

BANDWIDTH EXTENSION METHOD, BANDWIDTH EXTENSION
APPARATUS, PROGRAM, INTEGRATED CIRCUIT, AND AUDIO
DECODING APPARATUS

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[ABSTRACT]

To provide a bandwidth extension method which allows reduction of
computation amount in bandwidth extension and suppression of
10 deterioration of quality in the bandwidth to be extended. In the
bandwidth extension method: a low frequency bandwidth signal is
transformed into a QMF domain to generate a first low frequency QMF
spectrum (S11); pitch-shifted signals are generated by applying
different shifting factors on the low frequency bandwidth signal (S12);
15 a high frequency QMF spectrum is generated by time-stretching the
pitch-shifted signals in the QMF domain (S13); the high frequency
QMF spectrum is modified (S14); and the modified high frequency
QMF spectrum is combined with the first low frequency QMF spectrum
(S15).

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Figure 6