Because the information in the SpeakJet Manual is relatively wide spreaded, this page gives a quick overview of the control possibilities of the Speakjet:

MSA (Mathmatical Sound Architecture)

MSA commands are stored in the 64-Byte input buffer and are executed in the order they are received.

MSA Controls

An 'X' indicates that a second number should follow as parameter.

Pause Control

000: Pause 0 ms
001: Pause 100 ms
002: Pause 200 ms
003: Pause 700 ms

004: Pause 30 ms
005: Pause 60 ms
006: Pause 90 ms

016: Wait *Watch out! Waits for event input line or SCP-Start command!*
030: Delay, X *number of 10 ms intervals to delay before continuing on to the next code, accepts 0-255*

Next Sound Control

007: Play next sound fast
008: Play next sound slow

014: Play next sound high
015: Play next sound low

Volume/Pitch/Speed/Bend Control

020: Volume, X *sets Master Volume Level, accepts 0-127*
021: Speed, X *Play Speed, default 114, accepts 0-127*
022: Pitch, X *Pitch in Hertz, only for voiced sounds, default 88, accepts 0-255 (=32kHz..240kHz)*

023: Bend, X *Sets the Frequency Band (from deep hollow to high metallic), default 5, accepts 0-15*

Port Control

024: PortCtr, X *binaurally encoded output line control, see manual for details, default 7, accepts 0-7*
025: Port, X *port output value, see manual for details, default 0, accepts 0-7*

Phrase Control

026: Repeat, X *repeats the next code x-times, accepts 0-255*
028: Call Phrase, X *which EEPROM phrase to play, max 3 level deep nesting*
029: Goto Phrase, X *which EEPROM phrase to play*
255: End of Phrase

Reset

031: Reset Defaults

MSA Sound Codes

128..254: MSA Sound Phrases and Effects, see SpeakJet Definition List.

SCP (Serial Control Protocol)

SCP commands are executed immediately and provide control over the 5-channel synthesizer as well as accessing the internal speakjet EEPROM.

Entering SCP

'\0' to enter SCP

SCP Commands

'H': Store Memory Type *accepts 0 and 32*

- '0H': Write a register's value
- '32H': Write to the internal EEPROM

'J': Memory Address

- '0J': Envelope Freq
- '1J': OSC1 Freq .. '5J': OSC5 Freq
- '6J': Distortion
- '7J': Master Volume
- '8J': Envelope Control
- '11J': OSC1 Vol .. '15J': OSC5 Vol

'N': Store Memory
'R': Clear Buffer
'S': Stop Enounciating
'T': Start Enounciating
'V': ACK
'W': Hard Reset

Exiting SCP

'X' or '\A'

Examples

\0 V X*
Enters SCP-Mode, enounciates READY and exits SCP-mode

8J 0N 1J 500N 11J 16N*
1st OSC freq 500 and vol 16

0J 32H 01N*
write 0x1 to the first location of internal EEPROM

8J 00N*
set env-type to SAW

8J 10N*
set env-type to TRIANGLE

* *Don't send spaces, this is just for readability!*

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