

AutoDrum4.3

Automatic Drum performance software

User's Manual

2016/11/16 The 43th edition publish

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Thank you for downloading or receiving AutoDrum 4.3

First please read "readme_en.txt" before reading this manual.

This guide is written by using OpenOffice4.1.0 Writer. It is recommended to print to paper for reading.

Attention

- (1) This software is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.
- (2) This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.
- (3) This software uses (depends on) MIDIIO.dll, MIDIData.dll, MIDIClock.dll, and MIDIStatus.dll They are all released under the terms of LGPL from openmidiproject.
- (4) All brand names and product names are registered trademarks of their respective companies.

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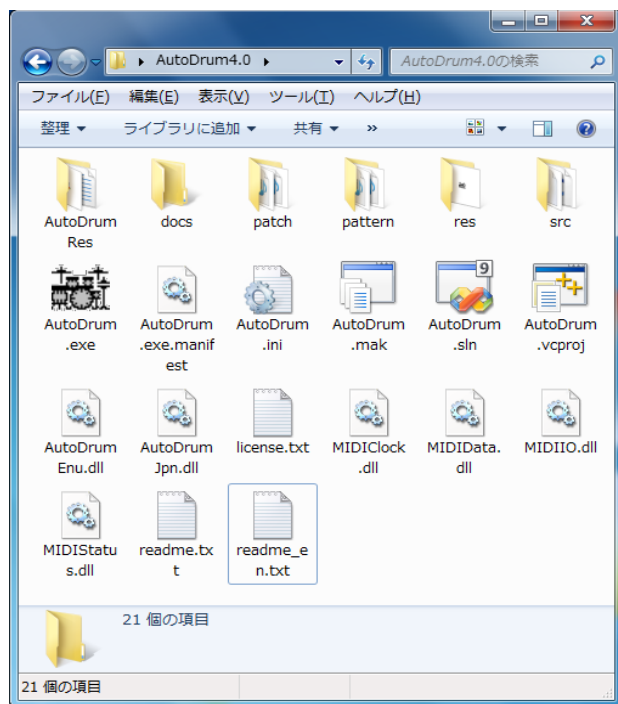
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1. Install and Execute

This software doesn't have an installer. You only need to extract zip file.

1-1. Install

(1) Please extract AutoDrum4.3.zip with folder. Following files and folders will be appeared. Please check all files and folders are exist.



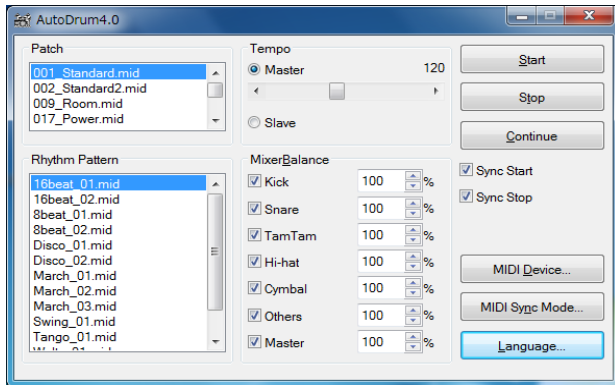
* If “Hide hidden files and folders” is selected in My computer or Window explorer's folder option dialog, “*.dll” files are not shown. It is recommended to select “Show all files and folders” to check to exist “*.dll” files.

* Don't put AutoDrum in the “c:\program files” or “c:\program files(x86)” or “c:\windows” folder. These folder is controled by Windows User Account Control (UAC) feature so writing configuration file (*.ini) is blocked.

FileName	Description
AutoDrum.exe	Main program.
AutoDrum.exe.manifest	Manifest file.
AutoDrum.ini	Configuration file.
AutoDrum.sln	Solution file for Microsoft Visual Studio 2008 Service Pack 1.
AutoDrum.vcproj	Project file for Microsoft Visual Studio 2008 Service Pack 1.
AutoDrum.mak	A make file for C/C++.
AutoDrumEnu.dll	AutoDrum Chinese language resource DLL.
AutoDrumEnu.dll	AutoDrum English language resource DLL.
AutoDrumJpn.dll	AutoDrum Japanese language resource DLL.
MIDIIO.dll	MIDI messeage input or output library.
MIDIClock.dll	MIDI clock measuring library.
MIDIData.dll	MIDI data creating / editing library.
MIDISatus.dll	MIDI module's status keeping library.
readme.txt	Please read me first (Japanese).
readme_ch.txt	Please read me first (Chinese).
readme_en.txt	Please read me first (English).
license.txt	License (LGPL)
src	A folder for C source files (*.c), C header files (*.h), and resource script file (*.rc).
res	A folder for resource files like *.bmp, *.ico, *.cur, and so on.
AutoDrumRes	A language depending resource script folder.
docs	A folder for documentations (*.odt) (*.pdf).
patch	A folder for Patch MIDI data (*.mid).
pattern	A folder for Pattern MIDI data (*.mid)

1-2. Execute

Please double click AutoDrum.exe in the “my computer” or “explorer”. Following main window will appear.



* Don't forget to extract all files. Otherwise, AutoDrum will cause error.

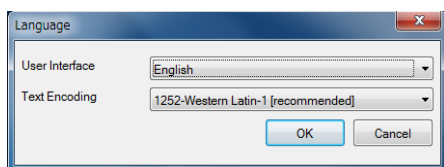
* Please see also 4. trouble shooting if AutoDrum doesn't execute normally.

* AutoDrum must be executed on the local computer that “AutoDrum.exe” is installed. Execution from the network computer will causes some troubles.

1-3. Setup of language

AutoDrum is made in Japan, therefore default GUI language is Japanese. You may select English language, there is two way to change language. (1) is from GUI, (2) is form text editor.

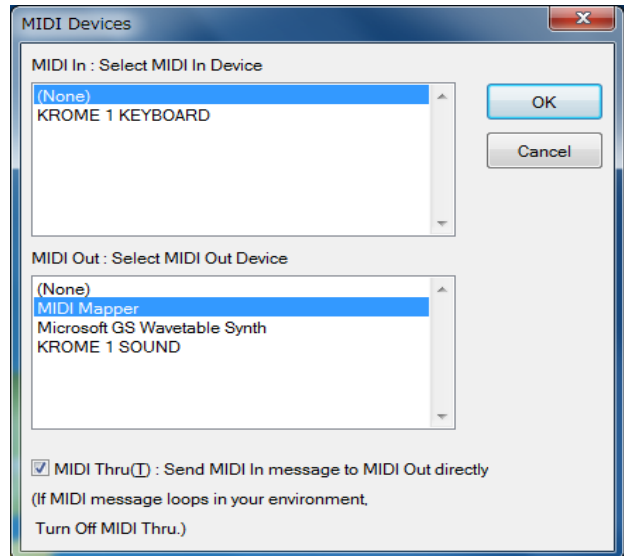
(1) Push "Language..." button and select language in the dialog, and restart AutoDrum again. If it is difficult to see the button because of character corruption, press [Alt]+[L] key, and you may open the dialog.




(2) Open "AutoDrum.ini" in your text editor, and change "Language=Japanese" into "Language=English" or "Language=Chinese", and then execute AutoDrum.

1-4. Setup of MIDI device and instrument

First you must select MIDI In device and MIDI Out device, so as to fit your using MIDI device in the MIDI Devices dialog from "MIDI Device..." button. In the default setting, “(None)” is selected for MIDI In device and “MIDI Mapper” is selected for MIDI Out device. If you select “(None)” as a MIDI Out Device, you will get no sound.



1-5. Exit

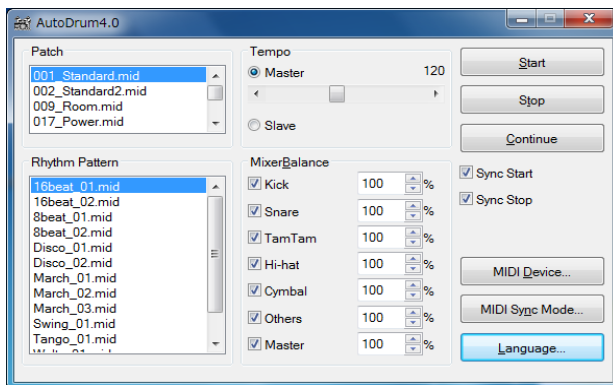
Push left-top  button, or press [Alt] + [F4] key.

1-6. Uninstall

Delete “AutoDrum4.3” folder which contains “AutoDrum.exe”

2. Operations

2-1. Main window



Patch

Select type of drum set from the list box. This changes type of drum set immediately. You can use various type of drum set in one rhythm pattern.

AutoDrum has 9 type of preset drum set (patch). These patches are available at both GS module and XG module. If you double click the item, you can see the property of the MIDI data.

Patch Name	Description
001_Standard.mid	Standard drum set 1
002_Standard2.mid	Standard drum set 2
009_Room.mid	With room ambient
017_Power.mid	For powerful hard rock.
025_Electronic.mid	Electric drum set
026_TR808.mid	TR-808 drum set
033_Jazz.mid	For Jazz with stick.
041_Brush.mid	For Jazz with brush.
049_Orchestral.mid	For orchestral instrument.

* Patch data is provided as a standard MIDI file (*.mid). These MIDI data contains patch change(CC#0, CC#32, PC), volume(CC#7), Pan(CC#10), Expression(CC#111), Reverb send level(CC#91) and so on. These MIDI data does not contain any note on and note off event. A Tempo event including these MIDI data is ignored.

* You can add your original patch MIDI data for your MIDI module. See also 3. Create original MIDI data.

Rhythm Pattern

Auto Drum has following 13 preset rhythm patterns. Select your favorite pattern from the list box. If you double click the item, you can see the property of the MIDI data.

Pattern Name	Description
8beat_01.mid	Normal 8beat.
8beat_02.mid	Up beat 8beat.
16beat_01.mid	Normal 16beat.
16beat_02.mid	Up beat 16beat.
Disco_01.mid	Mainly bass drum and hi-hat.
Disco_02.mid	Mainly bass drum and hi-hat .
March_01.mid	Mainly snare.
March_02.mid	Mainly snare.
March_03.mid	Mainly snare.
Swing_01.mid	Mainly ride cymbal.
Tango_01.mid	For 4/4.
Waltz_01.mid	For 3/4.
Waltz_02.mid	For 3/4.

* Rhythm Pattern data is provided as a standard MIDI file (*.mid). These MIDI data contains note on and note off event for one loop. These MIDI data does not contain set up data like patch change (CC#0, CC#32, PC) and so on. A Tempo event including these MIDI data is ignored.

* You can add your original pattern MIDI data for your MIDI module. See also 3. Create original MIDI data.

Tempo

AutoDrum4.3 supports two type of tempo mode, one is master, the other is slave.

In master mode, AutoDrum uses internal timer and generate tempo. You can specify the tempo from 16 [BPM] to 256 [BPM] by moving the scroll bar at any time. If you click left or right button of the scroll bar, you can change the tempo at 1 [BPM] step.

In slave mode, AutoDrum uses external machine's signal and synchronize to the signal. To use slave mode normally, MIDI timing clock signal or SMPTE/MTC signal must be received from MIDI In device. You can specify which signal to slave in the sync mode dialog. Normally MIDI timing clock (0xF8) is used, which is sent 24 times per quarter note continuously, and the tempo is depend on the interval MIDI timing clock.

In each mode, a tempo event including MIDI data is ignored.

Mixer and Balance

In AutoDrum4.3, the note event is grouped to the following 6 groups, which is, Kick, Snare, Tamtam, Hi-hat, Cymbal, and Others.

Group	Note number : Instrument name
Kick	35(B1) : Standard Kick 1
	36(C2) : Standard Kick 2
Snare	38(D2) : Acoustic Snare
	40(E2) : Electronic Snare
Tamtam	41(F2) : Low Tom 2
	43(G2) : Low Tom 1
	45(A2) : Mid Tom 2
	47(B2) : Mid Tom 1
	48(C2) : High Tom 2
	50(D2) : High Tom 1
Hi-hat	42(F#2) : Closed HiHat
	44(G#2) : Pedal HiHat
	46(A#2) : Open HiHat
Cymbal	49(C#3) : Crash Cymbal 1
	55(A3) : Crash Cymbal 2
Others	Others

Each group's sound can be muted independently by checking off the each group's check box. If check box is checked, it sounds, and you can adjust the group's velocity level from 1% to 200% independently. Master's velocity level affects all sounds, the output velocity level is following formula.

Output velocity =

$$\text{Original velocity} * \frac{\text{Group}}{100} * \frac{\text{Master}}{100}$$

* If the output velocity becomes over than 127, the output velocity becomes 127.

Start

Start playing the rhythm pattern from the beginning of the MIDI data, and repeat at the end of MIDI data automatically. If AutoDrum detect start command (0xFA) from MIDI In device, then also start playing.

Stop

Stop playing the rhythm pattern immediately. The current note on sound will be note offed except in case of the hold pedal is downed. If AutoDrum detect stop command (0xFC) from MIDI in device, then also stop playing.

Continue

Continue playing the rhythm pattern from the position that you've stopped, and repeat at the end of MIDI data automatically. If AutoDrum detect continue command (0xFB) from MIDI in device, then also continue playing.

Sync start

If this check box is checked, AutoDrum start playing the rhythm pattern automatically when your MIDI keyboard's key is pressed or the hold pedal is downed.

Sync stop

If this check box is checked, AutoDrum stop playing the rhythm pattern automatically when your MIDI keyboard's key is all released and the hold pedal is upped. If the hold pedal is kept downed, AutoDrum stop playing when the hold pedal is upped.

MIDI Device...

Open MIDI Device dialog.

MIDI Sync Mode...

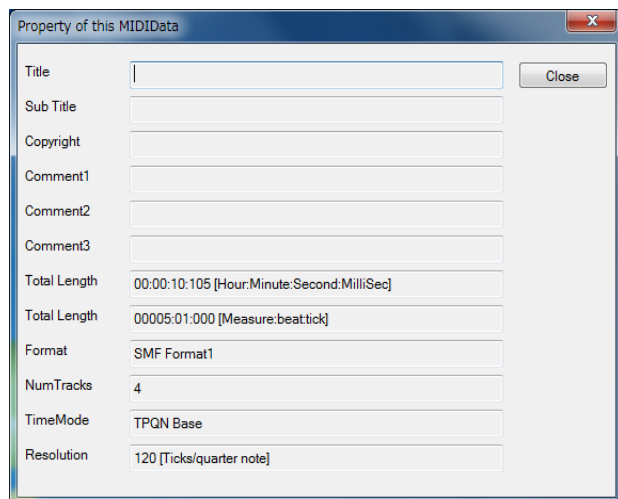
Open MIDI Sync dialog.

Language

Open Language dialog.

2-2. “Property of this MIDIData” Dialog

This dialog shows basic property of the MIDI data. This dialog can be opened by double-clicking list box's MIDI data.



Title

This shows the title of this MIDI data. This is related with the first track's the first track name event.

SubTitle

This shows the title of this MIDI data. This is related with the first track's the second track name event.

Copyrights

This shows the copyright of this MIDI data. This is related with the first track's the first copyright event.

Comment

This shows the comment of this MIDI data. This is related with the first track's the first text event.

Total Length

This shows total length of this MIDI data as [hour : minute : second : millisecc] and [measure : beat : tick](in TPQN base) or [frame : subframe] (in SMPTE base).

Format

This shows standard MIDI file's format 0 or 1. Format 0's MIDI data contains only one track and all events are included in the track. Format 1's MIDI data contains multiple track and tempo, time signature, key signature and so on's events are included in the first track, which is called conductor track, and MIDI channel events like note on event are included in the second or following track.

NumTracks

This shows how many tracks are contained in this MIDI data. In format 0's MIDI data, this value is always 1. In format 1's MIDI data, this value is larger than 1 and the first track is a

conductor track.

TimeMode

This shows the time mode of this MIDI data. Which is, TPQN Base, SMPTE24base, SMPTE25base, SMPTE29.97base, or SMPTE30base. Normally, MIDI data is TPQN (Ticks per quarter note) base. In AutoDrum, SMPTE base's MIDI data can't be used.

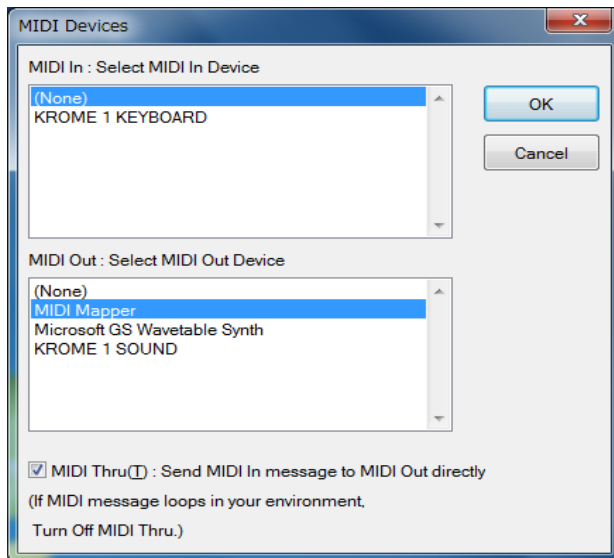
Resolution

This shows the time resolution of this MIDI data. If the MIDI data is TPQN base, this shows the resolution of quarter note [ticks per quarter note], which is normally 48, 72, 96, 120, 144, 168, 192, 216, 240, 360, 384, 480, or 960. If the MIDI data is SMPTE base, this shows the resolution of 1 frame [subframes per 1 frame].

Close

Close this dialog.

2-3. “MIDI Device” Dialog



MIDI In

This shows the list of MIDI In Device which is installed to your Windows. Select one of them the your MIDI keyboard or MIDI controller is connected.

MIDI Out

This shows the list of MIDI Out Device which is installed to your Windows. Select one of them which your MIDI module or synthesizer which you want to play a sound is connected.

If you select “MIDI Mapper”, the default MIDI Out device which is selected in the windows control panel's “sound and multimedia”

MIDI Thru

If this check box is checked on, AutoDrum outputs the inputted MIDI message from MIDI in device into the MIDI Out Device directly.

If you connect your MIDI keyboard's input and MIDI module's output, MIDI message loops eternally and the sound will not stops. In this case, check off the MIDI Thru.

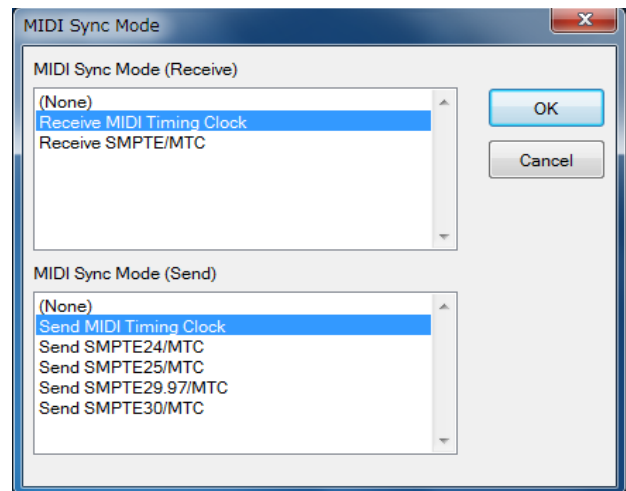
OK

Close this dialog and open specified MIDI devices.

Cancel

Close this dialog without change.

2-4. “MIDI Sync Mode” Dialog



MIDI Sync Mode (Receive)

Select the type of sync signal in the slave mode. If you select “(None)” here, time will not progress in the slave mode. Also, if you select “(None)” as a MIDI In Device, time will not progress in the slave mode.

- a) Receive MIDI Timing Clock : AutoDrum slaves to the MIDI timing clock (0xF8). MIDI timing clock is sent 24 times per quarter note. The tempo will be changed by the interval of MIDI timing clock. This is the best mode for TPQN base MIDI data.
- b) SMPTE/MTC : AutoDrum slaves to the MIDI time code quarter frame (0xF1). MIDI Time code is sent as a format including hour, minute, second, or frame, and generally it is sent 24 ~ 30 times per 1 second. The time will progress by the given hour : minute : second : frame.

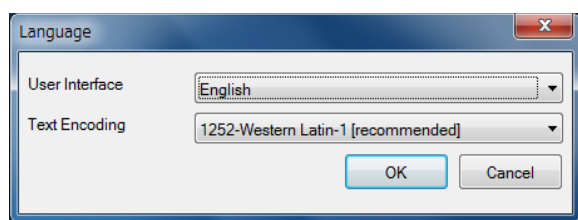
MIDI Sync Mode (Send)

Select which MIDI sync signal to send to MIDI Out Device.

- a) MIDI Timing Clock : AutoDrum sends MIDI timing clock (0xF8) 24 times per quarter note. If you change the tempo, the interval of MIDI timing clock will be changed. This is best mode for TPQN base MIDI data.
- b) SMPTE24/MTC : AutoDrum sends MIDI time code quarter frame (0xF1) which contains hour, minute, second, or frame 24 times per 1 sec.
- c) SMPTE25/MTC : AutoDrum sends MIDI time code quarter frame (0xF1) which contains hour, minute, second, or frame 25 times per 1 sec.
- d) SMPTE29.97/MTC : AutoDrum sends MIDI time code quarter frame (0xF1) which contains hour, minute, second, or frame 29.97 times per 1 sec.
- e) SMPTE30/MTC : AutoDrum sends MIDI time code quarter frame (0xF1) which contains hour, minute, second, or frame 30 times per 1 sec.

2-5. “Language” Dialog

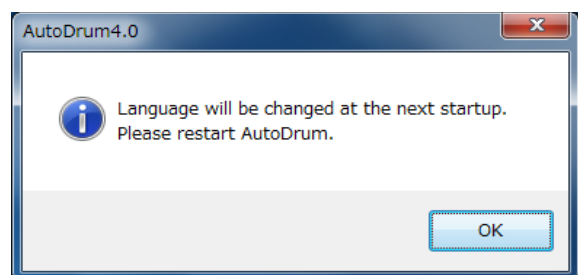
This dialog is used to select user interface's language. This dialog can be opened from “Language...” button.



The language can be selected from Japanese or English or Chinese. In Japanese, MS P Gothic font is used as main GUI font. In English, MS Sans Serif font is used as main GUI font. (Except the part defined by OS, like title bar, menu, controls, and so on).

OK

Close this dialog and update language setup. If you click OK, following message box is shown.



Language will be changed at the next start up. Please execute AutoDrum again.

Cancel

Close this dialog.

Hint:

AutoDrum is made in Japan, therefore, default GUI language is Japanese. If you use non Japanese Windows, please select English language.

In non Japanese Windows, it may be difficult to open the “Setup” - “Language...” menu because of character corruption. Please use keyboard short cut, press [Alt] + [L] and you can open this dialog.

The GUI language can be changed by text editor, too. Open “AutoDrum.ini” in your text editor, and change change “Language=Japanese” into “Language=English”, and execute AutoDrum.

3. Create user defined data

In AutoDrum, you can add user defined patch MIDI data and user defined rhythm pattern MIDI data. In AutoDrum4.3, patch MIDI data and rhythm pattern MIDI data are handled separately because to use one rhythm pattern in various tone.

Patch data (*.mid)	Rhythm pattern data (*.mid)
Define the tone. It contains program change, control change, and pitch-bend event. It does not contain any note on or note off event. These data is put in the patch folder.	Define the rhythm pattern. It contains only note on or note off event. And it is played as looped automatically in the AutoDrum. These data is put in the pattern folder.

Each data is standard MIDI file (*.mid), so you can create user defined data and add to the AutoDrum. When restart AutoDrum, your data will be appear in the list box by saving patch or pattern folder.

Here shows an example how to create user defined Patch data or Rhythm pattern data by using Sekaiju midi sequencer.

3-1. create user defined patch data

(1) By using track list window, put the first track (conductor track) and the second track (drum track). The second track's output channel must be 10.

	名前	色	入力入力ポート	入力出力ポート	出力表示	モCC#0	モCC#1	モCC#2	モCC#3	モCC#4	モCC#5	モCC#6	モCC#7	モCC#8	モCC#9	モCC#10	モCC#11	モCC#12	モCC#13	モCC#14	モCC#15	モCC#16	モCC#17	モCC#18	モCC#19	モCC#20	モCC#21	モCC#22	モCC#23	モCC#24	モCC#25	モCC#26	モCC#27	モCC#28	モCC#29	モCC#30	モCC#31	モCC#32	モCC#33	モCC#34	モCC#35	モCC#36	モCC#37	モCC#38	モCC#39	モCC#40	モCC#41	モCC#42	モCC#43	モCC#44	モCC#45	モCC#46	モCC#47	モCC#48	モCC#49	モCC#50	モCC#51	モCC#52	モCC#53	モCC#54	モCC#55	モCC#56	モCC#57	モCC#58	モCC#59	モCC#60	モCC#61	モCC#62	モCC#63	モCC#64	モCC#65	モCC#66	モCC#67	モCC#68	モCC#69	モCC#70	モCC#71	モCC#72	モCC#73	モCC#74	モCC#75	モCC#76	モCC#77	モCC#78	モCC#79	モCC#80	モCC#81	モCC#82	モCC#83	モCC#84	モCC#85	モCC#86	モCC#87	モCC#88	モCC#89	モCC#90	モCC#91	モCC#92	モCC#93	モCC#94	モCC#95	モCC#96	モCC#97	モCC#98	モCC#99	モCC#100	モCC#101	モCC#102	モCC#103	モCC#104	モCC#105	モCC#106	モCC#107	モCC#108	モCC#109	モCC#110	モCC#111	モCC#112	モCC#113	モCC#114	モCC#115	モCC#116	モCC#117	モCC#118	モCC#119	モCC#120	モCC#121	モCC#122	モCC#123	モCC#124	モCC#125	モCC#126	モCC#127	モCC#128	モCC#129	モCC#130	モCC#131	モCC#132	モCC#133	モCC#134	モCC#135	モCC#136	モCC#137	モCC#138	モCC#139	モCC#140	モCC#141	モCC#142	モCC#143	モCC#144	モCC#145	モCC#146	モCC#147	モCC#148	モCC#149	モCC#150	モCC#151	モCC#152	モCC#153	モCC#154	モCC#155	モCC#156	モCC#157	モCC#158	モCC#159	モCC#160	モCC#161	モCC#162	モCC#163	モCC#164	モCC#165	モCC#166	モCC#167	モCC#168	モCC#169	モCC#170	モCC#171	モCC#172	モCC#173	モCC#174	モCC#175	モCC#176	モCC#177	モCC#178	モCC#179	モCC#180	モCC#181	モCC#182	モCC#183	モCC#184	モCC#185	モCC#186	モCC#187	モCC#188	モCC#189	モCC#190	モCC#191	モCC#192	モCC#193	モCC#194	モCC#195	モCC#196	モCC#197	モCC#198	モCC#199	モCC#200	モCC#201	モCC#202	モCC#203	モCC#204	モCC#205	モCC#206	モCC#207	モCC#208	モCC#209	モCC#210	モCC#211	モCC#212	モCC#213	モCC#214	モCC#215	モCC#216	モCC#217	モCC#218	モCC#219	モCC#220	モCC#221	モCC#222	モCC#223	モCC#224	モCC#225	モCC#226	モCC#227	モCC#228	モCC#229	モCC#230	モCC#231	モCC#232	モCC#233	モCC#234	モCC#235	モCC#236	モCC#237	モCC#238	モCC#239	モCC#240	モCC#241	モCC#242	モCC#243	モCC#244	モCC#245	モCC#246	モCC#247	モCC#248	モCC#249	モCC#250	モCC#251	モCC#252	モCC#253	モCC#254	モCC#255	モCC#256	モCC#257	モCC#258	モCC#259	モCC#260	モCC#261	モCC#262	モCC#263	モCC#264	モCC#265	モCC#266	モCC#267	モCC#268	モCC#269	モCC#270	モCC#271	モCC#272	モCC#273	モCC#274	モCC#275	モCC#276	モCC#277	モCC#278	モCC#279	モCC#280	モCC#281	モCC#282	モCC#283	モCC#284	モCC#285	モCC#286	モCC#287	モCC#288	モCC#289	モCC#290	モCC#291	モCC#292	モCC#293	モCC#294	モCC#295	モCC#296	モCC#297	モCC#298	モCC#299	モCC#300	モCC#301	モCC#302	モCC#303	モCC#304	モCC#305	モCC#306	モCC#307	モCC#308	モCC#309	モCC#310	モCC#311	モCC#312	モCC#313	モCC#314	モCC#315	モCC#316	モCC#317	モCC#318	モCC#319	モCC#320	モCC#321	モCC#322	モCC#323	モCC#324	モCC#325	モCC#326	モCC#327	モCC#328	モCC#329	モCC#330	モCC#331	モCC#332	モCC#333	モCC#334	モCC#335	モCC#336	モCC#337	モCC#338	モCC#339	モCC#340	モCC#341	モCC#342	モCC#343	モCC#344	モCC#345	モCC#346	モCC#347	モCC#348	モCC#349	モCC#350	モCC#351	モCC#352	モCC#353	モCC#354	モCC#355	モCC#356	モCC#357	モCC#358	モCC#359	モCC#360	モCC#361	モCC#362	モCC#363	モCC#364	モCC#365	モCC#366	モCC#367	モCC#368	モCC#369	モCC#370	モCC#371	モCC#372	モCC#373	モCC#374	モCC#375	モCC#376	モCC#377	モCC#378	モCC#379	モCC#380	モCC#381	モCC#382	モCC#383	モCC#384	モCC#385	モCC#386	モCC#387	モCC#388	モCC#389	モCC#390	モCC#391	モCC#392	モCC#393	モCC#394	モCC#395	モCC#396	モCC#397	モCC#398	モCC#399	モCC#400	モCC#401	モCC#402	モCC#403	モCC#404	モCC#405	モCC#406	モCC#407	モCC#408	モCC#409	モCC#410	モCC#411	モCC#412	モCC#413	モCC#414	モCC#415	モCC#416	モCC#417	モCC#418	モCC#419	モCC#420	モCC#421	モCC#422	モCC#423	モCC#424	モCC#425	モCC#426	モCC#427	モCC#428	モCC#429	モCC#430	モCC#431	モCC#432	モCC#433	モCC#434	モCC#435	モCC#436	モCC#437	モCC#438	モCC#439	モCC#440	モCC#441	モCC#442	モCC#443	モCC#444	モCC#445	モCC#446	モCC#447	モCC#448	モCC#449	モCC#450	モCC#451	モCC#452	モCC#453	モCC#454	モCC#455	モCC#456	モCC#457	モCC#458	モCC#459	モCC#460	モCC#461	モCC#462	モCC#463	モCC#464	モCC#465	モCC#466	モCC#467	モCC#468	モCC#469	モCC#470	モCC#471	モCC#472	モCC#473	モCC#474	モCC#475	モCC#476	モCC#477	モCC#478	モCC#479	モCC#480	モCC#481	モCC#482	モCC#483	モCC#484	モCC#485	モCC#486	モCC#487	モCC#488	モCC#489	モCC#490	モCC#491	モCC#492	モCC#493	モCC#494	モCC#495	モCC#496	モCC#497	モCC#498	モCC#499	モCC#500	モCC#501	モCC#502	モCC#503	モCC#504	モCC#505	モCC#506	モCC#507	モCC#508	モCC#509	モCC#510	モCC#511	モCC#512	モCC#513	モCC#514	モCC#515	モCC#516	モCC#517	モCC#518	モCC#519	モCC#520	モCC#521	モCC#522	モCC#523	モCC#524	モCC#525	モCC#526	モCC#527	モCC#528	モCC#529	モCC#530	モCC#531	モCC#532	モCC#533	モCC#534	モCC#535	モCC#536	モCC#537	モCC#538	モCC#539	モCC#540	モCC#541	モCC#542	モCC#543	モCC#544	モCC#545	モCC#546	モCC#547	モCC#548	モCC#549	モCC#550	モCC#551	モCC#552	モCC#553	モCC#554	モCC#555	モCC#556	モCC#557	モCC#558	モCC#559	モCC#560	モCC#561	モCC#562	モCC#563	モCC#564	モCC#565	モCC#566	モCC#567	モCC#568	モCC#569	モCC#570	モCC#571	モCC#572	モCC#573	モCC#574	モCC#575	モCC#576	モCC#577	モCC#578	モCC#579	モCC#580	モCC#581	モCC#582	モCC#583	モCC#584	モCC#585	モCC#586	モCC#587	モCC#588	モCC#589	モCC#590	モCC#591	モCC#592	モCC#593	モCC#594	モCC#595	モCC#596	モCC#597	モCC#598	モCC#599	モCC#600	モCC#601	モCC#602	モCC#603	モCC#604	モCC#605	モCC#606	モCC#607	モCC#608	モCC#609	モCC#610	モCC#611	モCC#612	モCC#613	モCC#614	モCC#615	モCC#616	モCC#617	モCC#618	モCC#619	モCC#620	モCC#621	モCC#622	モCC#623	モCC#624	モCC#625	モCC#626	モCC#627	モCC#628	モCC#629	モCC#630	モCC#631	モCC#632	モCC#633	モCC#634	モCC#635	モCC#636	モCC#637	モCC#638	モCC#639	モCC#640	モCC#641	モCC#642	モCC#643	モCC#644	モCC#645	モCC#646	モCC#647	モCC#648	モCC#649	モCC#650	モCC#651	モCC#652	モCC#653	モCC#654	モCC#655	モCC#656	モCC#657	モCC#658	モCC#659	モCC#660	モCC#661	モCC#662	モCC#663	モCC#664	モCC#665	モCC#666	モCC#667	モCC#668	モCC#669	モCC#670	モCC#671	モCC#672	モCC#673	モCC#674	モCC#675	モCC#676	モCC#677	モCC#678	モCC#679	モCC#680	モCC#681	モCC#682	モCC#683	モCC#684	モCC#685	モCC#686	モCC#687	モCC#688	モCC#689	モCC#690	モCC#691	モCC#692	モCC#693	モCC#694	モCC#695	モCC#696	モCC#697	モCC#698	モCC#699	モCC#700	モCC#701	モCC#702	モCC#703	モCC#704	モCC#705	モCC#706	モCC#707	モCC#708	モCC#709	モCC#710	モCC#711	モCC#712	モCC#713	モCC#714	モCC#715	モCC#716	モCC#717	モCC#718	モCC#719	モCC#720	モCC#721	モCC#722	モCC#723	モCC#724	モCC#725	モCC#726	モCC#727	モCC#728	モCC#729	モCC#730	モCC#731	モCC#732	モCC#733	モCC#734	モCC#735	モCC#736	モCC#737	モCC#738	モCC#739	モCC#740	モCC#741	モCC#742	モCC#743	モCC#744	モCC#745	モCC#746	モCC#747	モCC#748	モCC#749	モCC#750	モCC#751	モCC#752	モCC#753	モCC#754	モCC#755	モCC#756	モCC#757	モCC#758	モCC#759	モCC#760	モCC#761	モCC#762	モCC#763	モCC#764	モCC#765	モCC#766	モCC#767	モCC#768	モCC#769	モCC#770	モCC#771	モCC#772	モCC#773	モCC#774	モCC#775	モCC#776	モCC#777	モCC#778	モCC#779	モCC#780	モCC#781	モCC#782	モCC#783	モCC#784	モCC#785	モCC#786	モCC#787	モCC#788	モCC#789	モCC#790	モCC#791	モCC#792	モCC#793	モCC#794	モCC#795	モCC#796	モCC#797	モCC#798	モCC#799	モCC#800	モCC#801	モCC#802	モCC#803	モCC#804	モCC#805	モCC#806	モCC#807	モCC#808	モCC#809	モCC#810	モCC#811	モCC#812	モCC#813	モCC#814	モCC#815	モCC#816	モCC#817	モCC#818	モCC#819	モCC#820	モCC#821	モCC#822	モCC#823	モCC#824	モCC#825	モCC#826	モCC#827	モCC#828	モCC#829	モCC#830	モCC#831	モCC#832	モCC#833	モCC#834	モCC#835	モCC#836	モCC#837	モCC#838	モCC#839	モCC#840	モCC#841	モCC#842	モCC#843	モCC#844	モCC#845	モCC#846	モCC#847	モCC#848	モCC#849	モCC#850	モCC#851	モCC#852	モCC#853	モCC#854	モCC#855	モCC#856	モCC#857	モCC#858	モCC#859	モCC#860	モCC#861	モCC#862	モCC#863	モCC#864	モCC#865	モCC#866	モCC#867	モCC#868	モCC#869	モCC#870	モCC#871	モCC#872	モCC#873	モCC#874	モCC#875	モCC#876	モCC#877	モCC#878	モCC#879	モCC#880	モCC#881	モCC#882	モCC#883	モCC#884	モCC#885	モCC#886	モCC#887	モCC#888	モCC#889	モCC#890	モCC#891	モCC#892	モCC#893	モCC#894	モCC#895	モCC#896	モCC#897	モCC#898	モCC#899	モCC#900	モCC#901	モCC#902	モCC#903	モCC#904	モCC#905	モCC#906	モCC#907	モCC#908	モCC#909	モCC#910	モCC#911	モCC#912	モCC#913	モCC#914	モCC#915	モCC#916	モCC#917	モCC#918	モCC#919	モCC#920	モCC#921	モCC#922	モCC#923	モCC#924	モCC#925	モCC#926	モCC#927	モCC#928	モCC#929	モCC#930	モCC#931	モCC#932	モCC#933	モCC#934	モCC#935	モCC#936	モCC#937	モCC#938	モCC#939	モCC#940	モCC#941	モCC#942	モCC#943	モCC#944	モCC#945	モCC#946	モCC#947	モCC#948	モCC#949	モCC#950	モCC#951	モCC#952	モCC#953	モCC#954	モCC#955	モCC#956	モCC#957	モCC#958	モCC#959	モCC#960	モCC#961	モCC#962	モCC#963	モCC#964	モCC#965	モCC#966	モCC#967	モCC#968	モCC#969	モCC#970	モCC#971	モCC#972	モCC#973	モCC#974	モCC#975	モCC#976	モCC#977	モCC#978	モCC#979	モCC#980	モCC#981	モCC#982	モCC#983	モCC#984	モCC#985	モCC#986	モCC#987	モCC#988	モCC#989	モCC#990	モCC#991	モCC#992	モCC#993	モCC#994	モCC#995	モCC#996	モCC#997	モCC#998	モCC#999	モCC#1000	モCC#1001	モCC#1002	モCC#1003	モCC#1004	モCC#1005	モCC#1006	モCC#1007	モCC#1008	モCC#1009	モCC#1010	モCC#1011	モCC#1012	モCC#1013	モCC#1014	モCC#1015	モCC#1016	モCC#1017	モCC#1018	モCC#1019	モCC#1020	モCC#1021	モCC#1022	モCC#1023	モCC#1024	モCC#1025	モCC#1026	モCC#1027	モCC#1028	モCC#1029	モCC#1030	モCC#1031	モCC#1032	モCC#1033	モCC#1034	モCC#1035	モCC#1036	モCC#1037	モCC#1038	モCC#1039	モCC#1040	モCC#1041	モCC#1042	モCC#1043	モCC#1044	モCC#1045	モCC#1046	モCC#1047	モCC#1048	モCC#1049	モCC#1050	モCC#1051	モCC#1052	モCC#1053	モCC#1054	モCC#1055	モCC#1056	モCC#1057	モCC#1058	モCC#1059	モCC#1060	モCC#1061	モCC#1062	モCC#1063	モCC#1064	モCC#1065	モCC#1066	モCC#1067	モCC#1068	モCC#1069	モCC#1070	モCC#1071	モCC#1072	モCC#1073	モCC#1074	モCC#1075	モCC#1076	モCC#1077	モCC#1078	モCC#1079	モCC#1080	モCC#1081	モCC#1082	モCC#1083	モCC#1084	モCC#1085	モCC#1086	モCC#1087	モCC#1088	モCC#1089	モCC#1090	モCC#1091	モCC#1092	モCC#1093	モCC#1094	モCC#1095	モCC#1096	モCC#1097	モCC#1098	モCC#1099	モCC#1100	モCC#1101	モCC#1102	モCC#1103	モCC#1104	モCC#1105	モCC#1106	モCC#1107	モCC#1108	モCC#1109	モCC#1110	モCC#1111	モCC#1112	モCC#1113	モCC#1114	モCC#1115	モCC#1116	モCC#1117	モCC#1118	モCC#1119	モCC#1120
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(3) Save as standard MIDI file (*.mid) and move it into the patch folder.

* It is recommended to make as SMF format 1.

* Don't put system exclusive data in the MIDI data.

3-2. Create user defined rhythm pattern data

(1) By using track list window, put the first track (conductor track) and some tracks for rhythm pattern.

名前	色	入力入力ポート	出力出力ポート	出力表示名	CC#	CC#	プログラムナンバー
1	blue	1-なし	n/a	1-MIDI マップ	n/a	通常	
2	yellow	1-on	1-MIDI マップ	10	ドラム		
3	green	1-なし	2-on	1-MIDI マップ	10	ドラム	
4	yellow	1-なし	3-on	1-MIDI マップ	10	ドラム	
5							

* In the standard MIDI file format 1, the first track is conductor track, which can include only Track name, Tempo, Time signature, Key signature, and Marker event. MIDI channel event like note on or note off must be put in the second or following track. Other unnecessary track must be removed.

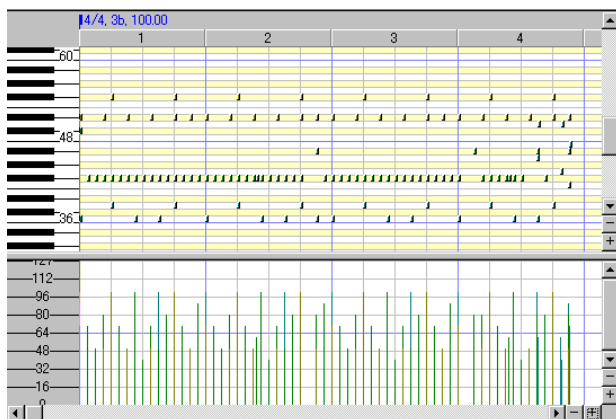
* Tempo event is ignored in AutoDrum.

* If need, you can put multiple tracks for rhythm pattern. But each track's output channel must be set to 10.

* Track name is free.

* Each track's set up event like control change, program change or pitch bend must be removed. Default set up events must be removed.

(2) By using piano roll window, insert note event in the second or following track.



* In AutoDrum's rhythm pattern, don't space the first measure (bar). Put note event from 1:1:000.

* The average note velocity must be about 64.

* The standard note duration must be about semiquaver or demisemiquaver in the drum track except long sound like snare roll.

* Each event's output channel must be set to 10.

(3) By using event list window, remove unnecessary event like control change or program change.

トラック	時分秒ミ秒	小節拍テック	イベントの種類	チャンネル	値1	値2
237	2-Drums	00:00:09.225	00004:04:045	ノートオン	10	43-Low Tom
238	2-Drums	00:00:09.250	00004:04:050	ノートオン	10	50-High Tom
239	2-Drums	00:00:09.300	00004:04:060	ノートオン	10	41-Low Tom
240	3-HiHat	00:00:09.300	00004:04:060	ノートオン	10	46-Open Hi
241	4-Perc	00:00:09.300	00004:04:060	ノートオン	10	51-Ride Cym
242	2-Drums	00:00:09.325	00004:04:065	ノートオン	10	47-Mid Tom
243	2-Drums	00:00:09.375	00004:04:075	ノートオン	10	41-Low Tom
244	3-HiHat	00:00:09.375	00004:04:075	ノートオン	10	46-Open Hi
245	4-Perc	00:00:09.375	00004:04:075	ノートオン	10	51-Ride Cym
246	2-Drums	00:00:09.400	00004:04:080	ノートオン	10	47-Mid Tom
247	2-Drums	00:00:09.600	00005:01:000	テキスト	n/a	End
248	2-Drums	00:00:09.600	00005:01:000	エンドオブトラック	n/a	
249	3-HiHat	00:00:09.600	00005:01:000	テキスト	n/a	End
250	3-HiHat	00:00:09.600	00005:01:000	エンドオブトラック	n/a	
251	4-Perc	00:00:09.600	00005:01:000	テキスト	n/a	End
252	4-Perc	00:00:09.600	00005:01:000	エンドオブトラック	n/a	
253						

* In the second or following track for rhythm pattern, don't put non note event.

* Each note event's output channel must be set to 10.

(4) By using event list window, adjust each track's End of Track event's time.

(5) Save as a standard MIDI file (*.mid) and move it into pattern folder.

* It is recommended to make as SMF format 1.

* Don't put system exclusive data in the MIDI data.

4. Trouble Shooting

4-1. Error Message

MIDI In Device open failed.

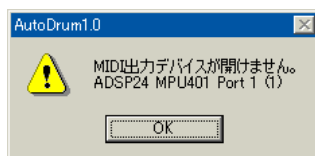


AutoDrum can't open specified MIDI in device. If this error caused, "(None)" is selected automatically. Until AutoDrum can open some MIDI In Device, "Slave", "Sync Start", "Sync Stop" can't be used. Check following list.

Reason	Solution
* Other application is using specified MIDI in device. *1	* End other application using specified MIDI In device.
* An application exited without closing specified MIDI in device.	* Reboot Windows.
* MIDI in device driver is broken.	* Uninstall the MIDI in device driver and then install it again.
* Nothing is connected to MIDI in terminal.	* Check cable connection.
* Your Windows doesn't have the device.	* Select the other device.

*1 : Generally, one MIDI in device can be opened from only one application, except multiple client MIDI interface.

MIDI Out Device open failed.



AutoDrum can't open specified MIDI out device. If this error caused, "(None)" is selected automatically. Until AutoDrum can open some MIDI out device, no sounds is played. Check following list.

Reason	Solution
* Other application is using specified MIDI out device.	* End other application using specified MIDI out device.
* An application exited without closing specified MIDI out device.	* Reboot Windows.
* MIDI out device driver is broken.	* Uninstall the MIDI out device driver and then install it again.
* Nothing is connected to MIDI out terminal.	* Check cable connection.
* Your Windows doesn't have the device.	* Select the other device.

*1 : Generally, one MIDI Out Device can be opened from only one application, except multiple client MIDI interface.

Insufficient memory, Insufficient resource.

Reason	Solution
* Too fast or slow tempo is specified.	* Change the tempo value in the MIDI data.
* Abnormal time base or time resolution is specified.	* Set time mode TPQN base and time resolution 120 or 480 in the MIDI data.
* Insufficient memory.	* End other application.
* Insufficient resource.	* Reboot Windows.

MIDI data open failed



AutoDrum can't open specified MIDI data. Check following list.

Reason	Solution
* Abnormal MIDI data.	* If it is saved in other sequencer, once open by the sequencer, fix bug, and then save again. Try saving in various file type, or SMF format 0 / 1, or the other time mode and time resolution.
* The disk storing the MIDI data is broken.	* Scan disk and repair disk. * Copy the file to other device.
* Specified MIDI data is used by other application.	* Close other applications..
* The MIDI data is removed or moved or renamed. *2	* Restart AutoDrum and refresh the list.
* Insufficient memory.	* End other application.
* Insufficient resource.	* Reboot Windows.

*1 : For detail of user defined MIDI data, see also 3. Create user defined data.

*2 : Patch MIDI data must be found in the patch folder. Pattern MIDI data must be found in the pattern folder.

DLL File is not found.

AutoDrum.exe – System Error

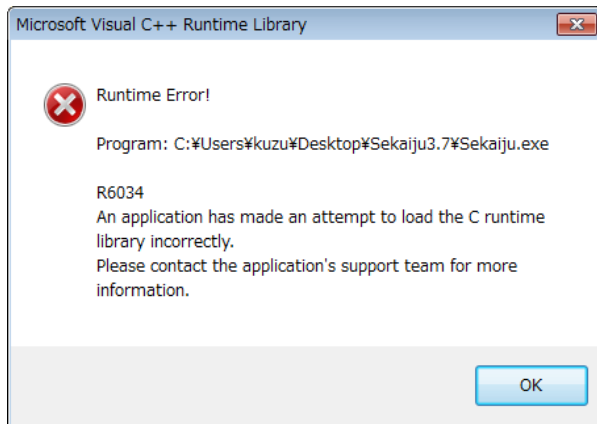
*.DLL File is not found.

AutoDrum.exe Wrong Side by Side








Microsoft VisualC++ Runtime Library Runtime Error!

AutoDrum

*.DLL Load failed!!



This message may be shown when executing AutoDrum. To execute AutoDrum, Following DLL files are required.

 AutoDrumJpn.dll	AutoDrum Japanese language resource DLL.
 AutoDrumEnu.dll	AutoDrum English language resource DLL.
 AutoDrumChs.dll	AutoDrum Chinese language resource DLL.
 MIDIIO.dll	MIDI message input output library.
 MIDIClock.dll	MIDI clock measuring library.
 MIDIData.dll	MIDI data creating editing library.
 MIDIStatus.dll	MIDI module status keeping library.

These DLLs are shipped with AutoDrum, and they must exist in the same folder as AutoDrum.exe folder. Please check following list.

Reason	Solution
* You forget to extract AutoDrum4.3.zip.	* Extract AutoDrum4.3.zip and then execute.
* DLL file is broken.	* Download AutoDrum again.
* DLL's version is wrong.	
* Manifest file is broken.	* Download AutoDrum again.
* Manifest's version is wrong.	

4-2. If no sound is played

If no sound is played, check following list.

Reason	Solution
Amplifier's volume is 0 or amplifier has some trouble.	Set volume up or use a headphone.
Loudspeaker's cable has some trouble.	Check cable connection. Change cable.
MIDI cable or USB cable has some trouble.	Check cable connection. Change cable.
MIDI module's master volume is 0.	Send GM system off or GM Reset or GM2 reset or GS reset or XG reset.
MIDI module's channel volume level or expression level is 0.	Send GM system off or GM Reset or GM2 reset or GS reset or XG reset.
In case using software module, volume control is wrong.	Uncheck mute button and set volume higher in windows volume control.
"(None)" is selected for MIDI out device.	In the MIDI device dialog, Select some MIDI out device.
Slave mode is selected but no sync message is detected from MIDI input port, so clock does not advance.	In the MIDI sync dialog, select MIDI In Sync mode ("Receive MIDI Clock" or "Receive SMPTE/MTC"), and send specified sync message to the input port.
There is no Note on event in the MIDI data, or too low note on velocity.	Write Note on event to the MIDI data and specify higher note on velocity.
You specified unavailable tone number.	Correct CC#0, CC#32, and program change value which is available in your MIDI module.
Lower volume level is specified by CC#7.	Specify higher volume level by CC#7.
Lower expression level is specified by CC#11.	Specify higher expression level by CC#11.
Patch MIDI data or Pattern MIDI data is wrong. (Wrong CC#0, CC#32, program change in patch data, or wrong note in pattern data).	Check patch data or pattern data's control change, program change, note event and so on. Each event's channel must be 10.
AutoDrum has crashed or caused some internal error.	Exit AutoDrum, and execute Sekaiju again.
Windows has crashed or caused some internal error.	Exit Windows, and reboot Windows.
MIDI module has crashed or caused some internal error.	Turn off the MIDI module, and then turn on MIDI module again.

5. MIDI Implementation

Model: AutoDrum4.3

Date: 2016/11/16

5-1. Receive data

Channel Voice Message

These message are recorded specified track whose input channel is the same as at real time recording.

* Note Off

Status	Second byte	Third byte
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI Channel number : 0H-FH (ch.1~ch16)

kk = Note number : 00H-7FH (0~127)

vv = Note off velocity 01H-7FH (0 ~ 127)

* If sync stop is checked on, if all note is off and hold pedal is not downed, AutoDrum stop playing automatically.

* Note On

Status	Second byte	Third byte
9nH	k kH	vvH

n = MIDI Channel number : 0H-FH (ch.1~ch16)

kk = Note number : 00H-7FH (0~127)

vv = Note on velocity : 01H-7FH (1~127)

* If sync start is checked on, if a note is on or hold pedal is downed, AutoDrum start playing automatically.

* Control Change Hold Pedal

Status	Second byte	Third byte
BnH	40H	vvH

n = MIDI Channel number : 0H-FH (ch.1~ch16)

vv = Control value : 00H-7FH (0~127)

* If sync start is checked on, if hold pedal is downed, AutoDrum start playing automatically.

* If sync stop is checked on, if hold pedal is upped and any key is not pressed, AutoDrum stop playing automatically.

System Real Time Message

* MIDI Timing Clock

Status
F8H

This message is sent 24 times per quarter note. In slave mode, if "Receive MIDI timing clock" is selected, Autodrum slaves to this message.

* Start

Status
FAH

Whenever receiving this message, AutoDrum start playing from the beginning of the MIDI data. If while playing, this message is ignored.

* Continue

Status
FBH

Whenever receiving this message, AutoDrum start playing from current playing position. If while playing, this message is ignored.

* Stop

Status
FCH

Whenever receiving this message, AutoDrum stop playing. If while not playing, this message is ignored.

5-2. Send data

Channel Voice Message

These message are recorded specified track whose input channel is the same as at real time recording.

* Note Off

Status	Second byte	Third byte
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI Channel number : 0H-FH (ch.1~ch16)

kk = Note number : 00H-7FH (0~127)

vv = Note off velocity 01H-7FH (0 ~ 127)

* Note On

Status	Second byte	Third byte
9nH	k kH	vvH

n = MIDI Channel number : 0H-FH (ch.1~ch16)

kk = Note number : 00H-7FH (0~127)

vv = Note on velocity : 01H-7FH (1~127)

* Key After Touch

Status	Second byte	Third byte
AnH	kkH	vvH

n = MIDI Channel number : 0H-FH (ch.1~ch16)

kk = Note number : 00H-7FH (0~127)

vv = Key after touch : 00H-7FH (0~127)

* Control Change

Status	Second byte	Third byte
BnH	ccH	vvH

n = MIDI Channel number : 0H-FH (ch.1~ch16)

cc = Control change number : 00H-7FH (0~127)

vv = Control value : 00H-7FH (0~127)

* Program Change

Status	Second byte
CnH	ppH

n = MIDI Channel number : 0H-FH (ch.1~ch16)

pp = Program number : 00H-7FH (0~127)

* Channel After Touch

Status	Second byte
DnH	ppH

n = MIDI Channel number : 0H-FH (ch.1~ch16)

vv = Channel after touch : 00H-7FH (0~127)

* Pitch Bend Change

Status	Second byte	Third byte
EnH	llH	mmH

n = MIDI Channel number : 0H-FH (ch.1 ~ ch16)
 mm, ll = Pitch bend value : 00 00H - 40 00H - 7F 7FH (-8192 ~ 0 ~ +8191)

System Exclusive Message

Status Second byte Last byte
 F0H vvH F7H
 vv = arbitrary value : 00H-7FH (0~127)

System Common Message

These message is not recorded to the MIDI data.

* MIDI Time Code Quarter Frame

Status Second byte
 F1H tvH
 t = Frame type : 0H-7H (0~7)
 v = 4 bit value : 0H-FH (0~127)

t	v
0	Frame number (00~29) lower 4 bit
1	Frame number (00~29) higher 4 bit
2	Second (00~59) lower 4 bit
3	Second (00~59) higher 4 bit
4	Minute (00~59) lower 4 bit
5	Minute (00~59) higher 4 bit
6	Hour (00~23) lower 4 bit
7	Constant 0 1bit, Frame rate (00~03) 2bit, Hour (00~23) higher 1bit

MIDI Time Code Quarter Frame is sent to notify current playing position at every frame while playing if "Send SMPTE/MTC" is selected.

* Song Position Selector

Status Second byte Third byte
 F2H llH mmH
 mm, ll = Position value : 00 00H - 40 00H - 7F 7FH (0~16383)

Song Position Selector let move current playing position as semiquaver note = 1 unit. This message is sent when current playing position is changed if "Send MIDI Timing Clock" is selected

System Real Time Message

* MIDI Timing Clock

Status
 F8H

This message is sent 24 times per quarter note. This message is sent while playing if "Send MIDI Timing Clock" is selected.

* Start

Status
 FAH

This message let start playing from beginning of the MIDI data. This message is sent when you start playing from the beginning of the MIDI data if "Send MIDI Timing Clock" or "Send SMPTE/MTC" is selected.

* Continue

Status
 FBH

This message let start playing from current playing position. This message is sent when you start playing from the middle of the MIDI data if "Send MIDI Timing Clock" or "Send SMPTE/MTC" is selected.

* Stop

Status
 FCH

This message let stop playing. Current playing position is not modified. This message is sent when you stop playing if "Send MIDI Timing Clock" or "Send SMPTE/MTC" is selected.

5-3. MIDI Implementation Chart

Function		Send	Receive	Notice
Note	Key number	O	O	
	velocity	O	X	
Key after touch		O	X	
Channel after touch		O	X	
Control change	64	O	O	Hold Pedal
	others	O	X	
Program change		O	X	
System exclusive		O	O	
System common	MIDI Time code quarter frame (0xF1)	O	O	*2
	Song position (0xF2)	O	O	*1
	Song select(0xF3)	X	X	
	Tune request (0xF6)	X	X	
System real time	MIDI Timing clock (0xF8)	O	O	*1
	Start (0xFA)	O	O	*3
	Continue (0xFB)	O	O	*3
	Stop (0xFC)	O	O	*3
	Active sensing (0xFE)	X	X	
	System reset (0xFF)	X	X	

*1 : Send is available if "Send MIDI Timing Clock" is selected.

*1 : Receive is available if "Receive MIDI Timing Clock" is selected.

*2 : Send is available if "Send SMPTE/MTC" is selected.

*2 : Receive is available if "Receive SMPTE/MTC" is selected.

*3 : Send is available if "Send MIDI Timing Clock" or "Send SMPTE/MTC" is selected.

6. Specification

AutoDrum4.3 : automatic drum performance software.

6-1. Specification of software.







Programming language and Compiler	C/C++ language / Win32API / MFC / Microsoft Visual C++ 2008 Standard Edition SP1
Threads	Multiple thread (Main thread, patch playing thread, pattern playing thread, recording thread.)
MIDI Device I/O capacity	Input : 1 port (WMME) Output : 1 port (WMME) Thru : on / off
File I/O capacity	Standard MIDI file (*.mid) load
Clock method	Master : Internal clock (Windows multimedia timer) Slave ; MIDI Timing Clock or SMPTE/MTC (MIDI time code quarter frame)
Tempo	16 ~ 255bpm、1bpm step

6-2. Required Environment

OS	WindowsXP/Vista/7/8.1/10
CPU	Core2Duo or higher
Memory	2GB
Hard disk	Empty of 10MB or larger
Monitor	640 x 480 pixel or larger and 16 colors or more monitor
MIDI module or Synthesizer	External MIDI module or Synthesizer is required. GM / GM2 / GS / XG module is better. Internal module (like "Microsoft GS Wavetable Synth") or software module (like VSC-88) is available. VSTi is NOT available.
MIDI controller or Keyboard	Optional. Those with MMC/MTC send function is better.

6-3. Required Dynamic Link Library (*.dll)

Made by Open MIDI Project (shipped with AutoDrum)

 AutoDrumJpn.dll	AutoDrum English language resource DLL.
 AutoDrumEnu.dll	AutoDrum Japanese language resource DLL.
 MIDIIO.dll	A library for MIDI input or output.
 MIDIClock.dll	A library for measuring timing.
 MIDIData.dll	A library for creating or editing MIDI data.
 MIDIStatus.dll	A library for keeping MIDI module's status in real time.