

--+----- -+--- -

THE Reference Document v1.9 for JCH's NewPlayer 20.G4 And Editor v3.04 X

-----+----- -+--- -

- Compiled and Written by Frantic/HT -
- PDF version with colorized and reorganized tables by SuperNoise/Crystal Sound
(17.09.2006) - noise@netblok.pl

Based On:

- * Docs by JCH/Vibrants himself (Jens-Christian Huus)
- * Some monitor hacking and also investigation of the playersource.
- * What I once was told by Peran/Xia (Per Almered)
- * Mapping the 64
- * Goto80's confused brain
- * Misunderstandings
- * Experience

And as a bonus, someone called Encore did the editor-window-section in the very beginning of this textfile. Thanks!

List of content:

1. The editor window
2. How To Set The Table-Bytes In NewPlayer 20.4G
3. Commands To Type In The ____-Row
4. Complete Key-Guide For The Jch-Editor V3.02
5. Useful technical info
6. About The Packer... (v5.3)
7. Other versions of the Editor/Player

1. The Editor Window

Note : The screen as it looks when the hidden table window is shown by pressing the "/" key.

```

Keyboard Lock
|      Total Time      |      Tracktranspose/      | | | |
|      |      Play Time      |      Tracknumber      |
|      |      |      |      |      |
+-----+-----+-----+-----+
|ST|01:52|00:14|      |      |F| <----- Global Volume
+-----+-----+-----+-----+
|00|8C02|03 A-0|8C04|04 C-3|8C01|--- ---| <----- Track Editor / Sequencer
|01|      --- +++|      --- +++|      --- ---|
|02|      --- A-1|      --- +++|      --- ---|
|03|      --- +++|      --- +++|      --- ---|
|04|      --- A-0|      --- C-3|      I02 C-3|
|05|      --- +++|      --- +++|      --- +++|
|06|      --- A-0|      --- C-3|      --- C-3|
|07|      --- +++|      --- +++|      --- +++|
+-----+-----+-----+-----+
|00:C1-81|00:51 40 02 04|00:02 02 00 00| <----- Arpeggio Table (left)
|01:A8-11|04:FF 20 20 08|04:00 00 00 00|
|02:AA-11|08:FF 20 A0 04|08:00 00 00 00| <--- Pulse-Sweep Table (middle)
|03:AA-10|0C:00 00 00 00|0C:00 00 00 00|
|04:AA-40|10:00 00 00 00|10:00 00 00 00| <- Filter-Sweep Table (right)
|05:A8-40|14:00 00 00 00|14:00 00 00 00| (First 4 bytes reserved)
|06:00-00|18:00 00 00 00|18:00 00 00 00|
+-----+-----+-----+-----+
|00:00 C8 08 F1 00 00 00 00|00:0F 00|04| <----- Current Octave
|01:00 C9 08 80 00 00 00 00|01:00 00|0+| <----- Crsr-Stay Note & Crsr-Stay Hex
|02:00 C8 00 80 00 00 00 00|02:00 00|S4| <----- Song Speed
|03:00 C8 04 40 30 04 10 16|03:00 00|SP| <----- Start Trigger
+-----+-----+-----+-----+
|      |      |      |      |      |
+-----+-----+-----+-----+
8-Byte Instrument Table      |      Info Window
|      |
+-----+-----+-----+-----+
Super/Slide Table
(First 2 bytes reserved)

```

--+----- -+-- -

2. How To Set The Table-Bytes In NewPlayer 20.4G

-----+----- -+-- -

"A" means first byte in a row in the table, "B" means second byte etc..

The 8-Byte Instrument Table.

-----+----- -+-- -

Byte	High nibble		Low nibble	
	Value	Description	Value	Description
A	\$00-\$0F	Attack	\$00-\$0F	Decay
B	\$00-\$0F	Sustain	\$00-\$0F	Release
C	\$40	HiFreq	\$00(fast)-\$0F(slow)	Apeggio Speed
	\$80	Hard Restart		
D	\$10-\$F0 - Normal \$F0	Filter Resonace	1	LP
			2	BP
			4	HP
			8	Voice 3 off
E	Filter-Sweep table Pointer (Start at pointer 4!)			
F	Pulsating Table Pointer			
G	Arpeggio Table Pointer While Gate ON (+++)			
H	Arpeggio Table Pointer While Gate OFF (---)			

The 4-Byte Filter-Sweep Table.

-----+----- -+-- -

Byte	Value	Description
A	\$00-\$FD	Start filter value
	\$FE	Sets Filter to Current Value of Voice 3 in the ht.g1-player
	\$FF	Keeps The Current Filter
B	\$00-\$7F	Speed of filtersweep (up)
	\$FF-\$80	Speed of filtersweep (down)
C	\$00-\$7F	Duration In Frames (1 Frame = 1/50 second)
D		Next Step Offset (Where To Go After C Has Expired)
First 4 Bytes in 20.g4 Filter-Sweep Table		
A	Half Speed Selector Speed 1 (\$02-\$09) (Active when songspeed is 1 or 0.)	
B	Half Speed Selector Speed 2 (\$02-\$09) (Active when songspeed is 1 or 0.)	
C	Not Used. (Was maximum raster decrease setting in some earlier players.)	
D	Choose which voice controls the filter-sweep routine (\$00-\$02) [Note: Honestly I don't think this one does this, but JCH himself says so.]	

The 2-Byte Arpeggio-Table.

-----+-----+-----+-----

Byte	High nibble		Low nibble	
	Value	Description	Value	Description
A	\$00-\$5F		TransposeValue	
	\$80-\$DF		Locked Values	
	00-7D		HiFreq	
	80-FF		locked	
	\$7E XX		Loop Last Table-Step eternally. XX Doesn't matter.	
	\$7F XX		Jump to LoopAddress. XX is the position to jump.	
B	1	Triangle	1	Gate
	2	Saw	2	Synch
	4	Pulse	4	Ringmodulation
	8	Noise	8	Disable oscillator

The 2-Byte Super/Slide Table.

-----+-----+-----+-----

First byte			Second byte		
High nibble value	Low nibble value	Description	High nibble value	Low nibble value	Description
\$0	Slide up				
	\$j	High slide up speed	\$kk		Low slide up speed
	Slide Speed = A(\$0j) + B(\$kk)				
\$2	Slide down				
	\$j	High slide down speed	\$kk		Low slide down speed
	Slide Speed = A(\$0j) + B(\$kk)				
\$6	Vibrato				
	\$1-\$F	Vibrato Feeling	\$1-\$F		Vibrato speed
	\$0	Vibrato off		\$0-\$7	Vibrato Width
\$90		New Sustain / Release value			
			\$1-\$F		New sustain
				\$0-\$F	New release
\$C0		Arpeggio Change Command (\$C0) + Instrument number (\$XX)			
			\$kk		Arpeggio Table Offset
\$E0		Song Speed			
			\$00-\$01		For Halfspeed, See Filter Table
			\$00-\$09		New Speed of The Tune
\$F0		Instrument Volume			
			\$00-\$0F		New Global Volume
First 2 Bytes In The Table Is Reserved					
\$0-\$F		Hard restart Attack	\$0-\$F		Hard restart Sustain
	\$0-\$F	Hard restart Decay		\$0-\$F	Hard restart Release

The 4-Byte Pulse-Sweep Table.

-----+-----+-----+-----

Byte	Value	Description
A	\$00-\$FE	Start pulse value
	\$FF	Keeps The Current Pulse value
B	\$00-\$FE	Speed of pulswweep
C	\$00-\$7F	Duration In Frames (1 Frame = 1/50 second)
	\$80	For Pulse Downwards Instead Of Upwards
D		Next Step Offset (Where To Go After C Has Expired)

---+-----+--

3. Commands To Type In The ____-Row

-----+-----+-----+-----+-----

In the Sequences

-----+-----+-----+-----

I03	Instrument #03. Values \$00-\$1F.
S04	Slide/super-table pointer #04. Values \$00-\$3F.
***	Tie note (does not restart vibrato, pulsating etc.)

The 2-byte Tracktranspose/Tracknumber Field

-----+-----+-----+-----

Examples:

8C03 means... Transpose current sequence \$0c steps up. (Default)
\$80 means no transpose. Note that you can't transpose down by using a value which is less than \$80.

Sequence number \$03. (May be between \$01-\$74)
Sequence \$00 should only be used as an empty sequence.

Special commands:

FFxx	Loop to beginning (xx doesn't matter)
FExx	End and stop tune (xx doesn't matter)
00xx	Loop to position xx. (This may work only when the tunes are packed in the packer, and not when played in the editor. However, I haven't tried this, so I'm not sure.)

-+-----+--- -

4. Complete Key-Guide For The Jch-Editor V3.02

-----+-----+-----+-----+-----

Key	Function
Play mode	
F1	Play music from start-point (SP), defined with the "+"-key.
F3	Play from the absolute beginning.
F4	Turn off ALL interrupt play (STOP)
CTRL 1-3	Turn voices on/off.
"+"	Define start-point for "F1" playing (SP).
SHIFT G	Go to start-point (defined with the "+" key).
SHIFT B	Follow-play (Break with the runstop key). Uses start-point!
<- (arrow)	Fast forward in play-mode.
SHIFT S/D	Music speed up/down.
SHIFT @/*	Overall volumen up/down.
SHIFT F	Finetune all three voices.
Edit functions	
F5	Toggle between track or sequence mode.
F7	Octave up
F8	Octave down
F6	DELETE in tracks, sequences or arpeggio-table.
SHIFT INST	Insert in tracks, sequences or arpeggio-table.
SHIFT RETURN	Insert as many spaces in a sequence as defined with SHIFT R
SHIFT R	Define number of inserts made with SHIFT RETURN.
SHIFT "."	Copy FROM sequence - TO sequence
SHIFT "/"	Copy FROM sequence - TO the sequence beneath the cursor
Instrument 'edit mode' functions	
"/"	Open/close the extra table window
"Z"	Toggle in/out of 8-byte instrument-table
"X"	Toggle in/out of slide/super-table
"L"	Toggle in/out of arpeggio-table
":"	Toggle in/out of pulsate-table
","	Toggle in/out of filtersweep-table
"G"	Enter start of current arpeggio (arpeggio-table only)
"H"	Same as "G" but for use in players like version 15
"J"	Go to the last position in the arpeggio-table
SHIFT HOME	Home in voice 1's sequence-mode

--+----- -+-- -

Complete Key-Guide For The Jch-Editor V3.02 – second side

-----+----- -+-- -

Sequence mode	
F5	Toggle between track or sequence mode.
SPACE	REST ("---") in sequence-mode
SHIFT SPACE	CONT ("+++") in sequence-mode
SHIFT-"UP-ARROW"	Fill with "+++" from cursor-pos down to the next note
CTRL-"UP-ARROW"	Fill with "---" from cursor-pos down to the next note
SHIFT V	Cursor right/Cursor stay (x+/x0) on hexadecimal numbers
SHIFT N	Cursor down/Cursor stay (+x/0x) when typing notes
SHIFT Z	Define number of track-numbers to be copied into a buffer
SHIFT A	Paste the buffer into the track beneath the cursor
SFX mode	
F2	Turn SFX keyboard mode on.
SHIFT Q	Play music in voice 2 and 3 while using voice 1 in SFX mode
SHIFT W	Play music in voice 1 and 3 while using voice 2 in SFX mode
SHIFT E	Play music in voice 1 and 2 while using voice 3 in SFX mode
"C="	Toggle lock of keyboard for SFX keyboard ("F2")
Other functions	
RETURN	Use as normal.
CRSR-keys	Use as normal.
SHIFT X	Enter diskette menu.
SHIFT I	Information about editor version
SHIFT P	Poly-play (multi keyboard check!). When entering this mode you can only use F7/F8 (octave up/down) besides the CRSR up and down IF you are in one of the tables. Exit this function with either runstop or F4.
SHIFT C	Clear composition only. Tables are untouched.
SHIFT M	Clear tables only. Composition remains untouched.
"="	Home in current mode and voice.

--+----- -+-- -

5. Useful technical info

-----+----- -+-- -

If the editor hangs, be quick to reset the computer and jump to \$c803.
(SYS 51203) It works most of the time...

If you'd like to edit/load/save some data directly in the monitor

-----+----- -+-- -

Global Volume: \$1009
Arpeggiotable1: \$18CB (+\$100)
Arpeggiotable2: \$19CB (+\$100)
Filtertable: \$1ACB (+\$100)
Pulsetable: \$1BCB (+\$100)

Instrument table: \$1CCB (+\$100)
 Supertable: \$1FCB (+\$100)
 Trackorderlist: \$20CB (+\$400*ChannelNumber)
 Tracks: \$2CCB (+\$100*TrackNumber)

Trackformat is like this in memory

$$- - - + - - - - - - + - - - - - + - - - -$$

Header: 73 XX 80 80 (XX is tracklength*2 - 2)
(Dunno exactly what the other three bytes means.)

Then a Series of Bytepairs (until a endmark is met),
like this XX (80-FF or Endmark 7F) YY (00-7E) where:

00 = No note

01-7D = note number..

7E = Gate on (+++)

7F = endmark..

80 = nothing

90 = Tie note (***)

A0+BF = Instrument number

C0+DF = S-command

Voice priority

-----+-----+-----+-----

The player sets the sidvoices in this order 2,1,0. This means that if two voices happens to set the filter simultaneously (same frame) and differently (not advisable) then the setting for the lowest numbered voice will be the one that appears to control the filter.

$$- + - - - - - - - + - - -$$

6. About The Packer... (v5.3)

-----+-----+-----+-----

V5.3 works with all music done in Player v10 up to player v20.

At the "maximum numbers of sequences-input" always press enter. Then you're prompted to tell weather you want to clear repeated Ixx-commands or not.

Don't do this if you have used the S9x-command (changes the sustain) and if you have used the Ixx-command to reset it. (You get the point, don't you?)

Then the packer removes unused sequences. If it finds one, the screen will flash red once for each unused one. Check it out if think you may have done something wrong. Also, the screen will flash grey once for each un-necessary Ixx-cmd if you choised to remove Ixx-cmds.

The packer is known to be a bit buggy. Watch out for 5.4 (not updated by JCH, but someone else that I cannot remember the name of right now) if you are experiencing problems when packing a tune.

— + — — — — — — — — — — + — — — —

7. Other versions of the Editor/Player

-----+-----+-----+-----

DJB (also known as Morbid/Onslaught) did a hacked version of the jch-editor/player which allows you to make tunes in up to 8x-speed. His version also supports turbo load/save with action replay/final cartdrige. Check it out!

Samar has made a few versions of the player (and the packer) too. I noticed that those could be found in the High Voltage Editor Collection, or something like that. Search and you'll find.

Also remember that the sourcecode for the jch-player is out there, so it's very easy to customize the player for your own needs if you feel like it.

Finito.