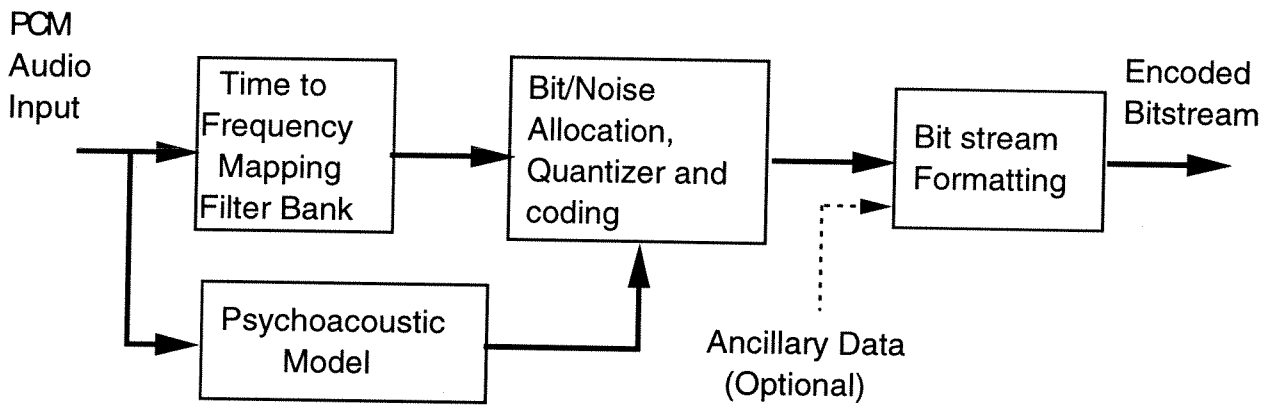
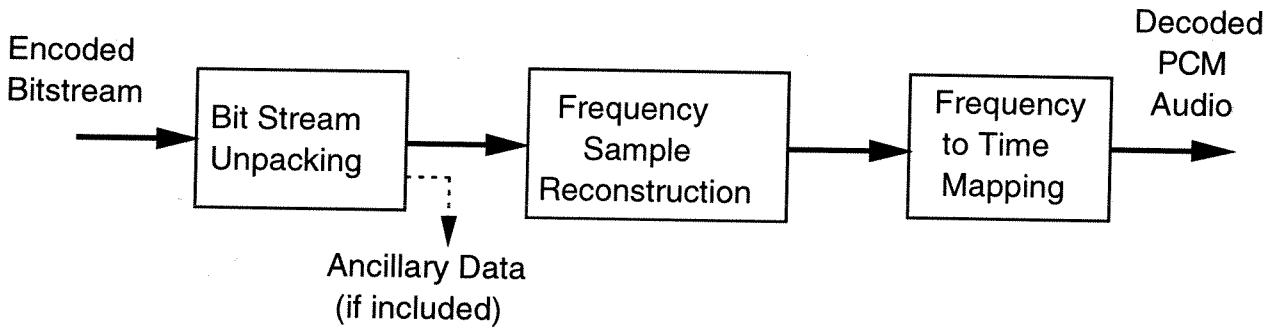


MPEG/Audio Encoder



MPEG/Audio Decoder

Figure 1 MPEG/Audio Compression and Decompression

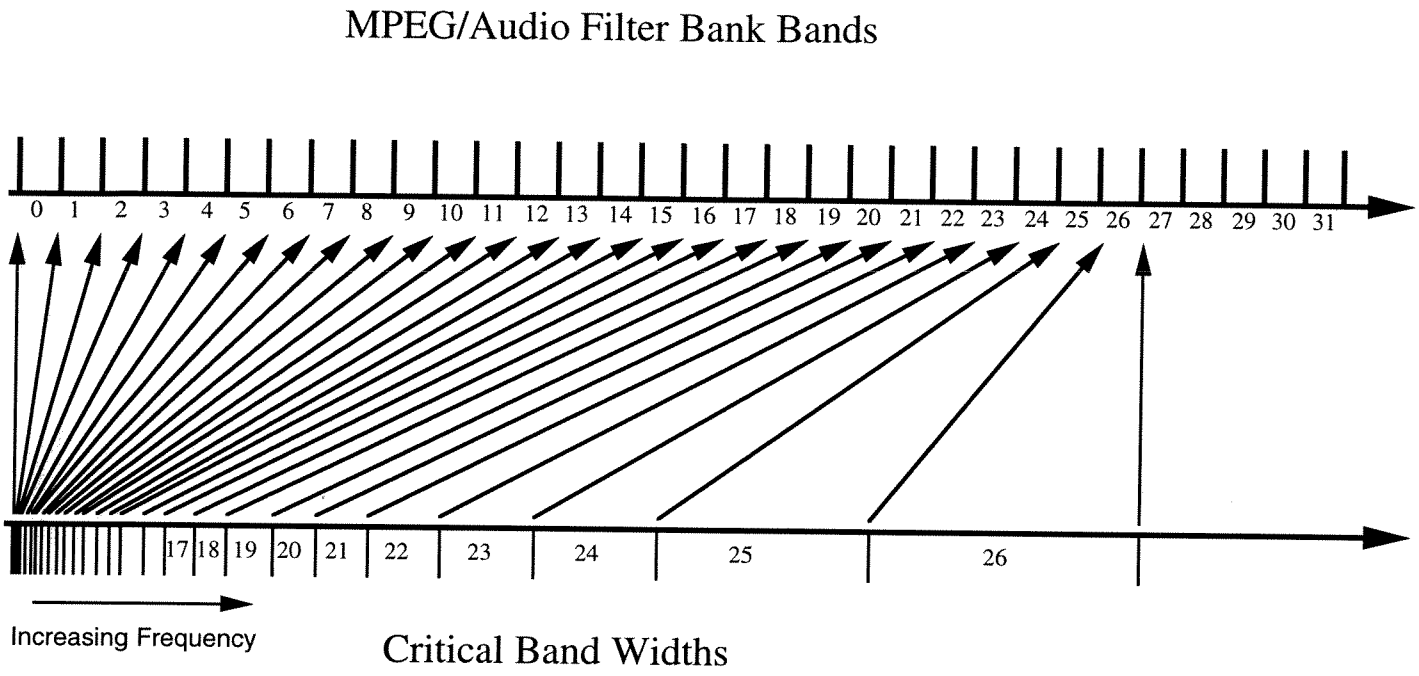


Figure 2 MPEG/Audio Filter Band Widths Versus Critical Band Widths

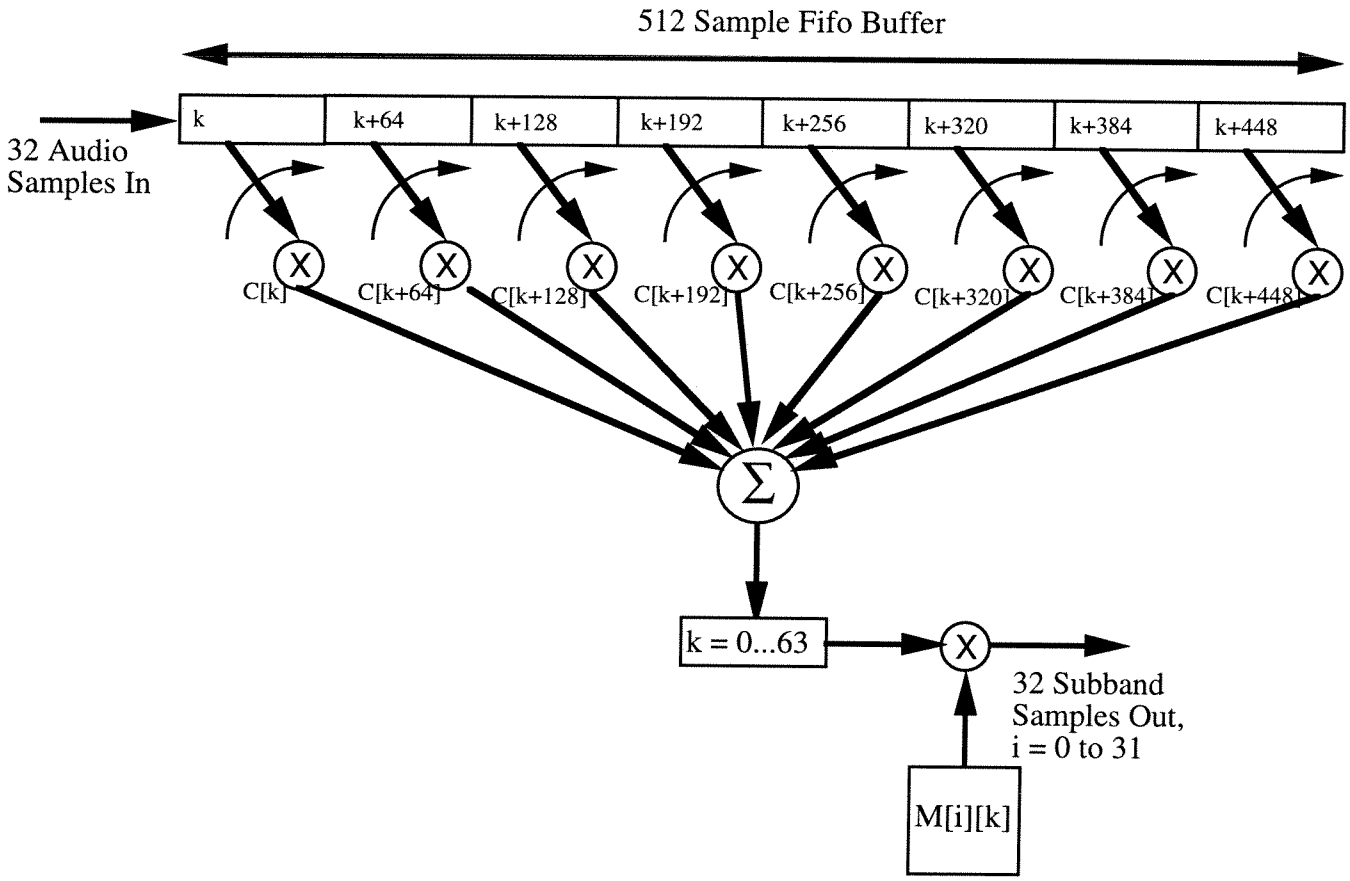


Figure 3 MPEG/Audio Encoder Filter Bank Implementation

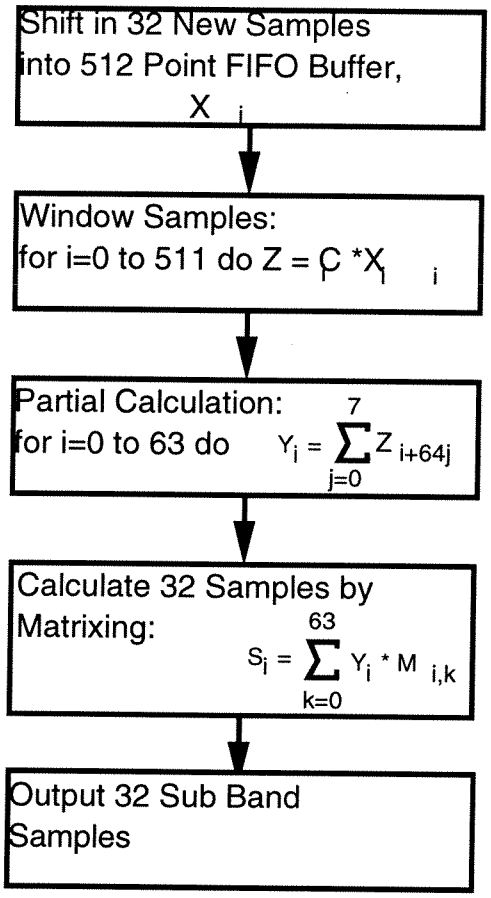


Figure 4 Flow Diagram of the MPEG/Audio Encoder Filter Bank

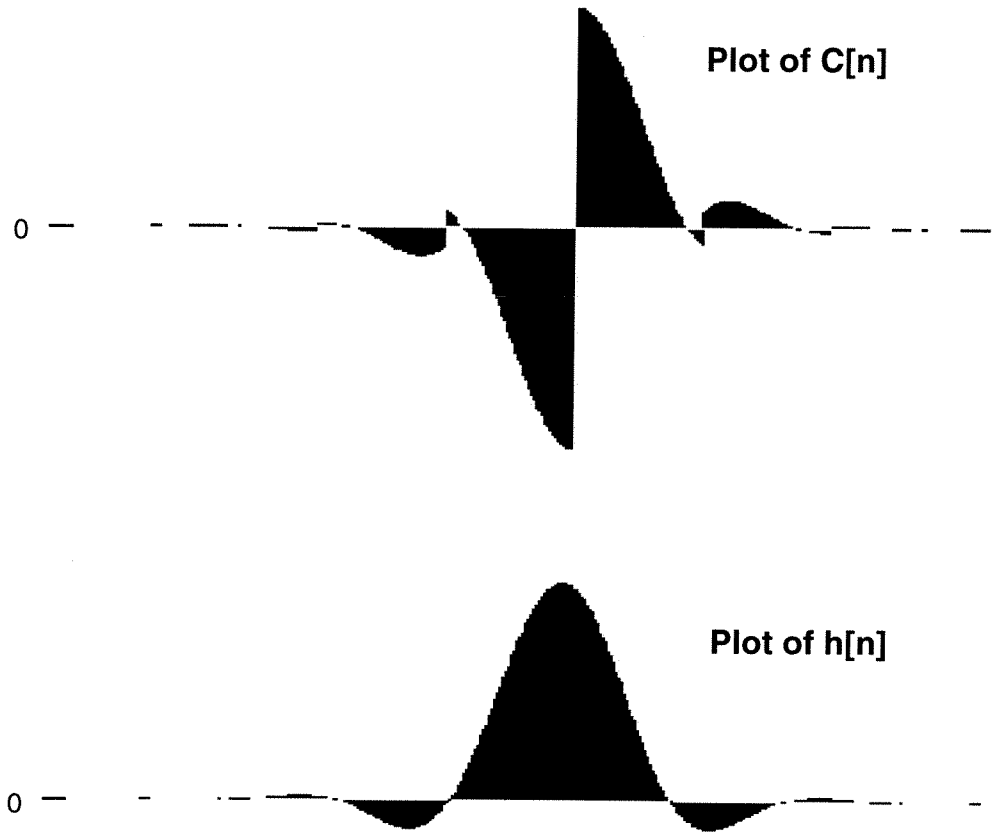


Figure 5 Comparison of h[n] with C[n]

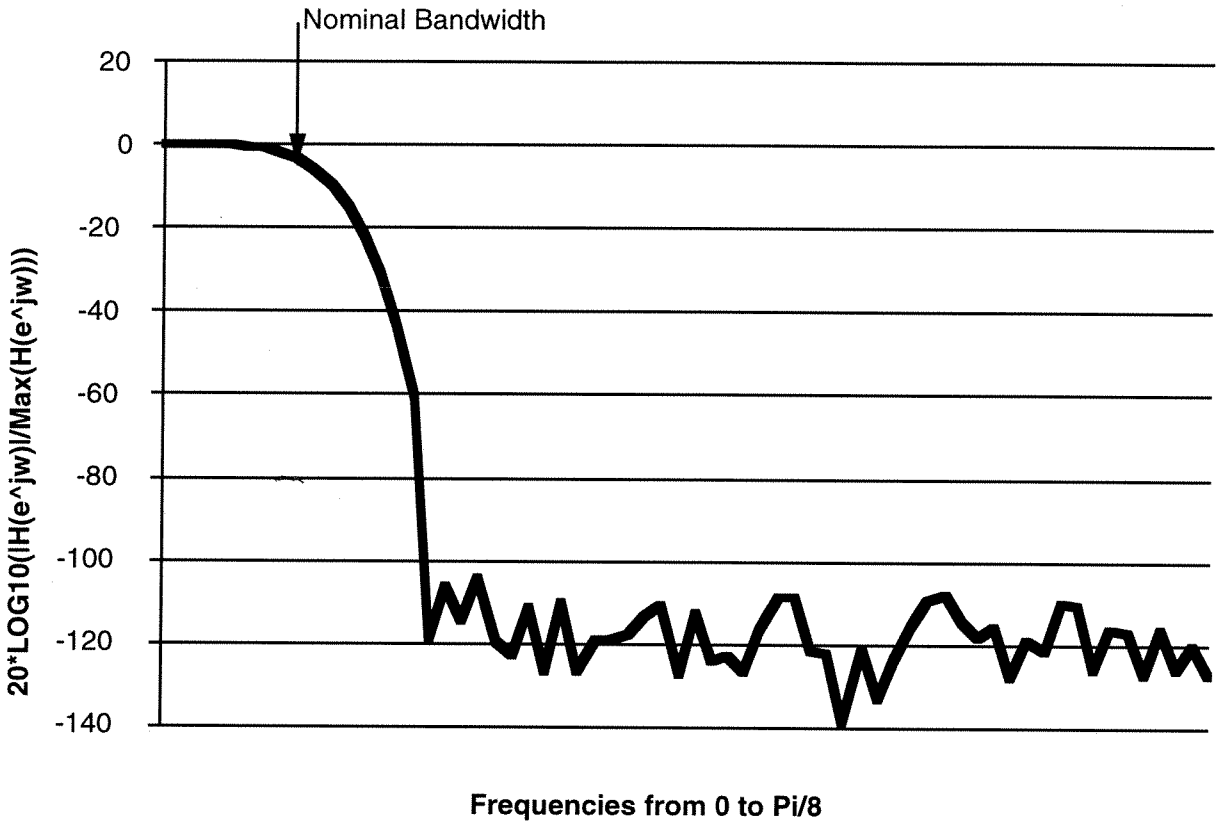


Figure 6 Frequency Response of Prototype Filter, h[n]

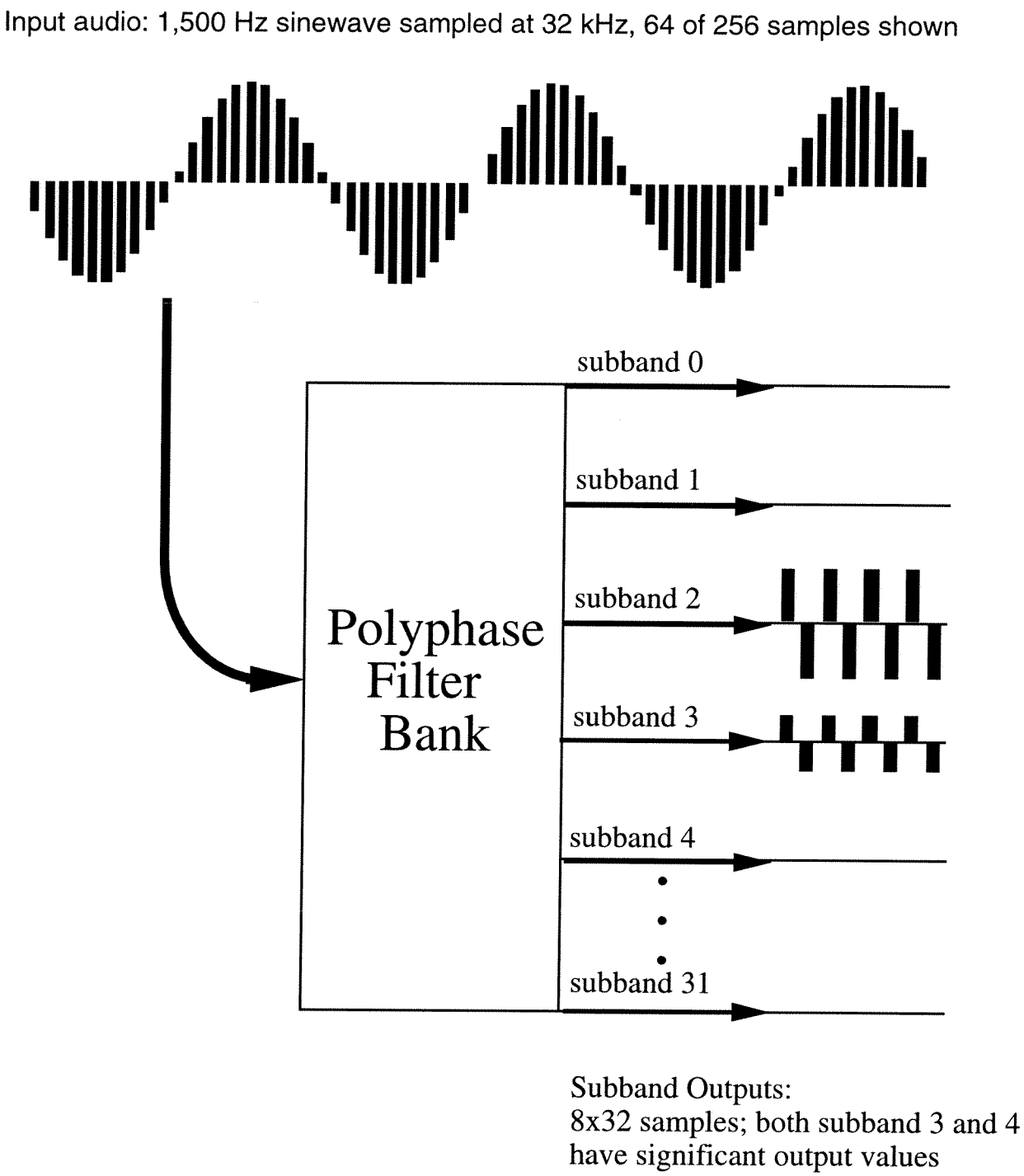


Figure 7 Aliasing: Pure Sinusoid Input Can Produce Non-zero Output For Two Subbands

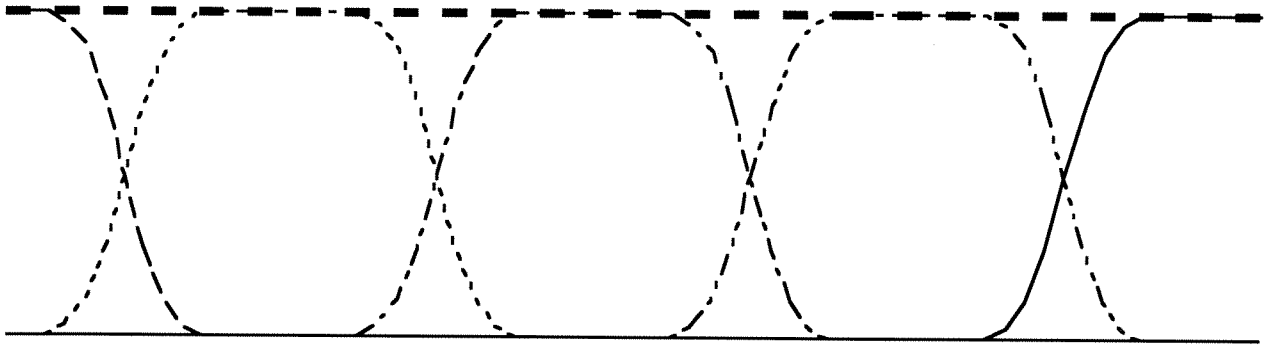


Figure 8 Composite Frequency Response of the Polyphase Filter Bank for 3 Subbands

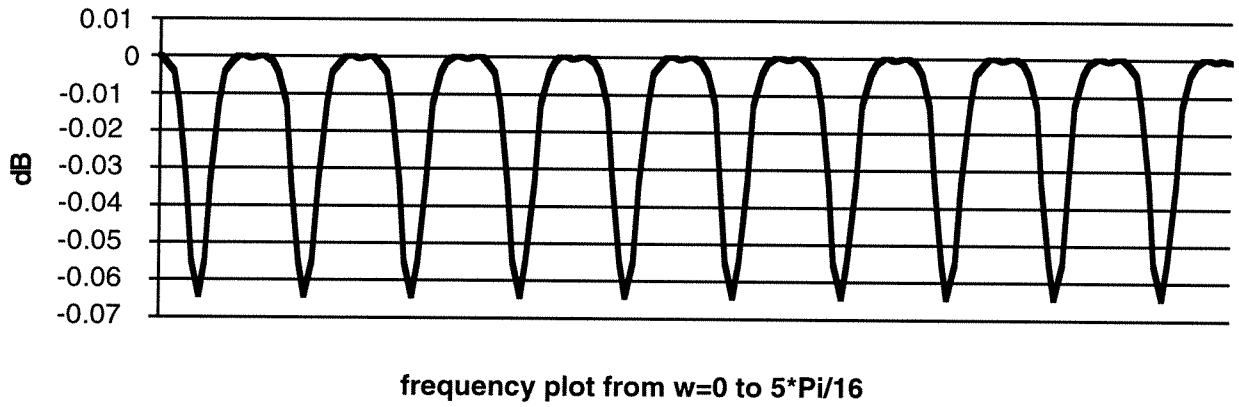


Figure 9 Normalized Composite Frequency Response in dB

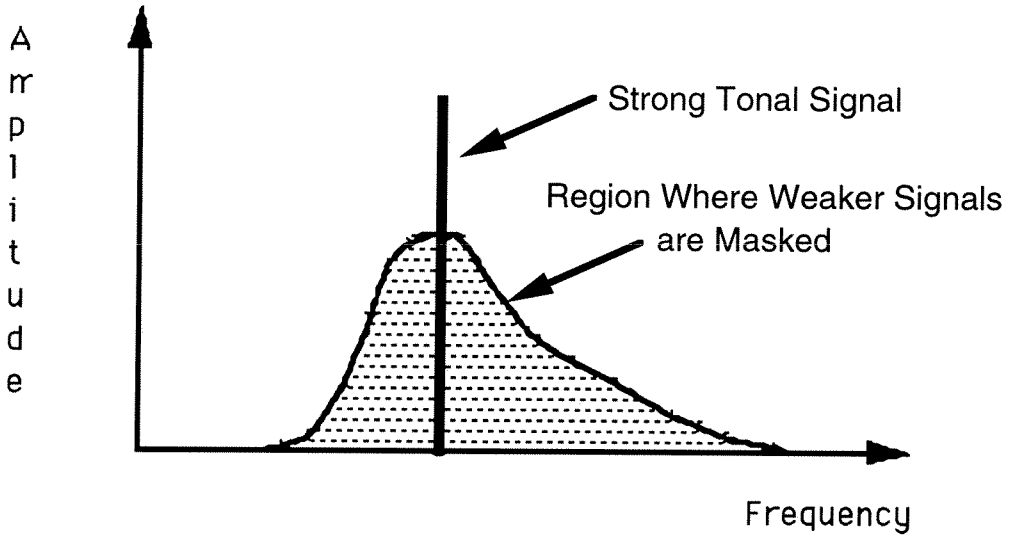


Figure 10 Audio Noise Masking

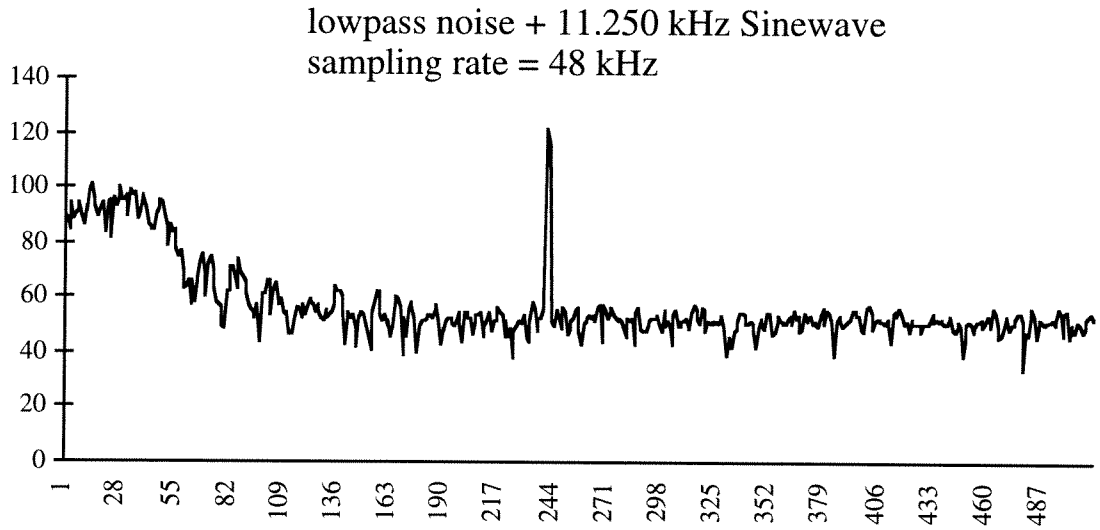
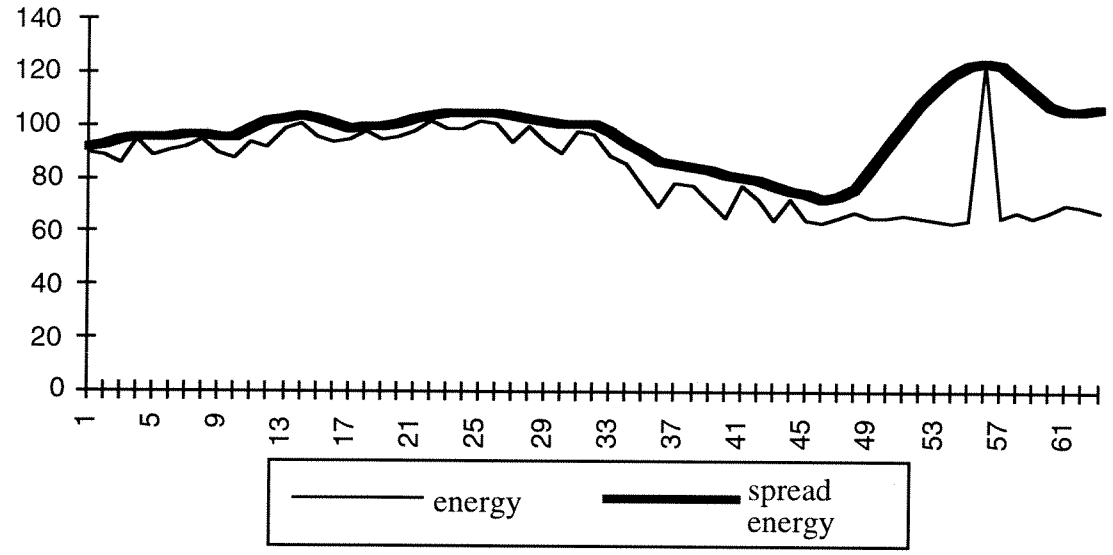
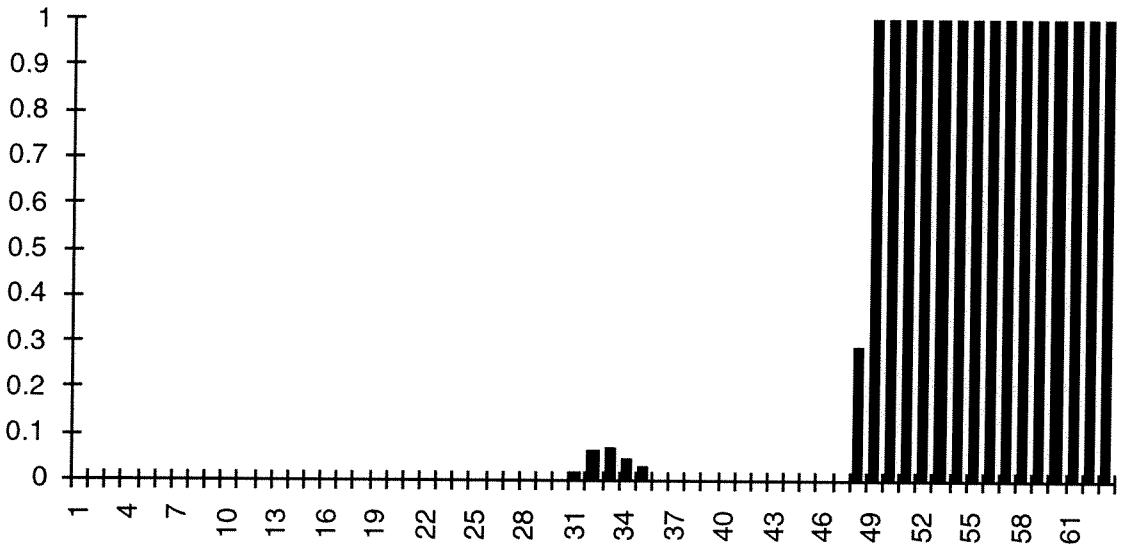


Figure 11 Input Audio Energy



12a. Audio Energy and Spread Energy in the Perceptual Domain



12b. Tonality Index

Figure 12 Psychoacoustic Model 2 Partition Domain Processing

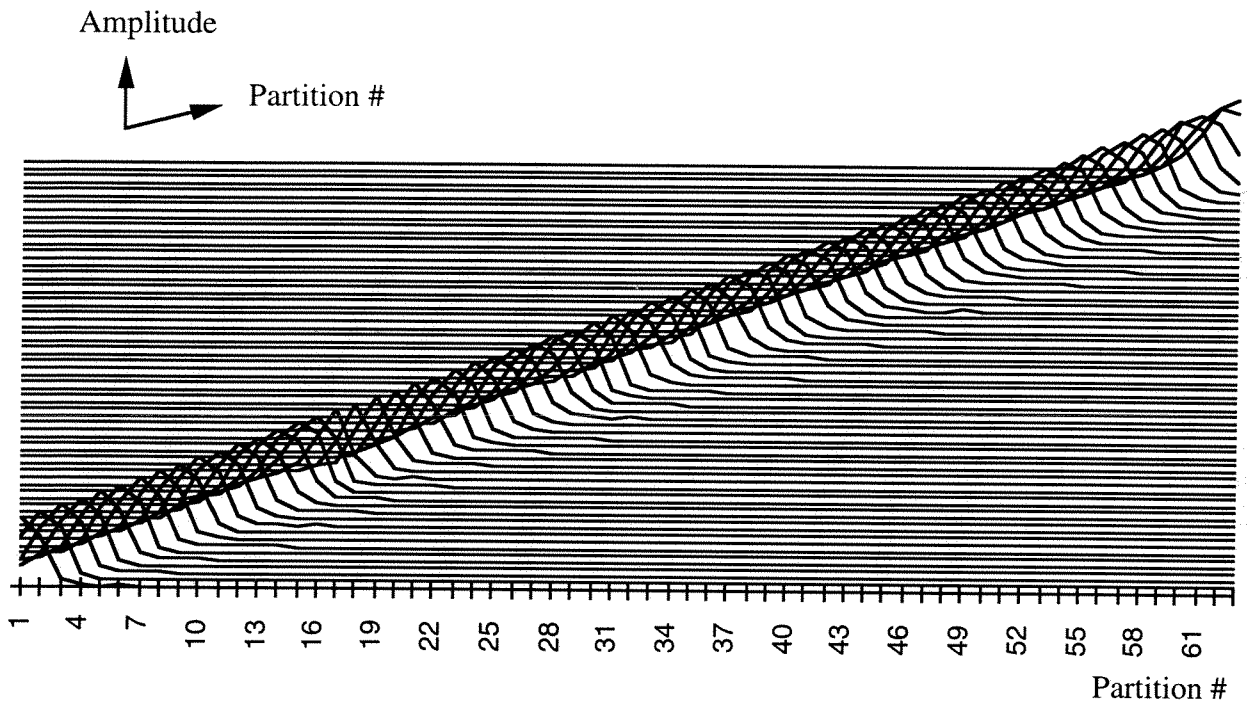
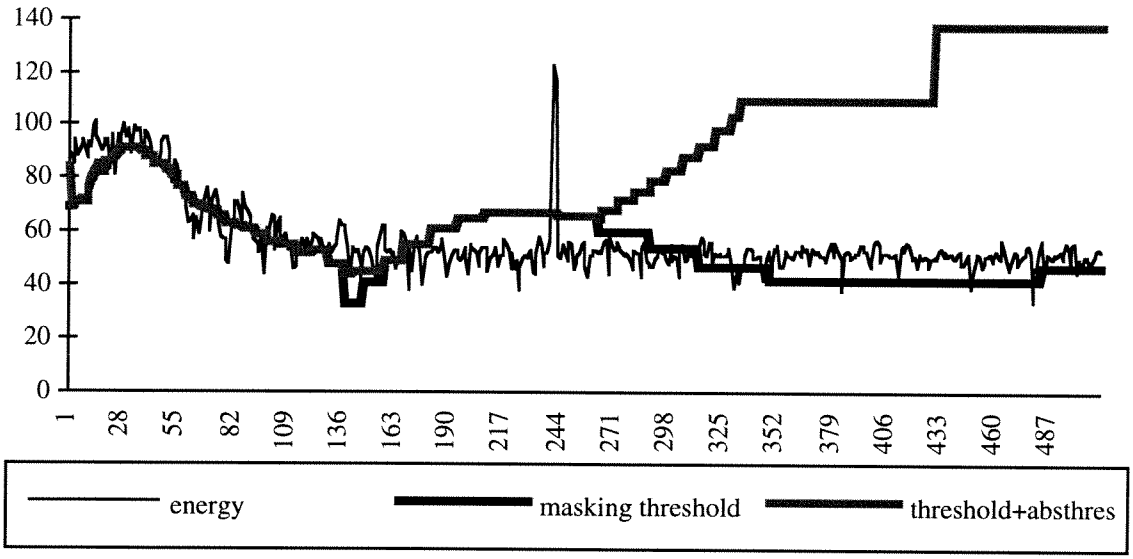
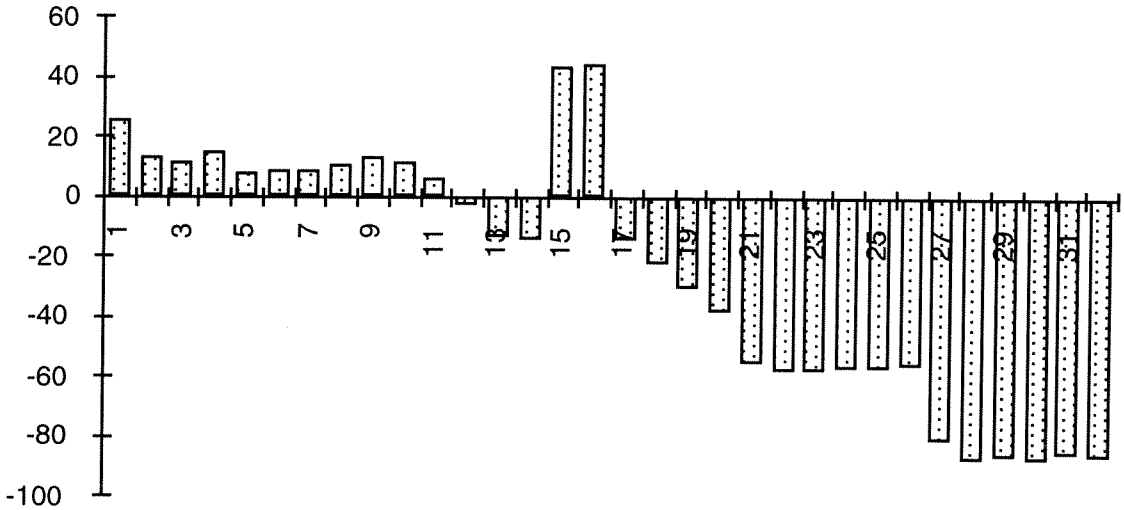


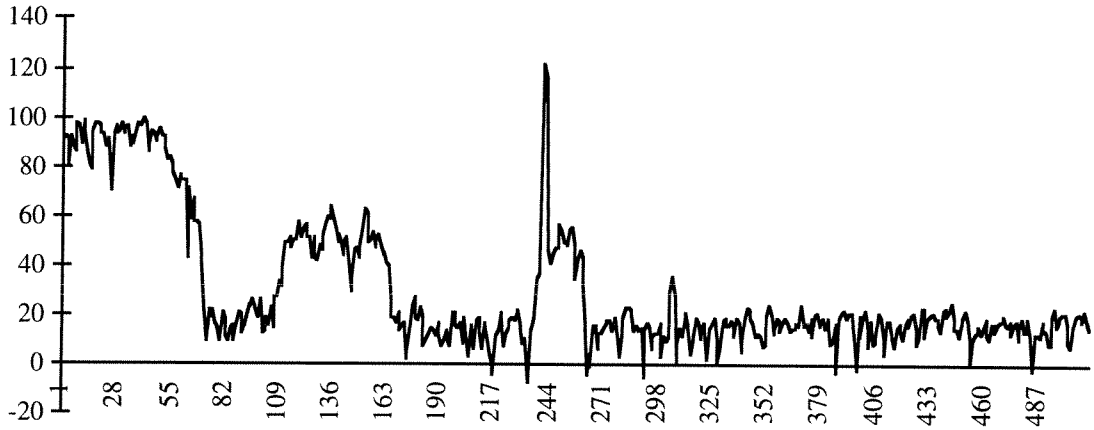
Figure 13 Spreading Function for Each Partition (Psychoacoustic Model 2)



14a Original Signal Energy and Computed Masking Thresholds

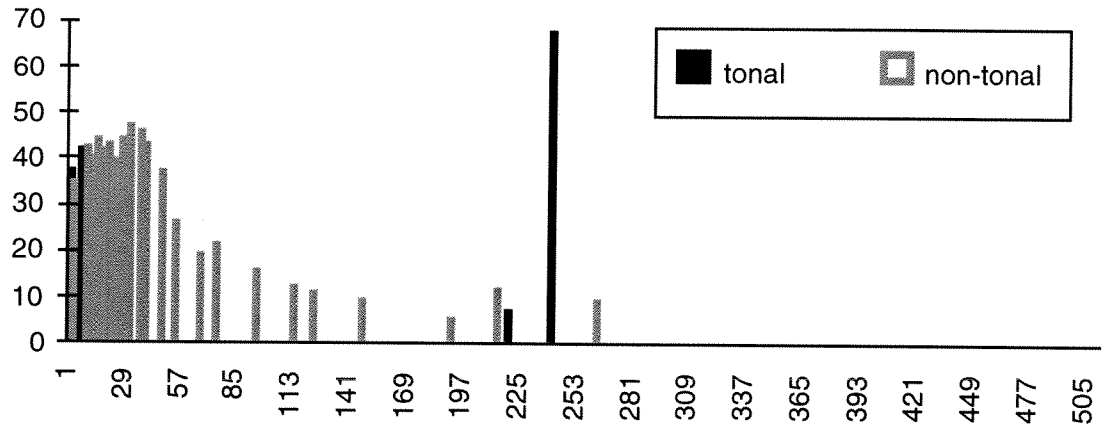


14b Signal-to-Mask Ratios

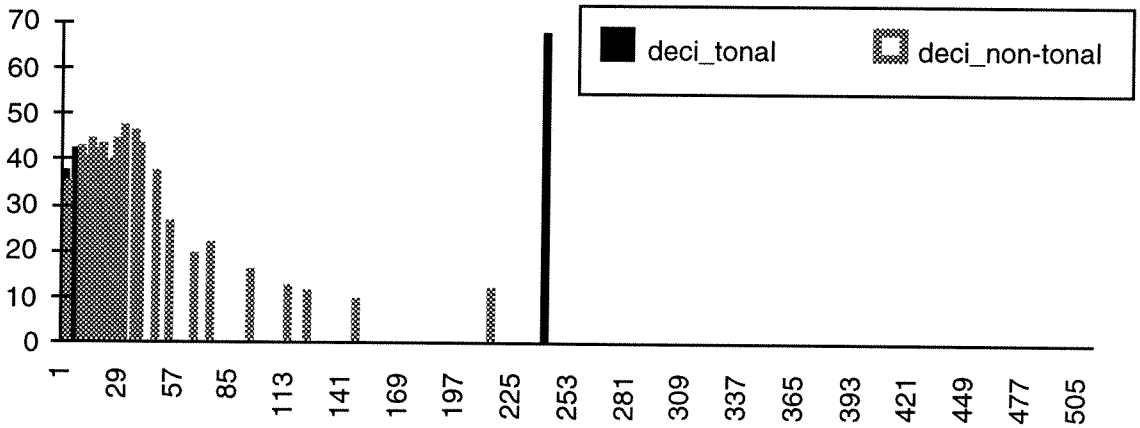


14c Coded Audio Energy (64 kbits/sec)

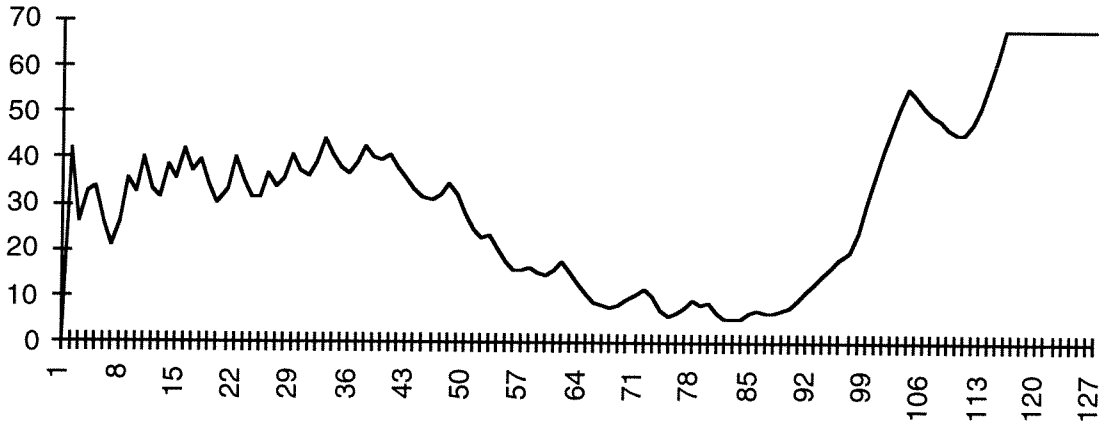
Figure 14 Psychoacoustic Model 2 Processing



15a Identified Tonal and Non-Tonal Components

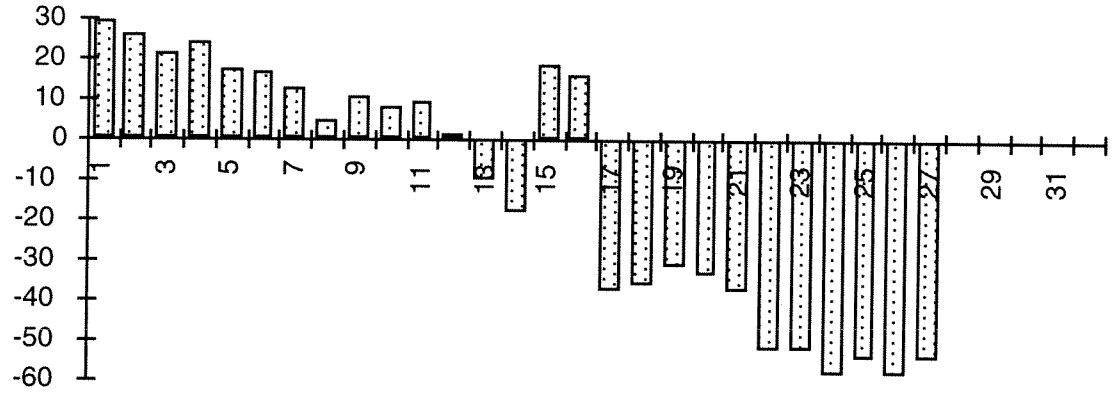


15b Decimated Tonal and Non-Tonal Components

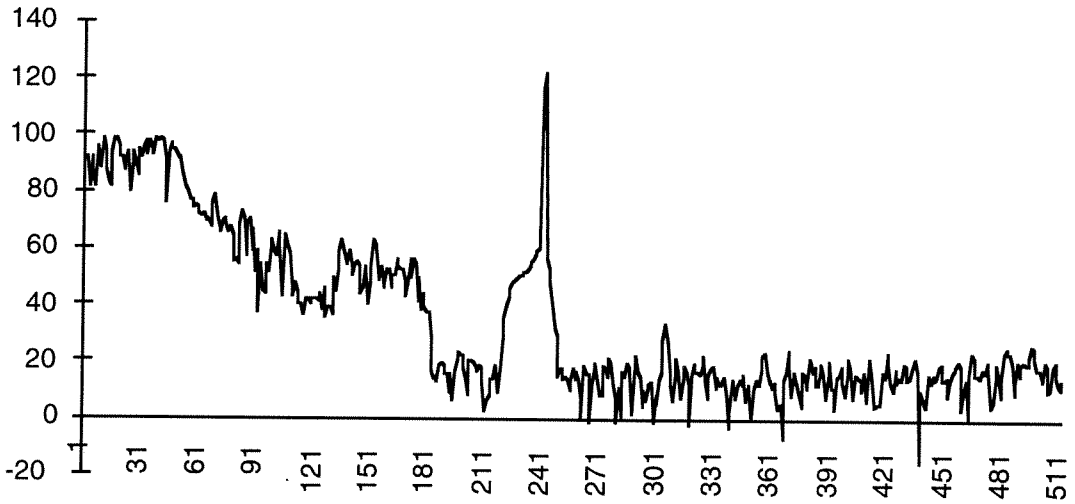


15c Global Masking Thresholds

Figure 15 Psychoacoustic Model 1 Processing



16a Signal-to-Mask Ratios



16b Coded Audio Energy (64 kbits/sec)

Figure 16 Psychoacoustic Model 1 Processing Results

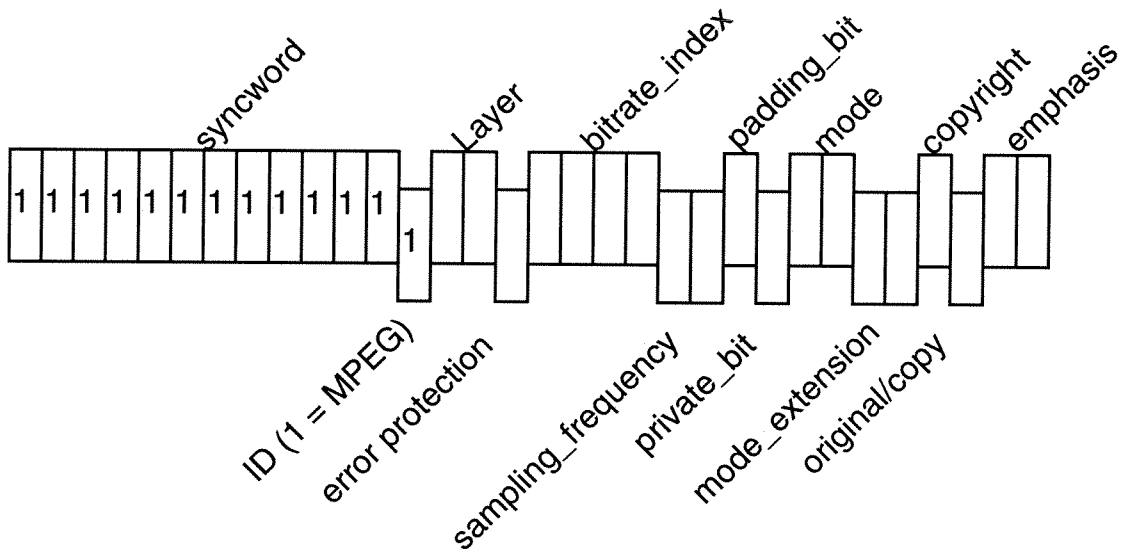


Figure 17 MPEG Header Syntax

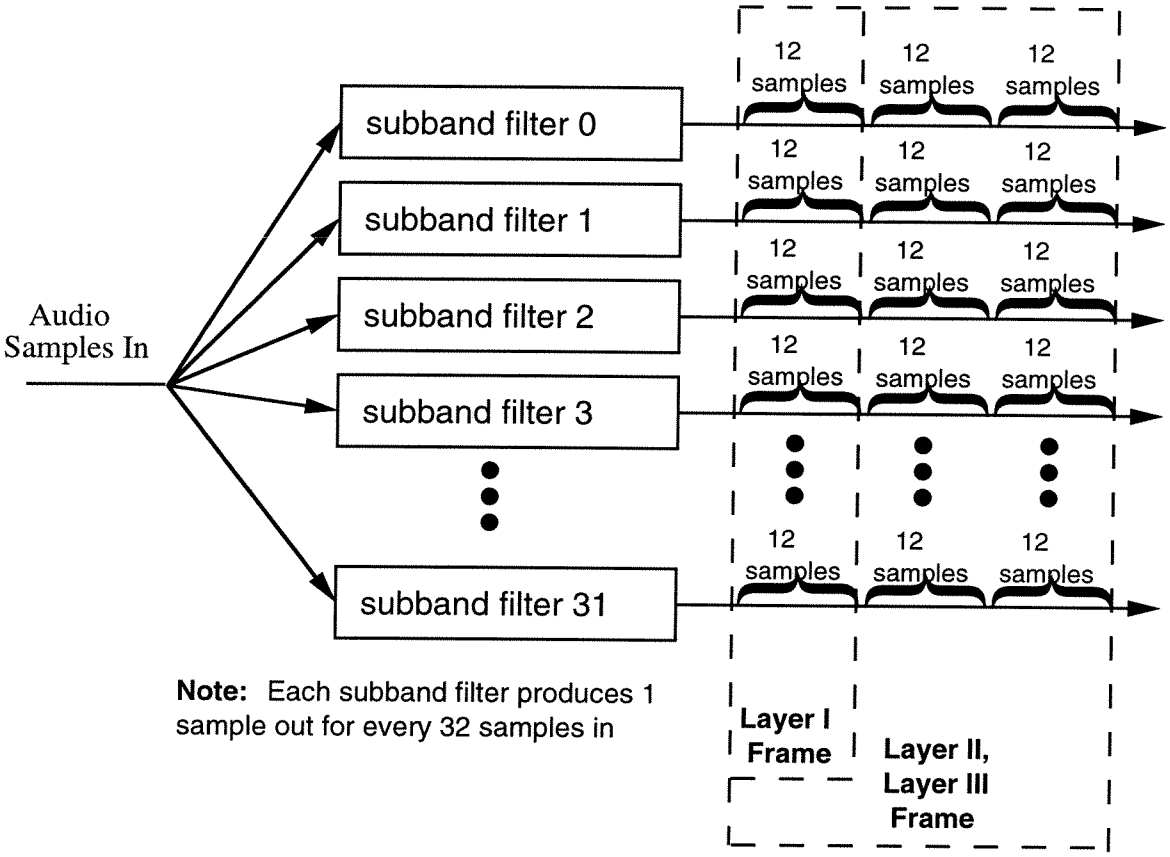


Figure 18 Grouping of Subband Samples for Layer I and Layer II

Header (32)	CRC (0,16)	Bit Alloc (128-256)	Scalefactors (0-384)	Samples	Anc. Data

19a The Frame Format of a Layer I Bitstream

Header (32)	CRC (0,16)	Bit Alloc (26-188)	SCFSI (0-60)	Scalefactors (0-1080)	Samples	Anc. Data

19b The Frame Format of a Layer II Bitstream

Header (32)	CRC (0,16)	Side Information (136,256)	Main Data; not necessarily linked to this frame. See figure 22

19c The Frame Format of a Layer III Bitstream

Figure 19 Frame formats of the three MPEG/audio Layers

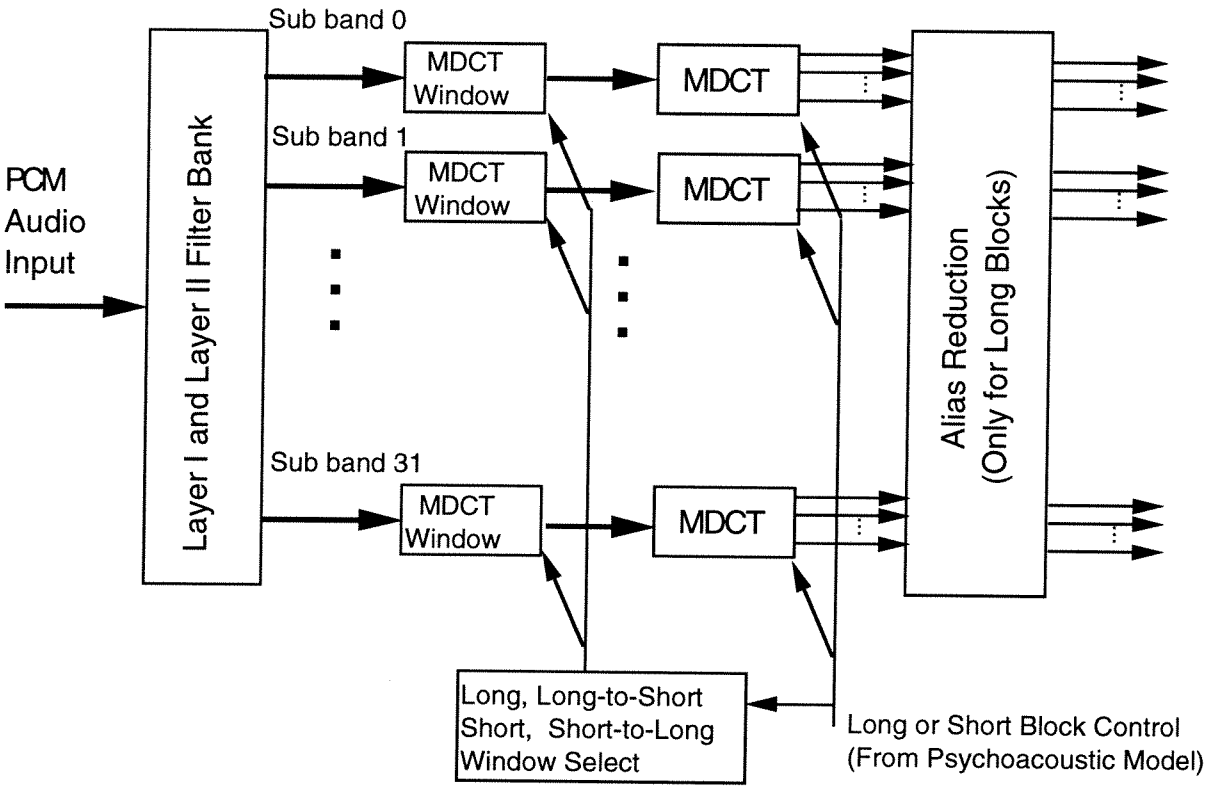


Figure 20 MPEG/Audio Layer III Filter Bank Processing (Encoder Side)

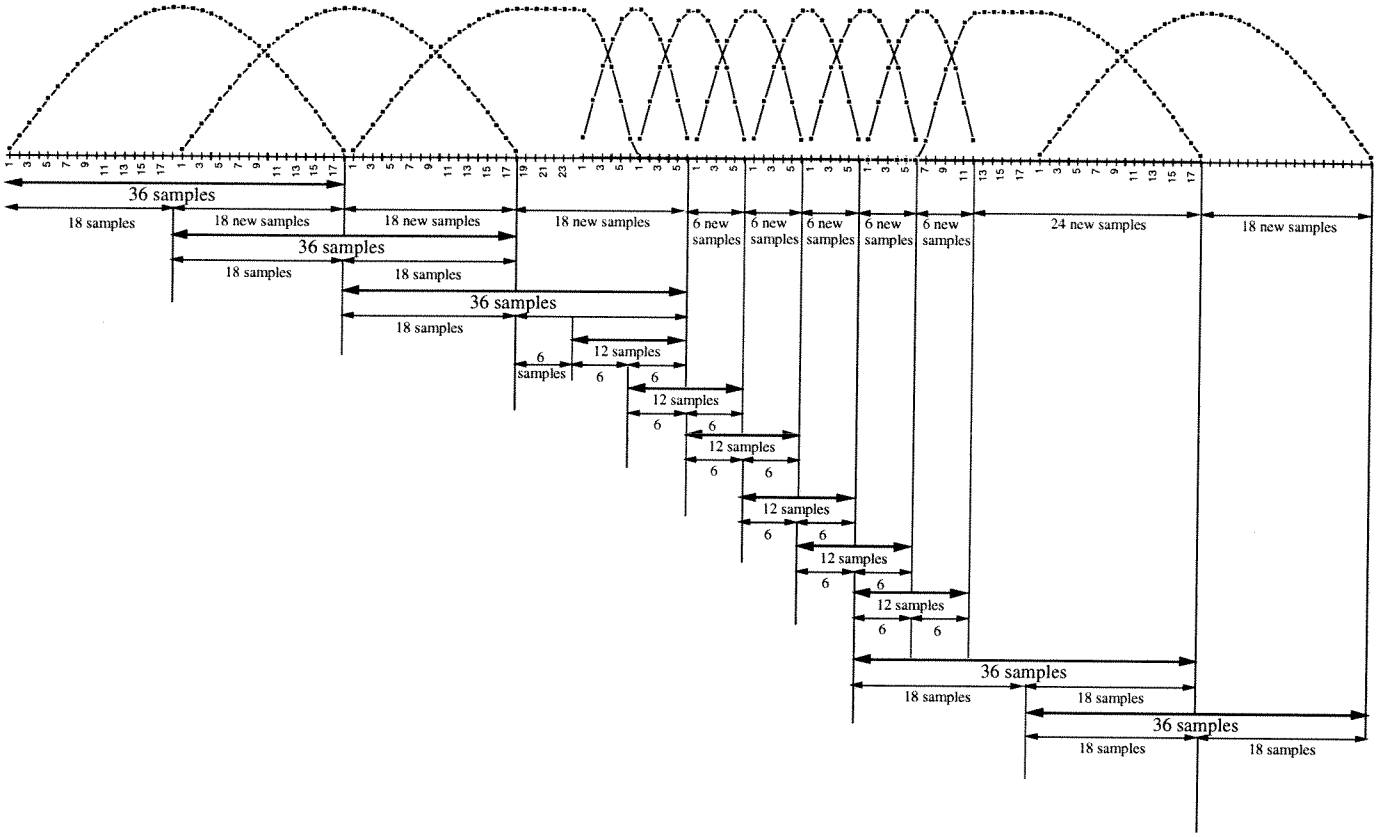


Figure 21 The Arrangement of Overlapping MDCT Windows

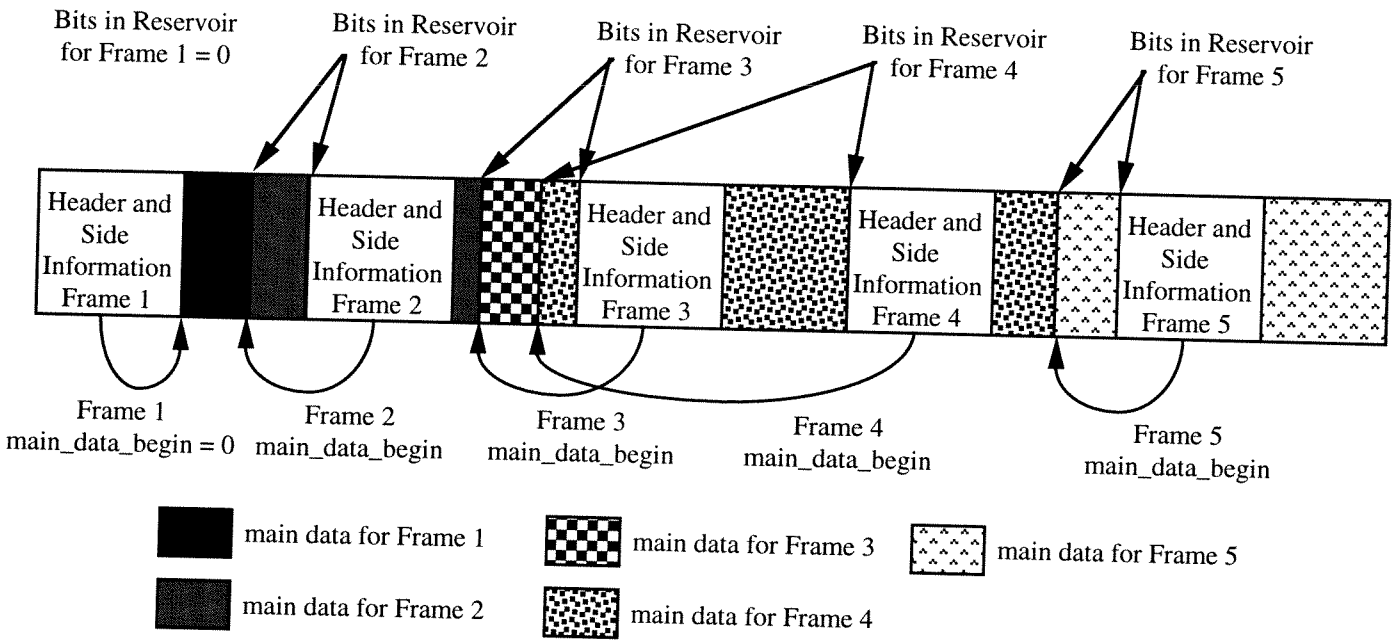


Figure 22 Layer III Bitstream Digram