

# **HV TOOL**

# **User's Manual**

**Ver1.6.0**

**2005/08/04**

**YAMAHA Corporation**

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# Introduction

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HV TOOL is the application software for verifying the HV playback sounds.

This application enables editing of HV-Scripts, verification of pronunciations, and editing of HV voice parameters.

## Recommended Operating Environment

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The recommended operating environment of this application is as follows.

OS	Microsoft® Windows® XP Microsoft® Windows® 2000
CPU/Clock	Pentium®, Celeron™, or compatible processor / 800MHz or over
Memory	64MB or over
Necessary hard disk space	10MB or over

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## Revision History

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Ver.	Date	Description
1.4.1	2004/11/15	Newly released.
1.5.0	2005/1/31	2.2 Font and Language Dialog of HV-Script was added to System menu. 2.2.1 Description of Font Dialog and Language Select Dialog were added. 2.2.2 New subsection for the Language Select Dialog was added with the change of the dialog display. 3.1 Word Library Dialog was added. 3.2 Word Assist Dialog (only Generic) was added.
1.5.1	2005/3/18	2.5 Function to save HV-Script Global (HV#G) data as SMAF file (*.mmf) was added.
1.6.0	2005/8/4	2.2.2 Dialog image has replaced.

# 1 Startup of the Application

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Double-click "*HVTool\_\*.exe*."



Fig. 1-1 HVTool\_\*.exe

## 2 Dialog

### 2.1 Main Dialog

When HV tool is started, a main dialog will be opened.

Selection and execution of various functions of HV tool can be carried out by the operation on the main dialog.

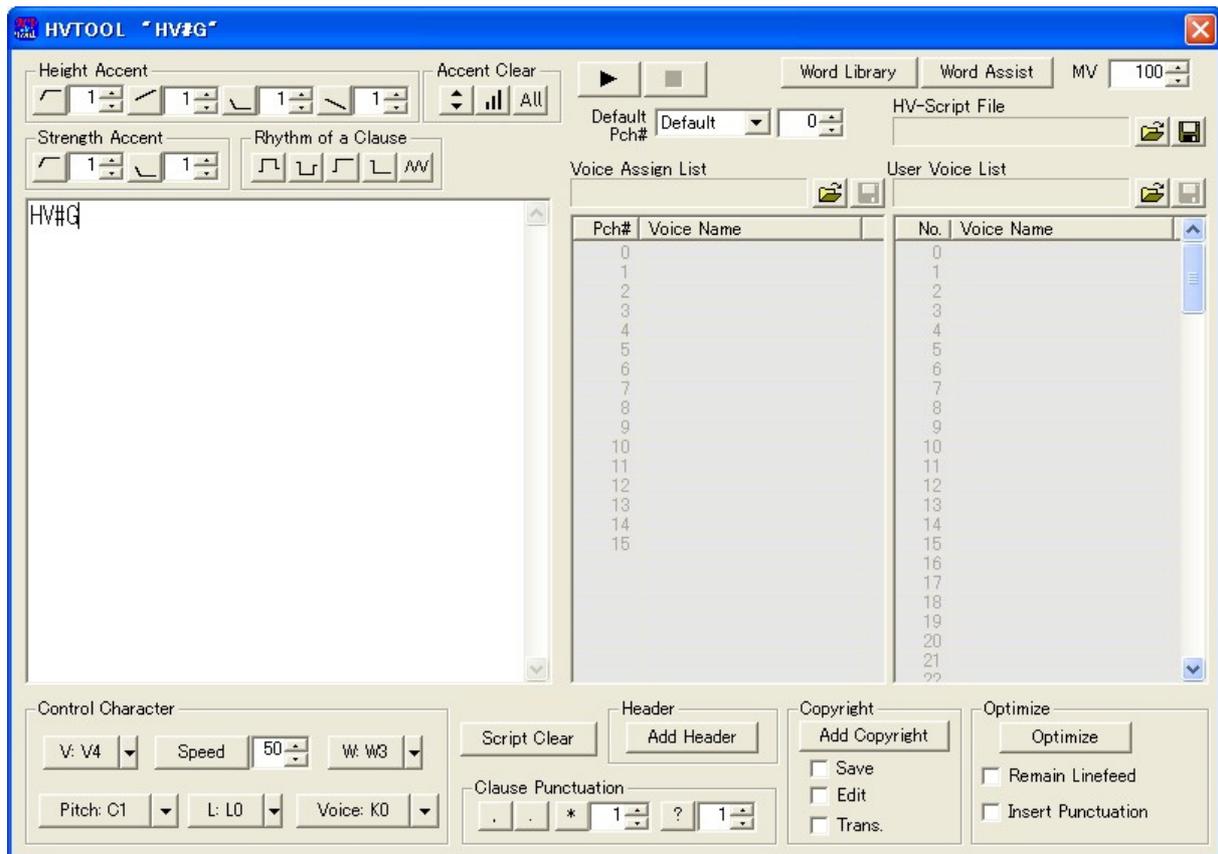


Fig. 2-1 Main Dialog

## 2.2 Title Bar



Fig. 2-2 Title Bar

System menu is displayed by right-clicking anywhere on the Title Bar.

### 2.2.1 System Menu

“*Move*”, “*Close*”, “*Change HV-Script Font...*”, “*Change HV-Script Language...*”, and “*About...*” are in the menu.

Main dialog can be moved by dragging mouse on the main dialog after left-clicking “*Move*”,

If “*Close*” is clicked, the application will close.

**if “*Change HV-Script Font...*” is clicked, Font Dialog will appear.**

**if “*Change HV-Script Language...*” is clicked, Language Select Dialog will appear.**

If “*About...*” is clicked, “About” dialog will be displayed.

### 2.2.2 HV-Script Language Select Dialog



Fig. 2-3 Language Select Dialog

Select a language by radio button. The header of selected language is reflected into the edit box at main dialog activation.

## 2.3 Control Area

A playback of HV-Script files can be controlled.

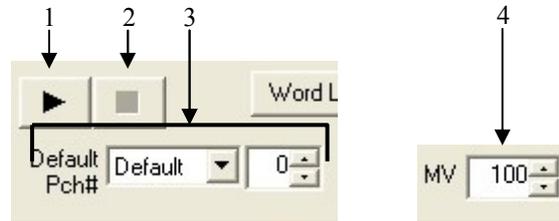


Fig. 2-4 Control Area

No.	Name	Description
1	Play button “Space” key	HV-Script is played back by clicking this button while playback of HV-Script is being stopped. When HV-Script is partly selected, only the selected part is played back.
2	Stop button “Space” key under playback	Playback of HV-Script stops by the click during the playback of HV-Script.
3	Default Pch# (Default program change number) setting	A program change number can be set when there is no program change designation in the HV-Script The relevant program change number in the Voice Assign List is set to this parameter, at the timing of the voice selection by the mouse. Default Pch# [Default] The Default voice from 0 to 15 can be selected. Default Pch# [Extend] The extended voice from 0 to 15, which is registered in the Voice Assign List, can be selected.
4	MV (Master Volume) setting	Playback volume value for the HV-Script can be set.

## 2.4 Sub-Dialog Open Area

On clicking the buttons, “Word Library Dialog” or “Word Assist Dialog” will open.

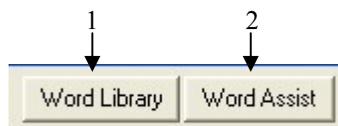


Fig. 2-5 Sub-Dialog Open Area

No.	Name	Description
1	“Word Library” button	“Word Library” Dialog will appear by clicking this button.
2	“Word Assist” button	“Word Assist” Dialog will appear by clicking this button

## 2.5 HV-Script File Area

Read and save of HV-Script files (\*. *hvs*) and save of SMAF files (\*.*mmf*) are performed in this area.

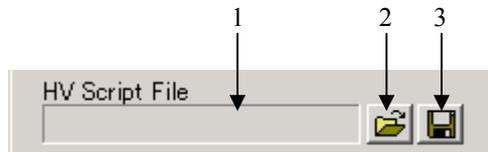


Fig. 2-6 HV-Script File Area

No.	Name	Description
1	Edit box	The header character string is inserted into the head of the Edit Box during start-up.
2	Open button	A HV-Script file is opened. The read HV-Script is displayed in the HV-Script box. Moreover, a HV-Script file name is displayed on HV-Script file name display area.
3	Save button	Files are saved in the HV-Script file format (*. <i>hvs</i> ) or SMAF file format (*. <i>mmf</i> ).

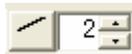
## 2.6 Add Menu Area

Functions to add various symbols and characters to the data displayed in HV-Script Input Box are prepared. The menu area is divided into smaller areas.

### 2.6.1 “Height Accent” Area

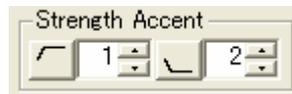


Move the cursor to the area of HV-Script to insert Height Accent symbols, and then click each button. The relevant Height Accent symbols are added to the cursor position, by the count of click.

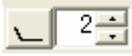
The variation value can be set up. e.g.)  → ^2

	button	1 byte Height Accent symbol “”” is added to the cursor position by the count of click.
	button	1 byte Height Accent symbol “^” is added to the cursor position by the count of click.
	button	1 byte Height Accent symbol “_” is added to the cursor position by the count of click.
	button	1 byte Height Accent symbol “\$” is added to the cursor position by the count of click.

## 2.6.2 “Strength Accent” Area



Move the cursor to the area of HV-Script to insert Strength Accent symbols, and then click each button. The relevant Strength Accent symbols are added to the cursor position, by the count of click.

The variation value can be set up. e.g.)  → >2

	button	1 byte Strength Accent symbol “<” is added to the cursor position by the count of click.
	button	1 byte Strength Accent symbol “>” is added to the cursor position by the count of click.

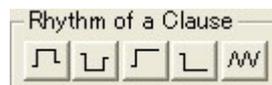
## 2.6.3 “Accent Clear” (Accent Shift Clear) Area



Move the cursor to the area of HV-Script to insert Accent Shift Clear symbols, and then click each button. The relevant Accent Shift Clear symbol is added to the cursor position.

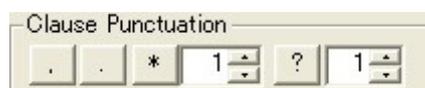
	button	1 byte Accent Shift Clear symbol “/” is added to the cursor position by the count of click.
	button	1 byte Accent Shift Clear symbol “=” is added to the cursor position by the count of click.
	button	1 byte Accent Shift Clear symbol “&” is added to the cursor position by the count of click.

## 2.6.4 “Rhythm of Clause” Area



	button	1 byte Rhythm of Clause symbol “@” is added to the cursor position by the count of click.
	button	1 byte Rhythm of Clause symbol “!” is added to the cursor position by the count of click.
	button	1 byte Rhythm of Clause symbol “;” is added to the cursor position by the count of click.
	button	1 byte Rhythm of Clause symbol “:” is added to the cursor position by the count of click.
	button	1 byte Rhythm of Clause symbol “+” is added to the cursor position by the count of click.

## 2.6.5 “Clause Punctuation” Area



Move the cursor to the area of HV-Script to insert Clause Punctuation symbols, and then click each button. The relevant Clause Punctuation symbol is added to the cursor position.

 button	1 byte Clause Punctuation symbol “,” is added to the cursor position by the count of click.
 button	1 byte Clause Punctuation symbol “.” is added to the cursor position by the count of click.
 button	1 byte Clause Punctuation symbol “*” is added to the cursor position by the count of click.
“*” variation settings	Playback volume value of “*” is set. When this variation setting is a value except 1 when clicking “*” button, the number is inserted after “*”.
 button	1 byte Clause Punctuation symbol “?” is added to the cursor position by the count of click.
“?” variation settings	Play volume value of “?” is set. When this variation setting is a value except 1 when clicking “?” button, the number is inserted after “?”.

## 2.6.6 “Control Character” Area



Move the cursor to the area of HV-Script to insert Control Character String, and then click each button. The relevant Control Character String is added to the cursor position.

button	Pop-up menu “ <b>V</b> ” ( <i>volume</i> ) <b>setting</b> is displayed by clicking “ <b>Volume</b> ” <b>button</b> . By selecting one of them, Control Character String “ <b>V</b> ” which shows 1byte volume is added to the cursor position.
“ <b>V</b> ” ( <i>volume</i> ) <b>setting</b>	“ <b>V</b> ” ( <i>volume</i> ) <b>button</b> sets the volume that is inserted. When clicking “ <b>V</b> ” ( <i>volume</i> ) <b>button</b> , the value of this variation setting is inserted.
button	Pop-up menu “ <b>Pitch</b> ” <b>setting</b> is displayed by clicking “ <b>Pitch</b> ” <b>button</b> , and 1 byte Pitch String “ <b>CI</b> ” to “ <b>B3</b> ” is added to the cursor position.
“ <b>Pitch</b> ” <b>setting</b>	“ <b>Pitch</b> ” <b>button</b> sets the Pitch String that is inserted. When clicking “ <b>Pitch</b> ” <b>button</b> , the value of this variation setting is inserted.
button	1 byte Speed String “ <b>S0</b> ” to “ <b>S99</b> ” is added to the cursor position by clicking “ <b>Speed</b> ” <b>button</b> .
	“ <b>Speed</b> ” <b>button</b> sets the Speed String that is inserted. When clicking “ <b>Speed</b> ” <b>button</b> , the value of this variation setting is inserted.
button	Pop-up menu “ <b>W</b> ” <b>setup</b> is displayed by clicking “ <b>W</b> ” <b>button</b> . By selecting one of them, 1 byte Rhythm Shift String “ <b>WI</b> ” to “ <b>W5</b> ” is added to the cursor position.
“ <b>W</b> ” <b>setup</b>	“ <b>W</b> ” <b>button</b> sets the Rhythm Shift String that is inserted. When clicking “ <b>W</b> ” <b>button</b> , the value of this variation setting is inserted.
button	Pop-up menu “ <b>L</b> ” <b>setup</b> is displayed by clicking “ <b>L</b> ” <b>button</b> , and 1 byte Utterance Length Unification String “ <b>L0</b> ” or “ <b>L1</b> ” is added to the cursor position.
“ <b>L</b> ” <b>setup</b>	“ <b>L</b> ” <b>button</b> sets the Utterance Length Unification that is inserted. When clicking “ <b>L</b> ” <b>button</b> , the value of this variation setting is inserted.
button	Vocal Quality “ <b>K</b> ” or “ <b>X</b> ” and “ <b>0 to 15</b> ” is added to the cursor position by clicking “ <b>Voice</b> ” <b>button</b> .
“ <b>L</b> ” <b>setup</b>	“ <b>Voice</b> ” <b>button</b> sets the Vocal Quality that is inserted. When clicking “ <b>Voice</b> ” <b>button</b> , the value of this variation setting is inserted.

## 2.6.7 Add Header



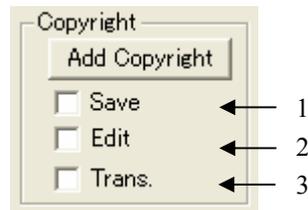
When the **Add Header button** is clicked, header information that begins with “**HV#**” is added to the head of HV-Script. When 4 bytes character string such as “**HV#J**” exists at the beginning of HV-Script, the string is considered as the header and deleted and replaced with the new one. When 4 bytes character string such as “**HV#J**” exists in the sentence, it is not considered as the header.

## 2.6.8 Script Clear



HV-Script inputted into HV-Script Input Area is cleared.

## 2.6.9 Add Copyright

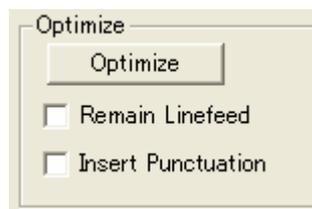


When the **Add Copyright** button is clicked under the condition of HV-Script with a header that begins with “**HV#**”, the copyright information which begins with “**##**” is added after header information. Copyright information includes “**Save**”, “**Edit**” and “**Trans.**” If each item is designated, copyright information is independently output.

When nothing is designated for “**Save**”, “**Edit**”, and “**Trans.**”, copyright information on HV-Script is deleted.

No.	Name	Description
1	Save	If Add Copyright is executed when checkbox is ON, “ <b>Not savable</b> ” is added to copyright information.
2	Edit	If Add Copyright is executed when checkbox is ON, “ <b>Not editable</b> ” is added to copyright information.
3	Trans.	If Add Copyright is executed when checkbox is ON, “ <b>Not transferable</b> ” is added to copyright information.

## 2.6.10 Optimize



When **Optimize** button is clicked under the condition of HV-Script with a header that begins with “**HV#**”, HV-Script is optimized. Contents of optimization are as follows.

1. Long-Vowel and Silent symbols are converted into 2-byte characters.
2. Japanese original Long-Vowel “—” and Clause Pause “、”、“、”、“。” are converted into “-”、“、”、“、” and “.”.
3. The numerical value range of Control String or Event is judged and is changed to the default value if the value is out-of-range.
4. When Control String or Event continues, unnecessary strings are deleted.  
(However, user event U is handled as the unnecessary strings because the event is invalid in the AT/KT)
5. Rhythm symbols which designate conflicted operation are offset from the group of Rhythm symbols in one Clause.
6. Successive Rhythm symbols are collected, and HV-Script is made into compact. (“\$\$\$\$\$\$\$\$” → “\$10”)  
The count-up process is performed to the symbols already counted-up before performing this function.
7. It deletes new-line code.

About the above operations, when the relevant string or symbol is in “[ ] (*comment*)”, or when **Remain Linefeed** is checked, new-line code is not processed.

Remain Linefeed	When “ <b>Optimize</b> ” is executed after checking the box, new-line code is not considered as an object of optimization process.
Insert Punctuation	When “ <b>Optimize</b> ” is executed after making the checkbox is ON, if one clause exceeds 100 bytes, a clause pause is inserted automatically so that it may fit in less than 100 bytes.

## 2.7 HV Voice List Area

Read and save of a HV Voice file, and creation and editing of a voice are performed.

### 2.7.1 Voice Assign List

Pch# (**Program Change Number**) and Voice Name are displayed in a list.  
One list (**line**) means one voice. The total numbers of lists are 16 (0 to 15).

In each list, when HV voice parameter is unregistered, it displays a background in gray, and when HV voice parameter is registered, it displays a background in white.

A HV Voice Edit dialog can be called by pushing an enter key, after double-clicking the mouse in any 1 list area or hitting a mouse focus to 1 list.

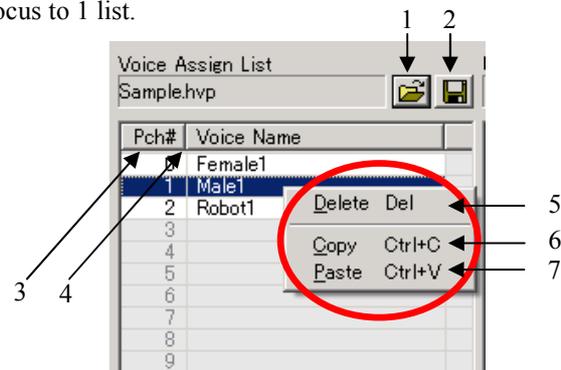


Fig. 2-7 Voice Assign List

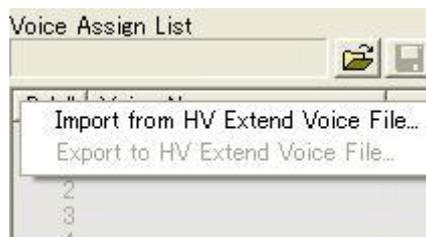
No.	Name	Description
1	Open button	HV extension voice file ( <b>.hvp</b> ) is opened. HV Voice data is read from a Voice Assign file, and a HV Voice file name is displayed on HV Voice file name display area.
2	Save button	The file is saved in HV extension voice file ( <b>*.hvp</b> ) format.
3	Pch# (Program change number)	A program change number is displayed in the order from 0 to 15. Clicking the item enables a switching between the descending order and the ascending order.
4	Voice Name	A voice name is displayed. The voice name can be changed only on the HV Voice Editor dialog, and cannot be changed on the Voice Assign List. Clicking the item enables a switching between the descending order and the ascending order.

### Voice-Related Operations

The menu for Voice-related operation will be displayed when right-clicking in the list area, which voice parameters are registered (**background white**). These menus can be performed either on Voice Assign List or User Voice List, and bidirectional Copy&Paste are also possible.

No.	Name	Description
5	Delete [Del] key	A voice parameter is made into the un registered state.
6	Copy [Ctrl+C]	The relevant voice parameter in the list is copied.
7	Paste [Ctrl+V]	The relevant voice parameter in the list is pasted.

When right-clicking on [Pch#] or [Voice Name] above List Area, a menu for file reading operation is displayed. The menu has following items.



Import from HV Extend Voice File...	It opens HV Extend Voice File (*.hv5), and reads it.
Export to HV Extend Voice File...	It saves HV Extend Voice File (*.hv5).

## 2.7.2 User Voice List

No. (**Voice number**) and Voice Name are displayed in a list. 1 list (**line**) means one voice. The total numbers of lists are 128 (**0 to 127**). In each list, when HV voice parameter is unregistered, it displays a background in a gray, and when HV voice parameter is registered, it displays a background in white.

A HV Voice Edit dialog can be called by pushing an enter key, after double-clicking the mouse in any 1 list area or hitting a mouse focus to 1 list.

When O.K. button is pushed to decide the voice parameter after the HV Voice Edit dialog is called, the voice parameter is registered in the relevant list.

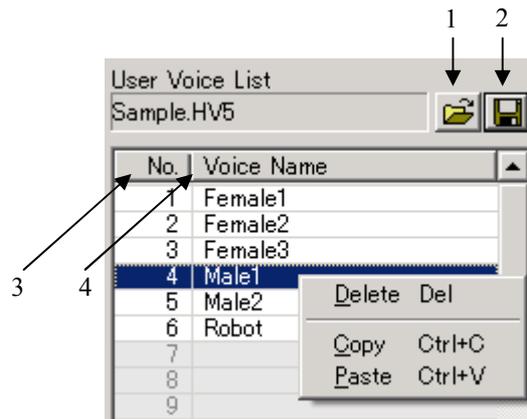


Fig. 2-8 User Voice List

No.	Name	Description
1	Open button	The User Voice List side opens a User Voice file (*.hv5). HV Voice data is read from a User Voice file, and a HV Voice file name is displayed on HV Voice file name display area.
2	Save button	The User Voice List side is saved in User Voice file (*.hv5) format.
3	No. (Voice Number)	A voice number is displayed. The number cannot be changed. Clicking the item enables a switching between the descending order and the ascending order.
4	Voice Name	A voice name is displayed. A voice name can be changed only in a HV Voice Editor dialog, and cannot be changed here. Clicking the item enables a switching between the descending order and the ascending order.

When right-clicking on [No.] or [Voice Name] above List Area, a menu for file reading operation is displayed. The menu has following items.



Import from HV Extend Voice File...	It opens HV Extend Voice File (*.hv5), and reads it.
Export to HV Extend Voice File...	It saves HV Extend Voice File (*.hv5).

## 2.8 HV-Script Input Area

The HV-Script is input from a keyboard and displayed on the area.  
When a HV-Script file is opened, the contents of HV-Script are displayed.

When a HV-Script file is dragged and dropped to HV-Script input area, a HV-Script file will be opened and the contents of HV-Script will be displayed.

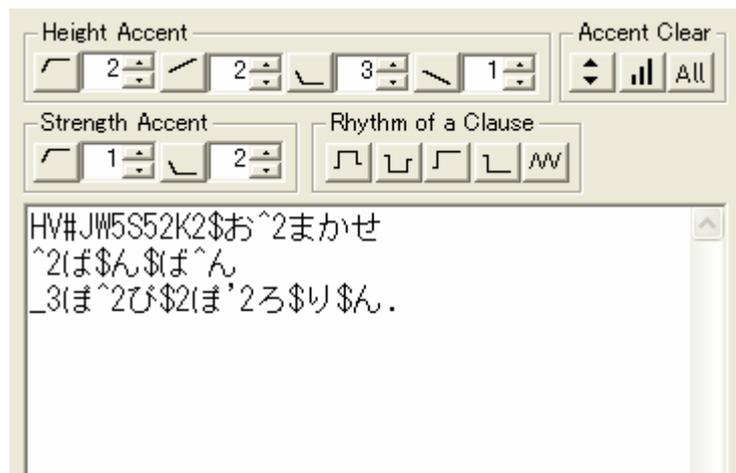


Fig. 2-9 HV-Script Input Area

This figure is an example of Japanese HV-Script.  
In the case of using it as other HV tool on other Windows, be sure to type in its HV-Script.

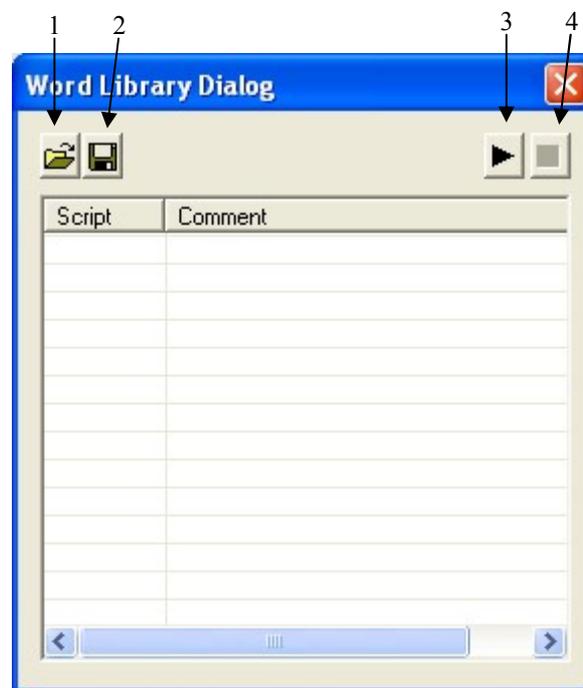
## 3 Sub-Dialog

### 3.1 Word Library Dialog

By clicking “Word Library” button on a main dialog, Word Library Dialog will be opened.

This dialog can be used for Library of HV-Script. Drag and drop the Multi HV-Script files and Word Library files on the dialog or click "Open" button to open these files and display its contents on the Word Library List area.

By double-clicking the line which has valid Word Library data, the data (Script) will be inserted into the cursor position in HV-Script Input Area on a main dialog.



**Fig. 3-1 Word Library Dialog**

No.	Name	Description
1	Open button	A Multi HV-Script file (*.hs5) or Word Library file (*.txt) is opened. The read data is displayed on the Word Library List area.
2	Save button	Files are saved in the Word Library file format (*.txt).
3	Play button	By clicking a line on the list to select, and then clicking this Play button while playback of HV-Script is stopped, playback is performed in the form of which header character strings were added to the Script data in the selected line.
4	Stop button	By clicking this button during the playback of HV-Script, playback of the Script data in the selected lines stops.

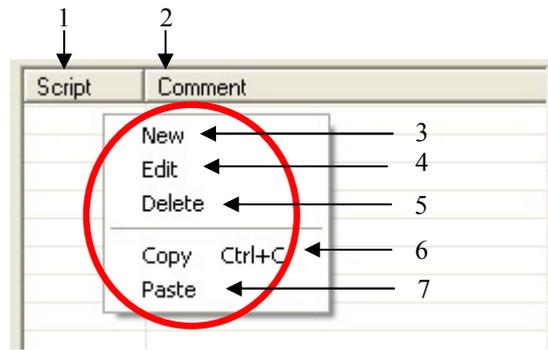


Fig. 3-2 Word Library List

No.	Name	Description
1	Script	HV-Script or a part of HV-Script is displayed.
2	Comment	Comment of the data of "Script". (Optional) is displayed.
3	New	Add Dialog is opened and new Word Library Data can be added to the list.
4	Edit	Edit Dialog is opened and a selected Word Library Data of the list can be edited.
5	Delete	A selected Word Library Data is deleted from the list,
6	Copy Ctrl + C	A selected Word Library Data is copied on the clipboard
7	Paste	A copied Word Library Data on the clipboard is pasted on Word Library list.

### 3.2 Word Assist Dialog

By clicking "Word Assist" button on a main dialog during Language mode is HV-Script Global ("HV#G"), Word Assist Dialog will be opened.

This dialog can be used as a utility for inputting HV-Script Global Data easily.

**This dialog can be used only when Language mode is HV-Script Global ("HV#G").**

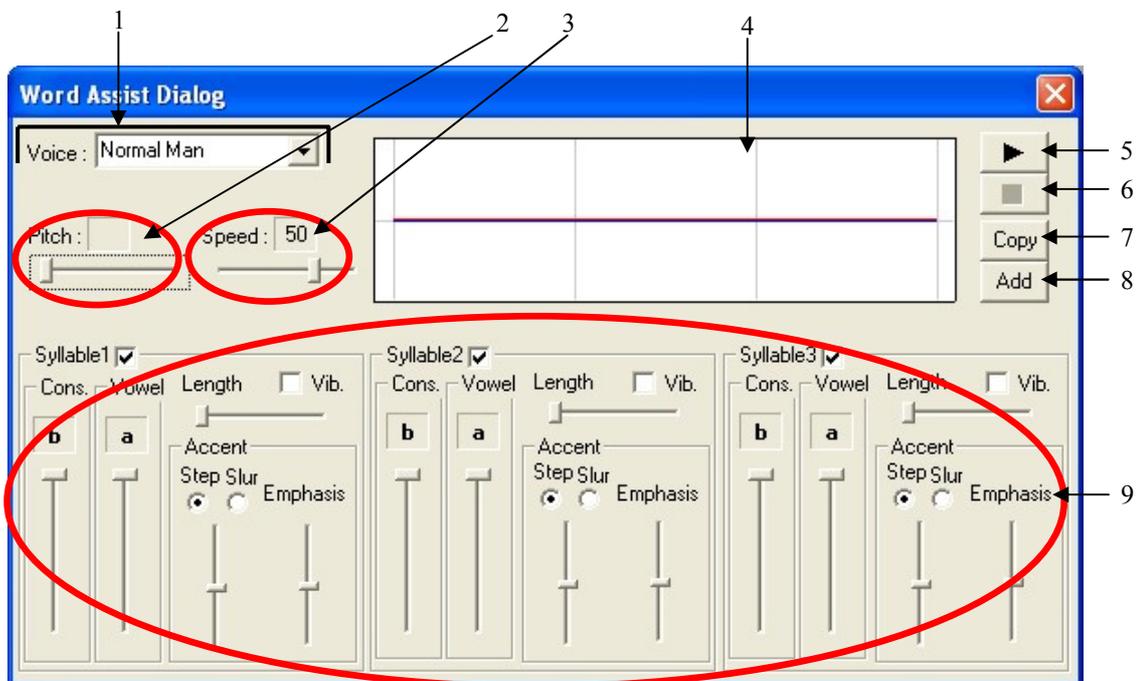


Fig. 3-3 Word Assist Dialog

No.	Name	Description
1	Voice Combo box	If Play, Copy or Add button is clicked, the program change number which is relevant to the selected voice name is set to HV-Script.
2	Pitch Slider	Pitch slider can set Pitch control value displayed on the Pitch edit box above to HV-Script.
3	Speed Slider	Speed slider can set Speed value displayed on the Speed edit box above to HV-Script.
4	Graph Area	Shows variation of “Height Accent (red line)” and “Strength Accent (blue line)” in each Syllable area with line graph.
5	Play button	By clicking this button while playback of HV-Script is stopped, the Script data combined on this Word Assist dialog will play.
6	Stop button	Playback of the Script data combined on this Word Assist dialog stops by the click during the playback of HV-Script.
7	Copy button	Copy the Script data combined on this Word Assist dialog to clipboard.
8	Add button	Add the Script data combined on this Word Assist dialog to HV-Script Input Area of main dialog.
9	Syllable Area	Area for setting consonant, vowel, length, and accent of a syllable to the Script combined on this Word Assist dialog.

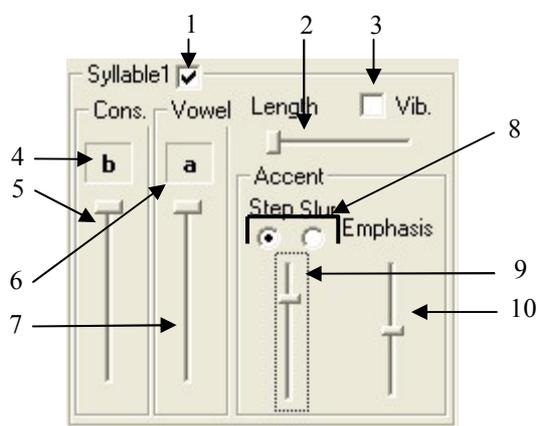


Fig. 3-4 Syllable Area

No.	Name	Description
1	Syllable Enable/Disable check box	After checking the box, the Syllable Area can be enabled.
2	Length Slider	Set the length of pronunciation of a syllable and insert “-” to the Script. To slide rightward the slider, to be longer the pronunciation.
3	Vibration check box	Change all “-” of a syllable to “~” if the length of pronunciation of a syllable is not zero.
4	Consonant edit box	Shows consonant character of the syllable that selected with Consonant slider.
5	Consonant Slider	Set the Consonant character and insert the determined character to the Script.
6	Vowel edit box	Shows vowel character of the syllable that selected with Vowel slider.
7	Vowel Slider	Set the Vowel character and insert the determined character to the Script.
8	Step/Slur radio button	If “Step” button is checked, “” or “_” is adopted for “Height Accent”. If “Slur” button is checked, “^” or “\$” is adopted for “Height Accent”.
9	Height Accent Slider	Set the variation value of “Height Accent” whose style is selected by “Step/Slur” radio button.
10	Strength Accent Slider	Set the variation value of “Strength Accent”.

## 4 HV Voice Setting Function

### 4.1 HV Voice Edit Dialog

The display and edit of HV voice parameter can be performed.

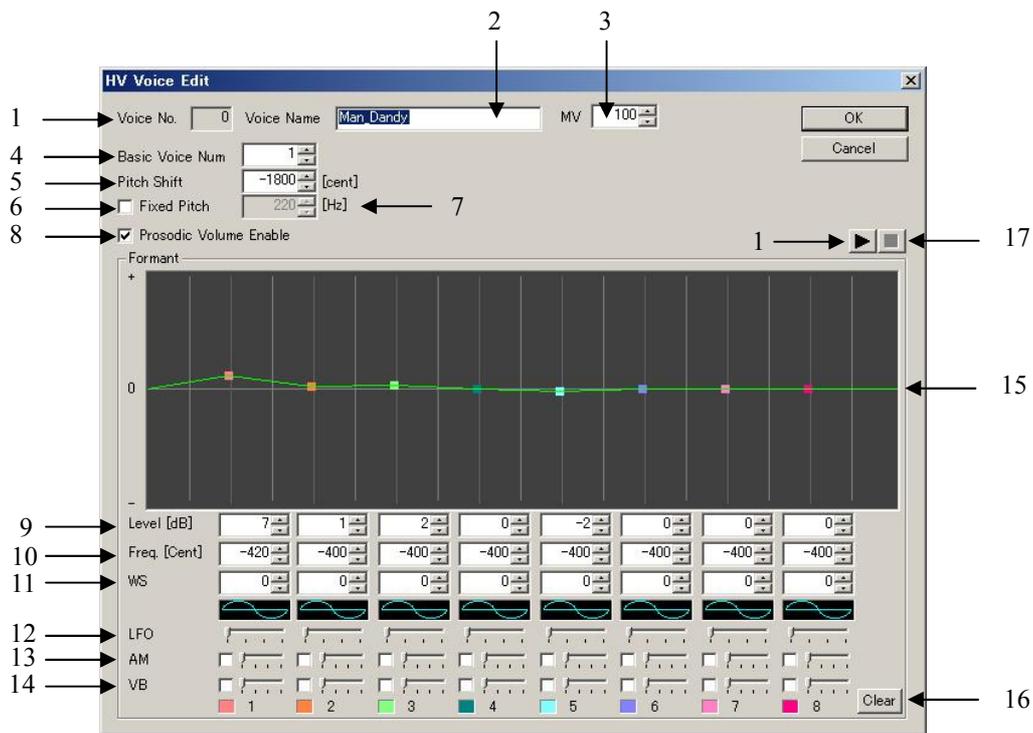
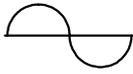
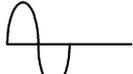
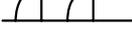
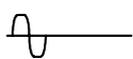
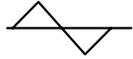
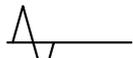
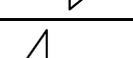


Fig. 4-1 HV Voice Edit Dialog

No.	Name	Description
1	Voice No. (Voice number) Pch No. (Program Change Number)	Voice numbers/Pch numbers are displayed. <ul style="list-style-type: none"> <li>When open from the Voice Assign List: "Pch No." is displayed and a voice from 0 to 15 can be selected.</li> <li>When open from the User Voice List: "Voice No." is displayed and a voice number from 0 to 127 are displayed. The number cannot be edited.</li> </ul>
2	Voice Name	The voice name being edited can be input. The half size characters can be input up to 16 characters.
3	MV (Master Volume Setting)	The master volume in the case of playback can be set. Although the direct inputting or a spin button can be used for the settings, the valid range is 0 to 127 in both cases. The value of out of the range is not accepted.
4	Basic Voice No. (Basic voice number)	Designates the basic voice numbers. 0: Male default voice 1: Female default voice
5	Pitch Shift [cent] (Pitch shift value)	Designates the amount ( <i>cent</i> ) of pitch variation from a basic voice. Setting value: -8192 to 8191
6	Fixed Pitch Enable (Fixed pitch enable specification)	The check box designates whether to make the pitch of a voice valid ( <b>ON</b> or <b>OFF</b> ).

No.	Name	Description
		<p>When a check box is checked, it becomes “<b>ON</b>”, and when the check is removed, it becomes “<b>OFF</b>”.</p> <p>[Note] If the parameter is displayed again after deciding a parameter, values may differ owing to the internal processing. An internal parameter becomes unique.</p>
7	Fixed Pitch[Hz] (Fixed pitch specification)	<p>Designates the fixed pitch frequency. The specification is possible only when the Fixed Pitch Enable is valid. Setting value: 0 to 48000</p>
8	Prosodic Volume Enable (Prosodic Volume enable specification)	<p>The check box designates whether to make the Prosodic Volume valid (<b>ON</b> or <b>OFF</b>.) When a check box is checked, it becomes “<b>ON</b>”, and when the check is removed, it becomes “<b>OFF</b>.”</p>
Formant 1 to Formant 8		
9	Level[dB] (Formant level shift value)	<p>The amount of level variation from a basic voice (<b>dB</b>) is specified. Setting value: -64 to 63</p>
10	Freq. [cent] (Formant Frequency shift value)	<p>The amount of frequency variation (<b>cent</b>) from a basic voice is specified. Setting value: -8192 to 8191</p>
11	WS (Operator Waveform Selection)	<p>An operator waveform number is specified. The waveforms are illustrated below. Setting value: 0 to 14, 16 to 22, 24 to 30</p> <p>[Note]: 15, 23, and 31 of WS cannot be used. When WS is set to 15, 23, or 31, “<b>OK</b>” button of Voice Edit cannot be pushed, and a voice cannot be decided.</p>

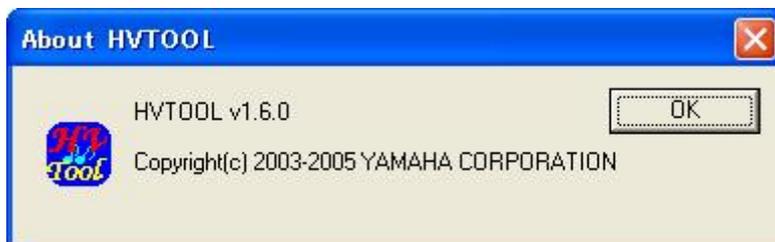
0		1		2		3	
4		5		6		7	
8		9		10		11	
12		13		14		15	Use any waveform on SRAM
16		17		18		19	
20		21		22		23	Use any waveform on SRAM
24		25		26		27	
28		29		30		31	Use any waveform on SRAM

No.	Name	Description										
12	LFO (LFO Frequency)	Designates LFO frequency. <table border="1"> <thead> <tr> <th>LFO setting value</th> <th>Variation [Hz]</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>2.08</td> </tr> <tr> <td>1</td> <td>4.17</td> </tr> <tr> <td>2</td> <td>6.25</td> </tr> <tr> <td>3</td> <td>12.50</td> </tr> </tbody> </table>	LFO setting value	Variation [Hz]	0	2.08	1	4.17	2	6.25	3	12.50
LFO setting value	Variation [Hz]											
0	2.08											
1	4.17											
2	6.25											
3	12.50											
13	AM Modulation (Modulation of formant level)	AM depth can be set by making AM modulation “ <i>ON</i> ”. When a check box is checked, it becomes “ <i>ON</i> ”, and when the check is removed, it becomes “ <i>OFF</i> ”. AM depth can be set by moving a slider. <table border="1"> <thead> <tr> <th>AM depth setting value</th> <th>Amplitude [db]</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>±4.5</td> </tr> <tr> <td>1</td> <td>±9.0</td> </tr> <tr> <td>2</td> <td>±13.5</td> </tr> <tr> <td>3</td> <td>±18.0</td> </tr> </tbody> </table> <p>[Note] AM depth can be set only when AM modulation is valid.</p>	AM depth setting value	Amplitude [db]	0	±4.5	1	±9.0	2	±13.5	3	±18.0
AM depth setting value	Amplitude [db]											
0	±4.5											
1	±9.0											
2	±13.5											
3	±18.0											
14	VB modulation (Modulation of formant frequency)	VB depth can be set by making VB modulation “ <i>ON</i> ” When a check box is checked, it becomes “ <i>ON</i> ”, and when the check is removed, it becomes “ <i>OFF</i> ” VB depth can be set by moving a slider. [Note] VB depth can be set only when VB modulation is valid. <table border="1"> <thead> <tr> <th>VB depth setting value</th> <th>Amplitude [cent]</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>±240</td> </tr> <tr> <td>1</td> <td>±480</td> </tr> <tr> <td>2</td> <td>±960</td> </tr> <tr> <td>3</td> <td>±1440</td> </tr> </tbody> </table>	VB depth setting value	Amplitude [cent]	0	±240	1	±480	2	±960	3	±1440
VB depth setting value	Amplitude [cent]											
0	±240											
1	±480											
2	±960											
3	±1440											
15	Formant setting graph area	Level and Freq. value in each of Formant 1 to Formant 8 are plotted on a line graph. A vertical axis is taken as Level and a horizontal axis is taken as Frequency. Each point of formants can be edited directly by clicking and dragging with a mouse. Each Level and Freq. value change according to the movement.										
16	Formant setting graph clear button	The values of Level, Freq., WS, LFO, AM, and VB in each Formant1 to Formant8 are returned to the initial value.										
17	Stop button	Playback of music will be stopped when this button is clicked during music playback. In addition, the playback is stopped when a space key is pushed under performance.										
18	Play button	HV-Script will be played when this button is clicked while music is being stopped. HV-Script needs to be read beforehand. Moreover, HV-Script is played back when a space key is pushed during stop. When [vocal quality change for an event] which uses an Extend voice has been input in Script, the voice to be played back differs depending on ways to open the HV Voice Edit: from the User Assign Map or from the User Voice List. <ul style="list-style-type: none"> <li>■When opened from the User Assign Map The voice according to the vocal quality change in Script is played back.</li> <li>■When opened from the User Voice List The voice according to the voice settings in Voice List is played back.</li> </ul>										

## 5 About Dialog

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Show the Application Name, Version Information, and Copyright Information.



By pressing "O.K.," About dialog is opened.

## 6 Message

### 6.1 Error Messages

Display	Description
Can not open file. Illegal output stream.	A certain problem occurred in the read of a file.
Can not open file. Illegal file format.	The format is not correct in the read of a file.
Can not save file. Illegal output stream.	A certain problem occurred in the save of a file.
Can not save file. Illegal file format.	The format is not correct in the save of a file.
Can not open application. Application is already running.	The HV tool was started over again.
Can not open application. Unexpected problem is occurred.	A problem occurred in initialization etc. Or a certain problem causes the termination.
Can not edit HV voice parameter.	A certain problem occurred in the HV voice parameter module.
Can not assure of contents. The maximum of segment include HV-Script is required within 100(byte).	Length of a Clause in HV-Script exceeds 100 bytes.
Can not optimize HV-Script. Illegal file format.	Header information does not exist in HV-Script. Or the format of HV-Script is illegal.
Can not edit copyright. Illegal header.	Header information does not exist in HV-Script. Or the format of HV-Script is illegal.
Exceed maximum byte of HV-Script.	Length of a HV-Script exceeds 30000 bytes.
Can not save file. Internal error occurred.	A certain problem occurred in the save of a file.
Exceed maximum playback time of HV-Script.	Playback time of a HV-Script exceeds the limit length of 2097140msec.

### 6.2 Warning Messages

Display	Description
Can not assure of HV voice parameter. Voice parameter in HV-Script is different from pch#.	When the HV Voice Edit Dialog is started from VAL, and the selected program number of the line is different from voice quality value in HV-Script.
Can not play HV-Script. The maximum of segment include HV-Script is required within 100 (byte).	When the HV Voice Edit Dialog is started from VAL, and length of a Clause in HV-Script exceeds 100 bytes.
Can not assure to play HV-Script. Illegal file format.	When the HV Voice Edit Dialog is started from VAL, and there is no available HV-Script on HV-Script Input Area.

## 6.3 Confirmation Messages

Display	Description
HV-Script is under edit. Do you want to save file?	When the following is performed while HV-Script is edited. <ul style="list-style-type: none"> <li>• Read of HV-Script</li> <li>• Drag and drop of HV-Script</li> <li>• Termination of HVTOOL</li> </ul>
HV Voice Parameter is under edit. Do you want to save file?	When the following is performed while HV voice file (*.hvp) is edited. <ul style="list-style-type: none"> <li>• Read of HV Voice file</li> <li>• Drag and drop of HV Voice file</li> <li>• Termination of HVTOOL</li> </ul>
This file already exists. Replace existing file?	When a file with the same name already exists in saving HV-Script or SMAF.
Do you want to delete HV voice parameter?	When a selected HV Voice parameter is about to be deleted in VAL or UVL.
Word Library Data is under edit. Do you want to save file?	When the following is performed while a Word Library Data is edited. <ul style="list-style-type: none"> <li>• Read of HV Word Library file</li> <li>• Drag and drop of HV Word library file onto Word Library dialog.</li> <li>• Termination of Word Library</li> <li>• Termination of HVTOOL</li> </ul>
Do you want to delete this Word Library Data?	When a selected Word Library data in the Word Library Dialog is about to be deleted.