

```

00 00 02 01 00
01 00 02 01 01
02 03 04 05 02
03 -- -- -- --
04 -- -- -- --
05 -- -- -- --
06 -- -- -- --
07 -- -- -- --
08 -- -- -- --
09 -- -- -- --

```

HT2

A 1230 playback indicators

LP 01 loop point

SP 10 global song speed

BS 00 block start

BE 00 block end

D 5FCD user drum pointer

A1P AutoInc/RowPlay indicators

CA message area

CONF

alpha mode indicator

channel 1 channel 2 channel 3 drum&fx channel

```

00 00 02 01 00
01 00 02 01 01
02 03 04 05 02
03 -- -- -- --
04 -- -- -- --
05 -- -- -- --
06 -- -- -- --
07 -- -- -- --
08 -- -- -- --
09 -- -- -- --

```

HT2

A 1230

LP 01

SP 10

BS 00

BE 00

D 5FCD

A1P

CA

CONF

sequence row no.

PT 02 pattern no.

OC 0 current octave

```

0 1 2 3 4 5 6 7 8 9
B-1 B-1 A B-1 B-1 C B-1 D B-1 E B-1 F B-1 G B-1

```

notes

row numbers

HT2

A 1230

LP 01

SP 10

BS 00

BE 00

D 5FCD

A1P

PT 01 pattern no.

row numbers

```

0 1 2 3 4 5 6 7 8 9
A 20 B 000 C 000 D 000 E 000 F 000 G 000 H 000 I 000 J 000 K 000 L 000 M 000 N 000 O 000 P 000 Q 000 R 000 S 000 T 000 U 000 V 000 W 000 X 000 Y 000 Z 000

```

drums

effect commands

effect parameters

HT2

A 1230

LP 01

SP 10

BS 00

BE 00

D 5FCD

A1P

<http://irrlichtproject.de/houston/>



cmd	effect
1xy	SET PAN
2xx	PITCH SLIDE UP CH3
3xx	PITCH SLIDE DOWN CH3
4xx	DUTY CYCLE / NOISE CH1
5xx	DUTY CYCLE / SWEET CH2
6xx	DUTY CYCLE CH3
7xx	AUTO CHORD CH2
8xx	EXEC NOTE TABLE CH3
9xx	GLITCH CH3
A0x	ADD SFX CH1
Bxy	LOOP SECTION / BREAK PTN
Cxx	NOTE CUT CH1
D0x	DRUM MODE
Exx	EXTENDED FX
Fxy	SET SPEED

<http://irrlichtproject.de/houston/>

1xy	SET PAN	<p>bit 0 set: pan channel 1 right (add 0x01 to parameter)  bit 1 set: pan channel 1 left (add 0x02 to parameter)  bit 0,1 reset: pan channel 1 center (don't add anything to parameter)  bit 2 set: pan channel 2 right (add 0x04 to parameter)  bit 3 set: pan channel 2 left (add 0x08 to parameter)  bit 2,3 reset: pan channel 2 center (don't add anything to parameter)  bit 4 set: pan channel 3 right (add 0x10 to parameter)  bit 5 set: pan channel 3 left (add 0x20 to parameter)  bit 4,5 reset: pan channel 3 center (don't add anything to parameter)  bit 6 set: pan drums right (add 0x40 to parameter)  bit 7 set: pan drums left (add 0x80 to parameter)  bit 6,7 reset: pan drums center (don't add anything to parameter)</p>
2xx	PITCH SLIDE UP CH3	<p>Cause a (rather fast) upward pitch slide on channel 3.  xx defines the speed of the slide, lower values mean slower slides. xx can be any value, but beware that the pitch counter will eventually wrap.  200 switches off the effect.</p>
3xx	PITCH SLIDE DOWN CH3	<p>Cause a very fast downward pitch slide on channel 3. Using this will disable effect 9xx.  xx defines the speed of the slide, higher values mean slower slides. xx can be any value, but beware that the pitch counter will eventually wrap, after which the pitch will start to slide upwards.  300 switches off the effect.</p>
4xx	DUTY CYCLE/ NOISE CH1	<p>Set the duty cycle for channel 2, and toggle noise mode.  xx &lt;= 0x80 - set duty cycle and disable noise mode (equivalent to additionally setting A00 command)  xx &gt; 0x80 - set duty cycle and enable noise mode (equivalent to additionally setting A01 command).</p>
5xx	DUTY CYCLE/ SWEEP CH2	<p>Set the duty cycle for channel 2, or enable duty cycle sweep.  xx &lt;= 0x80 - set duty cycle and disable duty cycle sweep. A value of 0x80 produces the default 50:50 wave. Very low/high values will cause glitches.  xx &gt; 0x80 - enable SID-style duty cycle sweep.</p>
6xx	DUTY CYCLE CH3	<p>Set the duty cycle for channel 3.  xx can be any value, but very low/high values will cause glitches. A value of 0x80 produces the default 50:50 wave.</p>
7xx	AUTO CHORD CH2	<p>Add a chord effect to channel 2. The chord created varies depending on the note used, and is not necessarily harmonic. xx can be any value, 700 turns off the effect. HINT: Try 780 with channel 2 duty cycle sweep enabled.</p>
8xx	EXEC NOTE TABLE CH3	<p>Execute a given pattern as a note table for channel 3. This effect operates on a per-tick basis. Execution starts after the first tick.  xx is the pattern to be executed as note table. If the current tempo is greater than 0x10, table execution will continue at the following pattern.  To disable the effect, set xx to a value greater than 0x7F.  Using this effect will disable the Cxx (note cut ch1) effect.</p>
9xx	GLITCH CH3	<p>Add a nasty glitch effect to channel 3. Using this will disable effect 3xx.  xx can be any value, 900 turns off the effect.</p>
A0x	ADD SFX CH1	<p>Add a sound effect to channel 1.  A00 deactivates the effect.  A01 adds noise or glitchy sounds to channel 1. The actual outcome depends on the current pitch of ch1. To some extent, it's also influenced by the currently active drum sound. It works best with high notes, especially A-5 and A-6.  A02 adds slight random inaccuracies to the pitch of channel 1. It has little effect by itself, but can be used to produce a phasing effect in conjunction with other channels set to the same note as ch1. The effect does not work equally well on all pitches, namely it won't do anything on C notes.</p>
Bxy	LOOP SECTION/ BREAK PTN	<p>xy = 0 - break pattern immediately and jump to the next position in the sequence. B00 is ignored on the first line of a pattern.  xy &gt; 0 - jump back y rows in the pattern, repeating the section x times.  The Bxy effect should not be nested (ie. don't put a Bxy loop within another Bxy loop)</p>
Cxx	NOTE CUT CH1	<p>Cut the note on channel 1 after xx ticks. Using this effect can make the sound output slightly more noisy.  Use C00 to disable the effect.  Using this effect will disable the 8xx (exec note table ch3) effect.</p>
Dxx	DRUM MODE	<p>Set the drum mode, where xx is 0x00..0x4F. Refer to the <a href="#">drums section</a> for details.</p>
Exx	EXTENDED FX	<p>Exx with xx &lt; 0x40 - execute up to 5 effects stored at the start of effects pattern xx at once. Effects Bxx and Exx will be ignored.  E80 - reset all effects and restore global variables to their defaults.  E81 - as above, but does not reset speed.  E82 - as above, but does not reset speed and duty cycles.  E83 - as above, but does not reset speed, duty cycles, and panning settings.</p>
Fxy	SET SPEED	<p>Set the current speed. xy can be any hexadecimal number between 0x01 and 0xFF. The higher the value, the slower the speed. This command temporarily overrides the global speed setting, but does not permanently change it.</p>