

0. History:

---Version1.1 **Add WAV transfer tool**

---Version1.2 **Add the support the GM musical instrument timbre table**

1. Introduction

This package(VT1682_Midi.rar) contains three files, they are Convert, WAV_12K and Driver. The Convert file is the MIDI transformation tool. It can transform the MIDI file(.MID) to the VT1682 Sound Driver broadcast form(.CH4) and produces the corresponding timbre storehouse. The WAV_12K is the timbre storehouse which VT1682 provides transforms the files use fro MIDI. The Driver file is the ASM demo source code of VT1682 MIDI broadcast.

Demo Code: Please run \driver\play.bat

2. MIDI transfer tool

MIDIPACK \$1 \$2 \$3 \$4 4

Input file : \$1, \$2

Output file : \$3, \$4 and (MIDI file name).ch4

\$1 : is the absolute path which timbre storehouse exits.

\$2 : is the MIDI file which all must transform tabulates

\$3 : is" After transforms the timbre comparative table which the files output, This file must be able to use in Playmidi.asm

\$4 : is "After transforms the timbre storehouse which the files output.

(MIDI file name).ch4 : CHANNEL is the transformation MIDI VOICE channels number, this value all fills in "4".

Example : midipack c:\vrt_midi\ins\ c:\vrt_midi\bat\midi.lst insttab merge.out 4

Will in the running directory produce insttab and merge.out and (MIDI file name).ch4

insttab will be included to PlayMidi.asm

merge.out and (MIDI file name).ch4 will be used in combin.ini

3. WAV transfer tool

WAVPACK \$1 \$2 \$3 \$4

Input file : \$1, \$2

Output file : \$3, \$4

\$1 : is the absolute path which WAV file exits.

\$2 : is the WAV file which all must transform tabulates

\$3 : is" After transforms the timbre comparative table which the files output, This file must be able to use in Playmidi.asm

\$4 : is "After transforms the timbre storehouse which the files output

Example : WAVPACK c:\vrt_midi\wav\ c:\vrt_midi\wav\wav.lst wavtab merge.out

Will in the running directory produce wavtab and merge.out

wavtab will be included to PlayMidi.asm

merge.out will be used in combin.ini

4. Combin.ini file introduction

r 0,scpu.tsk -----→ Sound driver from scpu.asm

r 78000,01.ch4 -----→ MIDI Play Table,
The (PlayTable) in the PlayMidi.asm will point to here.

r 7b000,PlayMidi.tsk -----→ main program from PlayMidi.asm

r 80000,..\\pcm\\midi.pcm -----→ SFX data,
The data of the SfxTable1 in the PlayMidi.asm will point to here.

Example :

SfxTable_BEG: EQU \$0010

DW \$8000,\$0000+SfxTable_BEG

It means that the SFX corresponding to \$80000

r 100000,merge.out -----→ The timbre storehouse which will be used
The data of InstrTab in the PlayMidi.asm will point to here.

Example :

InstrTable_BEG: EQU \$0020

DW \$8000,\$0000+InstrTable_BEG

It means that the timbre corresponding to \$10000

DW \$9400,\$0000+InstrTable_BEG

It means that the timbre corresponding to \$11400

w 0,200000,rom.bin -----→ According to the output in the above to combine BIN file.

5. The support the GM musical instrument timbre table

Note : The blue color partial expressions has corresponding the timbre storehouse, The

blackcolor partial expressions none, use the parenthesis timbre replace

As timbre 007 Clavinet for an example, In VT1682 timbre storehouse, it is used 006

Harpsichord replace

Catalog	Timbre	Note
Piano	000 Acoustic Grand Piano	Platform Piano
	001 Bright Acoustic Piano	Bright sound Piano
	002 Electric Grand Piano	Platform electric Piano
	003 Honky-tonk Piano	Dingdong Qin
	004 Rhodes Piano	Electric Piano 1

	005 Chorused Piano	Electric Piano 2
	006 Harpsichord	Big Key Qin
	007 Clavinet (006 Harpsichord)	Ancient Piano
High sound percussion instruments	008 Celesta (009 Glockenspiel)	Celesta
	009 Glockenspiel	Glockenspiel
	010 Music box	Music box
	011 Vibraphone	Vibraphone Celesta
	012 Marimba	Stand Xylophone
	013 Xylophone	Soft sound Xylophone
	014 Tubular Bells	Tubular Bells
	015 Dulcimer (014 Tubular Bells)	Dulcimer
Organ	016 Hammond Organ	Hammond Organ
	017 Percussive Organ (016 Hammond Organ)	Percussive Organ
	018 Rock Organ (016 Hammond Organ)	Rock Organ
	019 Church Organ (016 Hammond Organ)	Church Organ
	020 Reed Organ (016 Hammond Organ)	Reed Organ
	021 Accordion	Accordion
	022 Harmonica	Harmonica
	023 Tango Accordion (016 Hammond Organ)	Tango Accordion
Guitar	024 Acoustic Guitar(nylon)	Acoustic Guitar (nylon)
	025 Acoustic Guitar(steel)	Acoustic Guitar(steel)
	026 Electric Guitar(jazz)	Jazz Electric Guitar
	027 Electric Guitar(clean) (026 Electric Guitar(jazz))	Electric Guitar
	028 Electric Guitar(muted) (026 Electric Guitar(jazz))	Muted Electric Guitar
	029 Overdriven Guitar (026 Electric Guitar(jazz))	Overdriven Electric Guitar
	030 Distortion Guitar	Distortion Electric Guitar
	031 Guitar Harmonics (030 Distortion Guitar)	Harmonics Guitar
Bass	032 Acoustic Bass	Acoustic Bass
	033 Electric Bass(finger) (032 Acoustic Bass)	Finger Electric Bass

	034 Electric Bass(pick) (032 Acoustic Bass)	Pick Electric Bass
	035 Fretless Bass	Fretless Bass
	036 Slap Bass1 (035 Fretless Bass)	Slap Bass 1
	037 Slap Bass2 (035 Fretless Bass)	Slap Bass 2
	038 Synth Bass1	Synthesis Bass1
	039 Synth Bass2	Synthesis Bass2
Strings	040 Violin	Violin
	041 Viola (040 Violin)	Viola
	042 Cello	Cello
	043 Contrabass	Contrabass
	044 Tremelo Strings (045 Pizzicato Strings)	Tremelo Strings
	045 Pizzicato Strings	Pizzicato Strings
	046 Orchestral Harp	Orchestral Harp
	047 Timpani	Timpani
Ensemble	048 String Ensemble1	String Ensemble 1
	049 String Ensemble2 (050 Synth Strings1)	String Ensemble 2
	050 Synth Strings1	Synthesis Strings 1
	051 Synth Strings2 (050 Synth Strings1)	Synthesis Strings 2
	052 Choir Aahs	Choir (Aahs)
	053 Voice Oohs (052 Choir Aahs)	Voice (Oohs)
	054 Synth Voice (052 Choir Aahs)	Synthesis Voice
	055 Orchestra Hit	Orchestra Hit
Brass-wind instruments	056 Trumpet	Trumpet
	057 Trombone (056 Trumpet)	Trombone
	058 Tuba	Tuba
	059 Muted Trumpet (058 Tuba)	Muted Trumpet
	060 French Horn	French Horn
	061 Brass Section (060 French Horn)	Brass Section
	062 Synth Brass1	Synthesis Brass 1
	063 Synth Brass2 (062 Synth Brass1)	Synthesis Brass 2
Reed instruments	064 Soprano Sax (066 Tenor Sax)	Soprano Sax

	065 Alto Sax (066 Tenor Sax)	Alto Sax
	066 Tenor Sax	Tenor Sax
	067 Baritone Sax (066 Tenor Sax)	Baritone Sax
	068 Oboe	Oboe
	069 English Horn (068 Oboe)	English Horn
	070 Bassoon (068 Oboe)	Bassoon (bass tube)
	071 Clarinet	Clarinet
Wood-wind instruments	072 Piccolo (073 Flute)	Piccolo
	073 Flute	Flute
	074 Recorder	Recorder
	075 Pan Flute (074 Recorder)	Pan Flute
	076 Bottle Blow (074 Recorder)	Bottle Blow
	077 Shakuhachi (074 Recorder)	Shakuhachi
	078 Whistle (074 Recorder)	Whistle
	079 Ocarina (074 Recorder)	Ocarina
Synthesis timbre 1 (Lead)	080 Lead 1(square)	Lead 1 (Square)
	081 Lead 2(sawtooth)	Lead 2 (sawtooth)
	082 Lead 3(calliope lead) (081 Lead 2(sawtooth))	Lead 3 (calliope lead)
	083 Lead 4(chiff lead) (081 Lead 2(sawtooth))	Lead 4 (chiff lead)
	084 Lead 5(charang) (081 Lead 2(sawtooth))	Lead 5 (charang)
	085 Lead 6(voice) (081 Lead 2(sawtooth))	Lead 6 (voice)
	086 Lead 7(fifths) (081 Lead 2(sawtooth))	Lead 7 (fifths)
	087 Lead 8(bass+lead) (081 Lead 2(sawtooth))	Lead 8 (bass+lead)
Synthesis timbre 2 (Pad)	088 Pad 1(new age) (089 Pad 2(warm))	Pad 1 (new age)
	089 Pad 2(warm)	Pad 2 (warm)
	090 Pad 3(polysynth) (089 Pad 2(warm))	Pad 3 (polysynthesis)
	091 Pad 4(choir) (089 Pad 2(warm))	Pad 4 (choir)
	092 Pad 5(bowed) (089 Pad 2(warm))	Pad 5 (bowed)
	093 Pad 6(metallic) (089 Pad 2(warm))	Pad 6 (metallic)
	094 Pad 7(halo) (089 Pad 2(warm))	Pad 7 (halo)
	095 Pad 8(sweep) (089 Pad 2(warm))	Pad 8 (sweep)

Synthesis Sound effect	096 FX 1(rain) (098 FX 3(crystal))	Sound effect1 (rain)
	097 FX 2(soundtrack) (098 FX 3(crystal))	Sound effect2 (movie)
	098 FX 3(crystal)	Sound effect3 (crystal)
	099 FX 4(atmosphere) (098 FX 3(crystal))	Sound effect4 (atmosphere)
	100 FX 5(brightness) (098 FX 3(crystal))	Sound effect5 (brightness)
	101 FX 6(goblins) (098 FX 3(crystal))	Sound effect6 (goblins)
	102 FX 7(echoes) (098 FX 3(crystal))	Sound effect7 (echo)
	103 FX 8(sci-fi) (098 FX 3(crystal))	Sound effect8 (Synthesis science fiction)
Nation instruments	104 Sitar (105 Banjo)	Sitar
	105 Banjo	Five line qin (Banjo)
	106 Shamisen	Shamisen
	107 Koto	Koto
	108 Kalimba	Kalimba
	109 Bagpipe (108 Kalimba)	Bagpipe
	110 Fiddle (108 Kalimba)	Fiddle
	111 Shanai (108 Kalimba)	Shanai
Percussion instruments	112 Tinkle Bell	Dingdong Bell
	113 Agogo	Agogo
	114 Steel Drums	Steel Drum
	115 Woodblock	Woodblock
	116 Taiko Drums	Taiko Drums
	117 Melodic Tom	Melodic Tom
	118 Synth Drum	Synthesis Drum
	119 Reverse Cymbal (118 Synth Drum)	Cymbal (Reverse)
Special sound effect	120 Guitar Fret Noise (121 Breath Noise)	Fret Noise
	121 Breath Noise	Breath sound
	122 Seashore (121 Breath Noise)	Seashore sound
	123 Bird Tweet (121 Breath Noise)	Bird Tweet

	124 Telephone Ring (121 Breath Noise)	Telephone Ring
	125 Helicopter (121 Breath Noise)	Helicopter
	126 Applause (121 Breath Noise)	Applause
	127 Gunshot (121 Breath Noise)	Gunshort