TAS5805M, TAS5806M and TAS5806MD Process Flows

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ABSTRACT

The TAS5805M, TAS5806M and TAS5806MD devices have a powerful uCDSP audio processing core, which supports several selectable process flows. This application report explains details of each process flow.

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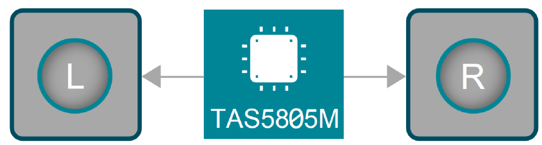
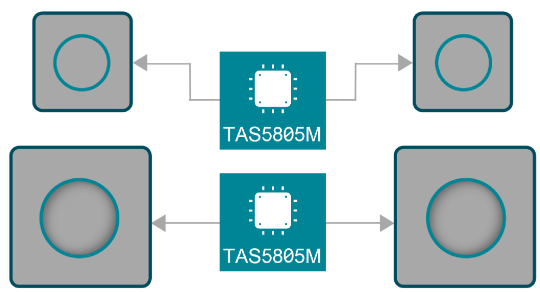
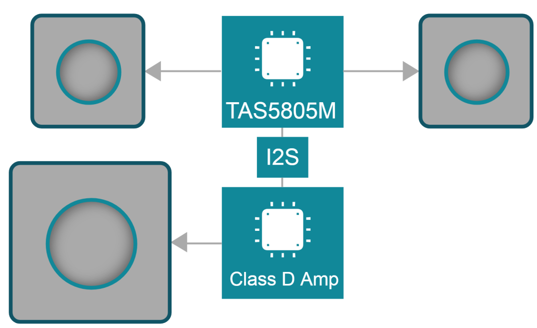
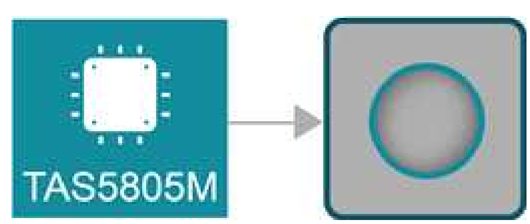
1 General Overview

1.1 Supported Use Cases

The TAS5805M, TAS5806M and TAS5806MD process flows have been generated based upon several popular configurations, primarily around the number and type of amplified outputs. Table 1 shows the use cases supported by available process flows and PPC3 GUI.

Table 1. Supported Use Cases

Mode	Also Known As	Amplifier Output Configuration	Symbol in PPC3 GUI
2.0	Stereo	One device drives two full-range speakers in stereo	
2.2	Dual Stereo	Two devices drive two-way speakers in stereo. One device drives two tweeters and one device drives two woofers.	
2.1	N/A	One device uses 2.0 mode and a separate device uses Mono mode	
Mono	0.1	A single signal, created from one or both of the two input signals sent via a single output created by placing the two output channels in parallel into a single channel, usually to drive more power.	

2 Process Flows

2.1 Overview

Table 2 below shows the processing features of each process flow available in the current PPC3 GUI.

Table 2. Processing Features Comparison Table

Feature	Process Flow 1 (3-Band DRC, 96 kHz, 2.0)	Process Flow 2 (3-Band DRC & FIR, 48 kHz, 2.0)	Process Flow 3 (3-Band DRC & FIR, 48 KHz, 2.0)
Maximum Internal Sample Rate	96 kHz	48 kHz	48 kHz
SRC and Auto-detect	Yes	No	No
Supported Input Sample Rates (32 k, 44.1 k, 48 k, 88.2 k and 96 k)	Yes	88.2 k and 96 k are not supported	88.2 k and 96 k are not supported
Biquads for EQ Filtering (Individual Left / Right)	15	15	15
Input Mixer	Yes	Yes	Yes
Click & Pop Free Volume	Yes	Yes	Yes
DRC	3-Band 4" Order Crossover	3-Band 4" Order Crossover	3-Band 4" Order Crossover and 1-Band
Automatic Gain Limiter	Yes	Yes	Yes
Output Clipper	Yes	Yes	Yes
FIR Filter	No	Yes	No
Hybrid PWM Mode	Yes	Yes	Yes

2.2 Process Flow 1

This process flow supports a maximum internal sample rate of 96 kHz and is therefore considered a true 96 kHz flow. It is intended for stereo speakers where the 3-Band DRC uses individual coefficients for left and right. It is possible to tune the left and right BQs in the 15 BQ bank individually between left and right.

Figure 1 depicts the signal path of this flow. The blocks below correspond to the functions found in the PPC3 GUI.

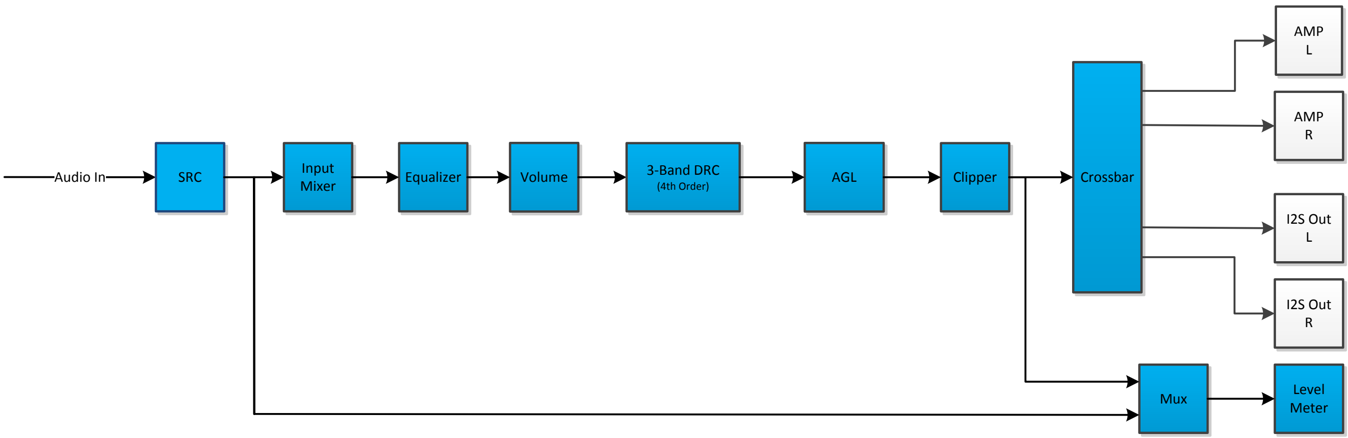


Figure 1. Process Flow 1

2.2.1 SRC

The Sample Rate Converter (SRC) supports 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz and 96 kHz input sample rates. These input sample rates can be converted to 88.2 or 96 kHz sample rate.

2.2.2 Input Mixer

The input mixer is used to mix the left and right channel input signals. Refer to Section 3.1 for more details.

2.2.3 Equalizer

The equalizer contains 15 independent filters for both left and right channels. Refer to Section 3.2 for more details.

2.2.4 Volume

This volume block is click & pop free. Refer to Section 3.4 for more details.

2.2.5 3-Band DRC

The 3-Band DRC can be used to automatically control the audio signal amplitude or the dynamic range within specified limits. Refer to Section 3.6 for more details.

2.2.6 AGL

The AGL can also be used to automatically control the audio signal amplitude or dynamic range within specified limits. Refer to Section 3.7 for more details.

2.2.7 Clipper

A THD boost and fine volume together can be used for clipping. The THD boost block allows the user to programmatically increase the THD by clipping at an operating point earlier than that defined by the supply rails. Refer to Section 3.8 for more details.

2.2.8 Output Crossbar

The crossbar provides the end user with a very flexible way to control what finally appears on amplifier outputs and I2S SDOUT. Refer to Section 3.9 for more details.

2.2.9 Level Meter

The level meter provides the end user with an easy way to study the power profile. Refer to Section 3.10 for more details.

2.2.10 DSP Memory Map

Refer to Section 4.1 for details.

2.3 Process Flow 2

This process flow supports a maximum internal sample rate of 48kHz and includes a 128-tap FIR filter.

Figure 2 depicts the signal path for this flow. The blocks below correspond to the functions found in the PPC3 GUI.

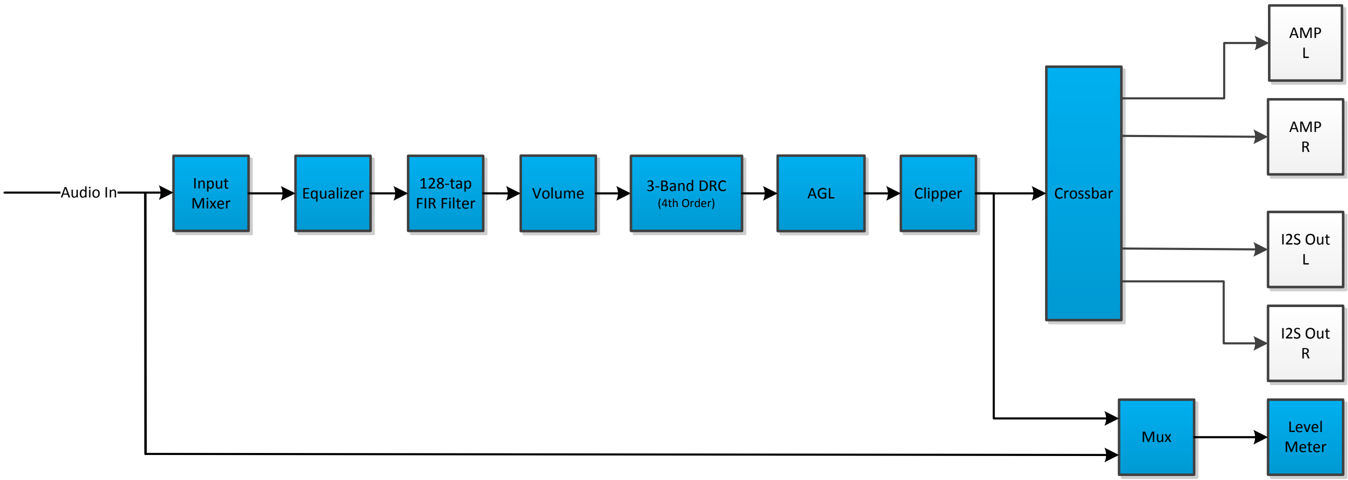


Figure 2. Process Flow 2

2.3.1 Input Mixer

The input mixer is used to mix the left and right channel input signals. Refer to Section 3.1 for more details.

2.3.2 Equalizer

The equalizer contains 15 independent filters for both left and right channels. Refer to Section 3.2 for more details.

2.3.3 128-tap FIR Filter

The 128-tap FIR Filter allows you to easily implement FIR filters. Refer to Section 3.3 for more details.

2.3.4 Volume

This volume block is click & pop free. Refer to Section 3.4 for more details.

2.3.5 3-Band DRC

The 3-Band DRC can be used to automatically control the audio signal amplitude or the dynamic range within specified limits. Refer to Section 3.6 for more details.

2.3.6 AGL

The AGL can also be used to automatically control the audio signal amplitude or dynamic range within specified limits. Refer to Section 3.7 for more details.

2.3.7 Clipper

A THD boost and fine volume together can be used for clipping. The THD boost block allows the user to programmatically increase the THD by clipping at an operating point earlier than that defined by the supply rails. Refer to Section 3.8 for more details.

2.3.8 Output Crossbar

The crossbar provides the end user with a very flexible way to control what finally appears on amplifier outputs and I2S SDOUT. Refer to Section 3.9 for more details.

2.3.9 Level Meter

The level meter provides the end user with an easy way to study the power profile. Refer to Section 3.10 for more details.

2.3.10 DSP Memory Map

Refer to Section 4.2 for details.

2.4 Process Flow 3

This process flow supports 2.1 speaker configurations with a maximum internal sample rate of 48 kHz. Figure 3 depicts the signal path of this flow. The blocks below correspond to the functions found in the PPC3 GUI.

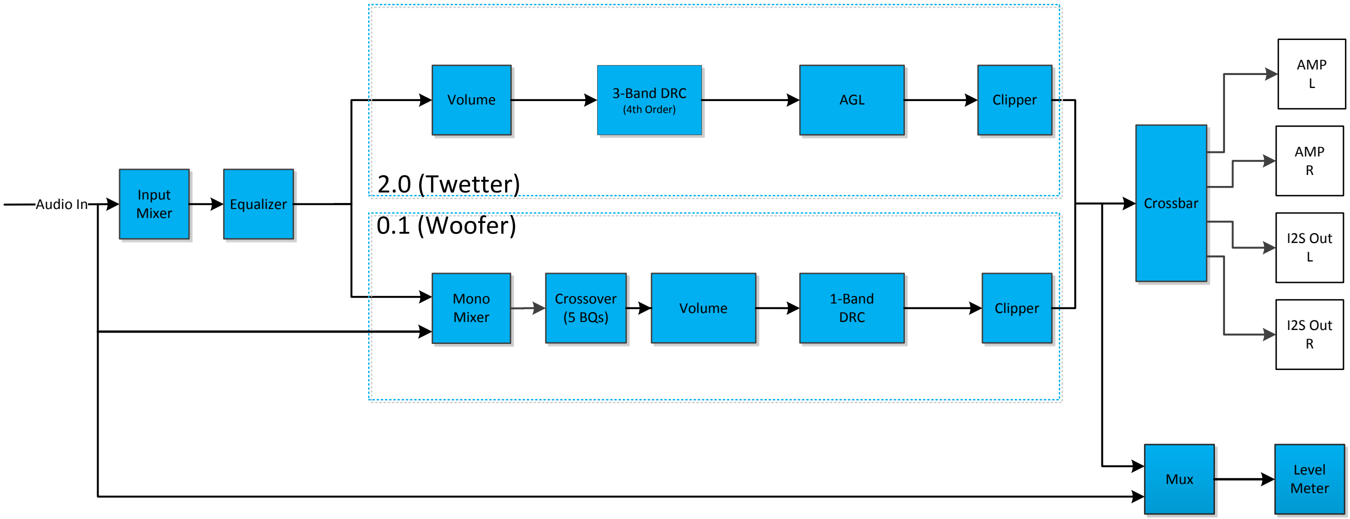


Figure 3. Process Flow 3

2.4.1 Input Mixer

The input mixer is used to mix the left and right channel input signals. Refer to Section 3.1 for more details.

2.4.2 Equalizer

The equalizer contains 15 independent filters for both left and right channels. Refer to Section 3.2 for more details.

2.4.3 Volume

This volume block is click & pop free. Refer to Section 3.4 for more details.

2.4.4 3-Band DRC

The 3-Band DRC can be used to automatically control the audio signal amplitude or the dynamic range within specified limits. Refer to Section 3.5 for more details.

2.4.5 AGL

The AGL can also be used to automatically control the audio signal amplitude or dynamic range within specified limits. Refer to Section 3.7 for more details.

2.4.6 Mono Mixer

The mono mixer configures the mixing of the digital audio data going to woofer. It is similar to the input mixer.

2.4.7 Crossover

The crossover block is used to set extra low pass filters on the woofer. Five more filters are available.

2.4.8 1-Band DRC

The 1-Band DRC can be used to automatically control the audio signal amplitude or the dynamic range within specified limits. Refer to Section Section 3.6 for more details.

2.4.9 Clipper

A THD boost and fine volume together can be used for clipping. The THD boost block allows the user to programmatically increase the THD by clipping at an operating point earlier than that defined by the supply rails. Refer to Section 3.8 for more details.

2.4.10 Output Crossbar

The crossbar provides the end user with a flexible way to control what finally appears on amplifier outputs and I2S SDOUT. Refer to Section 3.9 for more details.

2.4.11 Level Meter

The level meter provides the end user with an easy way to study the power profile. Refer to Section 3.10 for more details.

2.4.12 DSP Memory Map

Refer to Section 4.2 for details.

3 Audio Processing Blocks

3.1 Input Mixer

The input mixer can be used to mix the left and right channel input signals as shown in Figure 4. The input mixer has four coefficients, which control the mixing and gains of the input signals.

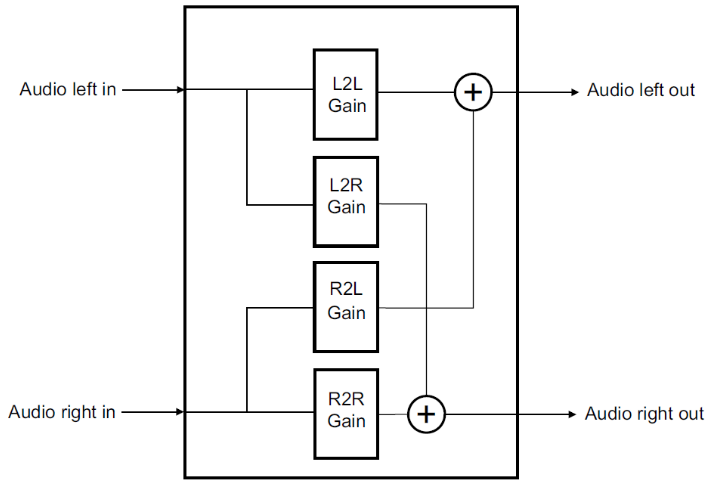


Figure 4. Input Mixer

The Basic Tab (See Figure 5) provides the easiest way for configuration in PPC3 GUI. Switch to the Advanced tab (See Figure 6) if all the four coefficients need to be adjusted. Note that the four parameters need to be specified in decibels (dB). The "Invert" options reverses the sign of the gain values.

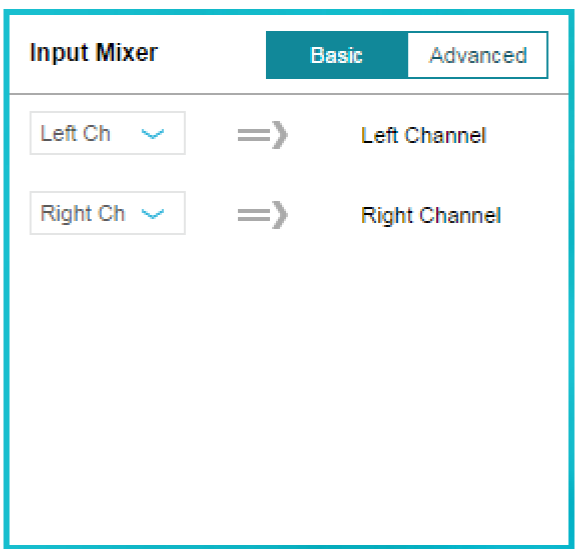


Figure 5. Input Mixer (Basic Tab)

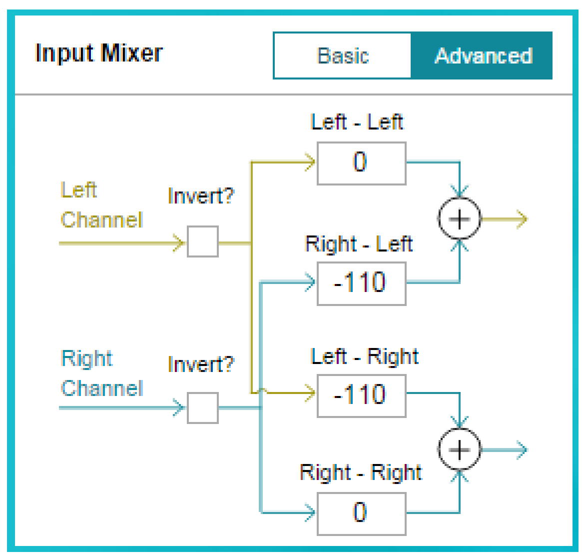


Figure 6. Input Mixer (Advanced Tab)

3.2 Equalizer

The equalizers are implemented using cascaded "direct form 1" BQs structures as shown in Figure 7.

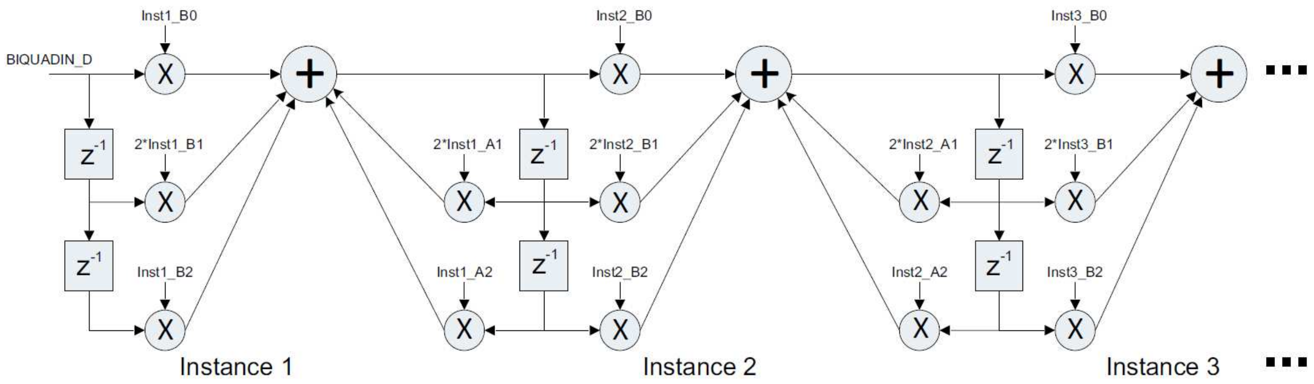


Figure 7. Cascaded BQ Structure

All BQ coefficients are normalized with a0 to insure that a0 is equal to 1. The structure requires 5 BQ coefficients as shown in Table 3.

Table 3. BQ Coefficients Normalization

BQ COEFFICIENT	COEFFICIENT CALCULATION
B0_DSP	b0 / a0
B1_DSP	b1 / (a0 × 2)
B2_DSP	b2 / a0
A1_DSP	–a1 / (a0 × 2)
A2_DSP	–a2 / a0

The Equalizer Tuning Window shown below in Figure 8 contains 15 independent filters for both left and right channels. They are designed for tuning the frequency response of the overall system. This is where the bulk of the frequency compensation occurs. Complex tuning shapes can be made to compensate for deficiencies in speaker response.

Figure 8. Equalizer Tuning Window

As Figure 8 shows, each filter has quite a few different filter types and can be turned on or off independently. All the changes to these filters are reflected in the plot above. The composite plot (red) shows the overall frequency response alteration applied to the incoming digital audio data.

The equalizers for left and right channels are ganged by default, but they can be configured independently by deselecting “Gang” option.

3.3 128-tap FIR Filter

Normally the FIR filter coefficients are created in another tool such as Matlab and then imported using a file formatted for a specific number of taps. You can create filters from 1 to 128 taps by simply setting the unused tap coefficients to 0.0. For example, if you want to create a 58-tap FIR filter, the coefficients can be calculated in Matlab with 58 coefficients. A file is then created with the 58 coefficients and 70 coefficients set to 0.0.

The 128-tap FIR filter is implemented using the structure as shown in Figure 9. Coefficients: b0, b1, b2, ..., b126, b127.

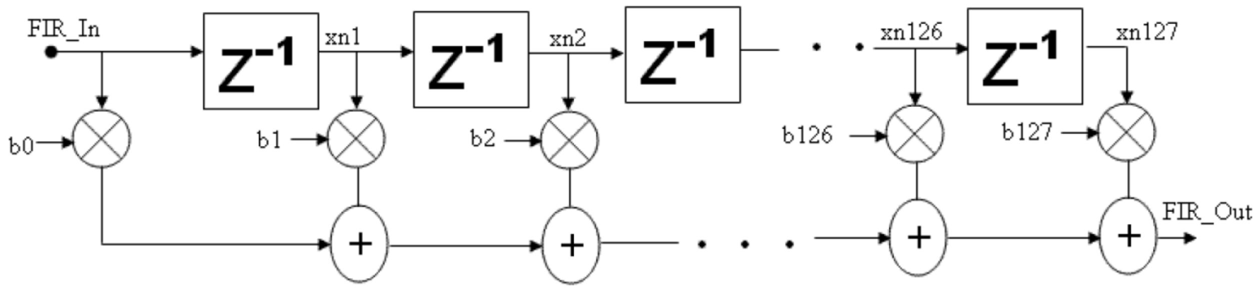


Figure 9. 128-tap FIR Filter Structure

3.4 Volume

Figure 10 shows the default volume in PPC3 GUI. Note that volume needs to be specified in decibels (dB). Independent volume change for left and right channel can be achieved by deselecting the “Gang” option.

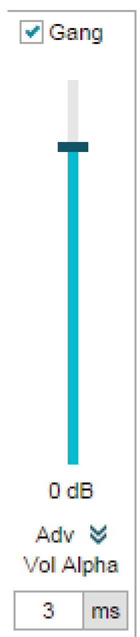


Figure 10. Volume

The volume block is implemented using an alpha filter structure. As Figure 11 shows, when a volume level change is initiated, the volume block assures a smooth transition to the newly commanded volume level without producing artifacts such as pops and clicks.

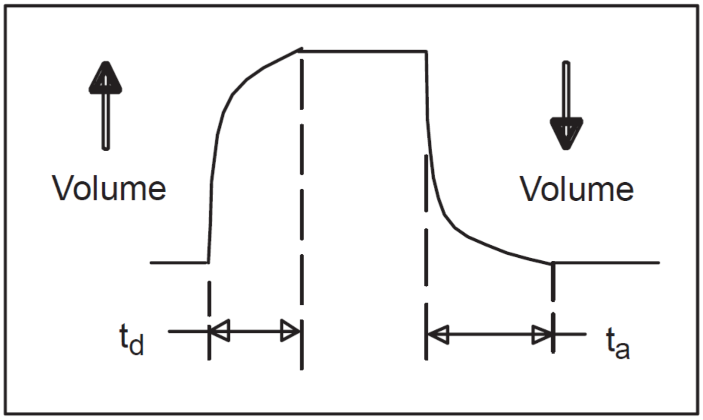


Figure 11. Volume Attack and Release

3.5 3-Band DRC

The Dynamic Range Control (DRC) is a feed-forward mechanism that can be used to automatically control the audio signal amplitude or the dynamic range within specified limits. The dynamic range control is done by sensing the audio signal level using an estimate of the alpha filter energy then adjusting the gain based on the region and slope parameters that are defined. The 3-Band DRC is shown in Figure 12.

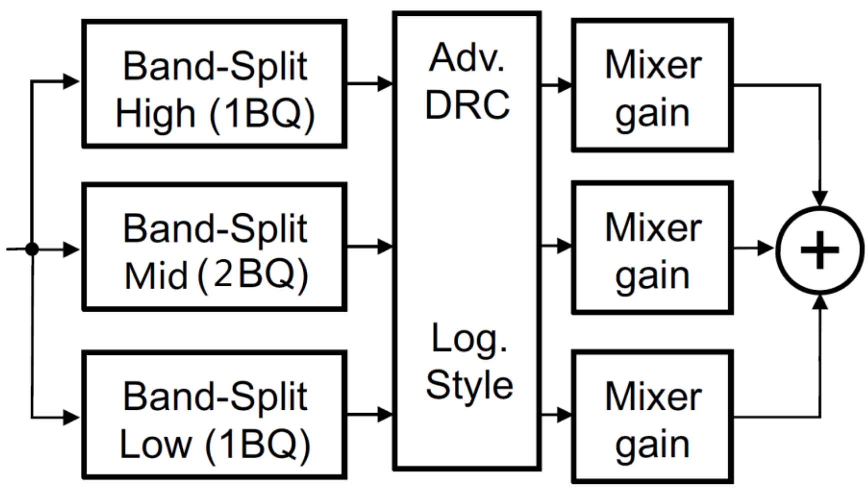


Figure 12. 3-Band DRC

The DRC works to reduce the peak of energy if it goes beyond the programmable threshold level. DRC starts an attack event (reduces gain) if energy goes above the threshold. Similarly, it starts a release event if the level goes below the threshold (increases gain back to the original value). Attack and release events occur only when level remains above or below the threshold continuously during the time-constant time. And the constant time is controlled by the attack/release rate. If the attack/release rate is short, DRC operates frequently. Attack time defines how fast to cut the signal to bring it under the threshold. Similarly, release time defines how fast to release the cut back to normal.

The 3-band DRC is comprised of three DRCs that can be spilt into three bands using the BQ at the input of each band. The DRC in each band is equipped with individual energy, attack, and decay time constants, as shown in Figure 13.

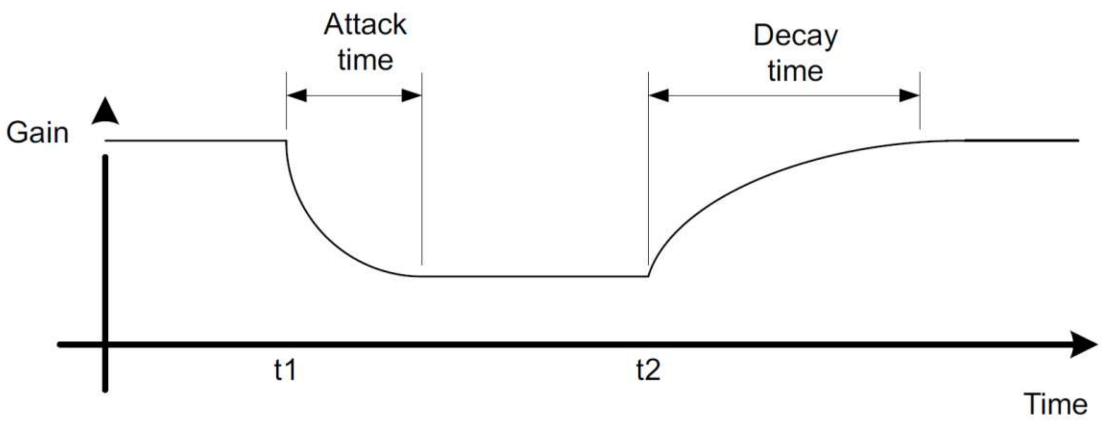


Figure 13. DRC Attack and Decay

This DRC can be used for power limiting and signal compression; therefore, it must be tested with maximum signal levels for the desired application. Use a resistive load for initial testing. However, the speaker used in the end application must be used for final testing and tweaking.

Figure 14. 3-Band DRC Tuning Window

The 3-Band DRC Tuning Window as shown in Figure 14 consists of three identical windows for low, mid and high bands. Each has a DRC curve that offers 3 regions of compression. The points on the DRC curve can be dragged and dropped.

Below each DRC plot, parameters such as threshold, offset and ratio can be manually typed in for each of the 3 regions. By typing a value and pressing Enter on the keyboard, the DRC curve automatically adjusts to the entered parameter.

3.5.1 DRC Time Constant

Change time constants by entering new values for each band. Attack(ms) determines the attack time of the DRC and Release(ms) determines the release time once the windowed energy band passes. Energy(ms) controls the time averaging windowing uses to determine the average signal energy; therefore, where the incoming signal compares to the set DRC curve. It is beneficial to have control over the DRC time constant for a given frequency band to avoid beating tones caused by the DRC attack and the incoming signal frequency.

The mixer gain controls the relative gain of each of the 3 frequency bands after the DRCs when they are mixed together. This is used to attenuate one of the frequency bands relative to the others, if needed. Make note of the sign of the gain coefficients. Because filters affect phase, a phase reversal or a 180 degree phase shift may be necessary. Use a negative sign on the coefficient to reverse the phase for the second order LR filter.

3.5.2 Crossover

Configure the frequency range associated with each of the 3 bands used, where the tuning can take place. After tuning, the response is automatically displayed on the right side of the DRC plot. The Crossover configuration has two tabs. In the Basic Tab, only the filter type and cut-off frequencies need to be determined. Go to the Advanced Tab if more parameters need to be adjusted.

3.6 1-Band DRC

The Dynamic Range Control (DRC) is a feed-forward mechanism that can be used to automatically control the audio signal amplitude or the dynamic range within specified limits. The dynamic range control is done by sensing the audio signal level using an estimate of the alpha filter energy then adjusting the gain based on the region and slope parameters that are defined.

The DRC works to reduce the peak of energy if it goes beyond the programmable threshold level. DRC starts an attack event (reduces gain) if energy goes above the threshold. Similarly, it starts a release event if the level goes below the threshold (increases gain back to the original value). Attack and release events occur only when level remains above or below the threshold continuously during the time-constant time. And the constant time is controlled by the attack/release rate. If the attack/release rate is short, DRC operates frequently. Attack time defines how fast to cut the signal to bring it under the threshold. Similarly, release time defines how fast to release the cut back to normal. The DRC is equipped with energy, attack, and decay time constants.

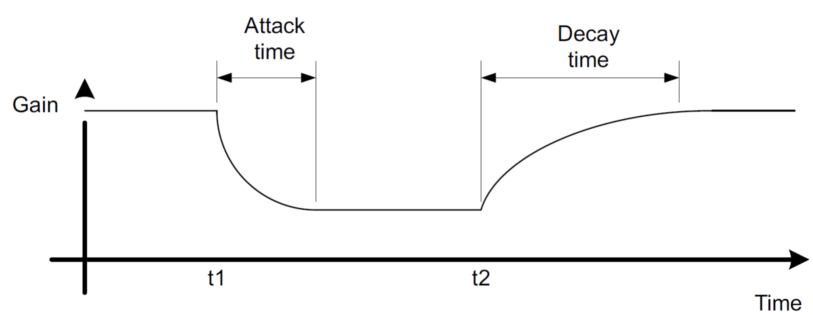


Figure 15. 1-Band DRC Attack and Decay

This DRC can be used for power limiting and signal compression; therefore, it must be tested with maximum signal levels for the desired application. Use a resistive load for initial testing. However, the speaker used in the end application must be used for final testing and tweaking.

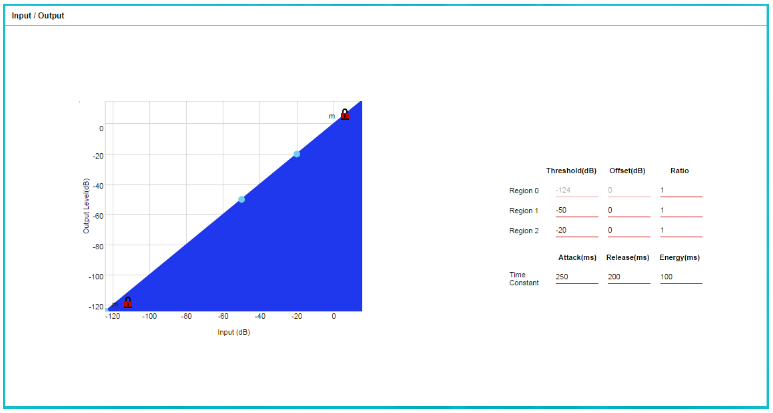


Figure 16. 1-Band DRC Tuning Window

The DRC curve offers 3 regions of compression. Next to the DRC plot, parameters such as threshold, offset and ratio can be manually typed in for each of the 3 regions. By typing a value and pressing *Enter* on the keyboard, the DRC curve automatically adjusts to the entered parameter.

3.6.1 DRC Time Constant

Change time constants by entering new values for each band.

Attack (ms) determines the attack time of the DRC and Release (ms) determines the release time once the windowed energy band passes. Energy (ms) controls the time averaging windowing uses to determine the average signal energy; therefore, where the incoming signal compares to the set DRC curve. It is beneficial to have control over the DRC time constant for a given frequency band to avoid beating tones caused by the DRC attack and the incoming signal frequency.

3.7 AGL

The Automatic Gain Limiter (AGL) is a feedback mechanism that can be used to automatically control the audio signal amplitude or dynamic range within specified limits. The automatic gain limiting is done by sensing the audio signal level using an alpha filter energy structure at the output of the AGL then adjusting the gain based on whether the signal level is above or below the defined threshold. Three decisions made by the AGL are engage, disengage, or do nothing. The rate at which the AGL engages or disengages depends on the attack and release settings respectively.

Figure 17 shows the AGL Tuning Window. By default, the AGL is disabled and it can be enabled by clicking the ON/OFF switch on the top right corner.

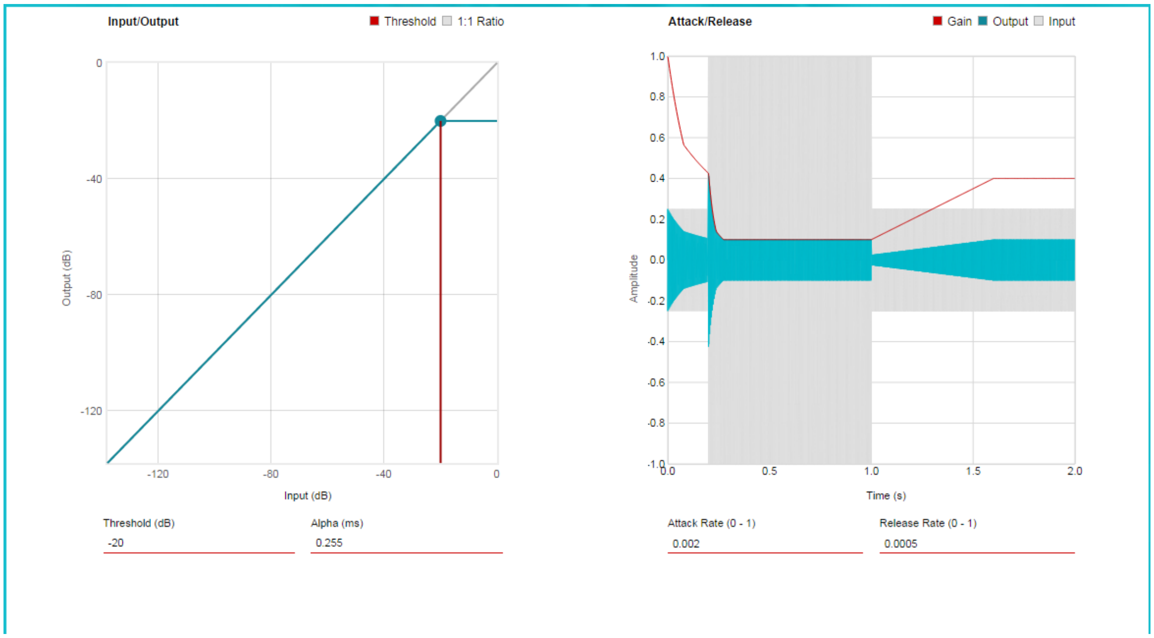


Figure 17. AGL Tuning Window

Threshold (db)— This parameter sets the threshold at which the compressor is activated. Lowering the threshold causes the compression to be activated at lower volume levels. Once the signal exceeds this threshold, compression is applied.

Alpha (ms)— This parameter configures the sharpness of the compression knee of the AGL.

Attack Rate (0 – 1)— This parameter controls how quickly compression is applied to the signal. Higher values causes the compressor to respond to signals quickly, while lower values decrease the response time.

Release Rate (0 – 1)— This parameter controls how quickly compression is removed from the signal as the signal gets quieter. Higher values cause the compressor to release from signals quickly, while lower values decrease the release time.

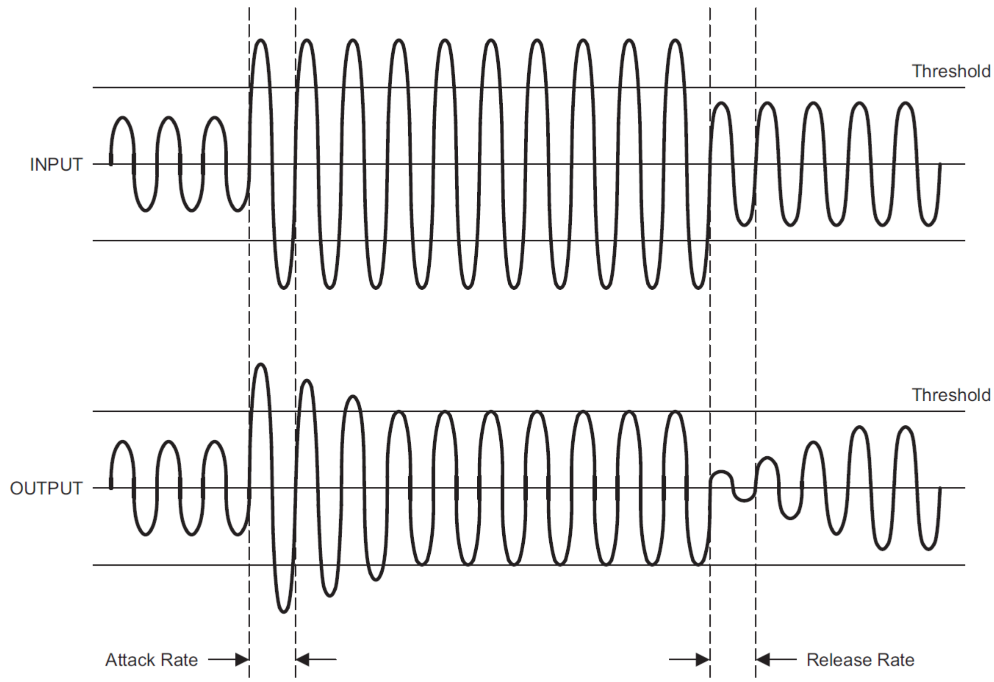


Figure 18. AGL Attack and Release

3.8 Clipper

The Clipper, shown below in Figure 19, can be used to achieve digitally the specified THD levels without voltage clipping. It allows users to achieve the same THD (for example, 10% THD) for different power levels (15 W, 10 W, 5 W) with same PVCC level.

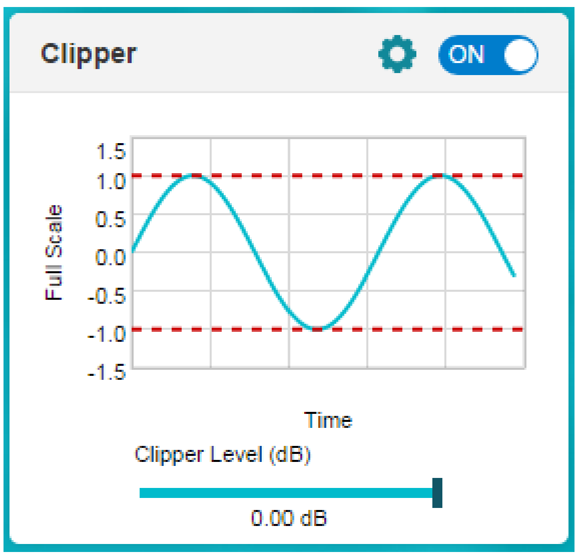


Figure 19. Clipper

Clipper Leve (dB)— The Clipper Level controls the signal level at which clipping occurs.

Makeup Gain (dB)— The Makeup Gain sets additional gain steps from –110 dB to 6 dB.

3.9 Output Crossbar

The crossbar provides the end user with a very flexible way to control what finally appears on amplifier outputs and I2S SDOUT. The Basic Tab shown below in Figure 20 provides the easiest way for configuration. Go to the Advanced Tab, shown below in Figure 21, if more parameters need to be adjusted. Note that all the parameters need to be specified in decibels (dB).

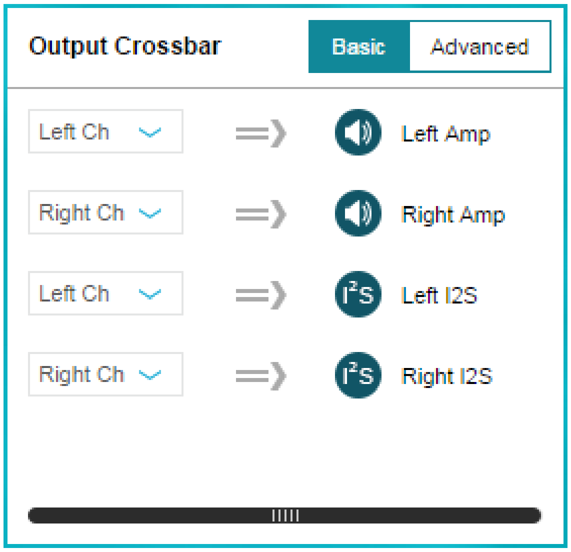


Figure 20. Output Crossbar (Basic Tab)

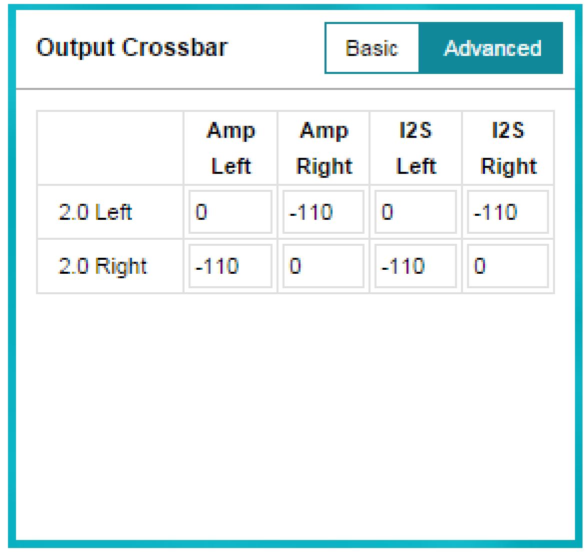


Figure 21. Output Crossbar (Advanced Tab)

3.10 Level Meter

Figure 22 shows the level meter, which uses an energy estimator with a programmable time constant to adjust the sensitivity level based on signal frequency and desired accuracy level. The level meter appears if the LM icon on the bottom is clicked.

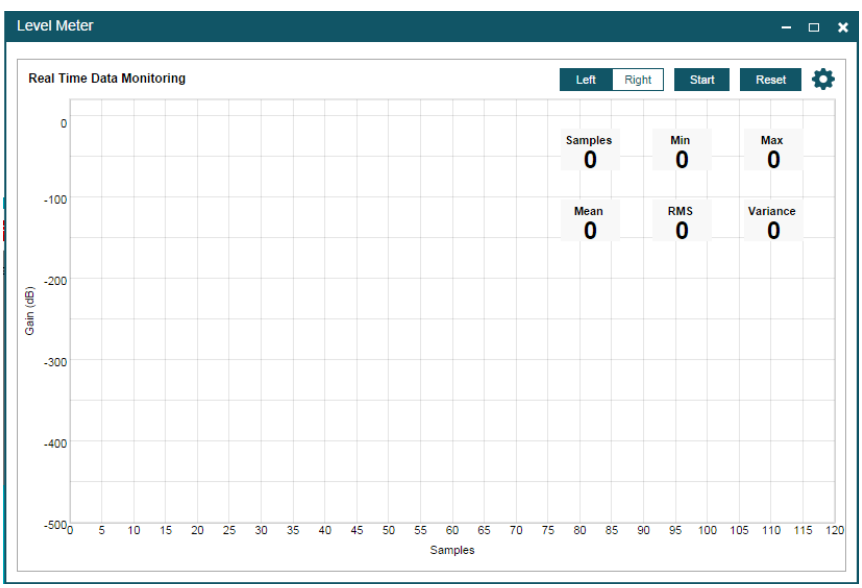


Figure 22. Level Meter

4 Appendix

4.1 DSP Memory Map for Process Flow 1

Table 4. Memory Map — Book 0x78

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x60	0x02	Level Meter Left Output	4 / 1.31	0x00000000	Level Meter Left Output flag
0x64	0x02	Level Meter Right Output	4 / 1.31	0x00000000	Level Meter Right Output flag

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
DRC					
0x34	0x2B	DRC1 Energy	4 / 1.31	0x7FFFFFFF	DRC1 Energy Time constant
0x38	0x2B	DRC1 Attack	4 / 1.31	0x7FFFFFFF	DRC1 Attack Time constant
0x3C	0x2B	DRC1 Decay	4 / 1.31	0x7FFFFFFF	DRC1 Decay Time constant
0x40	0x2B	K0_1	4 / 9.23	0x00000000	DRC1 Region 1 Slope (comp/Exp)
0x44	0x2B	K1_1	4 / 9.23	0x00000000	DRC1 Region 2 Slope (comp/Exp)
0x48	0x2B	K2_1	4 / 9.23	0x00000000	DRC1 Region 3 Slope (comp/Exp)
0x4C	0x2B	T1_1	4 / 9.23	0xE7000000	DRC1 Threshold 1
0x50	0x2B	T2_1	4 / 9.23	0xFE800000	DRC1 Threshold 2
0x54	0x2B	off1_1	4 / 9.23	0x00000000	DRC1 Offset 1
0x58	0x2B	off2_1	4 / 9.23	0x00000000	DRC1 Offset 2
LEVEL METER					
0x0C	0x2C	LM Left from Left Input	4 / 9.23	0x00000000	Level Meter Left gain from Left Input
0x10	0x2C	LM Left from Right Input	4 / 9.23	0x00000000	Level Meter Left gain from Right Input
0x14	0x2C	LM Left from Left Output	4 / 9.23	0x00800000	Level Meter Left gain from Left Output
0x18	0x2C	LM Left from Right Output	4 / 9.23	0x00800000	Level Meter Left gain from Right Output
OUTPUT CROSSBAR					
0x1C	0x2C	Analog Left from Left Output	4 / 9.23	0x00800000	Analog Left output gain from left Output
0x20	0x2C	Analog Left from Right Output	4 / 9.23	0x00000000	Analog Left output gain from Right Output
0x28	0x2C	Analog Right from Left Output	4 / 9.23	0x00000000	Analog Right output gain from left Output
0x2C	0x2C	Analog Right from Right Output	4 / 9.23	0x00800000	Analog Right output gain from Right Output
0x34	0x2C	Digital Left from Left Output	4 / 9.23	0x00800000	I2S Left output gain from left Output
0x38	0x2C	Digital Left from Right Output	4 / 9.23	0x00000000	I2S Left output gain from Right Output
0x40	0x2C	Digital Left from Left Input	4 / 9.23	0x00000000	I2S Left output gain from left Input
0x44	0x2C	Digital Left from Right Input	4 / 9.23	0x00000000	I2S Left output gain from Right Input
0x48	0x2C	Digital Right from Left Output	4 / 9.23	0x00000000	I2S Right output gain from left Output

Table 5. Memory Map — Book 0x8C (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x4C	0x2C	Digital Right from Right Output	4 / 9.23	0x00800000	I2S Right output gain from Right Output
0x54	0x2C	Digital Right from Left Input	4 / 9.23	0x00000000	I2S Right output gain from left Input
0x58	0x2C	Digital Right from Right Input	4 / 9.23	0x00000000	I2S Right output gain from Right Input
AGL					
0x5C	0x2C	Release Rate	4 / 1.31	0x00005762	AGL Release Time constant
0x60	0x2C	Attack Rate	4 / 1.31	0x000369D0	AGL Attack Time constant
0x64	0x2C	Threshold	4 / 1.31	0x40000000	Threshold linear
0x68	0x2C	AGL Enable	4 / 1.31	0x40000000	AGL Enable flag
0x6C	0x2C	Softening Filter Alpha	4 / 1.31	0x051EB852	AGL Energy Time constant
0x18	0x2D	Softening Filter Omega	4 / 1.31	0x7AE147AE	AGL Omega Time constant
LEVEL METER					
0x1C	0x2D	LM Softening Filter Alpha	4 / 1.31	0x00005762	Level Meter Energy Time constant
0x20	0x2D	LM Right from Left Input	4 / 9.23	0x00000000	Level Meter Right gain from Left Input
0x24	0x2D	LM Right from Right Input	4 / 9.23	0x00000000	Level Meter Right gain from Right Input
0x28	0x2D	LM Right from Left Output	4 / 9.23	0x00800000	Level Meter Right gain from Left Output
0x2C	0x2D	LM Right from Right Output	4 / 9.23	0x00800000	Level Meter Right gain from Right Output
DRC					
0x30	0x2D	DRC2 Energy	4 / 1.31	0x7FFFFFFF	DRC2 Energy Time constant
0x34	0x2D	DRC2 Attack	4 / 1.31	0x7FFFFFFF	DRC2 Attack Time constant
0x38	0x2D	DRC2 Decay	4 / 1.31	0x7FFFFFFF	DRC2 Decay Time constant
0x3C	0x2D	k0_2	4 / 9.23	0x00000000	DRC2 Region 1 Slope (comp/Exp)
0x40	0x2D	k1_2	4 / 9.23	0x00000000	DRC2 Region 2 Slope (comp/Exp)
0x44	0x2D	k2_2	4 / 9.23	0x00000000	DRC2 Region 3 Slope (comp/Exp)
0x48	0x2D	t1_2	4 / 9.23	0xE7000000	DRC2 Threshold 1
0x4C	0x2D	t2_2	4 / 9.23	0xFE800000	DRC2 Threshold 2
0x50	0x2D	off1_2	4 / 9.23	0x00000000	DRC2 Offset 1
0x54	0x2D	off2_2	4 / 9.23	0x00000000	DRC2 Offset 2
0x58	0x2D	DRC3 Energy	4 / 1.31	0x7FFFFFFF	DRC3 Energy Time constant
0x5C	0x2D	DRC3 Attack	4 / 1.31	0x7FFFFFFF	DRC3 Attack Time constant
0x60	0x2D	DRC3 Decay	4 / 1.31	0x7FFFFFFF	DRC3 Decay Time constant
0x64	0x2D	k0_3	4 / 9.23	0x00000000	DRC3 Region 1 Slope (comp/Exp)
0x68	0x2D	k1_3	4 / 9.23	0x00000000	DRC3 Region 2 Slope (comp/Exp)
0x6C	0x2D	k1_3	4 / 9.23	0x00000000	DRC3 Region 3 Slope (comp/Exp)
0x70	0x2D	t1_3	4 / 9.23	0xE7000000	DRC3 Threshold 1
0x74	0x2D	t2_3	4 / 9.23	0xFE800000	DRC3 Threshold 2
0x78	0x2D	off1_3	4 / 9.23	0x00000000	DRC3 Offset 1
0x7C	0x2D	off2_3	4 / 9.23	0x00000000	DRC3 Offset 2
0x08	0x2E	DRC 1 Mixer Gain	4 / 9.23	0x00800000	DRC 1 Mixer Gain coefficient
0x0C	0x2E	DRC 2 Mixer Gain	4 / 9.23	0x00000000	DRC 2 Mixer Gain coefficient
0x10	0x2E	DRC 3 Mixer Gain	4 / 9.23	0x00000000	DRC 3 Mixer Gain coefficient
FS CLIPPER					
0x18	0x2E	CH-LR THD Boost	4 / 9.23	0x00800000	THD LR Channel Prescale coefficient
0x1C	0x2E	CH-L Fine Volume	4 / 2.30	0x3FFFFFFF	THD L Channel Postscale coefficient
0x20	0x2E	CH-R Fine Volume	4 / 2.30	0x3FFFFFFF	THD R Channel Postscale coefficient

Table 6. 2.0 96 kHz Mode Memory Map — Book 0xAA

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
			EQ LEFT 15 BQS		
0x18	0x24	CH -L BQ 1 B0	4 / 5.27	0x08000000	left BQ coefficient
0x1C	0x24	CH -L BQ 1 B1	4 / 5.27	0x00000000	left BQ coefficient
0x20	0x24	CH -L BQ 1 B2	4 / 5.27	0x00000000	left BQ coefficient
0x24	0x24	CH -L BQ 1 A1	4 / 5.27	0x00000000	left BQ coefficient
0x28	0x24	CH -L BQ 1 A2	4 / 5.27	0x00000000	left BQ coefficient
0x2C	0x24	CH -L BQ 2 B0	4 / 5.27	0x08000000	left BQ coefficient
0x30	0x24	CH -L BQ 2 B1	4 / 5.27	0x00000000	left BQ coefficient
0x34	0x24	CH -L BQ 2 B2	4 / 5.27	0x00000000	left BQ coefficient
0x38	0x24	CH -L BQ 2 A1	4 / 5.27	0x00000000	left BQ coefficient
0x3C	0x24	CH -L BQ 2 A2	4 / 5.27	0x00000000	left BQ coefficient
0x40	0x24	CH -L BQ 3 B0	4 / 5.27	0x08000000	left BQ coefficient
0x44	0x24	CH -L BQ 3 B1	4 / 5.27	0x00000000	left BQ coefficient
0x48	0x24	CH -L BQ 3 B2	4 / 5.27	0x00000000	left BQ coefficient
0x4C	0x24	CH -L BQ 3 A1	4 / 5.27	0x00000000	left BQ coefficient
0x50	0x24	CH -L BQ 3 A2	4 / 5.27	0x00000000	left BQ coefficient
0x54	0x24	CH -L BQ 4 B0	4 / 5.27	0x08000000	left BQ coefficient
0x58	0x24	CH -L BQ 4 B1	4 / 5.27	0x00000000	left BQ coefficient
0x5C	0x24	CH -L BQ 4 B2	4 / 5.27	0x00000000	left BQ coefficient
0x60	0x24	CH -L BQ 4 A1	4 / 5.27	0x00000000	left BQ coefficient
0x64	0x24	CH -L BQ 4 A2	4 / 5.27	0x00000000	left BQ coefficient
0x68	0x24	CH -L BQ 5 B0	4 / 5.27	0x08000000	left BQ coefficient
0x6C	0x24	CH -L BQ 5 B1	4 / 5.27	0x00000000	left BQ coefficient
0x70	0x24	CH -L BQ 5 B2	4 / 5.27	0x00000000	left BQ coefficient
0x74	0x24	CH -L BQ 5 A1	4 / 5.27	0x00000000	left BQ coefficient
0x78	0x24	CH -L BQ 5 A2	4 / 5.27	0x00000000	left BQ coefficient
0x7C	0x24	CH -L BQ 6 B0	4 / 5.27	0x08000000	left BQ coefficient
0x08	0x25	CH -L BQ 6 B1	4 / 5.27	0x00000000	left BQ coefficient
0x0C	0x25	CH -L BQ 6 B2	4 / 5.27	0x00000000	left BQ coefficient
0x10	0x25	CH -L BQ 6 A1	4 / 5.27	0x00000000	left BQ coefficient
0x14	0x25	CH -L BQ 6 A2	4 / 5.27	0x00000000	left BQ coefficient
0x18	0x25	CH -L BQ 7 B0	4 / 5.27	0x08000000	left BQ coefficient
0x1C	0x25	CH -L BQ 7 B1	4 / 5.27	0x00000000	left BQ coefficient
0x20	0x25	CH -L BQ 7 B2	4 / 5.27	0x00000000	left BQ coefficient
0x24	0x25	CH -L BQ 7 A1	4 / 5.27	0x00000000	left BQ coefficient
0x28	0x25	CH -L BQ 7 A2	4 / 5.27	0x00000000	left BQ coefficient
0x2C	0x25	CH -L BQ 8 B0	4 / 5.27	0x08000000	left BQ coefficient
0x30	0x25	CH -L BQ 8 B1	4 / 5.27	0x00000000	left BQ coefficient
0x34	0x25	CH -L BQ 8 B2	4 / 5.27	0x00000000	left BQ coefficient
0x38	0x25	CH -L BQ 8 A1	4 / 5.27	0x00000000	left BQ coefficient
0x3C	0x25	CH -L BQ 8 A2	4 / 5.27	0x00000000	left BQ coefficient
0x40	0x25	CH -L BQ 9 B0	4 / 5.27	0x08000000	left BQ coefficient
0x44	0x25	CH -L BQ 9 B1	4 / 5.27	0x00000000	left BQ coefficient
0x48	0x25	CH -L BQ 9 B2	4 / 5.27	0x00000000	left BQ coefficient
0x4C	0x25	CH -L BQ 9 A1	4 / 5.27	0x00000000	left BQ coefficient
0x50	0x25	CH -L BQ 9 A2	4 / 5.27	0x00000000	left BQ coefficient
0x54	0x25	CH -L BQ 10 B0	4 / 5.27	0x08000000	left BQ coefficient
0x58	0x25	CH -L BQ 10 B1	4 / 5.27	0x00000000	left BQ coefficient
0x5C	0x25	CH -L BQ 10 B2	4 / 5.27	0x00000000	left BQ coefficient
0x60	0x25	CH -L BQ 10 A1	4 / 5.27	0x00000000	left BQ coefficient

Table 6. 2.0 96 kHz Mode Memory Map — Book 0xAA (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x64	0x25	CH -L BQ 10 A2	4 / 5.27	0x00000000	left BQ coefficient
0x68	0x25	CH -L BQ 11 B0	4 / 5.27	0x08000000	left BQ coefficient
0x6C	0x25	CH -L BQ 11 B1	4 / 5.27	0x00000000	left BQ coefficient
0x70	0x25	CH -L BQ 11 B2	4 / 5.27	0x00000000	left BQ coefficient
0x74	0x25	CH -L BQ 11 A1	4 / 5.27	0x00000000	left BQ coefficient
0x78	0x25	CH -L BQ 11 A2	4 / 5.27	0x00000000	left BQ coefficient
0x7C	0x25	CH -L BQ 12 B0	4 / 5.27	0x08000000	left BQ coefficient
0x08	0x26	CH -L BQ 12 B1	4 / 5.27	0x00000000	left BQ coefficient
0x0C	0x26	CH -L BQ 12 B2	4 / 5.27	0x00000000	left BQ coefficient
0x10	0x26	CH -L BQ 12 A1	4 / 5.27	0x00000000	left BQ coefficient
0x14	0x26	CH -L BQ 12 A2	4 / 5.27	0x00000000	left BQ coefficient
0x18	0x26	CH -L BQ 13 B0	4 / 5.27	0x08000000	left BQ coefficient
0x1C	0x26	CH -L BQ 13 B1	4 / 5.27	0x00000000	left BQ coefficient
0x20	0x26	CH -L BQ 13 B2	4 / 5.27	0x00000000	left BQ coefficient
0x24	0x26	CH -L BQ 13 A1	4 / 5.27	0x00000000	left BQ coefficient
0x28	0x26	CH -L BQ 13 A2	4 / 5.27	0x00000000	left BQ coefficient
0x2C	0x26	CH -L BQ 14 B0	4 / 5.27	0x08000000	left BQ coefficient
0x30	0x26	CH -L BQ 14 B1	4 / 5.27	0x00000000	left BQ coefficient
0x34	0x26	CH -L BQ 14 B2	4 / 5.27	0x00000000	left BQ coefficient
0x38	0x26	CH -L BQ 14 A1	4 / 5.27	0x00000000	left BQ coefficient
0x3C	0x26	CH -L BQ 14 A2	4 / 5.27	0x00000000	left BQ coefficient
0x40	0x26	CH -L BQ 15 B0	4 / 5.27	0x08000000	left BQ coefficient
0x44	0x26	CH -L BQ 15 B1	4 / 5.27	0x00000000	left BQ coefficient
0x48	0x26	CH -L BQ 15 B2	4 / 5.27	0x00000000	left BQ coefficient
0x4C	0x26	CH -L BQ 15 A1	4 / 5.27	0x00000000	left BQ coefficient
0x50	0x26	CH -L BQ 15 A2	4 / 5.27	0x00000000	left BQ coefficient
EQ RIGHT 15 BQS					
0x54	0x26	CH -R BQ 1 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x58	0x26	CH -R BQ 1 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x5C	0x26	CH -R BQ 1 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x60	0x26	CH -R BQ 1 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x64	0x26	CH -R BQ 1 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x68	0x26	CH -R BQ 2 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x6C	0x26	CH -R BQ 2 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x70	0x26	CH -R BQ 2 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x74	0x26	CH -R BQ 2 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x78	0x26	CH -R BQ 2 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x7C	0x26	CH -R BQ 3 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x08	0x27	CH -R BQ 3 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x0C	0x27	CH -R BQ 3 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x10	0x27	CH -R BQ 3 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x14	0x27	CH -R BQ 3 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x18	0x27	CH -R BQ 4 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x1C	0x27	CH -R BQ 4 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x20	0x27	CH -R BQ 4 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x24	0x27	CH -R BQ 4 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x28	0x27	CH -R BQ 4 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x2C	0x27	CH -R BQ 5 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x30	0x27	CH -R BQ 5 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x34	0x27	CH -R BQ 5 B2	4 / 5.27	0x00000000	Right BQ coefficient

Table 6. 2.0 96 kHz Mode Memory Map — Book 0xAA (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x38	0x27	CH -R BQ 5 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x3C	0x27	CH -R BQ 5 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x40	0x27	CH -R BQ 6 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x44	0x27	CH -R BQ 6 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x48	0x27	CH -R BQ 6 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x4C	0x27	CH -R BQ 6 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x50	0x27	CH -R BQ 6 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x54	0x27	CH -R BQ 7 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x58	0x27	CH -R BQ 7 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x5C	0x27	CH -R BQ 7 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x60	0x27	CH -R BQ 7 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x64	0x27	CH -R BQ 7 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x68	0x27	CH -R BQ 8 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x6C	0x27	CH -R BQ 8 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x70	0x27	CH -R BQ 8 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x74	0x27	CH -R BQ 8 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x78	0x27	CH -R BQ 8 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x7C	0x27	CH -R BQ 9 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x08	0x28	CH -R BQ 9 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x0C	0x28	CH -R BQ 9 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x10	0x28	CH -R BQ 9 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x14	0x28	CH -R BQ 9 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x18	0x28	CH -R BQ 10 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x1C	0x28	CH -R BQ 10 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x20	0x28	CH -R BQ 10 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x24	0x28	CH -R BQ 10 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x28	0x28	CH -R BQ 10 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x2C	0x28	CH -R BQ 11 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x30	0x28	CH -R BQ 11 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x34	0x28	CH -R BQ 11 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x38	0x28	CH -R BQ 11 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x3C	0x28	CH -R BQ 11 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x40	0x28	CH -R BQ 12 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x44	0x28	CH -R BQ 12 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x48	0x28	CH -R BQ 12 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x4C	0x28	CH -R BQ 12 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x50	0x28	CH -R BQ 12 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x54	0x28	CH -R BQ 13 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x58	0x28	CH -R BQ 13 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x5C	0x28	CH -R BQ 13 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x60	0x28	CH -R BQ 13 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x64	0x28	CH -R BQ 13 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x68	0x28	CH -R BQ 14 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x6C	0x28	CH -R BQ 14 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x70	0x28	CH -R BQ 14 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x74	0x28	CH -R BQ 14 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x78	0x28	CH -R BQ 14 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x7C	0x28	CH -R BQ 15 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x08	0x29	CH -R BQ 15 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x0C	0x29	CH -R BQ 15 B2	4 / 5.27	0x00000000	Right BQ coefficient

Table 6. 2.0 96 kHz Mode Memory Map — Book 0xAA (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x10	0x29	CH -R BQ 15 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x14	0x29	CH -R BQ 15 A2	4 / 5.27	0x00000000	Right BQ coefficient
DRC BQS					
0x34	0x2A	DRC low BQ 1 B0	4 / 1.31	0x7FFFFFFF	DRC low BQ coefficient
0x38	0x2A	DRC low BQ 1 B1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x3C	0x2A	DRC low BQ 1 B2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x40	0x2A	DRC low BQ 1 A1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x44	0x2A	DRC low BQ 1 A2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x48	0x2A	DRC low BQ 2 B0	4 / 1.31	0x7FFFFFFF	DRC low BQ coefficient
0x4C	0x2A	DRC low BQ 2 B1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x50	0x2A	DRC low BQ 2 B2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x54	0x2A	DRC low BQ 2 A1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x58	0x2A	DRC low BQ 2 A2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x5C	0x2A	DRC mid BQ 1 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x60	0x2A	DRC mid BQ 1 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x64	0x2A	DRC mid BQ 1 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x68	0x2A	DRC mid BQ 1 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x6C	0x2A	DRC mid BQ 1 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x70	0x2A	DRC mid BQ 2 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x74	0x2A	DRC mid BQ 2 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x78	0x2A	DRC mid BQ 2 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x7C	0x2A	DRC mid BQ 2 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x08	0x2B	DRC mid BQ 2 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x0C	0x2B	DRC high BQ 1 B0	4 / 1.31	0x7FFFFFFF	DRC high BQ coefficient
0x10	0x2B	DRC high BQ 1 B1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x14	0x2B	DRC high BQ 1 B2	4 / 1.31	0x00000000	DRC high BQ coefficient
0x18	0x2B	DRC high BQ 1 A1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x1C	0x2B	DRC high BQ 1 A2	4 / 1.31	0x00000000	DRC high BQ coefficient
0x20	0x2B	DRC high BQ 2 B0	4 / 1.31	0x7FFFFFFF	DRC high BQ coefficient
0x24	0x2B	DRC high BQ 2 B1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x28	0x2B	DRC high BQ 2 B2	4 / 1.31	0x00000000	DRC high BQ coefficient
0x2C	0x2B	DRC high BQ 2 A1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x30	0x2B	DRC high BQ 2 A2	4 / 1.31	0x00000000	DRC high BQ coefficient
DRC MID 2 BQS					
0x40	0x2E	DRC mid BQ 3 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x44	0x2E	DRC mid BQ 3 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x48	0x2E	DRC mid BQ 3 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x4C	0x2E	DRC mid BQ 3 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x50	0x2E	DRC mid BQ 3 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x54	0x2E	DRC mid BQ 4 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x58	0x2E	DRC mid BQ 4 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x5C	0x2E	DRC mid BQ 4 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x60	0x2E	DRC mid BQ 4 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x64	0x2E	DRC mid BQ 4 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient

4.2 DSP Memory Map for Process Flow 2 and 3

Table 7. Memory Map — Book 0x78

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x60	0x02	Level Meter Left Output	4 / 1.31	0x00000000	Level Meter Left Output flag
0x64	0x02	Level Meter Right Output	4 / 1.31	0x00000000	Level Meter Right Output flag

Table 8. Mode 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
0x28	0x29	Left to Sub	4 / 9.23	0x00800000	Sub Channel Mixer Left Input Gain
0x2C	0x29	Right to Sub	4 / 9.23	0x00000000	Sub Channel Mixer Right Input Gain
0x30	0x29	Left EQ to Sub	4 / 9.23	0x00000000	Sub Channel Mixer Left EQ Input Gain
0x34	0x29	Right EQ to Sub	4 / 9.23	0x00800000	Sub Channel Mixer Right EQ 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
0x2C	0x2A	CH-Sub Volume	4 / 9.23	0x00800000	Sub Channel Volume coefficient
0x30	0x2A	Softening Filter Alpha	4 / 1.31	0x00E2C46B	Volume Time constant
			DRC		
0x34	0x2B	DRC1 Energy	4 / 1.31	0x7FFFFFFF	DRC1 Energy Time constant
0x38	0x2B	DRC1 Attack	4 / 1.31	0x7FFFFFFF	DRC1 Attack Time constant
0x3C	0x2B	DRC1 Decay	4 / 1.31	0x7FFFFFFF	DRC1 Decay Time constant
0x40	0x2B	K0_1	4 / 9.23	0x00000000	DRC1 Region 1 Slope (comp/Exp)
0x44	0x2B	K1_1	4 / 9.23	0x00000000	DRC1 Region 2 Slope (comp/Exp)
0x48	0x2B	K2_1	4 / 9.23	0x00000000	DRC1 Region 3 Slope (comp/Exp)
0x4C	0x2B	T1_1	4 / 9.23	0xE7000000	DRC1 Threshold 1
0x50	0x2B	T2_1	4 / 9.23	0xFE800000	DRC1 Threshold 2
0x54	0x2B	off1_1	4 / 9.23	0x00000000	DRC1 Offset 1
0x58	0x2B	off2_1	4 / 9.23	0x00000000	DRC1 Offset 2
0x5C	0x2B	CH-Sub DRC1 Energy	4 / 1.31	0x7FFFFFFF	Sub Channel DRC1 Energy Time constant
0x60	0x2B	CH-Sub DRC1 Attack	4 / 1.31	0x7FFFFFFF	Sub Channel DRC1 Attack Time constant
0x64	0x2B	CH-Sub DRC1 Decay	4 / 1.31	0x7FFFFFFF	Sub Channel DRC1 Decay Time constant
0x68	0x2B	CH-Sub K0_1	4 / 9.23	0x00000000	Sub Channel DRC1 Region 1 Slope (comp/Exp)
0x6C	0x2B	CH-Sub K1_1	4 / 9.23	0x00000000	Sub Channel DRC1 Region 2 Slope (comp/Exp)
0x70	0x2B	CH-Sub K2_1	4 / 9.23	0x00000000	Sub Channel DRC1 Region 3 Slope (comp/Exp)
0x74	0x2B	CH-Sub T1_1	4 / 9.23	0xE7000000	Sub Channel DRC1 Threshold 1
0x78	0x2B	CH-Sub T2_1	4 / 9.23	0xFE800000	Sub Channel DRC1 Threshold 2
0x7C	0x2B	CH-Sub off1_1	4 / 9.23	0x00000000	Sub Channel DRC1 Offset 1
0x08	0x2C	CH-Sub off2_1	4 / 9.23	0x00000000	Sub Channel DRC1 Offset 2
			LEVEL METER		
0x0C	0x2C	LM Left from Left Input	4 / 9.23	0x00000000	Level Meter Left gain from Left Input

Table 8. Mode Memory Map — Book 0x8C (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x10	0x2C	LM Left from Right Input	4 / 9.23	0x00000000	Level Meter Left gain from Right Input
0x14	0x2C	LM Left from Left Output	4 / 9.23	0x00800000	Level Meter Left gain from Left Output
0x18	0x2C	LM Left from Right Output	4 / 9.23	0x00800000	Level Meter Left gain from Right Output
		OUTPUT CROSSBAR			
0x1C	0x2C	Analog Left from Left Output	4 / 9.23	0x00800000	Analog Left output gain from left Output
0x20	0x2C	Analog Left from Right Output	4 / 9.23	0x00000000	Analog Left output gain from Right Output
0x24	0x2C	Analog Left from Sub Output	4 / 9.23	0x00000000	Analog Left output gain from Sub Output
0x28	0x2C	Analog Right from Left Output	4 / 9.23	0x00000000	Analog Right output gain from left Output
0x2C	0x2C	Analog Right from Right Output	4 / 9.23	0x00800000	Analog Right output gain from Right Output
0x30	0x2C	Analog Right from Sub Output	4 / 9.23	0x00000000	Analog Right output gain from Sub Output
0x34	0x2C	Digital Left from Left Output	4 / 9.23	0x00800000	I2S Left output gain from left Output
0x38	0x2C	Digital Left from Right Output	4 / 9.23	0x00000000	I2S Left output gain from Right Output
0x3C	0x2C	Digital Left from Sub Output	4 / 9.23	0x00000000	I2S Left output gain from Sub Output
0x40	0x2C	Digital Left from Left Input	4 / 9.23	0x00000000	I2S Left output gain from left Input
0x44	0x2C	Digital Left from Right Input	4 / 9.23	0x00000000	I2S Left output gain from Right Input
0x48	0x2C	Digital Right from Left Output	4 / 9.23	0x00000000	I2S Right output gain from left Output
0x4C	0x2C	Digital Right from Right Output	4 / 9.23	0x00800000	I2S Right output gain from Right Output
0x50	0x2C	Digital Right from Sub Output	4 / 9.23	0x00000000	I2S Right output gain from Sub Output
0x54	0x2C	Digital Right from Left Input	4 / 9.23	0x00000000	I2S Right output gain from left Input
0x58	0x2C	Digital Right from Right Input	4 / 9.23	0x00000000	I2S Right output gain from Right Input
		AGL			
0x5C	0x2C	Release Rate	4 / 1.31	0x00005762	AGL Release Time constant
0x60	0x2C	Attack Rate	4 / 1.31	0x000369D0	AGL Attack Time constant
0x64	0x2C	Threshold	4 / 1.31	0x40000000	Threshold linear
0x68	0x2C	AGL Enable	4 / 1.31	0x40000000	AGL Enable flag
0x6C	0x2C	Softening Filter Alpha	4 / 1.31	0x051EB852	AGL Energy Time constant
0x18	0x2D	Softening Filter Omega	4 / 1.31	0x7AE147AE	AGL Omega Time constant
		LEVEL METER			
0x1C	0x2D	LM Softening Filter Alpha	4 / 1.31	0x00005762	Level Meter Energy Time constant
0x20	0x2D	LM Right from Left Input	4 / 9.23	0x00000000	Level Meter Right gain from Left Input
0x24	0x2D	LM Right from Right Input	4 / 9.23	0x00000000	Level Meter Right gain from Right Input
0x28	0x2D	LM Right from Left Output	4 / 9.23	0x00800000	Level Meter Right gain from Left Output
0x2C	0x2D	LM Right from Right Output	4 / 9.23	0x00800000	Level Meter Right gain from Right Output
		DRC			
0x30	0x2D	DRC2 Energy	4 / 1.31	0x7FFFFFFF	DRC2 Energy Time constant
0x34	0x2D	DRC2 Attack	4 / 1.31	0x7FFFFFFF	DRC2 Attack Time constant
0x38	0x2D	DRC2 Decay	4 / 1.31	0x7FFFFFFF	DRC2 Decay Time constant
0x3C	0x2D	k0_2	4 / 9.23	0x00000000	DRC2 Region 1 Slope (comp/Exp)
0x40	0x2D	k1_2	4 / 9.23	0x00000000	DRC2 Region 2 Slope (comp/Exp)
0x44	0x2D	k2_2	4 / 9.23	0x00000000	DRC2 Region 3 Slope (comp/Exp)
0x48	0x2D	t1_2	4 / 9.23	0xE7000000	DRC2 Threshold 1
0x4C	0x2D	t2_2	4 / 9.23	0xFE800000	DRC2 Threshold 2
0x50	0x2D	off1_2	4 / 9.23	0x00000000	DRC2 Offset 1

Table 8. Mode Memory Map — Book 0x8C (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x54	0x2D	off2_2	4 / 9.23	0x00000000	DRC2 Offset 2
0x58	0x2D	DRC3 Energy	4 / 1.31	0x7FFFFFFF	DRC3 Energy Time constant
0x5C	0x2D	DRC3 Attack	4 / 1.31	0x7FFFFFFF	DRC3 Attack Time constant
0x60	0x2D	DRC3 Decay	4 / 1.31	0x7FFFFFFF	DRC3 Decay Time constant
0x64	0x2D	k0_3	4 / 9.23	0x00000000	DRC3 Region 1 Slope (comp/Exp)
0x68	0x2D	k1_3	4 / 9.23	0x00000000	DRC3 Region 2 Slope (comp/Exp)
0x6C	0x2D	k1_3	4 / 9.23	0x00000000	DRC3 Region 3 Slope (comp/Exp)
0x70	0x2D	t1_3	4 / 9.23	0xE7000000	DRC3 Threshold 1
0x74	0x2D	t2_3	4 / 9.23	0xFE800000	DRC3 Threshold 2
0x78	0x2D	off1_3	4 / 9.23	0x00000000	DRC3 Offset 1
0x7C	0x2D	off2_3	4 / 9.23	0x00000000	DRC3 Offset 2
0x08	0x2E	DRC 1 Mixer Gain	4 / 9.23	0x00800000	DRC 1 Mixer Gain coefficient
0x0C	0x2E	DRC 2 Mixer Gain	4 / 9.23	0x00000000	DRC 2 Mixer Gain coefficient
0x10	0x2E	DRC 3 Mixer Gain	4 / 9.23	0x00000000	DRC 3 Mixer Gain coefficient
FS CLIPPER					
0x18	0x2E	CH-LR THD Boost	4 / 9.23	0x00800000	THD LR Channel Prescale coefficient
0x1C	0x2E	CH-L Fine Volume	4 / 2.30	0x3FFFFFFF	THD L Channel Postscale coefficient
0x20	0x2E	CH-R Fine Volume	4 / 2.30	0x3FFFFFFF	THD R Channel Postscale coefficient
SUB FS CLIPPER					
0x6C	0x2E	CH-Sub THD Boost	4 / 9.23	0x00800000	THD Sub Channel prescale coefficient
0x70	0x2E	CH-Sub Fine Volume	4 / 2.30	0x3FFFFFFF	THD Sub Channel postscale coefficient
128 TAPS FIR					
0x48	0x31	128 Taps FIR Start Address	4 / 2.30	0x40000000	128 taps FIR coefficient

Table 9. 2.1 48 kHz Mode Memory Map — Book 0xAA

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
EQ LEFT 15 BQS					
0x18	0x24	CH -L BQ 1 B0	4 / 5.27	0x08000000	left BQ coefficient
0x1C	0x24	CH -L BQ 1 B1	4 / 5.27	0x00000000	left BQ coefficient
0x20	0x24	CH -L BQ 1 B2	4 / 5.27	0x00000000	left BQ coefficient
0x24	0x24	CH -L BQ 1 A1	4 / 5.27	0x00000000	left BQ coefficient
0x28	0x24	CH -L BQ 1 A2	4 / 5.27	0x00000000	left BQ coefficient
0x2C	0x24	CH -L BQ 2 B0	4 / 5.27	0x08000000	left BQ coefficient
0x30	0x24	CH -L BQ 2 B1	4 / 5.27	0x00000000	left BQ coefficient
0x34	0x24	CH -L BQ 2 B2	4 / 5.27	0x00000000	left BQ coefficient
0x38	0x24	CH -L BQ 2 A1	4 / 5.27	0x00000000	left BQ coefficient
0x3C	0x24	CH -L BQ 2 A2	4 / 5.27	0x00000000	left BQ coefficient
0x40	0x24	CH -L BQ 3 B0	4 / 5.27	0x08000000	left BQ coefficient
0x44	0x24	CH -L BQ 3 B1	4 / 5.27	0x00000000	left BQ coefficient
0x48	0x24	CH -L BQ 3 B2	4 / 5.27	0x00000000	left BQ coefficient
0x4C	0x24	CH -L BQ 3 A1	4 / 5.27	0x00000000	left BQ coefficient
0x50	0x24	CH -L BQ 3 A2	4 / 5.27	0x00000000	left BQ coefficient
0x54	0x24	CH -L BQ 4 B0	4 / 5.27	0x08000000	left BQ coefficient
0x58	0x24	CH -L BQ 4 B1	4 / 5.27	0x00000000	left BQ coefficient
0x5C	0x24	CH -L BQ 4 B2	4 / 5.27	0x00000000	left BQ coefficient
0x60	0x24	CH -L BQ 4 A1	4 / 5.27	0x00000000	left BQ coefficient
0x64	0x24	CH -L BQ 4 A2	4 / 5.27	0x00000000	left BQ coefficient
0x68	0x24	CH -L BQ 5 B0	4 / 5.27	0x08000000	left BQ coefficient

Table 9. 2.1 48 kHz Mode Memory Map — Book 0xAA (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x6C	0x24	CH -L BQ 5 B1	4 / 5.27	0x00000000	left BQ coefficient
0x70	0x24	CH -L BQ 5 B2	4 / 5.27	0x00000000	left BQ coefficient
0x74	0x24	CH -L BQ 5 A1	4 / 5.27	0x00000000	left BQ coefficient
0x78	0x24	CH -L BQ 5 A2	4 / 5.27	0x00000000	left BQ coefficient
0x7C	0x24	CH -L BQ 6 B0	4 / 5.27	0x08000000	left BQ coefficient
0x08	0x25	CH -L BQ 6 B1	4 / 5.27	0x00000000	left BQ coefficient
0x0C	0x25	CH -L BQ 6 B2	4 / 5.27	0x00000000	left BQ coefficient
0x10	0x25	CH -L BQ 6 A1	4 / 5.27	0x00000000	left BQ coefficient
0x14	0x25	CH -L BQ 6 A2	4 / 5.27	0x00000000	left BQ coefficient
0x18	0x25	CH -L BQ 7 B0	4 / 5.27	0x08000000	left BQ coefficient
0x1C	0x25	CH -L BQ 7 B1	4 / 5.27	0x00000000	left BQ coefficient
0x20	0x25	CH -L BQ 7 B2	4 / 5.27	0x00000000	left BQ coefficient
0x24	0x25	CH -L BQ 7 A1	4 / 5.27	0x00000000	left BQ coefficient
0x28	0x25	CH -L BQ 7 A2	4 / 5.27	0x00000000	left BQ coefficient
0x2C	0x25	CH -L BQ 8 B0	4 / 5.27	0x08000000	left BQ coefficient
0x30	0x25	CH -L BQ 8 B1	4 / 5.27	0x00000000	left BQ coefficient
0x34	0x25	CH -L BQ 8 B2	4 / 5.27	0x00000000	left BQ coefficient
0x38	0x25	CH -L BQ 8 A1	4 / 5.27	0x00000000	left BQ coefficient
0x3C	0x25	CH -L BQ 8 A2	4 / 5.27	0x00000000	left BQ coefficient
0x40	0x25	CH -L BQ 9 B0	4 / 5.27	0x08000000	left BQ coefficient
0x44	0x25	CH -L BQ 9 B1	4 / 5.27	0x00000000	left BQ coefficient
0x48	0x25	CH -L BQ 9 B2	4 / 5.27	0x00000000	left BQ coefficient
0x4C	0x25	CH -L BQ 9 A1	4 / 5.27	0x00000000	left BQ coefficient
0x50	0x25	CH -L BQ 9 A2	4 / 5.27	0x00000000	left BQ coefficient
0x54	0x25	CH -L BQ 10 B0	4 / 5.27	0x08000000	left BQ coefficient
0x58	0x25	CH -L BQ 10 B1	4 / 5.27	0x00000000	left BQ coefficient
0x5C	0x25	CH -L BQ 10 B2	4 / 5.27	0x00000000	left BQ coefficient
0x60	0x25	CH -L BQ 10 A1	4 / 5.27	0x00000000	left BQ coefficient
0x64	0x25	CH -L BQ 10 A2	4 / 5.27	0x00000000	left BQ coefficient
0x68	0x25	CH -L BQ 11 B0	4 / 5.27	0x08000000	left BQ coefficient
0x6C	0x25	CH -L BQ 11 B1	4 / 5.27	0x00000000	left BQ coefficient
0x70	0x25	CH -L BQ 11 B2	4 / 5.27	0x00000000	left BQ coefficient
0x74	0x25	CH -L BQ 11 A1	4 / 5.27	0x00000000	left BQ coefficient
0x78	0x25	CH -L BQ 11 A2	4 / 5.27	0x00000000	left BQ coefficient
0x7C	0x25	CH -L BQ 12 B0	4 / 5.27	0x08000000	left BQ coefficient
0x08	0x26	CH -L BQ 12 B1	4 / 5.27	0x00000000	left BQ coefficient
0x0C	0x26	CH -L BQ 12 B2	4 / 5.27	0x00000000	left BQ coefficient
0x10	0x26	CH -L BQ 12 A1	4 / 5.27	0x00000000	left BQ coefficient
0x14	0x26	CH -L BQ 12 A2	4 / 5.27	0x00000000	left BQ coefficient
0x18	0x26	CH -L BQ 13 B0	4 / 5.27	0x08000000	left BQ coefficient
0x1C	0x26	CH -L BQ 13 B1	4 / 5.27	0x00000000	left BQ coefficient
0x20	0x26	CH -L BQ 13 B2	4 / 5.27	0x00000000	left BQ coefficient
0x24	0x26	CH -L BQ 13 A1	4 / 5.27	0x00000000	left BQ coefficient
0x28	0x26	CH -L BQ 13 A2	4 / 5.27	0x00000000	left BQ coefficient
0x2C	0x26	CH -L BQ 14 B0	4 / 5.27	0x08000000	left BQ coefficient
0x30	0x26	CH -L BQ 14 B1	4 / 5.27	0x00000000	left BQ coefficient
0x34	0x26	CH -L BQ 14 B2	4 / 5.27	0x00000000	left BQ coefficient
0x38	0x26	CH -L BQ 14 A1	4 / 5.27	0x00000000	left BQ coefficient
0x3C	0x26	CH -L BQ 14 A2	4 / 5.27	0x00000000	left BQ coefficient
0x40	0x26	CH -L BQ 15 B0	4 / 5.27	0x08000000	left BQ coefficient

Table 9. 2.1 48 kHz Mode Memory Map — Book 0xAA (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x44	0x26	CH -L BQ 15 B1	4 / 5.27	0x00000000	left BQ coefficient
0x48	0x26	CH -L BQ 15 B2	4 / 5.27	0x00000000	left BQ coefficient
0x4C	0x26	CH -L BQ 15 A1	4 / 5.27	0x00000000	left BQ coefficient
0x50	0x26	CH -L BQ 15 A2	4 / 5.27	0x00000000	left BQ coefficient
EQ RIGHT 15 BQS					
0x54	0x26	CH -R BQ 1 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x58	0x26	CH -R BQ 1 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x5C	0x26	CH -R BQ 1 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x60	0x26	CH -R BQ 1 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x64	0x26	CH -R BQ 1 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x68	0x26	CH -R BQ 2 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x6C	0x26	CH -R BQ 2 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x70	0x26	CH -R BQ 2 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x74	0x26	CH -R BQ 2 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x78	0x26	CH -R BQ 2 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x7C	0x26	CH -R BQ 3 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x08	0x27	CH -R BQ 3 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x0C	0x27	CH -R BQ 3 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x10	0x27	CH -R BQ 3 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x14	0x27	CH -R BQ 3 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x18	0x27	CH -R BQ 4 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x1C	0x27	CH -R BQ 4 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x20	0x27	CH -R BQ 4 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x24	0x27	CH -R BQ 4 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x28	0x27	CH -R BQ 4 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x2C	0x27	CH -R BQ 5 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x30	0x27	CH -R BQ 5 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x34	0x27	CH -R BQ 5 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x38	0x27	CH -R BQ 5 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x3C	0x27	CH -R BQ 5 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x40	0x27	CH -R BQ 6 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x44	0x27	CH -R BQ 6 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x48	0x27	CH -R BQ 6 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x4C	0x27	CH -R BQ 6 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x50	0x27	CH -R BQ 6 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x54	0x27	CH -R BQ 7 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x58	0x27	CH -R BQ 7 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x5C	0x27	CH -R BQ 7 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x60	0x27	CH -R BQ 7 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x64	0x27	CH -R BQ 7 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x68	0x27	CH -R BQ 8 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x6C	0x27	CH -R BQ 8 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x70	0x27	CH -R BQ 8 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x74	0x27	CH -R BQ 8 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x78	0x27	CH -R BQ 8 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x7C	0x27	CH -R BQ 9 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x08	0x28	CH -R BQ 9 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x0C	0x28	CH -R BQ 9 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x10	0x28	CH -R BQ 9 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x14	0x28	CH -R BQ 9 A2	4 / 5.27	0x00000000	Right BQ coefficient

Table 9. 2.1 48 kHz Mode Memory Map — Book 0xAA (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x18	0x28	CH -R BQ 10 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x1C	0x28	CH -R BQ 10 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x20	0x28	CH -R BQ 10 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x24	0x28	CH -R BQ 10 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x28	0x28	CH -R BQ 10 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x2C	0x28	CH -R BQ 11 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x30	0x28	CH -R BQ 11 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x34	0x28	CH -R BQ 11 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x38	0x28	CH -R BQ 11 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x3C	0x28	CH -R BQ 11 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x40	0x28	CH -R BQ 12 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x44	0x28	CH -R BQ 12 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x48	0x28	CH -R BQ 12 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x4C	0x28	CH -R BQ 12 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x50	0x28	CH -R BQ 12 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x54	0x28	CH -R BQ 13 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x58	0x28	CH -R BQ 13 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x5C	0x28	CH -R BQ 13 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x60	0x28	CH -R BQ 13 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x64	0x28	CH -R BQ 13 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x68	0x28	CH -R BQ 14 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x6C	0x28	CH -R BQ 14 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x70	0x28	CH -R BQ 14 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x74	0x28	CH -R BQ 14 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x78	0x28	CH -R BQ 14 A2	4 / 5.27	0x00000000	Right BQ coefficient
0x7C	0x28	CH -R BQ 15 B0	4 / 5.27	0x08000000	Right BQ coefficient
0x08	0x29	CH -R BQ 15 B1	4 / 5.27	0x00000000	Right BQ coefficient
0x0C	0x29	CH -R BQ 15 B2	4 / 5.27	0x00000000	Right BQ coefficient
0x10	0x29	CH -R BQ 15 A1	4 / 5.27	0x00000000	Right BQ coefficient
0x14	0x29	CH -R BQ 15 A2	4 / 5.27	0x00000000	Right BQ coefficient
EQ SUB 5 BQS					
0x38	0x29	CH -Sub BQ 1 B0	4 / 5.27	0x08000000	Sub BQ coefficient
0x3C	0x29	CH -Sub BQ 1 B1	4 / 5.27	0x00000000	Sub BQ coefficient
0x40	0x29	CH -Sub BQ 1 B2	4 / 5.27	0x00000000	Sub BQ coefficient
0x44	0x29	CH -Sub BQ 1 A1	4 / 5.27	0x00000000	Sub BQ coefficient
0x48	0x29	CH -Sub BQ 1 A2	4 / 5.27	0x00000000	Sub BQ coefficient
0x4C	0x29	CH -Sub BQ 2 B0	4 / 5.27	0x08000000	Sub BQ coefficient
0x50	0x29	CH -Sub BQ 2 B1	4 / 5.27	0x00000000	Sub BQ coefficient
0x54	0x29	CH -Sub BQ 2 B2	4 / 5.27	0x00000000	Sub BQ coefficient
0x58	0x29	CH -Sub BQ 2 A1	4 / 5.27	0x00000000	Sub BQ coefficient
0x5C	0x29	CH -Sub BQ 2 A2	4 / 5.27	0x00000000	Sub BQ coefficient
0x60	0x29	CH -Sub BQ 3 B0	4 / 5.27	0x08000000	Sub BQ coefficient
0x64	0x29	CH -Sub BQ 3 B1	4 / 5.27	0x00000000	Sub BQ coefficient
0x68	0x29	CH -Sub BQ 3 B2	4 / 5.27	0x00000000	Sub BQ coefficient
0x6C	0x29	CH -Sub BQ 3 A1	4 / 5.27	0x00000000	Sub BQ coefficient
0x70	0x29	CH -Sub BQ 3 A2	4 / 5.27	0x00000000	Sub BQ coefficient
0x74	0x29	CH -Sub BQ 4 B0	4 / 5.27	0x08000000	Sub BQ coefficient
0x78	0x29	CH -Sub BQ 4 B1	4 / 5.27	0x00000000	Sub BQ coefficient
0x7C	0x29	CH -Sub BQ 4 B2	4 / 5.27	0x00000000	Sub BQ coefficient
0x08	0x2A	CH -Sub BQ 4 A1	4 / 5.27	0x00000000	Sub BQ coefficient

Table 9. 2.1 48 kHz Mode Memory Map — Book 0xAA (continued)

SUB ADDRESS	PAGE	REGISTER NAME	NUMBER OF BYTES/ FORMAT	DEFAULT VALUE	DESCRIPTION
0x0C	0x2A	CH -Sub BQ 4 A2	4 / 5.27	0x00000000	Sub BQ coefficient
0x10	0x2A	CH -Sub BQ 5 B0	4 / 5.27	0x08000000	Sub BQ coefficient
0x14	0x2A	CH -Sub BQ 5 B1	4 / 5.27	0x00000000	Sub BQ coefficient
0x18	0x2A	CH -Sub BQ 5 B2	4 / 5.27	0x00000000	Sub BQ coefficient
0x1C	0x2A	CH -Sub BQ 5 A1	4 / 5.27	0x00000000	Sub BQ coefficient
0x20	0x2A	CH -Sub BQ 5 A2	4 / 5.27	0x00000000	Sub BQ coefficient
DRC BQS					
0x34	0x2A	DRC low BQ 1 B0	4 / 1.31	0x7FFFFFFF	DRC low BQ coefficient
0x38	0x2A	DRC low BQ 1 B1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x3C	0x2A	DRC low BQ 1 B2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x40	0x2A	DRC low BQ 1 A1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x44	0x2A	DRC low BQ 1 A2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x48	0x2A	DRC low BQ 2 B0	4 / 1.31	0x7FFFFFFF	DRC low BQ coefficient
0x4C	0x2A	DRC low BQ 2 B1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x50	0x2A	DRC low BQ 2 B2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x54	0x2A	DRC low BQ 2 A1	4 / 2.30	0x00000000	DRC low BQ coefficient
0x58	0x2A	DRC low BQ 2 A2	4 / 1.31	0x00000000	DRC low BQ coefficient
0x5C	0x2A	DRC mid BQ 1 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x60	0x2A	DRC mid BQ 1 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x64	0x2A	DRC mid BQ 1 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x68	0x2A	DRC mid BQ 1 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x6C	0x2A	DRC mid BQ 1 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x70	0x2A	DRC mid BQ 2 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x74	0x2A	DRC mid BQ 2 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x78	0x2A	DRC mid BQ 2 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x7C	0x2A	DRC mid BQ 2 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x08	0x2B	DRC mid BQ 2 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x0C	0x2B	DRC high BQ 1 B0	4 / 1.31	0x7FFFFFFF	DRC high BQ coefficient
0x10	0x2B	DRC high BQ 1 B1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x14	0x2B	DRC high BQ 1 B2	4 / 1.31	0x00000000	DRC high BQ coefficient
0x18	0x2B	DRC high BQ 1 A1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x1C	0x2B	DRC high BQ 1 A2	4 / 1.31	0x00000000	DRC high BQ coefficient
0x20	0x2B	DRC high BQ 2 B0	4 / 1.31	0x7FFFFFFF	DRC high BQ coefficient
0x24	0x2B	DRC high BQ 2 B1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x28	0x2B	DRC high BQ 2 B2	4 / 1.31	0x00000000	DRC high BQ coefficient
0x2C	0x2B	DRC high BQ 2 A1	4 / 2.30	0x00000000	DRC high BQ coefficient
0x30	0x2B	DRC high BQ 2 A2	4 / 1.31	0x00000000	DRC high BQ coefficient
DRC MID 2 BQS					
0x40	0x2E	DRC mid BQ 3 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x44	0x2E	DRC mid BQ 3 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x48	0x2E	DRC mid BQ 3 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x4C	0x2E	DRC mid BQ 3 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x50	0x2E	DRC mid BQ 3 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x54	0x2E	DRC mid BQ 4 B0	4 / 1.31	0x7FFFFFFF	DRC mid BQ coefficient
0x58	0x2E	DRC mid BQ 4 B1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x5C	0x2E	DRC mid BQ 4 B2	4 / 1.31	0x00000000	DRC mid BQ coefficient
0x60	0x2E	DRC mid BQ 4 A1	4 / 2.30	0x00000000	DRC mid BQ coefficient
0x64	0x2E	DRC mid BQ 4 A2	4 / 1.31	0x00000000	DRC mid BQ coefficient

Revision History

NOTE: Page numbers for previous revisions may differ from page numbers in the current version.

Changes from Original (July 2018) to A Revision	Page
• Changed the document title From: TAS5805M Process Flows To: TAS5805M, TAS5806M and TAS5806MD Process Flows	1

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