

**ABSTRACT****xDSL FEEDBACK CLASS C-AB DRIVER**

5                   The present invention is related to a Line driver for amplifying an input signal, said line driver comprising: a first input terminal (11) for receiving said input signal, a non-linear amplifier (3) connected to said input terminal (11) and arranged to provide a first output  
10 signal at a first output terminal (13), a digital to analogue converter (15) arranged to transform said input signal to an analogue input signal, an analogue linear amplifier (5) comprising a second (6) and a third input terminal (8) and a second output terminal (10), set up as a  
15 comparator between a first correction signal provided at said second input terminal (6) and a second correction signal provided at said third input terminal (8) and arranged to provide a second output signal at said second output terminal (10), combining means arranged to combine  
20 said first output signal and said second output signal to provide a total output signal to an output line (7), a first operational amplifier (12) configured to sense the current of said total output signal and arranged to provide a third output signal at fourth output terminal (16), said  
25 third output signal being based on said current and the impedance of the output line, and a second operational amplifier (14) arranged to subtract said third output signal from said analogue input signal to provide a fourth output signal,  
30                   wherein said first correction signal is the total output signal and the second correction signal is said fourth output signal.