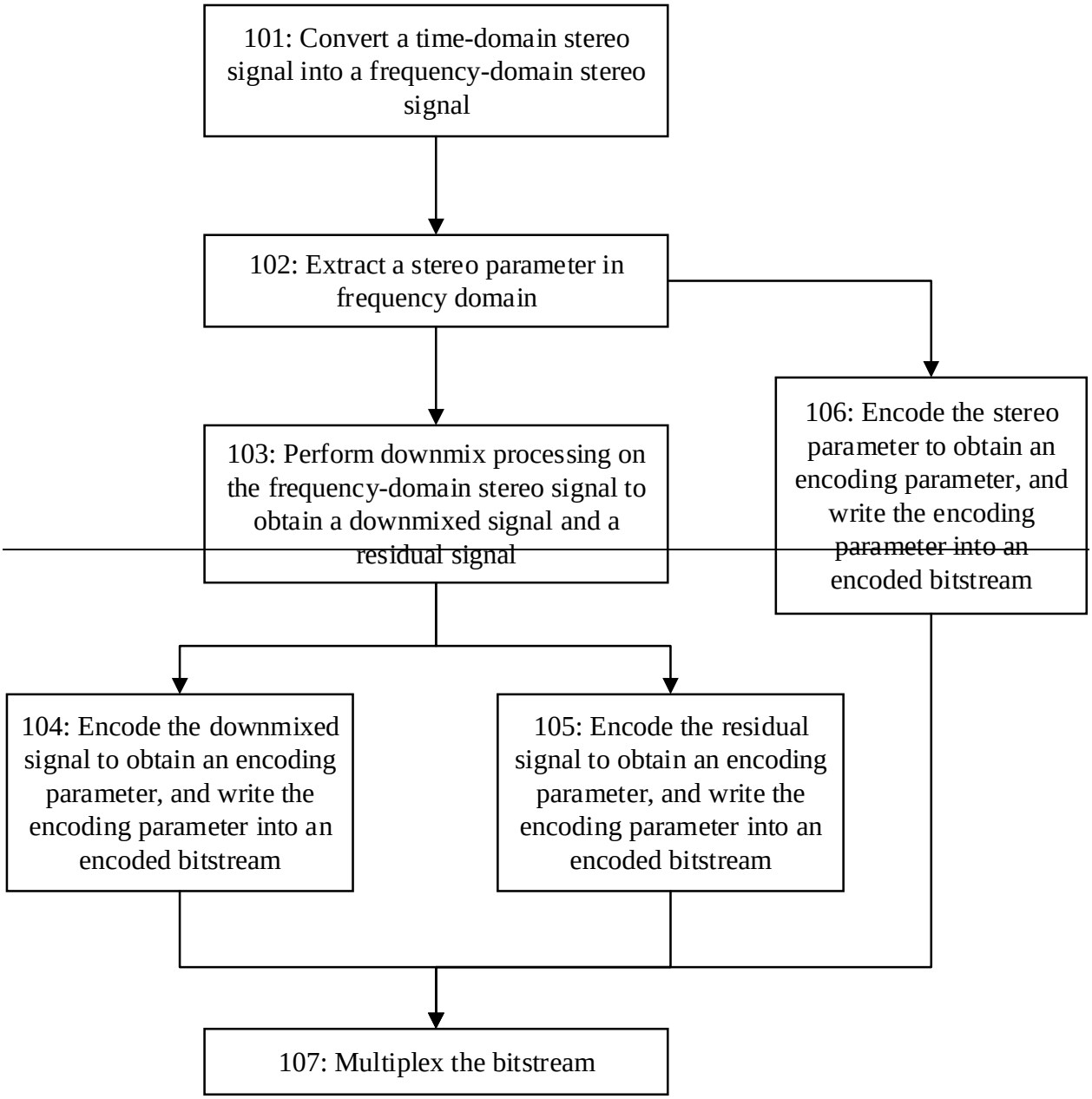

101: Convert a time-domain stereo signal into a frequency-domain stereo signal
102: Extract a stereo parameter in frequency domain
103: Perform downmix processing on the frequency-domain stereo signal to obtain a downmixed signal and a residual signal
106: Encode the stereo parameter to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
104: Encode the downmixed signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
105: Encode the residual signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
107: Multiplex the bitstream

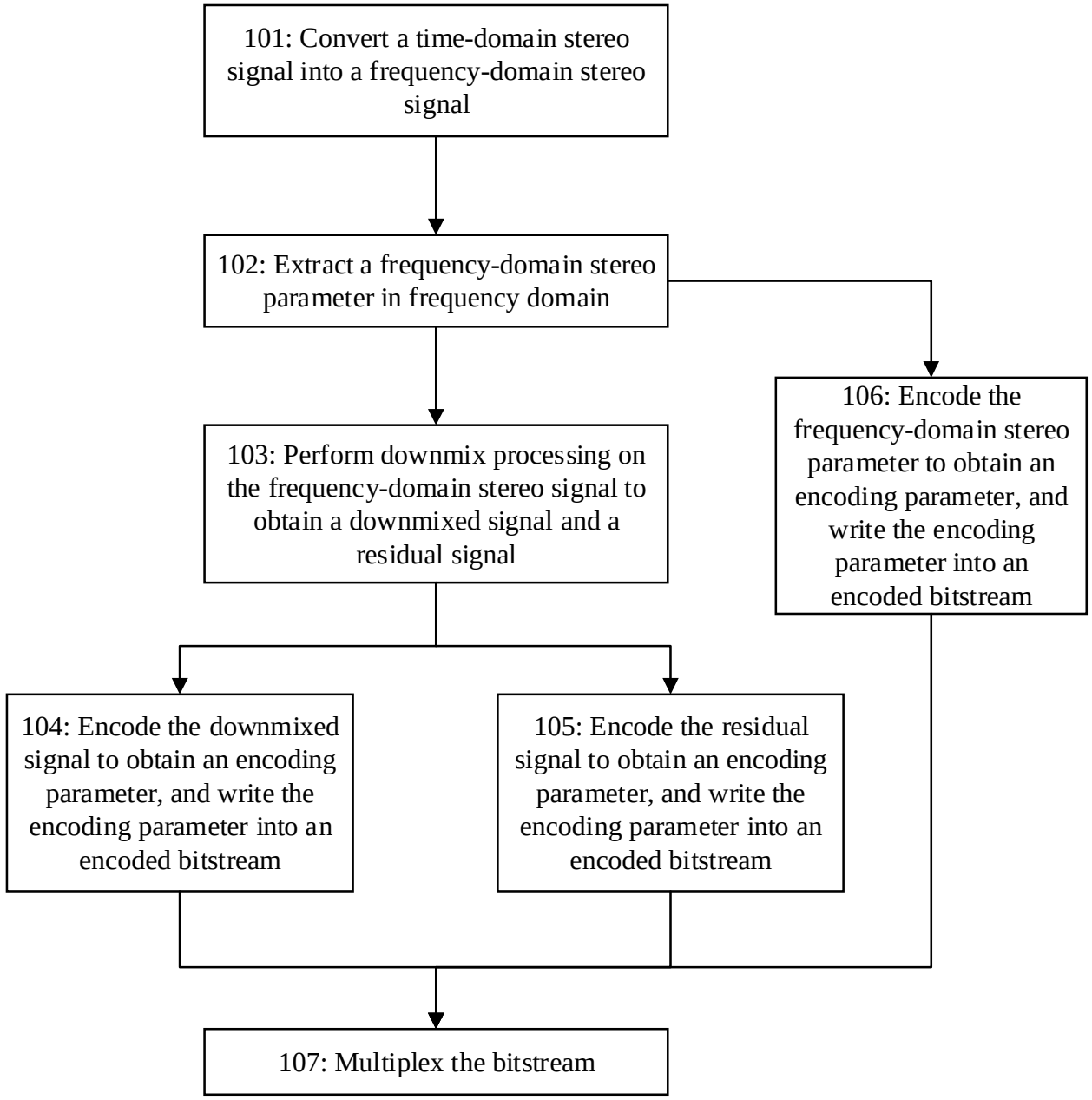
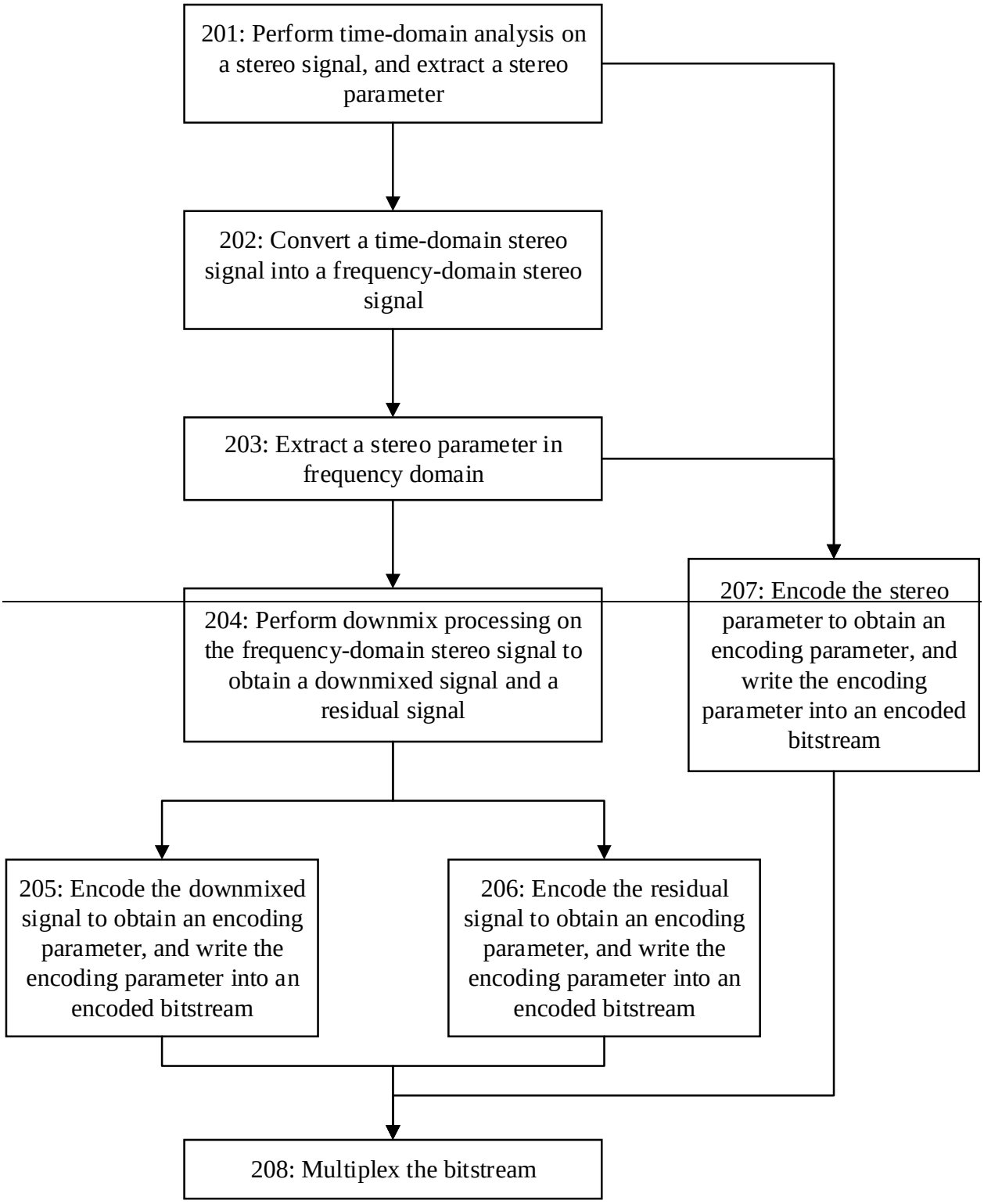

101: Convert a time-domain stereo signal into a frequency-domain stereo signal
102: Extract a frequency-domain stereo parameter in frequency domain
103: Perform downmix processing on the frequency-domain stereo signal to obtain a downmixed signal and a residual signal
104: Encode the downmixed signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
105: Encode the residual signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
106: Encode the frequency-domain stereo parameter to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
107: Multiplex the bitstream

FIG. 4


201: Perform time-domain analysis on a stereo signal, and extract a stereo parameter
202: Convert a time-domain stereo signal into a frequency-domain stereo signal
203: Extract a stereo parameter in frequency domain
204: Perform downmix processing on the frequency-domain stereo signal to obtain a downmixed signal and a residual signal
207: Encode the stereo parameter to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
205: Encode the downmixed signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
206: Encode the residual signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
208: Multiplex the bitstream

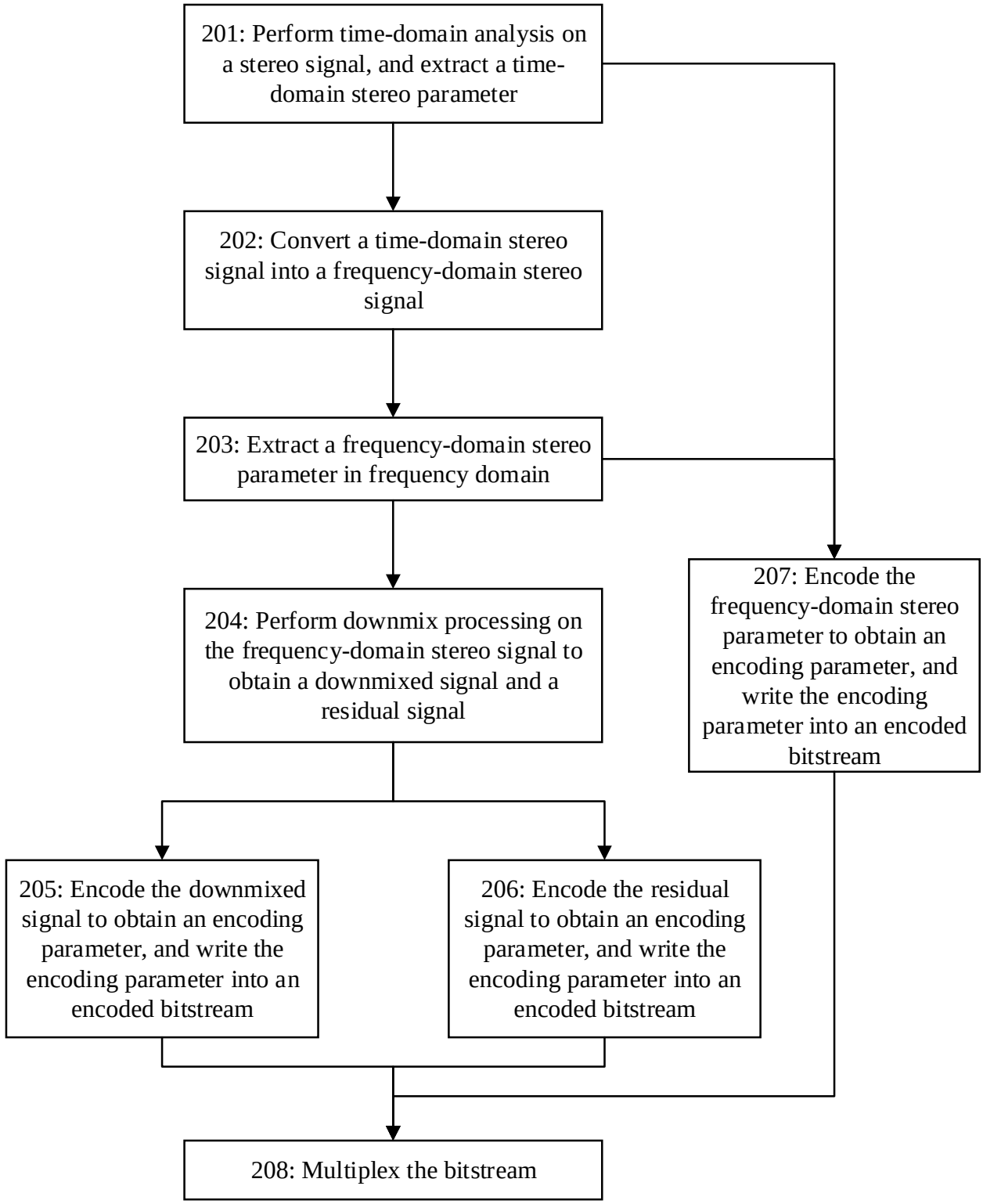
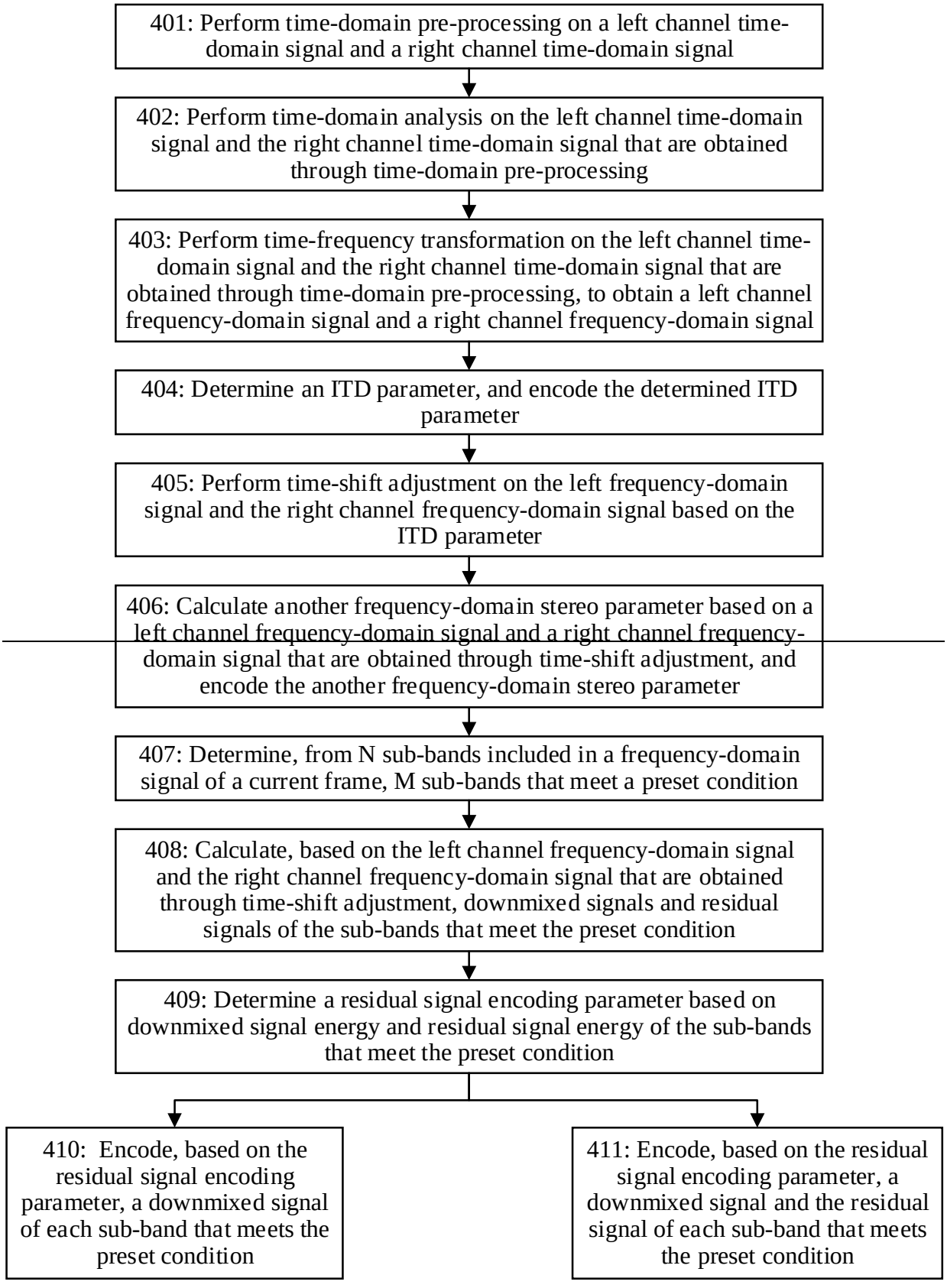

201: Perform time-domain analysis on a stereo signal, and extract a time-domain stereo parameter
202: Convert a time-domain stereo signal into a frequency-domain stereo signal
203: Extract a frequency-domain stereo parameter in frequency domain
204: Perform downmix processing on the frequency-domain stereo signal to obtain a downmixed signal and a residual signal
207: Encode the frequency-domain stereo parameter to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
205: Encode the downmixed signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
206: Encode the residual signal to obtain an encoding parameter, and write the encoding parameter into an encoded bitstream
208: Multiplex the bitstream

FIG. 5


401: Perform time-domain pre-processing on a left channel time-domain signal and a right channel time-domain signal
402: Perform time-domain analysis on the left channel time-domain signal and the right channel time-domain signal that are obtained through time-domain pre-processing
403: Perform time-frequency transformation on the left channel time-domain signal and the right channel time-domain signal that are obtained through time-domain pre-processing, to obtain a left channel frequency-domain signal and a right channel frequency-domain signal
404: Determine an ITD parameter, and encode the determined ITD parameter
405: Perform time-shift adjustment on the left frequency-domain signal and the right channel frequency-domain signal based on the ITD parameter
406: Calculate another frequency-domain stereo parameter based on a left channel frequency-domain signal and a right channel frequency-domain signal that are obtained through time-shift adjustment, and encode the another frequency-domain stereo parameter
407: Determine, from N sub-bands included in a frequency-domain signal of a current frame, M sub-bands that meet a preset condition
408: Calculate, based on the left channel frequency-domain signal and the right channel frequency-domain signal that are obtained through time-shift adjustment, downmixed signals and residual signals of the sub-bands that meet the preset condition
409: Determine a residual signal encoding parameter based on downmixed signal energy and residual signal energy of the sub-bands that meet the preset condition
410: Encode, based on the residual signal encoding parameter, a downmixed signal of each sub-band that meets the preset condition
411: Encode, based on the residual signal encoding parameter, a downmixed signal and the residual signal of each sub-band that meets the preset condition

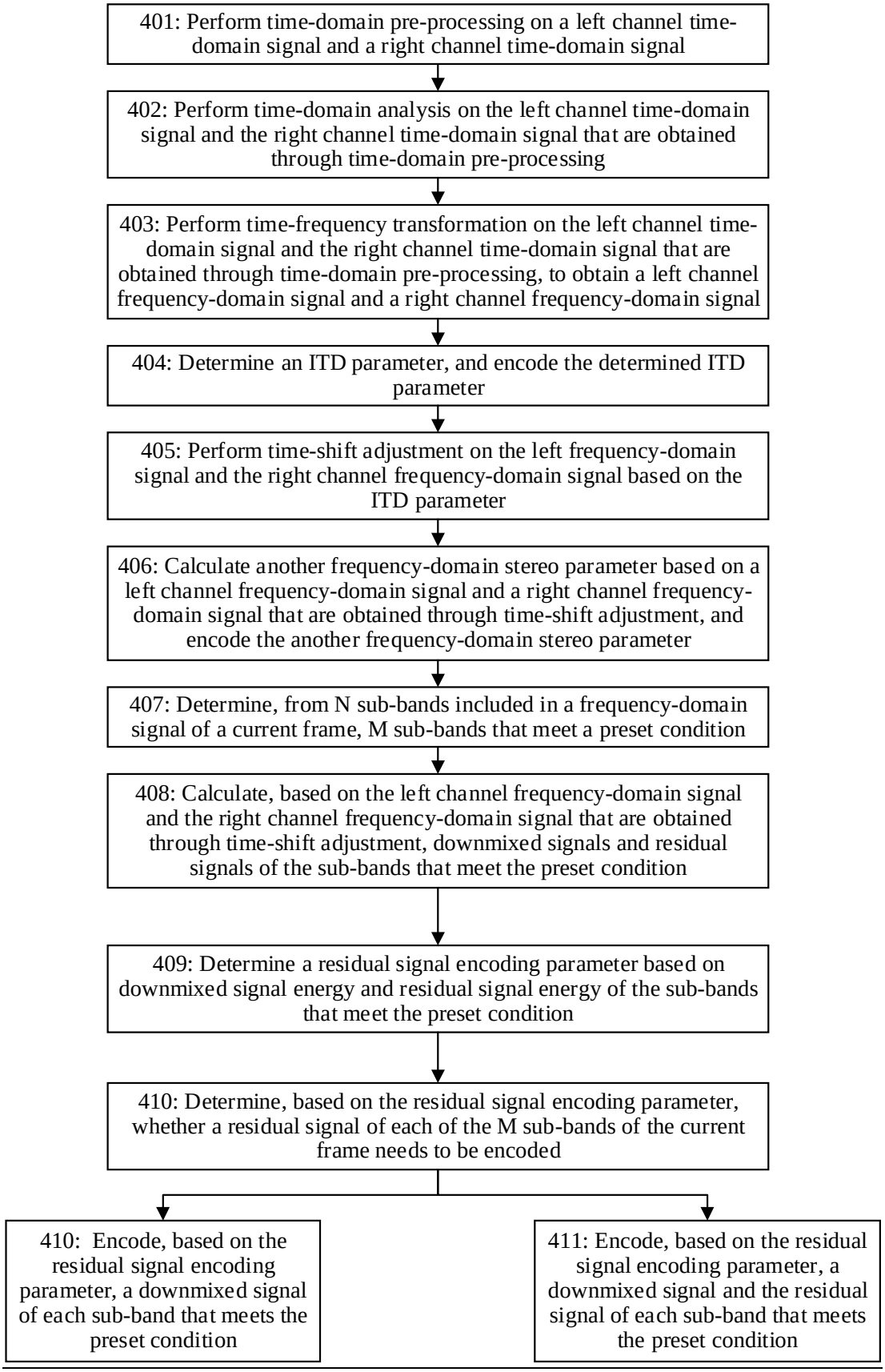

401: Perform time-domain pre-processing on a left channel time-domain signal and a right channel time-domain signal
402: Perform time-domain analysis on the left channel time-domain signal and the right channel time-domain signal that are obtained through time-domain pre-processing
403: Perform time-frequency transformation on the left channel time-domain signal and the right channel time-domain signal that are obtained through time-domain pre-processing, to obtain a left channel frequency-domain signal and a right channel frequency-domain signal
404: Determine an ITD parameter, and encode the determined ITD parameter
405: Perform time-shift adjustment on the left frequency-domain signal and the right channel frequency-domain signal based on the ITD parameter
406: Calculate another frequency-domain stereo parameter based on a left channel frequency-domain signal and a right channel frequency-domain signal that are obtained through time-shift adjustment, and encode the another frequency-domain stereo parameter
407: Determine, from N sub-bands included in a frequency-domain signal of a current frame, M sub-bands that meet a preset condition
408: Calculate, based on the left channel frequency-domain signal and the right channel frequency-domain signal that are obtained through time-shift adjustment, downmixed signals and residual signals of the sub-bands that meet the preset condition
409: Determine a residual signal encoding parameter based on downmixed signal energy and residual signal energy of the sub-bands that meet the preset condition
410: Determine, based on the residual signal encoding parameter, whether a residual signal of each of the M sub-bands of the current frame needs to be encoded
410: Encode, based on the residual signal encoding parameter, a downmixed signal of each sub-band that meets the preset condition
411: Encode, based on the residual signal encoding parameter, a downmixed signal and the residual signal of each sub-band that meets the preset condition

FIG. 7