

## EclaireXL - Bug #16

### Audio bug report for Altirra

05/12/2017 07:48 PM - foft

<b>Status:</b>	Closed	<b>Start date:</b>	05/12/2017
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>		<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	0:00 hour
<b>Target version:</b>			
<b>Description</b>			
One for the coders, please can you check if these bugs are present?			
From post on atariage... <a href="http://atariage.com/forums/topic/256683-altirra-280-released/page-24#entry3760704">http://atariage.com/forums/topic/256683-altirra-280-released/page-24#entry3760704</a> Let me report a couple of issues with POKEY chip in Altirra that I've found			
1. Setting POKEY registers as follows AUDF1=100 AUDC1=175 AUDF3=0 AUDC3=0 AUDCTL=5 SKCTL=3 should cause it to generate a narrow impulse train. It seems to work reliably on a real hardware, however on Altirra it sometimes works correctly and sometimes it doesn't. Sometimes the impulse train is generated but it is very quiet. Most often no sound is produced at all.			
2. Behavior of a low timer in a linked timers pair is incorrect when timers are driven by 64 kHz or 15 kHz clock (it's OK with 1.79 MHz clock). For example AUDF1=33 AUDC1=170 AUDF2=1 AUDC2=0 AUDCTL=16 SKCTL=3 the generated sound is wrong and is disturbed by keystrokes. This happens only when timer emulation is in deferred mode. Forcing it to go out of deferred mode by enabling interrupts for timer 1 fixes the problem.			
3. The pitch of a square wave generated with the following settings AUDF1=99 AUDC1=170 AUDF2=199 AUDC2=0 AUDCTL=0 SKCTL=139 is one octave lower than it should be.			
4. Altirra doesn't implement additional two-cycle delay when timers 1 and 2 are linked and two-tone mode is enabled at the same time. For example, with the following settings: AUDF1=10 AUDC1=0 AUDF2=0 AUDC2=136 AUDCTL=208 SKCTL=139 the pitch is too high by almost 2 semitones.			
<b>Related issues:</b>			
Related to Bug #41: Core 8 - the background music in Gene & LMS demos are not ...			New 06/06/2017

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## History

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### #1 - 06/07/2017 01:06 PM - foft

- *Related to Bug #41: Core 8 - the background music in Gene & LMS demos are not the same as on a real ATARI added*

### #2 - 06/07/2017 02:13 PM - ndary

I Confirm that these Audio tests sound the same on a real Atari and on EclairXL board

Nir

### #3 - 06/07/2017 05:33 PM - foft

- *Status changed from New to Closed*

Many thanks Nir