

SCP and MSA #defines for the SpeakJet

ImportantNote:

This file is currently under development and can change radically!

Maybe you want to wait some days until this note disappears to add your SJ-Definitions

It can be used for your C-based MBHP_IIC_SpeakJet Project:

Feel free to edit and add defines!

```
/*
 * IIC_SpeakJetDefines.h
 * kII.2
 *
 * Created by Michael Markert, audiocommander.de on 20.05.06
 * Based on Speakjet control codes from July 27, 2004 version of Speakjet
Manual
 * and ASM-Version of Doug Elliott, VA3DAE
 *
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 */

#ifndef _IIC_SPEAKJETDEFINES_H
#define _IIC_SPEAKJETDEFINES_H

// ***** SPEAKJET SCP REGISTERS ***** //
// SCP Registers & MAX Values
#ifdef _DEBUG_C
    #pragma mark -
    #pragma mark SCP REGISTERS & MAX VALUES
#endif

// Envelope
#define SCP_ENV_FREQ      0
#define SCP_ENV_CTRL      8
// ENVType (send ENVType + ENVState!)
#define SCP_ENV_SAW        0x0
#define SCP_ENV_SINE       0x1
#define SCP_ENV_TRIANGLE  0x2
#define SCP_ENV_SQUARE     0x3
// ENVState (send ENVType + ENVState!)
#define SCP_ENV_OSC123     0x40
#define SCP_ENV_OSC45     0x80

// Oscillators
```

```
#define SCP_OSC1_FREQ      1
#define SCP_OSC2_FREQ      2
#define SCP_OSC3_FREQ      3
#define SCP_OSC4_FREQ      4
#define SCP_OSC5_FREQ      5
#define SCP_FREQ_MAX      3999

#define SCP_OSC1_LEVEL      11
#define SCP_OSC2_LEVEL      12
#define SCP_OSC3_LEVEL      13
#define SCP_OSC4_LEVEL      14
#define SCP_OSC5_LEVEL      15
#define SCP_LEVEL_MAX      31    // 63 MAX for Mixer 1

// Distortion
#define SCP_DISTORTION      6
#define SCP_DISTORTION_MAX  255

// Master
#define SCP_MASTER_VOLUME  7
#define SCP_MASTER_VOLUME_MAX 255

// ***** SPEAKJET SCP ***** //
// Serial Control Protocol
#ifdef _DEBUG_C
    #pragma mark -
    #pragma mark SCP
#endif

// escape character ('\') 0x5C to enter SCP Mode
#define SCP_ESCAPE          0x5C
#define SCP_SEL0            0
#define SCP_SEL1            1
#define SCP_SEL2            2
#define SCP_SEL3            3
#define SCP_SEL4            4
#define SCP_SEL5            5
#define SCP_SEL6            6
#define SCP_SEL7            7
#define SCP_EXIT            X

#define SCP_READY          V
#define SCP_CLEAR_BUFFER   R
#define SCP_START          T
#define SCP_STOP           S
```

```
#define SCP_MEMTYPE          H
#define SCP_MEMADDR          J
#define SCP_MEMWRT           N

#define SCP_RESET            W

// ***** SPEAKJET MSA ***** //
// Mathematical Sound Architecture
#ifdef _DEBUG_C
    #pragma mark -
    #pragma mark MSA Control Codes
#endif

// 0 - 31 CONTROL CODES
#define MSA_PAUSE0           0
#define MSA_PAUSE1           1
#define MSA_PAUSE2           2
#define MSA_PAUSE3           3
#define MSA_PAUSE4           4
#define MSA_PAUSE5           5
#define MSA_PAUSE6           6

#define MSA_NEXTFAST          7
#define MSA_NEXTSLOW          8
#define MSA_NEXTHIGH          14
#define MSA_NEXTLOW           15

#define MSA_WAIT              16

#define MSA_VOLUME            20
#define MSA_SPEED             21
#define MSA_PITCH             22
#define MSA_BEND              23

#define MSA_PORTCTR           24
#define MSA_PORT              25

#define MSA_REPEAT            26

#define MSA_CALLPHRASE        28
#define MSA_GOTOPHRASE        29

#define MSA_DELAY             30
#define MSA_RESET             31

// 32 - 127 (Reserved)
#ifdef _DEBUG_C
```

```
#pragma mark MSA (Reserved)
#endif

// 128 - 254 SOUNDCODES
#ifdef _DEBUG_C
    #pragma mark MSA Sound Codes
#endif

// MSA Sound Codes: Phonemes
#define MSAPH_IY          128
#define MSAPH_IH          129
#define MSAPH_EY          130
#define MSAPH_EH          131
#define MSAPH_AY          132
#define MSAPH_AX          133
#define MSAPH_UX          134
#define MSAPH_OH          135
#define MSAPH_AW          136
#define MSAPH_OW          137
#define MSAPH_UH          138
#define MSAPH_UW          139
#define MSAPH_MM          140
#define MSAPH_NE          141
#define MSAPH_NO          142
#define MSAPH_NGE         143
#define MSAPH_NGO         144
#define MSAPH_LE          145
#define MSAPH_LO          146
#define MSAPH_WW          147
#define MSAPH_RR          148
#define MSAPH_IYRR        149
#define MSAPH_EYRR        150
#define MSAPH_AXRR        151
#define MSAPH_AWRR        152
#define MSAPH_OWRR        153
#define MSAPH_EYIY        154
#define MSAPH_OHIY        155
#define MSAPH_OWIY        156
#define MSAPH_OHIH        157
#define MSAPH_IYEH        158
#define MSAPH_EHLL        159
#define MSAPH_IYUW        160
#define MSAPH_AXUW        161
#define MSAPH_IHWW        162
#define MSAPH_AYWW        163
#define MSAPH_OWWW        164
#define MSAPH_JH          165
#define MSAPH_VV          166
#define MSAPH_ZZ          167
#define MSAPH_ZH          168
#define MSAPH_DH          169
```

```
#define MSAPH_BE      170
#define MSAPH_BO      171
#define MSAPH_EB      172
#define MSAPH_OB      173
#define MSAPH_DE      174
#define MSAPH_DO      175
#define MSAPH_ED      176
#define MSAPH_OD      177
#define MSAPH_GE      178
#define MSAPH_GO      179
#define MSAPH_EG      180
#define MSAPH_OG      181
#define MSAPH_CH      182
#define MSAPH_HE      183
#define MSAPH_HO      184
#define MSAPH_WH      185
#define MSAPH_FF      186
#define MSAPH_SE      187
#define MSAPH_SO      188
#define MSAPH_SH      189
#define MSAPH_TH      190
#define MSAPH_TT      191
#define MSAPH_TU      192
#define MSAPH_TS      193
#define MSAPH_KE      194
#define MSAPH_KO      195
#define MSAPH_EK      196
#define MSAPH_OK      197
#define MSAPH_PE      198
#define MSAPH_PO      199
```

// MSA Sound Codes: Robot

```
#define MSAFX_ROBOT_0    200
#define MSAFX_ROBOT_1    201
#define MSAFX_ROBOT_2    202
#define MSAFX_ROBOT_3    203
#define MSAFX_ROBOT_4    204
#define MSAFX_ROBOT_5    205
#define MSAFX_ROBOT_6    206
#define MSAFX_ROBOT_7    207
#define MSAFX_ROBOT_8    208
#define MSAFX_ROBOT_9    209
```

// MSA Sound Codes: Alarms

```
#define MSAFX_ALARM_0    210
#define MSAFX_ALARM_1    211
#define MSAFX_ALARM_2    212
#define MSAFX_ALARM_3    213
#define MSAFX_ALARM_4    214
#define MSAFX_ALARM_5    215
#define MSAFX_ALARM_6    216
```

```
#define MSAFX_ALARM_7      217
#define MSAFX_ALARM_8      218
#define MSAFX_ALARM_9      219

// MSA Sound Codes: Beeps
#define MSAFX_BEEP_0        220
#define MSAFX_BEEP_1        221
#define MSAFX_BEEP_2        222
#define MSAFX_BEEP_3        223
#define MSAFX_BEEP_4        224
#define MSAFX_BEEP_5        225
#define MSAFX_BEEP_6        226
#define MSAFX_BEEP_7        227
#define MSAFX_BEEP_8        228
#define MSAFX_BEEP_9        229

// MSA Sound Codes: Biological
#define MSAFX_BIO_0          230
#define MSAFX_BIO_1          231
#define MSAFX_BIO_2          232
#define MSAFX_BIO_3          233
#define MSAFX_BIO_4          234
#define MSAFX_BIO_5          235
#define MSAFX_BIO_6          236
#define MSAFX_BIO_7          237
#define MSAFX_BIO_8          238
#define MSAFX_BIO_9          239

// MSA Sound Codes: DTMF
#define MSAFX_DTMF_0          240
#define MSAFX_DTMF_1          241
#define MSAFX_DTMF_2          242
#define MSAFX_DTMF_3          243
#define MSAFX_DTMF_4          244
#define MSAFX_DTMF_5          245
#define MSAFX_DTMF_6          246
#define MSAFX_DTMF_7          247
#define MSAFX_DTMF_8          248
#define MSAFX_DTMF_9          249
#define MSAFX_DTMF_S          250
#define MSAFX_DTMF_R          251

// MSA Sound Codes: Misc
#define MSAFX_SONAR_PING      252
#define MSAFX_PISTOLSHOT      253
#define MSAFX_WOW              254

// 255: End of Phrase
#ifdef _DEBUG_C
    #pragma mark MSA EOP
#endif
```

```
#define MSA_EOP          255

#endif /* _IIC_SPEAKJETDEFINES_H */
```

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