What is claimed is:

CLAIMS

1. An audio encoding method comprising:

receiving, with at least one processor, an input multi-channel audio signal comprising a primary input audio channel and L non-primary input audio channels;

determining, with the at least one processor, a set of L input gains, where L is a positive integer greater than one, wherein the set of L input gains are determined by scaling a set of L mixing coefficients by an input mixture strength coefficient;

for each of the L non-primary input audio channels and L input gains, forming a respective scaled non-primary input audio channel from the respective non-primary input audio channel scaled according to the input gain;

forming a primary output audio channel from a sum of the primary input audio channel and the scaled non-primary input audio channels;

determining, with the at least one processor, a set of L prediction gains, wherein the set of L prediction gains is determined by scaling the set of L mixing coefficients by a prediction mixture strength coefficient;

for each of the L prediction gains, forming, with the at least one processor, a prediction channel from the primary output audio channel scaled according to the prediction gain;

forming, with the at least one processor, L non-primary output audio channels from a difference of the respective non-primary input audio channel and the respective prediction channel;

forming, with the at least one processor, an output multi-channel audio signal from the primary output audio channel and the L non-primary output audio channels;

encoding, with an audio encoder, the output multi-channel audio signal; and

transmitting or storing, with the at least one processor, the encoded output multi-channel audio signal.

2. A system comprising:

one or more computer processors; and

a non-transitory computer-readable medium storing instructions that, when executed by

the one or more computer processors, cause the one or more computer processors to perform operations of claim 1.

3. A non-transitory computer-readable medium storing instructions that, when executed by one or more computer processors, cause the one or more computer processors to perform operations of claim 1.