

Specification of HV-Script Global Format

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YAMAHA Corporation

[Notes]

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Revision History

Ver.	Date	Contents
0.0.1	2003/08/04	First Edition
0.0.2	2003/08/27	3.1 Added a description so that HV#G is valid only on the tool during playing.
1.0.0	2003/12/24	2 Description about conversion of Global HV-Script to Japanese HV-Script was added. 3.1 Explanation about the purport the header is described into the beginning of HV-Script, was added. 3.2.1.4 Description about the amount of changing by “?” and “*” marks was added. Fig.2 Description about “1” in horizontal-axis was added. Fig.3 Description about “1” in horizontal-axis was added. Fig.5 Description about “1” in horizontal-axis was added. Table 13 Clerical error of Martian was corrected.

1 Introduction

HV-Script is the format for performing a voice synthesis which consists of the synthesis character string included a rhythm marks, a set up of pronounced voice, and a message to a playback application and etc. The input format serves as text input in order to make the user's input easier.

2 Basic Composition

HV-Script is composed of "Header" and "Body".

Header is composed of the 4-byte of ASCII code characters, that displays a start of HV-Script and character code used by language and Body. Body is a character string written in the character code specified by Header, and consists of the vocal information and the playback information.

The HV-Script written by Global specified ASCII code is distinguished by the header, and it is required to be converted to Japanese HV by Authoring Tool when it is played and saved..

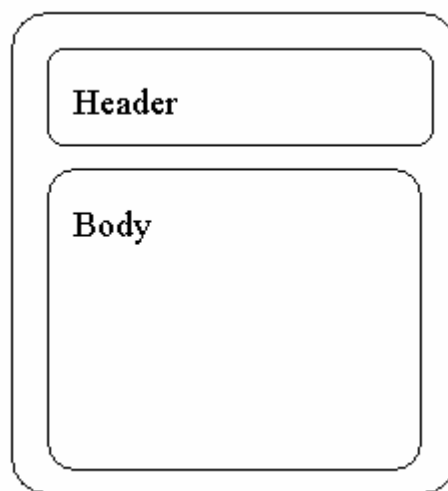


Fig. 1 Basic Composition of HV-Script

3 Format

3.1 Header

Header is expressed at the beginning of HV-Script. It is described with the 4-byte of alphabet capital letter (ASCII).

HV#G

HV# (0x48,0x56,0x23)	HV-Script start
G (0x47)	Indicate “Country”, “Language” and “Character” Codes. In this case, it signifies Global HV-Script, and the character code is ASCII. “G” is used for the distinction at the tool side, it is converted to [J(0x4A)]which means Japanese HV-Script when it is played with Middleware. At the time, Voice character string are converted to HIRAGANA of character code Shift-JIS.

3.2 Body

Body is described using character codes (ASCII) specified by Header, and consists as follows.

- Voice character string : The character to utter is expressed. The alphabet is the small letter.
- Rhythm mark : Marks which gives a clause(*1), asyllable(*2), and a rhythm (*3) to voice character string. The alphabet is the capital letter.
- Control character string : The volume, the pitch of sound, speaking speed, etc. are set up. The alphabet is the capital letter.
- Event : The message transmission to a playback application, and etc. The alphabet is the capital letter.
- Comment out : A comment can be written into HV-Script. The comment has no influence on the playback processing.

The alphabets used by Body are treated by distinguishing its capital letter and its small letter. Moreover, use small letters for Voice character string, and use capital letters for Rhythm Mark , Control character string, and Event.

The ASCII code of marks and characters are shown in Table 9 ~ Table 12.

- *1 clause : The clause is a text unit which is divided from a head of clause till "Clause pause mark".
(For the details about “Clause pause marks”, refer to the later in this document)

(Example) HV#Gkonnitiwa. genki? kyo-wa. hierune. (HV#J こんにちは。げんき？きょーわ、ひえるね。)
 clause clause clause clause

- *2 syllable : One “Reading mark” shows one syllable.

- *3 rhythm : The rhythm of the language made by the strength of sound, length, height, and etc.

3.2.1 Voice Character String

It is consisted of characters to utter and silence, and a character string which shows the punctuation of a clause like below.

- Reading mark
- Long vowel
- Silent
- Clause punctuation mark

3.2.1.1 Reading Mark [Small letter of Alphabet (ASCII)]

Character to pronounce. “Reading mark” and its ASCII code are shown in Table 9 Reading Marks.

Input by the “sound” characters to pronounce.

Example : ×[watashiha(わたしは)] → ○[watashiwa(わたしわ)]

Basically, the sound should be inputted by KUNREI system of romaji, but also Hepburn system is possible.

Example : to input [ふ]pronunciation. →[hu] (recommended)
→[fu] (possible)

The correspondence to HIRAGANA is shown in Table 13 ~ Table 17.

3.2.1.2 Long Vowel ["-", "~"]

Pronounce last “Reading mark” extended. It extends longer as it was inputted continuously.

“—” is the “long vowel” of fixed pitch, and “~” is the “long vowel” of vibrated pitch.

“Reading mark” right before the Long Vowel should be the Vowel ([a],[e],[i],[o],[u], or[n(ん)]).

Example : [ohayo-----] → (おはよ—————)

3.2.1.3 Silent[" "]

A constant silent sound is inserted. The silent time becomes longer as the number inputted continuously.

“Reading mark” right before Silent should be the Vowel ([a],[e],[i],[o],[u], or[n(ん)]).

3.2.1.4 Clause Punctuation Symbols [",", ".","?", "*"]

It shows an end of the clause.

“,” inputs one-length of “Silent”, and “.” inputs two-length of “Silent” compulsorily.

A symbol “?” raises a pitch and volume to a latest “Reading mark” or latest “Long vowel”, and expresses interrogative rhythm. The amount of change becomes large by attaching the numerical value of 1 to 99 like “? 99”. Moreover, two-terms of “Silent” are inputted compulsorily. When “?” is inputted continuously like “?????”, each symbols are considered as the end of Clause. In this case, the amount of pitch and volume change is the same as one “?”, but Silent increases by the count of “?”.

A symbol “*” decreases a pitch and volume to a latest “Reading sign” or latest “Long vowel”, and

expresses rhythm. The amount of change becomes large by attaching the numerical value of 1 to 99 like “*99”. Moreover, two-terms of “Silent” are inputted compulsorily. When “*” is inputted continuously like “*****”, each symbols are considered as the end of Clause. In this case, the amount of pitch and volume change is the same as one “*”, but Silent increases by the count of “*”.

3.2.2 Rhythm Marks

Concerning to the utterance character string, it is expressed a rhythm by the change of pitch and volume.

3.2.2.1 Accent mark [" ' ", " ^ ", " / ", " _ ", " \$ ", "< ", "> ", "& ", "= "]

By describing it just before a "Reading mark" or a "Long vowel", it sets up a rhythm by the hight accents which change pitch (Table 1 /Fig. 2) , and by the strength accents which change volume (Table 2/ Fig. 3). In addition, it is accumulated the amount of change until a "Clause punctuation mark" or the symbols shown in Table 3 which returns a change.

Although it allows describing a "Height accent" and a "Strength accent" simultaneously to one of a "Reading mark" or a "Long vowel", when two or more different "Height accents" or "Strength accents" are described, it gives a priority to accents described later.

The combined use with the symbols, [/], [=], and [&], which return a change, is possible, and when symbols are inputted like [?/], it performs the change after returning the amount of shifts to 0.

Moreover, the amount of shifts becomes larger as the same mark was inputted continuously (Fig. 4 Accent Symbols (example)), and it means the same thing as inputting the numerical value of 1 to 99 into just after the mark, such as ['99].

When "?" or "*" are effective to "Reading mark" or "Long vowel" which sets just after the "Accent mark", "Accent mark" will be skipped.

Table 1 Height accent mark

Symbol	Contents
'	Raises pitch at anlaut.
^	Raises pitch under pronunciation.
_	Decreases pitch at the beginning of a word.
\$	Decreases pitch under pronunciation.

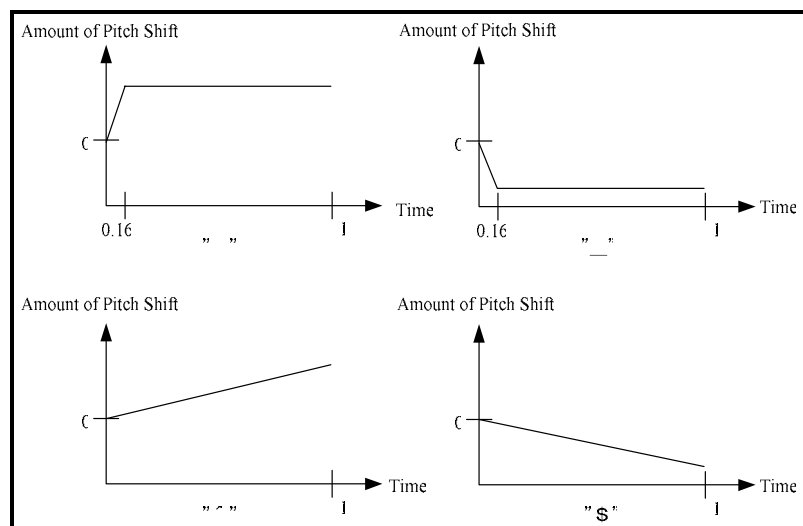


Fig. 2 Height Accent Symbols

"1" in the horizontal axis shows Utterance Length of each character. Utterance Length differs for every character.

Table 2 Strength accent mark

Symbol	Contents
<	Raises volume under pronunciation
>	Decreases volume under pronunciation.

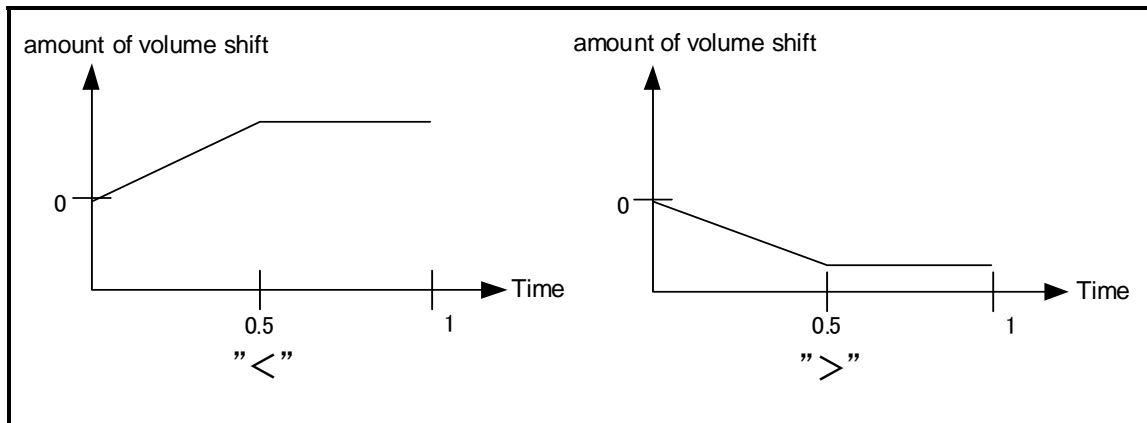


Fig. 3 Strength accent mark

“1” in the horizontal axis shows Utterance Length of each character. Utterance Length differs for every characters.

Table 3 Clear accent shift

Symbol	Contents
/	Clears pitch shifted by “Accent mark”.
=	Clears volume shifted by “Accent mark”.
&	Clears pitch and volume shifted by “Accent mark”.

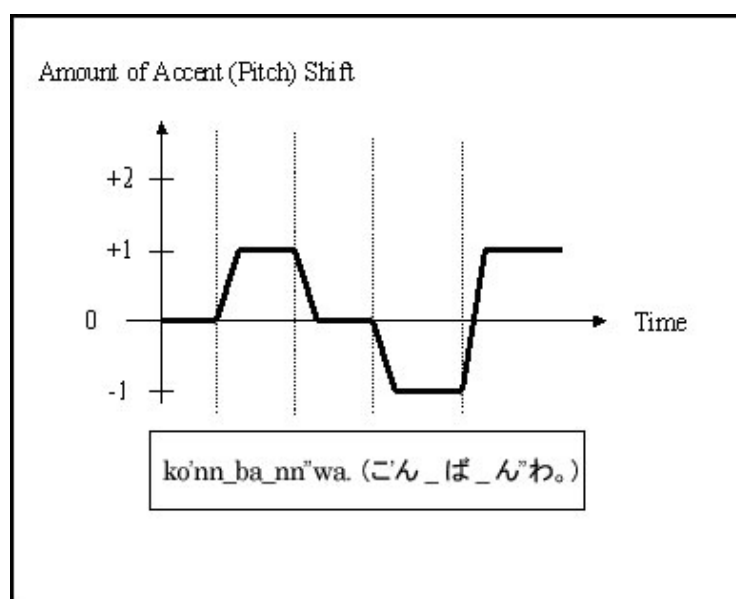


Fig. 4 Accent Symbols (example)

3.2.2.2 Rhythm of a clause ["@" , ":" , ";" , "!" , "+"]

It is Described at the head of a cause, and gives rhythm(tune) to the clause section uniformly. “Rhythm of clause” mark and its actions are shown in Table 4 / Fig. 5.

It is effective only in the setup clause, and it has no change when it's not described. Since “+” sets “Height accent mark” randomly to each “Reading mark” or “Long vowel”, “Height accent mark” written in the clause is ignored.

Table 4 Rhythm Symbols of a Clause

Symbol	Contents
@	It becomes higher with the 2nd "Read mark", and falls at the last.
!	It becomes lower with the 2nd "Read mark", and goes up by the last.
;	It becomes higher with the 2nd "Read mark."
:	It becomes lower with the 2nd "Read mark."
+	Random pitch

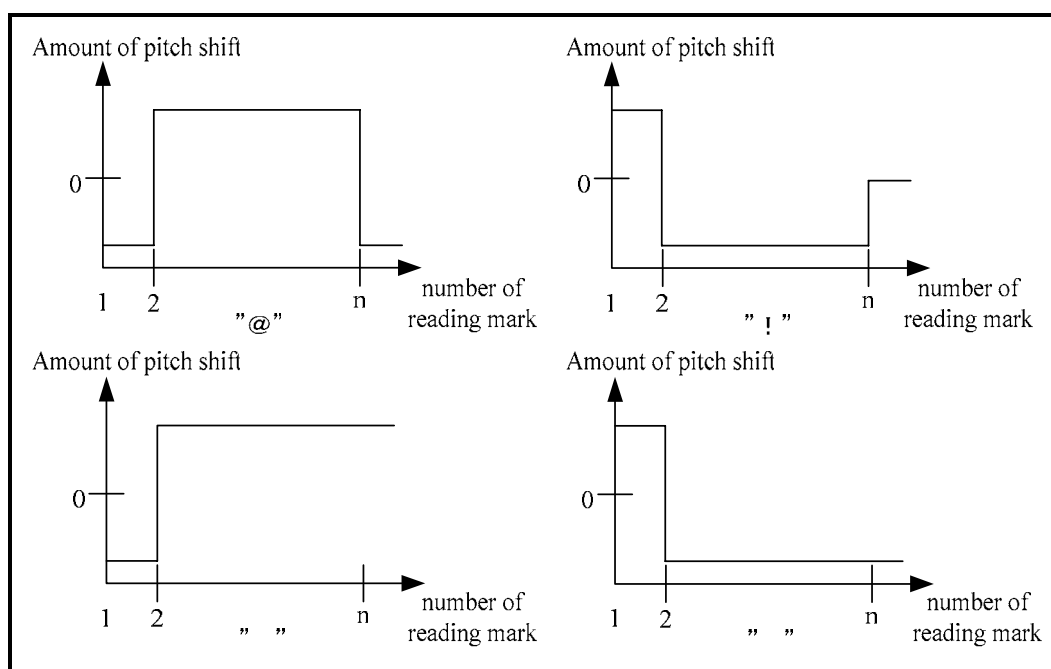


Fig. 5 Rhythm of a Clause (In case of a Reading mark number is n)

“1” in the horizontal axis shows Utterance Length of each character. Utterance Length differs for every character.

3.2.3 Control Character String

By the use of the following marks, the change of a volume, pitch, and etc. are given. The same value is maintained until it changes the changed amount of change into the next time

In addition, in the definition of the following setup values, it is indicated that the portion surrounded by "[]" is for the indispensable input, and the portion surrounded by "()" is for an arbitrary input.

3.2.3.1 Volume

V[value]

Numerical setting range : 1 to 5 (Default value : 4)

Explanation : Message to change volume

The amount of volume shift effected by each setting value is shown in Table 5.

It effects from the first "Reading mark" after the input location, until the location next Volume was set or the performance was finished

"Volume" between "Reading mark" and "Long vowel" or between "Long vowel" and "Long vowel" effects from the first "Reading mark" after "Long vowel".

Table 5 Table of Volume Change Parameter

Message	Amount of shift [dB]
V1	-24
V2	-18
V3	-12
V4	-6
V5	0

3.2.3.2 Pitch

[Music Scale] (Octave value)

Scale setting range : C, C#, D, D#, E, F, F#, G, G#, A, A#, B

Octave specification range : 1 to 3 (Default value : 2)

Explanation : Message to set height of voice sound to pronounce.

Specification of music scale and octave (Table 6). Height of octave is set automatically to the height which matches to the voice.

When an octave value is omitted, it would be set with the existing value.

When an pitch specification does not exist, it would be played with the default voice value.

It effects from the first "Reading mark" after the input location, until the location next "pitch" is specified, or the performance is finished.

"Pitch" between "Reading mark" and "Long vowel" or between "Long vowel" and "Long vowel" effects from the first "Reading mark" after "Long vowel".

Table 6 The amount of octave specification range shift

Octave specification range	Amount of shift
1	Default – 1 octave
2	Default
3	Default + 1 octave

3.2.3.3 Speed

S [Value]

- Numerical specification range : 0 to 99 (Default value : 50)
- Explanation : Message to shift utterance speed.
 Utterance length becomes shorter of certain fixed quantity, as the specified value gains one. Also becomes longer as the value decreases.
 It effects from the first “Reading mark”, “Long vowel”, “Silent”, and “Clause punctuation mark” after input location, until the next “Speed” specified or the performance finished.
 Operation about speed like the following examples described in the Long-vowel sound is not guaranteed.
 (Example) HV#GaS40---S50-. (HV#J あ S40―――S50――。)

3.2.3.4 Utterance Length Unification

L [value]

- Numerical setting range : 0 to 1 (Default value : 0)
- Explanation : The switch to decide whether all utterance has same length or each one has peculiar length after the described position. ON/OFF of a switch is as in Table 7.
 It effects from the first “Reading mark”, and “Long vowel” after input location, until the next “Utterance length unification” specified or the performance finished.
 Operation about speed like the following examples described in the Long-vowel sound is not guaranteed.
 (Example) HV#GaL1---L0 (HV#J あ L1―――L0――。)

Table 7 Utterance Length Unification Setting Value

Numerical setting	Utterance length of a Reading mark
0	Peculiar length
1	Same length

3.2.4 Event

The message sent to a playback application and etc. at the time of playback of HV-Script.

3.2.4.1 Voice Quality Change

K[value], X[value]

Numerical setting range	:	0 to 15 (Default value : K0)
Explanation	:	It changes the voice quality of synthesized voice sound to the voice quality of numerical setting range. K0 to K15 are default voice. X0 to X15 are extended voice, and extended voice must be set up beforehand. It is effective from the first “Reading mark” and “Long Vowel” after inputted location, until the next “Voice quality change” specified or the performance finished. Refer to “7 Default Voice Map” about contents of default voice

3.2.4.2 User Event

U[value]

Numerical setting range	:	0 to 9
Explanation	:	Message to execute the user specified event under the performance of HV-Script.

3.2.4.3 Height Accent / Degree of Rhythm Change of a Clause

W [value]

Numerical setting range	:	1 to 5 (Default value : 3)
Explanation	:	Message to change “Degree of rhythm change” of “Height accent mark” and “Rhythm mark of clause”. It changes a lot as the specified value gains. Amount of shift for each numerical setting is as shown in Table 8. It is effective from the next “Reading mark” after the inputted location, until the next value specified or the performance finished. The operation of the height accent described during a long vowel sound and the operation of the rhythm change degree in a clause are not guaranteed. (Example) HV#Ga’W5---W3-. (HV#J あ’W5―――W3ー。)

Table 8 Height Accent / Rhythm Change Parameter of a Clause

Message	The degree of rhythm change (×2)
W1	1/6
W2	1/2
W3	1
W4	2
W5	5

3.2.5 Comment Out

It makes it possible to write comments into HV-Script.

[(character string)]

Explanation	:	An area surrounded by "[]" is considered as a comment. It is impossible to describe between nests or commands. (Example: V[Volume]5)
-------------	---	---

3.3 Playback Limitation

The following items are the limitation of performing HV-Script with Middleware.

- 1) The maximum bytes in one clause surrounded by the clause punctuation marks is 100 bytes.
 - a) a clause punctuation marks includes not only punctuation marks, but also “?” and “*”.
 - b) a comment sentence, such as a copyright information, and numerical value incidental to “?” or “*” of clause punctuation marks is included in one clause.
 - c) When multiple clause punctuation marks exist continuously, they are calculated respectively as a different clause.
 - d) a header is not included in one clause.
 - e) “Long Vowel” and “Silent” marks are calculated as 2 bytes character, even though they were written by 1byte character.
 - f) When New-line code exists in one clause, it is calculated as 1 byte or 2 bytes.
 - g) When the 100th byte is a header byte of full-size character, or is a mark that includes number or # etc., accompanying lower bytes, numbers, and marks can be loaded up to the maximum of 105 bytes.
- 2) HV-Script data exceeding 214783547 (0x7FFFFFFF) bytes can not be performed.

The byte calculation is followed to Japanese HV format. The byte number of each string sequence is shown in Table 9 ~ Table 17.

4 Example of HV-Script

The following is the example of inputting HV-Script.

(In the following script, Voice character string is shown with **BOLD**, and Comment out is shown with *ITALIC*. These forms are described in order to make the script easy to read. An actual HV-Script does not have those forms.)

HV#G@S54ohayo^~<**gozaimasu**U1. o'<**ge_nn=kidesuka?** S56kyo_owa [*「kyou ha」* は *「kyoo wa」*
と入力する。] V5S51toxtuxtuxtutu'temo,S54'i/ite\$nn_ki,desu_ne.L1W5K4so-desune-.

(HV#J@S54 おはよ ^ ~ <、ございます U1。 お'げ_ん=きですか？ S56 きょ_おわ[「きょうは」は
「きょおわ」と入力する。]V5s51 とっつつつ'ても,S54'い・いて \$ ん_き、です_ね。 L1W5K4 そーで
すねー。)

5 Compatibility with Japanese HV-Script

5.1 Conversion from Global to Japanese HV-Script

Table 13 – Table 15 show the correspondence of [Alphabet notation of Global HV] to [KANA(Shift-JIS) notation of Japanese HV]. (recommended)

Alphabet notation shown in Table 16 also can be converted to KANA (Shift-JIS). (not recommended)

5.2 Conversion from Japanese to Global HV-Script

Table 13 – Table 15 show the correspondence of [KANA(Shift-JIS) notation of Japanese HV] to [Alphabet notation of Global HV] . (recommended)

KANA (Shift-JIS) notation shown in Table 17 also can be converted to Alphabet. (not recommended)

6 Correspondence Table of Characters and Marks

Table 9 Reading Marks

Roman	ASCII	Byte	Roman	ASCII	Byte	Roman	ASCII	Byte	Roman	ASCII	Byte
a	0x61	1	h	0x68	1	o	0x6F	1	v	0x76	1
b	0x62	1	i	0x69	1	p	0x70	1	w	0x77	1
c	0x63	1	j	0x6A	1	q	0x71	1	x	0x78	1
d	0x64	1	k	0x6B	1	r	0x72	1	y	0x79	1
e	0x65	1	l	0x6C	1	s	0x73	1	z	0x7A	1
f	0x66	1	m	0x6D	1	t	0x74	1			
g	0x67	1	n	0x6E	1	u	0x75	1			

Table 10 Alphabets

Alphabets	ASCII	Byte	Message	Alphabets	ASCII	Byte	Message
A	0x41	1	Pitch	K	0x4B	1	Vocal quality change (default)
B	0x42	1	Pitch	L	0x4C	1	Utterance length unification
C	0x43	1	Pitch	S	0x53	1	Speed
D	0x44	1	Pitch	U	0x55	1	User Event
E	0x45	1	Pitch	V	0x56	1	Volume
F	0x46	1	Pitch	W	0x57	1	Height accent / Degree of rhythm change of a clause
G	0x47	1	Pitch	X	0x58	1	Vocal quality change (extended voice)

Table 11 Symbols

Symbols	ASCII	Byte	Messages
" "(space)	0x20	2	Input of "Silent"
!	0x21	1	Rhythm of clause
#	0x23	1	Pitch
\$	0x24	1	Height accent
&	0x26	1	Clear shift of Height accent and Strength accent
'	0x27	1	Height accent
*	0x2A	1	Clause punctuation
+	0x2B	1	Clause punctuation
,	0x2C	1	Rhythm of clause
-	0x2D	2	Long vowel
.	0x2E	1	Clause punctuation
/	0x2F	1	Clear shift of Strength accent
:	0x3A	1	Rhythm of clause
;	0x3B	1	Rhythm of clause
<	0x3C	1	Strength accent
=	0x3D	1	Clear shift of Strength accent
>	0x3E	1	Strength accent
?	0x3F	1	Interrogative rhythm
@	0x40	1	Rhythm of clause
[0x5B	1	Start comment out
]	0x5D	1	Close comment out
^	0x5E	1	Height accent
_	0x5F	1	Height accent
~	0x7E	2	Long vowel (pitch vibration)

Table 12 Numbers

Maks	S-JIS	Byte	Messages
0	0x30	1	Input numeral value
1	0x31	1	Input numeral value
2	0x32	1	Input numeral value
3	0x33	1	Input numeral value
4	0x34	1	Input numeral value
5	0x35	1	Input numeral value
6	0x36	1	Input numeral value
7	0x37	1	Input numeral value
8	0x38	1	Input numeral value
9	0x39	1	Input numeral value

Table 13 Converting Map of Roman to Kana (1)

Kana	Roman	Pronunciation Examples	Byte	Kana	Roman	Pronunciation Examples	Byte
きゃ	kya	cab	4	ぎゃ	gya	gap	4
きゅ	kyu	cute	4	ぎゅ	gyu		4
きえ	kye		4	ぎえ	gye		4
きよ	kyo		4	ぎよ	gyo		4
しゃ	sya	shuffle	4	じゃ	zya	jump	4
しゅ	syu	shoot	4	じゅ	zyu	junior	4
しえ	sye	shelter	4	じえ	zye	jealous	4
しょ	syo	short	4	じょ	zyo	Jordan	4
すい	suxi	swim	4	ずい	zuxi		4
ちや	tya	chut	4	ぢや	dya	similar to "zya"	4
ちゅ	tyu	chew	4	ぢゅ	dyu	similar to "zyu"	4
ちえ	tye	check	4	ぢえ	dye	similar to "zye"	4
ちよ	tyo	cho colate	4	ぢよ	dyo	similar to "zyo"	4
てや	tha		4	でや	dha	Dallas	4
てい	thi	stick	4	でい	dhi	did	4
てゅ	thu		4	でゅ	dhu	dual	4
てえ	the		4	でえ	dhe		4
てよ	tho		4	でよ	dho		4
にや	nya		4	びや	bya	balance	4
にゅ	nyu	nu ance	4	びゅ	byu		4
にえ	nye		4	びえ	bye		4
によ	nyo		4	びよ	byo		4
ひや	hya		4	ぴや	pya	palace	4
ひゅ	hyu	huge	4	ぴゅ	pyu		4
ひえ	hye		4	ぴえ	pye		4
ひよ	hyo		4	ぴよ	pyo		4
みや	mya		4	ふあ	fa	fun	4
みゅ	myu	music	4	ふい	fi	fix	4
みえ	mye		4	ふえ	fe	fellow	4
みよ	myo		4	ふお	fo	form	4
りや	rya		4	ふや	fya		4
りゅ	ryu		4	ふゅ	fyu	fuel	4
りえ	rye		4				
りよ	ryo		4				

Table 14 Converting Map of Roman to Kana (2)

Kana	Roman	Pronunciation Examples	Byte	Kana	Roman	Pronunciation Examples	Byte
あ	a	ultimate	2	ぬ	nu	noon	2
い	i	interest	2	ね	ne	nest	2
う	u	how	2	の	no	north	2
え	e	elegant	2	は	ha	hut	2
お	o	boy	2	ひ	hi	hit	2
あ	xa	similar to "a"	2	ふ	hu	full	2
い	xi	similar to "i"	2	へ	he	head	2
う	xu	similar to "u"	2	ほ	ho	hall	2
え	xe	similar to "e"	2	ま	ma	musk	2
お	xo	similar to "o"	2	み	mi	mill	2
か	ka	cut	2	む	mu	swim	2
き	ki	kick	2	め	me	memo	2
く	ku	cream	2	も	mo	mall	2
け	ke	kettle	2	や	ya	young	2
こ	ko	Korea	2	ゆ	yu	you	2
さ	sa	suburb	2	よ	yo	York	2
し	si	sit	2	や	xya	similar to "ya"	2
す	su	stop	2	ゆ	xyu	similar to "yu"	2
せ	se	settle	2	よ	xyo	similar to "yo"	2
そ	so	soft	2	ら	ra	luck	2
た	ta	tusk	2	り	ri	little	2
ち	ti	church	2	る	ru	little	2
つ	tu	pants	2	れ	re	lemon	2
て	te	technology	2	ろ	ro	exploit	2
と	to	tray	2	わ	wa	wonder	2
っ	xtu	similar to "tu"	2	わ	xwa	similar to "wa"	2
な	na	nut	2	ん	nn	hint	2
に	ni	nickel	2				

Table 15 Converting Map of Roman to Kana (3)

Kana	Roman	Pronunciation Examples	Byte	Kana	Roman	Pronunciation Examples	Byte
が	ga	gut	2	で	de	destiny	2
ぎ	gi	give	2	ど	do	dormitory	2
ぐ	gu	good	2	ば	ba	bunker	2
げ	ge	get	2	び	bi	bee	2
ご	go	gong	2	ぶ	bu	boom	2
ざ	za		2	べ	be	bed	2
じ	zi	jingle	2	ぼ	bo	boar	2
ず	zu	zoo	2	ぱ	pa	pump	2
ぜ	ze	zed	2	ぴ	pi	pit	2
ぞ	zo	zoysia	2	ぷ	pu	pudding	2
だ	da	dull	2	ぺ	pe	pet	2
ぢ	di	similar to "zi"	2	ぽ	po	porch	2
づ	du	similar to "zu"	2				

Table 16 Converting Map of Roman to Kana (Supplement)

	Rom an	Kan a	Byte	Rom an	Kan a	Byte	Rom an	Kan a	Byte	Rom an	Kan a	Byte	Rom an	Kan a	Byt e
c-	cha	ちゃ	4	cya	ちゃ	4	chi	ち	2	chu	ちゅ	4	cyu	ちゅ	4
	che	ちえ	4	cye	ちえ	4	cho	ちよ	4	cyo	ちよ	4			
f-	fu	ふ	2												
j-	ja	じゃ	4	jya	じゃ	4	ji	じ	2	ju	じゅ	4	jyu	じゅ	4
	je	じえ	4	jye	じえ	4	jo	じよ	4	jyo	じよ	4			
s-	sha	しゃ	4	shi	し	2	shu	しゅ	4	she	しえ	4	sho	しょ	4
v-	va	ば	2	vi	び	2	vu	ぶ	2	ve	べ	2	vo	ぼ	2
	* “va”, “vi”, etc are not changed to “う゛ あ”, “う゛ い”, etc, but are treated as “ば”, “び”, etc.														
x-	xtsu	っ	2												

Table 17 Converting Map of Roman to Kana (Supplement)

Kana	Roman	Byte	Kana	Roman	Byte
			う゛ あ	ba	2
ゐ	i	2	う゛ い	bi	2
			う゛	bu	2
ゑ	e	2	う゛ え	be	2
を	o	2	う゛ お	bo	2

7 Default Voice Map

The following shows the individuality of default Voice Map.

Table 18 Default voice map

No.	Name	Dict	Pitch Shift	Fixed Pitch	Prosodic Volume	Dimensions
0	Normal Man	m	0	—	E	Default Man
1	Normal Woman	w	0	—	E	Default Woman
2	Onih-san	m	0	—	E	Fine Young Man
3	Oneh-san	w	300	—	E	Gentle Young Lady
4	Boy	w	700	—	E	Boy
5	Girl	w	1200	—	E	Girl
6	Radio Voice Man	m	100	—	E	Man voice from AM-radio
7	Radio Voice Woman	w	300	—	E	Woman voice from AM-radio
8	Hard-boiled	m	-1200	—	E	Man, Hard-boiled
9	Witch	m	0	—	E	Old Witch Woman
10	Hanazumari	m	0	—	E	Nasal Voice
11	Shitatarazu	m	200	—	E	Rat Voice
12	Water	m	0	—	E	Voice Of Underwater
13	Martian	m	0	—	E	Vibrated voice like an alien
14	Robot	m	0	80	E	Robot voice without intonation
15	Synth	m	1200	—	E	Synthesizer sound

* No 0 to 15 refer to K0 to K15 of Voice quality change (one of the event mark of HV-Script) .

* Dict shows the sex of the base of the voice. [m] means a male, and [f] means a female.

* Pitch Shift shows the amount of pitch shift to the standard voice for each male and female. The unit is cent.

* Fixed Pitch is used to fix the pitch to play. The unit is Hz.

When the pitch is fixed, pitch shift set in HV-Script is ignored, and it is played with the designated pitch.

* Prosodic Volume is used to designate Enable / Unable of “Volume change specification”.

[E] means enable, and U means unable.

When the “Volume change specification” is designated to [Unable], “Strength accent” or “Volume specification” in HV-Script are ignored.