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LINE DRIVER WITH ADAPTIVE OUTPUT IMPEDANCE

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Abstract of WO9838774 (A2)

A line driver comprising a first transistor (M1), a first operational transconductance amplifier (A1) and a reference resistor (10) for converting an input voltage (V_{in}) to a first current (i_1) through the first transistor (M1). A second current $i_2 = n \cdot i_1$ flows through a second transistor (M2) which forms a 1:n current mirror with the first transistor (M1). The current i_2 flows to a load (6), if so required via a transmission line (TL). The impedance of the load (6) is equal to the characteristic impedance R_L of the transmission line (TL). Thus, the impedance seen by the line driver is equal to R_L . A second operational transconductance amplifier (A2) counteracts reflected signals in the output signal (V_{out}) caused by mismatch between the output impedance of the current mirror (M1, M2) and the impedance seen by the line driver.

