program Change editor ✕

| 73=Piccolo |
| 74=Flute |
| 75=Recorder |
| 76=PanFlute |
| 77=BlownBottle |
| 78=Shakuhachi |
| 79=Whistle |
| 80=Ocarina |
| 81=SquareLead |
| 82=SawtoothLead |
| 83=CalliopeLead |
| 84=ChiffLead |

Channel
[Channel 11 ▼]

Pic.1. MIDI Event editing window.

System Exclusive edit

If you want to edit System Exclusive message proceed as in the visible screens:

Offset	M:B:T	Channel	Events	Data
0	001:01:000		Time Signature	4/4
0	001:01:000		Tempo	109
0			Sequence Name	Despacito - Luis Fonsi, feat. Dadd
0			Key Signature	D-dur
1			GM System On	7E 7F 09 01 F7
9	001:01:010		XG System On	43 10 4C 00 00 7E 00 F7
480	001:01:490		DSP 1 Connection:system	43 10 4C 02 01 5A 01 F7
5	001:01:495	S1	Drum 36 Pan:C	43 10 4C 30 24 04 40 F7
0	001:01:495	2	Bank Select MSB [0]	Normal [0]
1			Bank Select LSB[32]	Bank [0]
1			Program Change	FretlessBass (gm) [36]
1			Main Volume [7]	value [120]
1			Panorama [10]	value [64]
1	001:01:500	2	Resonance [71]	value [64]

double-click left mouse button on the selected midi event, exp: Drum 36 Pan:C

This message sets the balance for a percussion instrument, in our example: Bass Drum 36 (C1): center

Pic.1. Step one.

Pic.2. Step two, variant first.
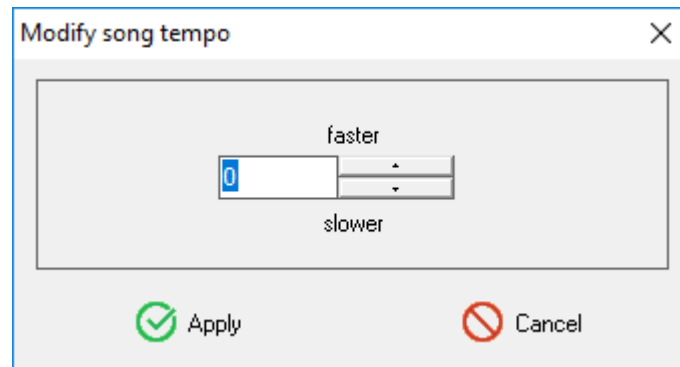

Pic.3. Step two, variant second.

Song tempo modify

Edit section:

Song tempo modify, when you click a window pops up:

Pic.1. Window song tempo modify.

With this window you can change the song tempo. A change of pace has an impact on the all tempo events in the midi file, therefore track retains its rhythmic dynamism which he had before making any changes.