

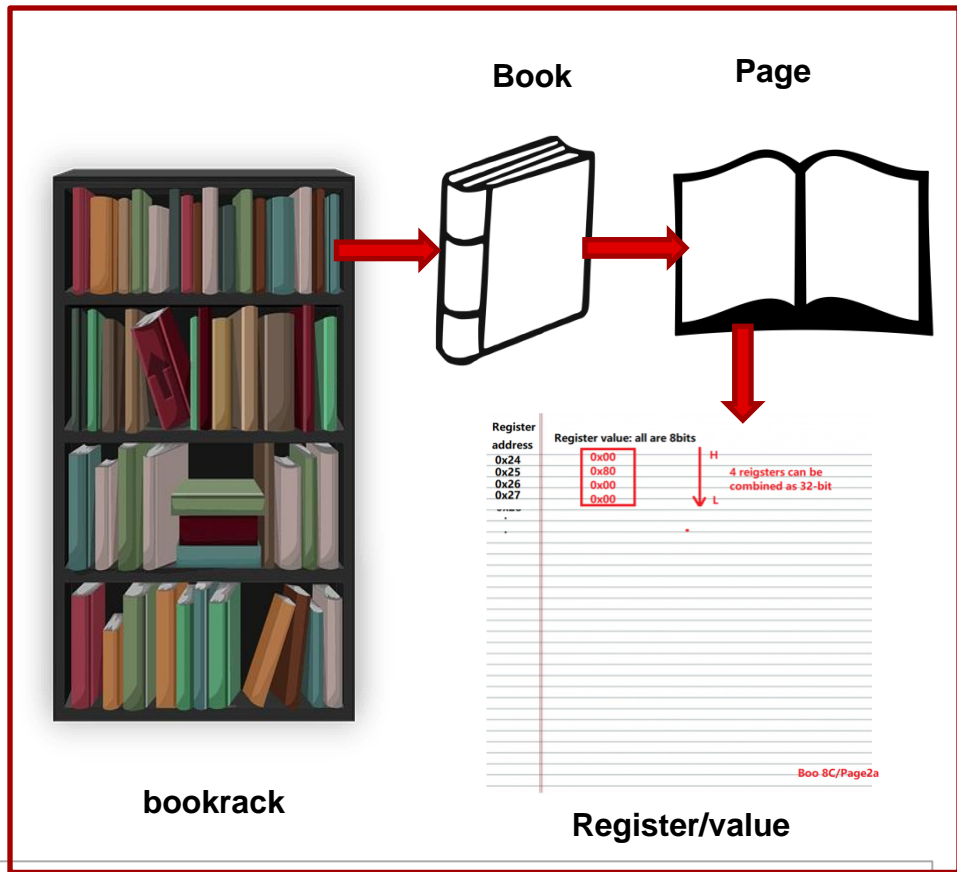
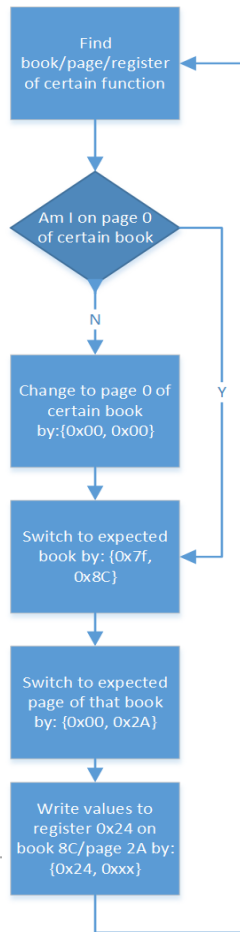
TAS5805/25 Register Map Introduction

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Register Structure

TAS58x5m: Register structure Overview

- ❑ How to configure certain registers
 - Eg. book 8c, page 2a, register 24 as an example
- ❑ How to switch book/page?
See next page;



TAS58x5m: Register structure Overview

□ Overview

- Non-DSP (in book 0/ page 0)
- DSP (in other book/page)

□ TAS5825 register structure:

1. Book 0

- Page 0
- Page 1

2. Book 8C

- Page 0x00
- Page 0x01

3. Book 78

- Page 0x00
- Page 0x01

4. Book AA

- Page 0x00
- Page 0x01

Note: See Maps of TAS5825's datasheet

Note: See **Appendix** of [TAS5825 process flow](#) to the map [TAS5805 Process Flow:](#)

□ Register operation:

1. Change Book (0x7f is the specified flag of book)
{0x00, 0x00} // must change to page 0 of current book
{0x7f , 0xaa} // Then change to book aa
{0x00, 0x24} // go to book aa/ page 24. If no operation, its default page is **0x00**;
2. Change page (0x00 is the specified flag of book)
{0x00, 0x24} // change to page 24
3. Change address under certain book/page
 - {0x00, 0x00}**
 - {0x00, 0xaa}**
 - {0x00, 0x24}** //page 24
 - {0x7f, 0x24}** //change value of register 0x7f to 0x24

Example to find registers for volume

1. Use I2C log

Step2: click log then click the dot to make it turn red

The screenshot shows the PurePath™ Console interface. The I2C Monitor window is open, displaying a list of I2C transactions. A red box highlights the log content, and a red arrow points to the 'Log' button and a red dot on the log header. The log shows the following data:

```

1 W 58 00 00
2 W 58 7f 8c
3 W 58 00 2a
4 W 58 24 00 a1 24 78
5 W 58 28 00 a1 24 78
6
    
```

Step4: obtain the registers for volume

1. change to page 0 of current book;
2. change to book 8C
3. Enter page 2a of book 8C
4. Register 24 and 28 in page 2a of book 8C is for L/R volume

Step 3: input volume

2. Double check by Appendix of [TAS5825 process flow](#) to the map as below:

Table 5. Memory Map — Book 0x8C

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/FORMAT	DEFAULT VALUE	DESCRIPTION
INPUT MIXER					
0x18	0x29	Left to Left	4 / 9.23	0x00800000	Left Channel Mixer Left Input Gain
0x1C	0x29	Right to Left	4 / 9.23	0x00000000	Left Channel Mixer Right Input Gain
0x20	0x29	Left to Right	4 / 9.23	0x00000000	Right Channel Mixer Left Input Gain
0x24	0x29	Right to Right	4 / 9.23	0x00800000	Right Channel Mixer Right Input Gain
VOLUME CONTROL					
0x24	0x2A	CH-L Volume	4 / 9.23	0x00800000	Left Channel Volume coefficient
0x28	0x2A	CH-R Volume	4 / 9.23	0x00800000	Right Channel Volume coefficient
0x30	0x2A	Softening Filter Alpha	4 / 1.31	0x00E2C46B	Volume Time constant

Step1: click on I2C

How to understand dumped .h file

9.6 Register Maps

9.6.1 CONTROL PORT Registers

Table 5 lists the memory-mapped registers for the CONTROL PORT. All register offset addresses not listed in Table 5 should be considered as reserved locations and the register contents should not be modified.

Table 5. CONTROL PORT Registers

Offset	Acronym	Register Name	Section
1h	RESET_CTRL	Register 1	Go
2h	DEVICE_CTRL_1	Register 2	Go
3h	DEVICE_CTRL2	Register 3	Go
Fh	I2C_PAGE_AUTO_INC	Register 15	Go
28h	SIG_CH_CTRL	Register 40	Go
29h	CLOCK_DET_CTRL	Register 41	Go
30h	SDOUT_SEL	Register 48	Go
31h	I2S_CTRL	Register 49	Go
33h	SAP_CTRL1	Register 51	Go
34h	SAP_CTRL2	Register 52	Go
37h	FS_MON	Register 55	Go
38h	BCK (SCLK)_MON	Register 56	Go
39h	CLKDET STATUS	Register 57	Go

Memory Maps

A.1 DSP Memory Map for Process Flow 1

Table 9. DSP Memory Map for Process Flow 1

BaseProf(2.0 96k) Mode Memory Map — Book 0x78					
SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x48	0x01	Level Meter Left Output	4 / 1.31	0x000000--	Level Meter Left Output flag
0x7C	0x01	Level Meter Right Output	4 / 1.31	0x000000--	Level Meter Right Output flag
BaseProf(2.0 96k) Mode Memory Map — Book 0x8C					
VOLUME ALPHA FILTER					
0x2C	0x01	Softening Filter Alpha	4 / 1.31	0x00E2C40B	Volume Time constant
DRC					
0x58	0x06	DRC 1 Mixer Gain	4 / 9.23	0x00800000	DRC 1 Mixer Gain coefficient
0x5C	0x06	DRC 2 Mixer Gain	4 / 9.23	0x00000000	DRC 2 Mixer Gain coefficient
0x60	0x06	DRC 3 Mixer Gain	4 / 9.23	0x00000000	DRC 3 Mixer Gain coefficient
0x64	0x06	DRC1 Energy	4 / 1.31	0x7FFFFFFF	DRC1 Energy Time constant
0x68	0x06	DRC1 Attack	4 / 1.31	0x7FFFFFFF	DRC1 Attack Time constant
0x6C	0x06	DRC1 Decay	4 / 1.31	0x7FFFFFFF	DRC1 Decay Time constant
0x70	0x06	K0_1	4 / 9.23	0x00000000	DRC1 Region 1 Slope (comp/Exp)

```

51  cfg_reg registers[] = {
52
53  { 0x00, 0x00 }, //change to page 0
54  { 0x7f, 0x00 }, //change to book 0
55  { 0x03, 0x02 }, //all lines start from here
56  { 0x01, 0x11 }, //are in book 0/ page 0 before the switch
57  { 0x00, 0x00 },
58  { 0x00, 0x00 },
59  { 0x00, 0x00 },
60  { 0x00, 0x00 },
61  { 0x00, 0x00 },
62  { 0x7f, 0x00 },
63  { 0x03, 0x02 },
64  { CFG_META_DELAY, 5 },
65  { 0x00, 0x00 },
66  { 0x00, 0x00 },
67  { 0x00, 0x00 },
68  { 0x00, 0x00 },
69  { 0x00, 0x00 },
70  { 0x7f, 0x00 },
71  { 0x03, 0x12 },
72  { 0x00, 0x00 },
73  { 0x00, 0x00 },
74  { 0x00, 0x00 },
75  { 0x00, 0x00 },
76  { 0x00, 0x00 },
77  { 0x7f, 0x00 },
78  { 0x48, 0x0c },
79  { 0x00, 0x00 }, // change to page 0
80  { 0x7f, 0x64 }, // change to book 64
81  { 0x00, 0x01 }, // change to page 1 of book 64
82  { 0x08, 0x00 }, // all lines start from here
83  { 0x09, 0xfe }, //are in book 64/ page 1 before the switch
84  { 0x00, 0x00 },

```

Note: See Maps of TAS5825's datasheet and they are in book 0/page 0 always



Note: See Appendix of [TAS5825 process flow](#) to the map

Power on Sequence

TAS5825 Power on sequence

1. TAS5825 normal startup sequence:

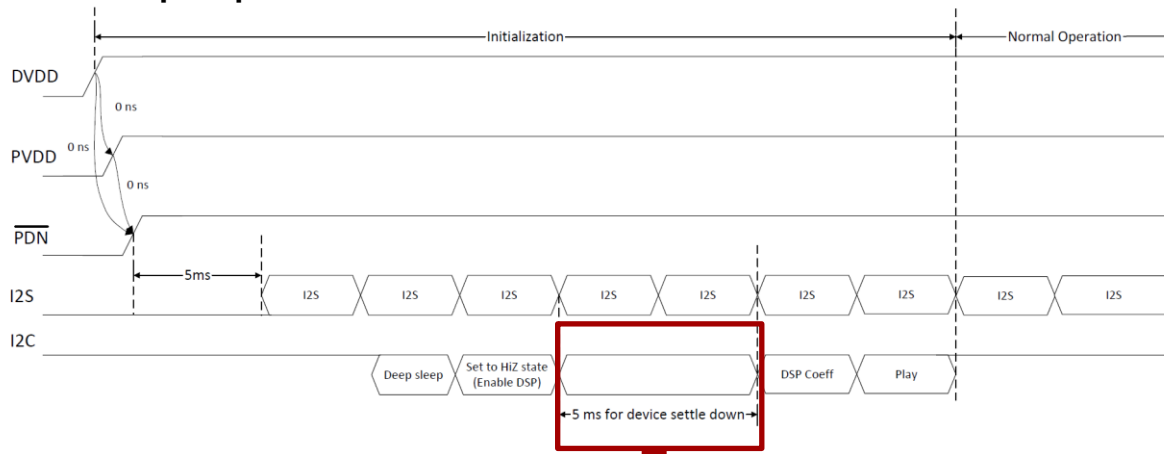


Figure 93. Start-up sequence

2. TAS5825 normal startup sequence:

```
50
51 cfg_reg registers[] = {
52
53 //RESET
54 { 0x00, 0x00 },
55 { 0x7f, 0x00 },
56 { 0x03, 0x02 },
57 { 0x01, 0x11 } // reset
58
59 { 0x00, 0x00 },
60 { 0x00, 0x00 },
61 { 0x00, 0x00 },
62 { 0x00, 0x00 },
63 { 0x7f, 0x00 },
64 { 0x03, 0x02 } // Enable DSP
65 //add 5ms delay here
66 { 0x00, 0x00 },
67 { 0x7f, 0x00 },
68 { 0x03, 0x02 },
69 { 0x00, 0x00 },
70 { 0x7f, 0x00 },
71 { 0x46, 0x11 },
```

First {0x03, 0x02} after {0x01, 0x11}

