CLAIMS

1. A method for detecting an audio signal, wherein the method comprises:

determining an audio signal which is inputted as a to-be-determined audio signal;

determining an enhanced segmental signal-to-noise ratio, SSNR, of the audio signal, according to a sub-band signal-to-noise ratio, SNR, of each sub-band in the audio signal and a weight of the sub-band SNR of each sub-band in the audio signal, wherein the weights of the sub-band SNRs of high-frequency end sub-bands in the audio signal whose sub-band SNRs are greater than a first preset threshold are greater than the weights of sub-band SNRs of the other sub-bands; and

comparing the enhanced SSNR with a voice activity detection, VAD, decision threshold to determine whether the audio signal is an active signal.

2. The method according to claim 1, wherein the determining an audio signal which is inputted as a to-be-determined audio signal comprises:

determining the audio signal as a to-be-determined audio signal according to a sub-band SNR of the audio signal.

3. The method according to claim 2, wherein the determining an audio signal which is inputted as a to-be-determined audio signal comprises:

determining the audio signal as a to-be-determined audio signal if a quantity of high-frequency end sub-bands that are in the audio signal and whose sub-band SNRs are greater than the first preset threshold is greater than a first quantity.

4. The method according to claim 2, wherein the determining an audio signal which is inputted as a to-be-determined audio signal comprises:

determining the audio signal as a to-be-determined audio signal if a quantity of sub-bands that are in the audio signal and whose values of sub-band SNRs are greater than a third preset threshold is greater than a fourth quantity.

5. The method according to claim 1, wherein the determining an audio signal which is inputted as a to-be-determined audio signal comprises:

determining the audio signal as a to-be-determined audio signal if it is determined that the audio signal is an unvoiced signal.

6. The method according to claim 1, wherein the determining an enhanced SSNR of the audio signal comprises:

determining a reference SSNR of the audio signal; and

determining the enhanced SSNR according to the reference SSNR of the audio signal.

7. The method according to claim 6, wherein the determining the enhanced SSNR according to the reference SSNR of the audio signal comprises:

determining the enhanced SSNR by using the following formula:

$SSNR' = x * SSNR + y$, wherein

SSNR indicates the reference SSNR, $SSNR'$ indicates the enhanced SSNR, and x and y indicate enhancement parameters.

8. The method according to any one of claims 1 to 7, wherein the audio signal is divided into 20 sub-bands, and the audio signal comprises sub-band 0 to sub-band 19, sub-band 18 and sub-band 19 are the high-frequency end sub-bands.

9. An apparatus, wherein the apparatus comprises:

a first determining unit, configured to determine an audio signal which is inputted as a to-be-determined audio signal;

a second determining unit, configured to determine an enhanced segmental signal-to-noise ratio, SSNR, of the audio signal, according to a sub-band signal-to-noise ratio, SNR, of each sub-band in the audio signal and a weight of the sub-band SNR of each sub-band in the audio signal, wherein the weights of the sub-band SNRs of high-frequency end sub-bands in the audio signal whose sub-band SNRs are greater than a first preset threshold are greater than the weights of sub-band SNRs of the other sub-bands; and

a third determining unit, configured to compare the enhanced SSNR with a voice activity detection, VAD, decision threshold to determine whether the audio signal is an active signal.

10. The apparatus according to claim 9, wherein the first determining unit is specifically configured to determine the audio signal as a to-be-determined audio signal according to a sub-band SNR of the audio signal.

11. The apparatus according to claim 10, wherein the first determining unit is specifically configured to determine the audio signal as a to-be-determined audio signal if a quantity of high-frequency end sub-bands that are in the audio signal and whose sub-band SNRs are greater than the first preset threshold is greater than a first quantity.

12. The apparatus according to claim 10, wherein the first determining unit is specifically configured to determine the audio signal as a to-be-determined audio signal if a quantity of sub-bands that are in the audio signal and whose values of sub-band SNRs are greater than a third preset threshold is greater than a fourth quantity.

13. The apparatus according to claim 9, wherein the first determining unit is specifically configured to determine the audio signal as a to-be-determined audio signal if it is determined that the audio signal is an unvoiced signal.

14. The apparatus according to claim 9, wherein the second determining unit is specifically configured to determine a reference SSNR of the audio signal; and determine the enhanced SSNR according to the reference SSNR of the audio signal.

15. The apparatus according to claim 14, wherein the second determining unit is specifically configured to determine the enhanced SSNR by using the following formula:

$SSNR' = x * SSNR + y$, wherein

SSNR indicates the reference SSNR, $SSNR'$ indicates the enhanced SSNR, and x and y indicate enhancement parameters.

16. The apparatus according to any one of claims 9 to 15, wherein the audio signal is divided into 20 sub-bands, and the audio signal comprises sub-band 0 to sub-band 19, sub-band 18 and sub-band 19 are the high-frequency end sub-bands.