

Auxiliary Request 1 (AR1) - 1 March 2021

CLAIMS

1. A hearing aid comprising

a radio (44) configured for reception of a wirelessly broadcasted signal including

5 a message comprising a plurality of parts, wherein at least a part (62) of the message, which part has been encoded (64) using an error checking code, has been encrypted (68) with a first key (72), and

the first key, wherein the first key (76), as included in the wirelessly broadcasted signal, has been encrypted (74) with a second key (78),

10 an authenticator (48) configured for authentication of the message by

decrypting the first key with a third key (82), and

decrypting the plurality of parts of the message with the first key (72)
including decrypting (86) the at least a part of the message, which part has
been encoded (64) using the error checking code, with the first key (72), and

15 a processing unit that is configured for converting the message into an acoustic signal for transmission towards an eardrum of a user of the hearing aid upon successful authentication of the message, wherein the successful authentication includes correct verification (88) of the received parts of the message including the
received at least a part of the message using the error checking code.

20 2. A hearing aid according to claim 1, wherein the processing unit is configured for muting at least one other signal (30) received by the hearing aid upon the successful authentication of the message.

3. A hearing aid according to any of the preceding claims, wherein the processing unit comprises a mixer (32) for mixing the message with at least one other signal
25 (30) received by the hearing aid upon the successful authentication of the message, and wherein the processing unit is configured for converting the mixed output (34) into the acoustic signal for transmission towards the eardrum of the user of the hearing aid.

4. A hearing aid according to any of the preceding claims, wherein the processing
30 unit is configured for ignoring the wirelessly broadcasted signal upon failed authentication of the message in the wirelessly broadcasted signal.