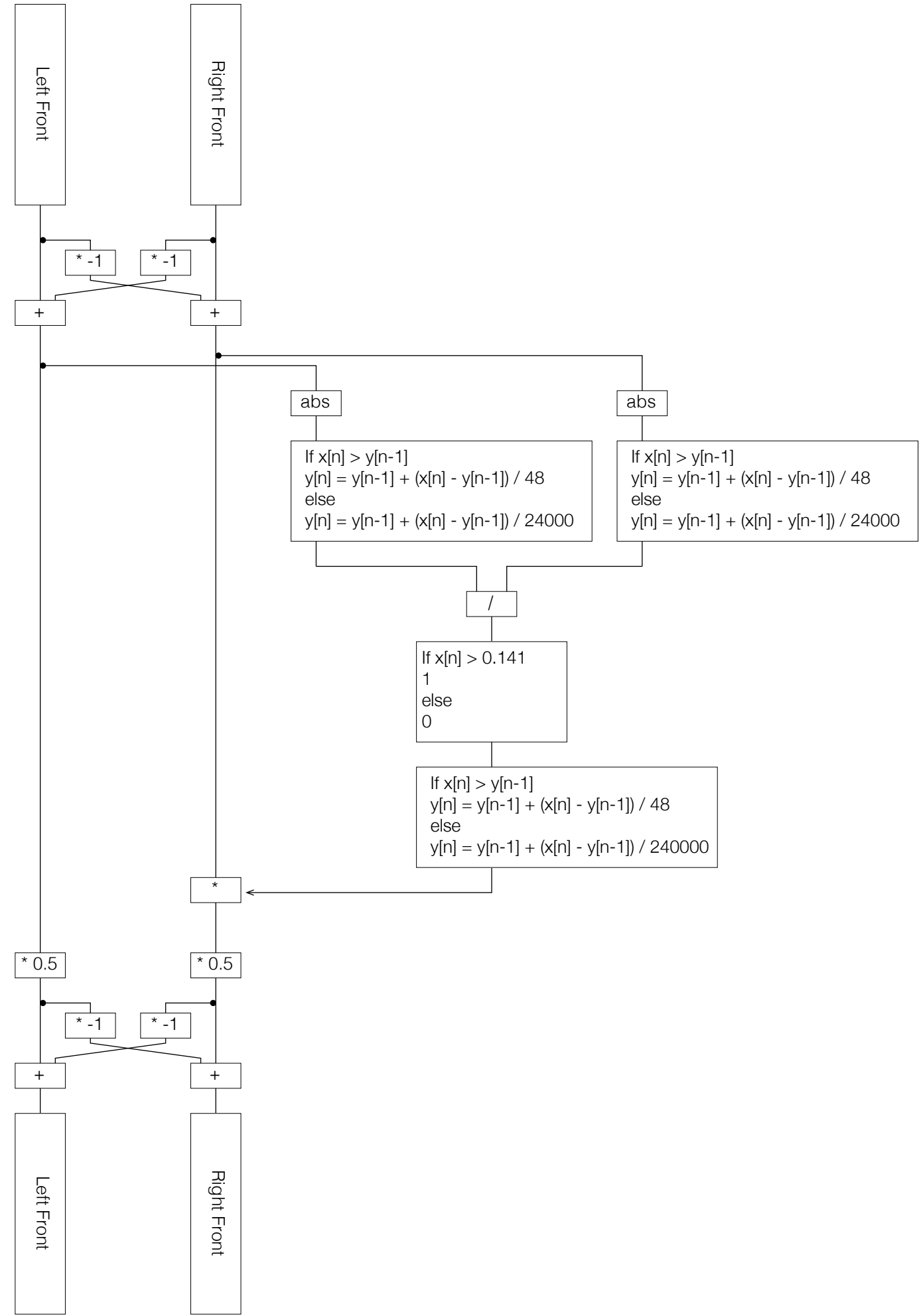**True Image for CA44**
Speech Enhance
2021 11 18
ggm

Note:
The purpose of this block is to cover up artefacts
in the 2-channel upmixer when fed with mono
signals that are encoded with a low-bitrate 2-
channel CODEC. The result of this is that all of
CODEC artefacts are routed through the TI
upmixer into the surround and back channels,
thus making them audible.

Implementation Note:
The actual implementation is slightly different - but
the overall behaviour is very similar to the
description here.

Left Front

Right Front

* -1   * -1

+   +

abs   abs

If x[n] > y[n-1]
y[n] = y[n-1] + (x[n] - y[n-1]) / 48
else
y[n] = y[n-1] + (x[n] - y[n-1]) / 24000

If x[n] > y[n-1]
y[n] = y[n-1] + (x[n] - y[n-1]) / 48
else
y[n] = y[n-1] + (x[n] - y[n-1]) / 24000

1 ms up
500 ms down
at 48 kHz sampling rate

/

If x[n] > 0.141
1
else
0

If the level of the S-component is
lower than 17 dB below rthe M-
component then set to 0

If x[n] > y[n-1]
y[n] = y[n-1] + (x[n] - y[n-1]) / 48
else
y[n] = y[n-1] + (x[n] - y[n-1]) / 240000

1 ms up
5000 ms down
at 48 kHz sampling rate

*

* 0.5   * 0.5

* -1   * -1

+   +

Left Front

Right Front