

## Expander of A-law (assume nonnegative $m$ )

<i>Compressed Code Word</i>							<i>Raised Output Values</i>										
<i>Chord</i>			<i>Step</i>														
<i>Bits: 6 5 4</i>			<i>3 2 1 0</i>				<i>Bits: 11 10 9 8 7 6 5 4 3 2 1 0</i>										
0 0 0			a b c d				0 0 0 0 0 0 0 a b c d 1										
0 0 1			a b c d				0 0 0 0 0 0 1 a b c d 1										
0 1 0			a b c d				0 0 0 0 0 1 a b c d 1 0										
0 1 1			a b c d				0 0 0 0 1 a b c d 1 0 0										
1 0 0			a b c d				0 0 0 1 a b c d 1 0 0 0										
1 0 1			a b c d				0 0 1 a b c d 1 0 0 0 0										
1 1 0			a b c d				0 1 a b c d 1 0 0 0 0 0										
1 1 1			a b c d				1 a b c d 1 0 0 0 0 0 0										

E.g.  $(113)_{10} \rightarrow (111,0001)_2 \rightarrow (1000,1100,0000)_2 \rightarrow (2240)_{10}$

In other words,  $\frac{(1001,0000,0000)_2 + (1000,1000,0000)_2}{2} = \frac{(2304)_{10} + (2176)_{10}}{2} = (2240)_{10}$